Strategic Human Resource Management Techniques for Managing Innovation in IT Firm

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Many innovation initiatives fail in the dynamic Information Technology (IT) sector, often due to misaligned Human Resource Management (HRM) practices. This paper addresses the need for a more nuanced understanding of how strategic HRM techniques can effectively support different types of innovation within IT firms. Adopting Ansoff's growth matrix as an innovation classification framework, this study utilizes a qualitative case study methodology, drawing conceptual insights from Tata Consultancy Services (TCS), to explore this relationship. The primary contribution is the proposed "Innovation-HRM Matrix," which outlines distinct sets of HRM techniques tailored for three innovation types- market penetration, market development, and product development innovations.

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Introduction

According to Everett Rogers, an innovation is "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 2003). The Information Technology (IT) sector thrives on continuous innovation, which serves as the primary engine for growth, competitive advantage, and adaptation in a rapidly evolving global market (Chen & Huang, 2009). IT firms constantly pursue new products, services, processes, and business models to maintain relevance and capture value. Despite its criticality, however, a significant proportion of innovation initiatives within IT firms fail to meet their objectives or deliver expected value. Industry reports and academic studies consistently highlight high failure rates for IT projects and innovation initiatives, often estimated to be significantly high, sometimes exceeding 50-70% depending on the scope and definition (McKinsey & Company, 2020).

While reasons for failure are multifaceted, encompassing technical challenges, market misalignments, and flawed strategic choices, inadequate attention to the human element managed through strategic Human Resource Management (HRM) techniques is increasingly recognized as a major contributing factor (Shanker et al., 2017). Failures in innovation initiatives are often attributed to critical HRM-related shortcomings such as persistent skill gaps in rapidly evolving technical domains, ineffective team collaboration and knowledge sharing processes, performance and reward systems that fail to adequately incentivize experimentation and calculated risk-taking, insufficient leadership commitment or inappropriate leadership styles, and organizational cultures that lack psychological safety or actively stifle creativity (Bos-Nehles et al., 2017; Mahajan, 2019; Hughes et al., 2018). Effectively managing talent, fostering a supportive culture, and aligning HR practices with innovation goals are therefore crucial, yet often underdeveloped, aspects of managing innovation success (Mahajan, 2019).

Innovative companies typically manage multiple innovation projects in parallel to stay competitive, adapt to evolving market demands, and mitigate risk. These projects span various types—product, process, service, and business model innovations—with varying degrees of novelty. Effective innovation management, as noted by Tidd and Bessant (2018), involves portfolio thinking: balancing short-term incremental improvements with long-term radical initiatives. O'Connor and DeMartino (2006) similarly emphasize the need to simultaneously manage multiple exploratory projects within breakthrough innovation pipelines (O'Connor, & DeMartino, 2006). This aligns with the concept of organizational ambidexterity—leveraging existing capabilities while exploring new opportunities—which requires firms to allocate resources across diverse initiatives (Tushman & O'Reilly, 1996). A common tendency is to manage all these innovation initiatives using a uniform approach. Such practices are often shaped by existing literature, which typically emphasizes the general relationship between human resource management (HRM) systems and overall innovation performance (Bos-Nehles et al., 2017). There is limited research identifying specific, context-sensitive HRM techniques tailored to manage the distinct types of innovation prevalent in IT firms. To address this gap, this paper adopts Ansoff's (1957) classic classification—distinguishing between market penetration, market development, product development, and diversification—as a framework to conceptualize different innovation thrusts. Each category represents a different level and type of novelty and risk, likely requiring distinct HRM approaches for successful execution. Employing a qualitative case study methodology, this research investigates the strategic HRM techniques utilized within selected IT firms to foster and manage these distinct types of innovation. The primary objective is to propose a framework of tailored HRM techniques aligned with three of Ansoff's

innovation categories, providing actionable insights for HR practitioners and managers seeking to improve innovation success rates in IT firms.

