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De-dollarisation and the digital HR Transformation: Examining the role of AI-powered virtual HRM in fostering organisational citizenship behaviour among Indian IT professionals

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Abstract
The Indian information technology (IT) sector, which derives over 70–80 per cent of its revenues from overseas markets, stands at a critical intersection of macroeconomic disruption and technological transformation. This conceptual article examines the interplay between de-dollarisation pressures, AI-powered virtual human resource management (HRM), and organisational citizenship behaviour (OCB) within India's IT industry. Drawing upon recent empirical evidence indicating that OCB accounts for approximately 70.60 per cent of an IT company's organisational efficacy, the article argues that the confluence of rupee volatility, AI-driven automation, and the proliferation of virtual work environments necessitate a fundamental reimagining of HRM practices. The study synthesises existing literature on de-dollarisation dynamics, AI-enabled HRM systems, virtual HRM frameworks, and OCB antecedents to propose an integrative model for sustainable talent management. Findings suggest that AI-