Literature Review

Innovation is widely recognized as a critical driver of competitive advantage and long-term survival, particularly within the dynamic and rapidly evolving Information Technology (IT) sector (Chen & Huang, 2009). As IT firms operate in knowledge-intensive environments characterized by constant technological shifts and intense global competition, their ability to innovate continuously is paramount. While technological capabilities are essential, the human element, managed through effective Human Resource Management (HRM), is increasingly acknowledged as a fundamental enabler of organizational innovation capacity (Shipton et al., 2006).

Strategic HRM practices are theorized to influence innovation by shaping employees' abilities, motivations, and opportunities to engage in creative and innovative behaviors (Bos-Nehles et al., 2017). Foundational HRM functions such as selective recruitment and staffing ensure the acquisition of talent with the necessary skills and creative potential. Indeed, strategic staffing approaches focusing on employer branding and person-organization fit are seen as crucial for attracting talent capable of supporting innovation and reducing resistance to change (Bhatnagar, & Srivastava, 2008). Furthermore, targeted training and development programs can enhance employees' technical expertise and problem-solving skills, directly contributing to their innovative capabilities (Jiang et al., 2012). The broader organizational context, shaped by HRM, is vital; fostering a supportive organizational culture through talent management practices (Mahajan, 2019) and encouraging knowledge sharing are essential for creating an environment where innovation can thrive. Performance management and compensation systems also play a crucial role; when designed to reward experimentation, risk-taking, and successful innovation outcomes, they can significantly motivate employees to pursue novel ideas (Laursen & Foss, 2003). The adoption of innovative HR practices is increasingly seen as a response to competitive pressures and changing employee needs (Agarwal & Jha, 2013, Agarwala, 2002).

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While general HRM practices that support innovation have been widely discussed in the literature, there remains a need to identify and analyze context-specific HRM practices tailored to different types of innovation. In-depth case studies within IT firms are warranted to uncover how managers and HR professionals adapt and implement such practices to cultivate and sustain various forms of innovation in this dynamic sector (Shipton et al., 2006).

Research Questions

Given the identified gap in understanding how specific Human Resource Management (HRM) techniques can effectively support different types of innovation within IT firms, and adopting Ansoff's classification (Ansoff, 1957) as a guiding framework, this study addresses the research question:how can Ansoff's innovation classification guide the selection and implementation of appropriate strategic Human Resource Management (HRM) techniques for effectively managing different types of organizational innovation in IT firms?

Methodology

This study employs a qualitative case study methodology, an approach well-suited for in-depth exploration of complex organizational phenomena like the interplay between strategic Human Resource Management (HRM) practices and specific innovation types within a real-world context (Yin, 2018).

To provide a structured lens for analyzing innovation within the IT sector, this research adopts Ansoff's (1957) growth strategy matrix as an innovation classification framework. The application of Ansoff's matrix for classifying innovation, distinguishing initiatives based on market and product/service novelty (market penetration, market development, product development, diversification), is supported by prior research (Gurcaylilar-Yenidogan & Aksoy, 2018).

The empirical context for this research is Tata Consultancy Services (TCS), a large, globally significant Indian IT firm with a documented history of diverse innovation activities. Specific innovation initiatives TCS undertook were identified and mapped to each quadrant of Ansoff's matrix based on their strategic characteristics. The detailed descriptions and analyses of these individual innovation cases are part of a larger study and thus beyond the scope of this specific paper.

Upon examining the innovation classification matrix, strategic HRM techniques pertinent to their management were identified. The focus was on discerning practices related to key HRM functions such as staffing, training and development, performance management, compensation and rewards, leadership approaches, and organizational culture that appeared to support each type of innovation.

The core analysis involved comparing the identified HRM techniques across the different Ansoff quadrants. Based on this comparative analysis, the study proposes distinct sets of strategic HRM techniques considered most suitable for effectively managing innovations within the market penetration, market development, and product development categories. Consistent with the conceptual underpinnings of Ansoff's matrix, HRM techniques for the diversification quadrant would require a hybrid approach. We assume that managing the diversification type of innovations would require the combination of management techniques prescribed for market development and product development innovations. Therefore, the proposed Innovation-HRM Matrix excludes discussion on this innovation type.

Table 1 Summarized View of HRM Techniques for Innovation Management

Management Techniques	Market Penetration	Market Development	Product Development
Developing Talent/Skills	• The focus of upskilling and reskilling will be on enhancing technical skills (Hasan, Haque, Nishat, & Hossain, 2024). Technical skills would also include process optimization skills in order to improve efficiency and productivity. (Davenport, 1993; Antony, & Banuelas, 2002) • Relationship oriented and service driven mindset would be important for managing client relationships (Tseng, & Wu, 2014)	• The focus of skilling would be on understanding culture and language. This would equip employees for new geographic markets (Feely, & Harzing, 2003; Earley, & Ang, 2003) Technical skills in this quadrant would also involve developing market specific expertise in local regulations and preferences (Ghemawat, 2007) • Mobility readiness mindset would enhance job performance in this quadrant (Stahl, Björkman, Farndale, Morris, Paauwe, Stiles, P. & Wright, 2012; Sparrow, Brewster, & Chung, 2016)	• The focus of upskilling would be on emerging technologies such as AI, machine learning, and automation (Horvat, Jäger, & Lerch, 2025) Technical expertise like system architecture would enable robust product development. (Teece, 2007; Bhatti, Saxena, & Singh, 2025) • Entrepreneurial and creative mindset would encourage risk-taking and out of the box solution implementation. (Pacher, & Glinik, 2024; Fu, Indiran, & Kohar, 2024)
Building Agility/ Culture	• Foster efficiency and continuous improvement culture (Kotler & Keller, 2016) • Encourage cost-conscious culture pivoting based on customer value perception (Tidd & Bessant, 2018).	• Appreciates culture of diversity and respects local norms and practices, fostering stronger relationships with local partners. (Johnson et al., 2006) • Embraces culture of flexibility in decision-making and quick pivoting based on market feedback (Feely & Harzing, 2003)	• Encourage innovation and experimentation culture (Tidd & Bessant, 2018) • Foster a risk-taking culture pivoting on developing new and out of the box solutions (Chesbrough, 2003; Christensen, 1997)
Offering appropriate Rewards/ Incentives	• Incentivize sales growth and customer retention (Kotler & Keller, 2016) • Reward efficiency improvements (Tidd & Bessant, 2018)	• Incentivize cross-cultural competence (Feely & Harzing, 2003) • Reward successful market entry related milestones (Johnson et al., 2006)	• Incentivize innovation and creativity (Tidd & Bessant, 2018) • Reward product development milestones (Chesbrough, 2003)

Towards an Innovation-HRM Matrix

Building upon the identified variations in HRM practices across different innovation categories, the Innovation-HRM Matrix given in Table 1 offers a structured framework outlining distinct strategic HRM techniques suitable for managing market penetration, market development, and product development innovations within IT firms. The detailed analysis of findings for each cell of the above table is presented as follows:

Innovation-HRM Matrix: Talent & Skill Focus under Market Penetration

Talent and skill focus is critical for achieving this goal, as it enables organizations to optimize operations, enhance customer satisfaction, and strengthen their competitive position. From a skill perspective, the fundamental theme of market penetration is that the core business knowledge remains unchanged. However, technological advancements necessitate reskilling and upskilling (Hasan et al., 2024), particularly in digital competencies, data analytics, and process optimization. According to Tidd and Bessant (2018), organizations must continuously invest in training and development programs to enhance the technical skills of their employees. In the era of automation, reskilling and upskilling strategies aim to equip employees to meet evolving job demands and contribute to strategic goals (Laker & Powell, 2011).

TCS's Enterprise Agile by 2020 initiative launched large-scale training in agile methodologies, automation tools, and advanced IT skills. TCS provided certifications in agile practices and DevOps, enabling employees to deliver faster and more efficient services. This focus on technical expertise contributed to TCS's ability to improve project delivery times and enhance customer satisfaction (Tata Consultancy Services [TCS], 2021).

Organizations must continuously invest in training and development programs to enhance the technical skills of their employees.

Researchers suggest that automation and process optimization are key drivers of operational excellence (Davenport, 1993; Antony & Banuelas, 2002; Davenport & Ronanki, 2018), allowing firms to focus on strategic initiatives such as innovation and customer engagement. By integrating these practices, businesses can achieve the agility and efficiency needed to respond to market demands and sustain competitive advantage.

Relationship oriented and service driven mindset including communication, problem-solving, and client management (Tseng & Wu, 2014) are critical for retaining and attracting new customers (Kotler & Keller, 2016). A customer-centric workforce reinforces long-term relationships (Krone & Dougherty, 1999).

TCS's Enterprise Agile by 2020 initiative provides a compelling example of how service oriented, technical skill along with agile process focus drives market penetration. The initiative involved exten-

sive training programs to develop technical expertise, customer-centric skills, and cross-functional collaboration. TCS's Enterprise Agile initiative resulted in significant perceived productivity gains, with over 90% of customers acknowledging increased speed-to-value from their agile adoption. The company successfully met all its internal KPIs for the transformation by October 2020, establishing capabilities like Location Independent Agile™ and laying the groundwork for its Secure Borderless Workspaces™ (SBWS™) ((TCS, 2021). These outcomes demonstrate the effectiveness of talent and skill focus in strengthening TCS's competitive position and achieving market penetration.

Innovation-HRM Matrix: Talent & Skill Focus under Market Development

In the Market Development quadrant of Ansoff's Matrix, the key skills include market research, localization, adaptability, and international business expertise (Johnson et al., 2008; Hill & Jones, 2012). Employees must understand the cultural, regulatory, and economic nuances of new markets, tailoring existing products to meet specific needs.

Market development begins with deep market understanding, requiring skills in data analysis, customer segmentation, and competitive benchmarking. Localization skills are essential to adapt offerings to local customs, languages, and regulations. Proficiency in local languages, supported by cultural and language training (Feely & Harzing, 2003; Earley & Ang, 2003), facilitates engagement and market entry. Such training is also critical in diverse workplaces, creating an inclusive environment that leverages strengths for innovation (Stahl et al., 2010).

For example, TCS's Hungary ODC setup demonstrates the importance of market research and localization. The company leveraged local talent and trained global teams in regional specifics for seamless integration, requiring strong cross-cultural communication and process adaptation skills (Serving the globe from Hungary., n.d.) in addition to the technical skill. This enabled effective service delivery to European clients.

Johnson et al. (2008) emphasize understanding new markets and adapting offerings. Hill and Jones (2012) highlight the need for cross-cultural competence and navigating complex regulatory environments, requiring market-specific expertise (Ghemawat, 2007). International business expertise is essential for managing cross-border operations, understanding regulations, building partnerships, and requires openness for mobility or deployment of global talent (Stahl et al., 2012; Sparrow et al., 2016). The mobility related mindset enhances job performance. TCS's Hungary expansion highlights the importance of adaptability and international business skills (Mulloth & Rao, 2017). By fostering these, TCS successfully established its ODC as a strategic European hub.

Innovation-HRM Matrix: Talent & Skill Focus under Product Development

In the Product Development quadrant of Ansoff's Matrix, key skills include R&D

expertise, technical proficiency on emerging technologies and creative problem-solving (Tidd & Bessant, 2018). Employees must be adept at identifying customer pain points, developing innovative solutions, and rapidly iterating based on feedback to ensure successful product launches.Business knowledge and technical knowledge are both critical for fostering innovation in new product development. According to Tidd and Bessant (2018), the integration of business and technical expertise are essential for successful innovation, as it aligns technological capabilities with market opportunities.

At the core of product development is the emerging technology enabled research and development (R&D), which involves exploring new technologies, materials, and processes to create innovative products. This often necessitates targeted talent acquisition to hire specialists having advanced emerging technology skills (Teece, 2007; Bhatti et al., 2025). Here, the focus of upskilling would be on emerging technologies such as AI, machine learning, and automation. The development of advanced AI driven technical platforms requires a team with advanced technical expertise in artificial intelligence (AI), machine learning (ML), and automation, requiring talent acquisition and development focused on these skills (Horvat et al., 2025). A prime example of this is TCS Ignio, an AI-driven autonomous enterprise platform designed to optimize IT operations. Digitate's ignio™ leverages advanced technologies like AI, automation, large language models (LLMs), and generative AI to create deep enterprise context and drive autonomous operations through tailored, efficient solutions. This integration of cutting-edge AI enables enhanced knowledge creation and optimized automation for improved agility and resiliency (APMdigest., 2023). By combining technical expertise with a deep understanding of customer needs, TCS was able to deliver a product. having more than 10,000 pre-built automations, that significantly enhanced business value (Digitate., n.d.). This highlights the importance of emerging technology skills in product development.

Product development also demands creative problem-solving skills to identify unmet customer needs and develop innovative solutions, underpinned by a culture of experimentation and creativity (Fu et al., 2024). TCS's Ignio, a self-learning platform, was developed over a period of three years by over 100 scientists from two TCS research and development labs. It uses a neuroscience-based approach and leverages machine learning, AI, and intelligent automation (TCS, n.d.). TCS Ignio exemplifies the role of creative problem-solving and customer-centric design in product development (Neo4j, 2020). Successfully navigating the uncertainties inherent in these processes often require fostering an entrepreneurial mindset that encourages calculated risk-taking (Pacher & Glinik, 2024).

Innovation-HRM Matrix: Agility & Culture under Market Penetration

Agility and culture are critical enablers of this strategy, as they allow organizations to respond quickly to market changes, improve operational efficiency, and deliver greater value to customers. According to Teece, Pisano, and Shuen (1997), dynamic

capabilities such as sensing opportunities, seizing them, and reconfiguring resources are critical for maintaining competitiveness (Teece, Pisano, & Shuen, 1997). The adoption of Enterprise agility enabled TCS to respond faster to client demands, reduce delivery times, and improve customer satisfaction, contributing to its market penetration efforts (TCS, 2021). A culture of continuous improvement is essential for driving market penetration. Organizations must foster efficiency and continuous improvement (Kotler & Keller, 2016), encourage innovation and promote a cost-conscious culture (Tidd & Bessant, 2018) based on customer value perception to stay competitive.

A culture of continuous improvement is essential for driving market penetration.

TCS's 'Enterprise Agile by 2020' initiative fundamentally transformed its workforce and service delivery, creating capabilities like Location Independent Agile™ for global collaboration. This enterprise-wide agility enabled faster project execution (contributing 85% of IT services revenue) and increased speed-to-value for clients, thereby strengthening customer satisfaction and supporting market penetration through enhanced responsiveness and proven ability to drive client growth. (TCS, 2021).

Innovation-HRM Matrix: Agility & Culture under Market Development

As defined by Ansoff's Matrix, market development involves entering new geographic markets with existing products. According to Teece, Pisano, and Shuen (1997), dynamic capabilities such as sensing opportunities, seizing them, and reconfiguring resources are critical for maintaining competitiveness in new markets. TCS's Hungary ODC setup required significant agility to adapt to the European market's regulatory environment, cultural nuances, and customer preferences. For example, TCS implemented agile methodologies to streamline project delivery and respond quickly to client demands. This agility enabled TCS to establish a strong market presence in Hungary (Serving the globe from Hungary., n.d.).

A culture of diversity is essential for driving market development, encouraging employees to respect local norms and practices. Kotler and Keller (2016) highlight that organizations must create an environment where diversity is encouraged. Market development often involves operating in culturally diverse environments, requiring organizations to foster cross-cultural competence. Johnson, Lenartowicz, and Apud (2006) define cultural intelligence (CQ) as the ability to function effectively in culturally diverse settings, requiring organizations to build cultural agility. Cultural training and language courses will train employees for cross-cultural competence (Feely & Harzing, 2003), and create opportunities for employees to interact with local clients. TCS's establishment of an ODC in Hungary is a prime example of how agility and culture drive market development. The company demonstrated organizational agility by appreciating the European market's cultural, language, regulatory environment

Organizations must create an environment where diversity is encouraged.

and customer preferences. TCS also fostered a culture of innovation and cross-cultural competence, enabling its employees to deliver high-quality services and build strong relationships with local clients and partners (Mulloth, & Rao, 2017).

Innovation-HRM Matrix: Agility & Culture under Product Development

A cultural orientation and agile mindset is essential for driving product development, as it encourages employees to experiment, take risks, and explore new ideas. Organizations must create an environment where innovation and experimentation are actively encouraged (Tidd & Bessant, 2018), failure is seen as a learning opportunity (Kotler & Keller, 2016), and a risk-taking culture is fostered (Chesbrough, 2003). This often requires leadership to embrace high-risk tolerance for potentially disruptive innovations (Christensen, 1997). TCS fostered such a culture by empowering its employees to experiment with new technologies and business models. For example, the development of Ignio involved cross-functional teams working collaboratively to design, test, and refine the product. The commitment to driving innovation with state-of-the-art technologies, such as generative AI powering features like the Knowledge Accelerator and AI Assist, enables the creation of differentiated solutions tailored to deliver value and address the unique needs of its enterprise customers. (APMdigest., 2023).

Agility and organizational culture play a pivotal role in fostering collaboration and driving continuous improvement. The product evolved over several years through a process marked by out-of-the-box thinking, deep collaboration, and iterative enhancement.

TCS cultivated a culture of experimentation and calculated risk-taking through initiatives such as hackathons, idea contests, and innovation labs. These platforms encouraged employees to generate and test novel ideas, reinforcing a mindset of learning from experimentation (SightsIn Plus, 2024). This innovation-oriented culture proved instrumental in enabling the rapid development of Ignio and other cutting-edge solutions.

Systemic agility—characterized by rapid feedback loops, cross-functional collaboration, and adaptive processes—was also central to the platform's evolution. TCS's agile approach enabled quicker iterations and accelerated client feedback cycles, which significantly contributed to Ignio's maturity and market-readiness (Mishra & Mendonca, 2015).

Innovation-HRM Matrix: Rewards & Incentives under Market Penetration

Rewards and incentives are most effective when they are closely aligned with organizational goals. According to Kerr (1975), misaligned incentives can lead to unintended consequences. In the context

of market penetration, incentives should ideally encourage behaviors that increase sales, improve customer retention, and enhance operational efficiency. TCS's *Enterprise Agile by 2020* initiative exemplifies this approach. This alignment of incentives with organizational goals was instrumental in driving market penetration.

Sales teams are at the forefront of market penetration efforts, and their performance is often directly tied to rewards and incentives. Kotler and Keller (2016) highlight that well-designed incentive programs can motivate sales teams to achieve higher sales volumes and customer acquisition rates. In addition to driving sales, rewards and incentives can encourage employees to focus on operational efficiency. Tidd and Bessant (2018) argue that cost reduction and process optimization are critical for maintaining competitiveness in existing markets. The Enterprise Agile program celebrated individual and team contributions, designating "TCS Superstars" and "TCS Gems," at the team level and acknowledging their efforts with specific rewards and recognition for upselling and cross-selling. Furthermore, the initiative focused on amplifying success stories across the organization, aiming to inculcate a sense of pride and reinforce the value of Agile adoption (Mittal, 2020).

Innovation-HRM Matrix: Rewards & Incentives under Market Development

Rewards and incentives play a critical role in motivating employees to achieve market entry goals, adapt to new environments, and deliver exceptional performance. By aligning incentives with organizational objectives, companies can drive employee engagement, enhance productivity, and ensure the success of market development strategies.

Market development requires employees to adapt to new environments, learn new skills, and overcome challenges. Rewards and incentives are essential for motivating employees to embrace these changes and contribute to the organization's goals as per the market entry milestones. According to Kerr (1975), well-designed incentive programs align employee behavior with objectives. TCS's Hungary ODC setup involved relocating employees and hiring local talent. To motivate them, TCS has several programs at TCS Hungary ODC, that provides employees with a clear path for career advancement on merit-based recognition systems through a fair, internal, and transparent talent system (TCS, 2025). Given that cultural intelligence (CQ) is essential for international performance (Johnson et al., 2006), it is crucial to incentivize cross-cultural competence (Johnson et al., 2006) through such reward structures.

Rewards and incentives are most effective when they are aligned with the organization's market development goals. Tidd and Bessant (2018) argue that incentives should encourage behaviors that contribute to market entry and expansion. Not surprisingly, strong customer acquisition, brand awareness, and market expansion enabled TCS Hungary to achieve 'Top Employer' status. Employees were accordingly selected for internal awards for demonstrating achievements across activi-

ties like lead generation, customer acquisition, increasing brand awareness as it resulted in success and growth in the Hungarian market (Tata Consultancy Services., 2025a). Subsequently, over the years, interns from as many as 20 diverse nationalities were inducted into its ACE (Accelerate, Connect, Experience) program in Hungary. Through these efforts, TCS could successfully demonstrate its commitment to fostering a fair and equal opportunity environment where global and local talent are provided with equitable opportunities for growth and development (TCS, n.d.a).

Innovation-HRM Matrix: Rewards & Incentives under Product Development

Innovation is the cornerstone of product development, and rewards and incentives are powerful tools to incentivize innovation and creativity (Tidd & Bessant, 2018) and motivate employees to take risks. Intrinsic and extrinsic rewards can significantly enhance creativity (Amabile, 1998). A product development firm requires a rewards program that recognizes employees for innovative ideas and contributions, effectively rewarding product development milestones (Chesbrough, 2003).

Product development often requires cross-functional collaboration, and rewards and incentives can encourage employees to work together effectively. Tidd and Bessant (2018) highlight that team-based incentives can foster collaboration and knowledge sharing, which are essential for successful product development. Creating Digitate as a separate unit allows TCS to cultivate a distinct brand focused on AI innovation and the Ignio product, enhancing targeted sales and marketing (Mendonca, & Mandavia, 2017). TCS continues to recognize employee contributions at various stages of the innovation lifecycle—such as ideation, pilots, iterative improvements, and development—through platforms like Ideathon and Innovista (TCS, n.d.-b; Tata Innovista, n.d.).

Contribution to Theory

The primary theoretical contribution of this study lies in advancing the understanding of the contingent relationship between strategic HRM techniques and distinct types of organizational innovation. While the general positive link between HRM and innovation is well-documented (e.g., Bos-Nehles et al., 2017; Shipton et al., 2006), this research adds specificity by employing Ansoff's (1957) matrix not just as a growth strategy tool, but as an innovation classification framework specifically to differentiate HRM requirements (building on Gurcaylilar-Yenidogan & Aksoy, 2018, but focusing explicitly on HRM implications). It moves beyond discussing generic HRM systems to proposing specific sets of HRM techniques tailored for market penetration, market development, and product development innovations. By grounding these propositions in a case study of a major IT firm, it provides empirical weight to the argument that a 'one-size-fits-all' HRM approach is suboptimal for managing diverse innovation portfolios, addressing calls for more context-specific research in the strategic HRM-innovation field.

Contribution to Practice

From a practical standpoint, this research provides valuable insights for managers and HR professionals, particularly within IT firms. The proposed Innovation-HRM Matrix serves as a guide for the effective execution of innovation strategies. Managers can use this framework to align specific HRM actions with the demands for different innovation types (as classified by the Ansoff framework), whether pursuing incremental improvements or radical new ventures. Specifically, it offers actionable guidance on key levers such as Developing Talent and Skills appropriate for the specific innovation challenge, Building agility & culture conducive to experimentation and rapid adaptation, and offering appropriate rewards & incentives that effectively motivate the desired innovative behaviors associated with each innovation type. By facilitating a more tailored alignment between these core HRM techniques and innovation strategy, the framework can help IT firms improve the effectiveness of their innovation processes and potentially increase the success rate of crucial innovation initiatives.

Limitations & Future Research

While this study offers a novel framework through the Innovation–HRM Matrix, its findings represent an initial step toward understanding the HRM-innovation interface in IT firms. Future research is needed to validate the proposed matrix across a broader range of IT organizations and varied contextual settings. The current focus on three key HRM levers—talent and skills, agility and culture, and rewards and incentives—alongside the use of Ansoff's innovation classification provides a useful starting point. However, further work is required to incorporate the fourth (hybrid) innovation category—diversification—as a distinct and fully developed innovation type consisting of market development and product development innovation within the framework. In addition, future studies could examine additional HRM dimensions, adopt alternative innovation typologies, and assess their interplay with HRM practices. Incorporating richer case evidence and longitudinal research designs would also offer deeper insights into how context-specific HRM strategies evolve and contribute to sustaining different innovation types over time.

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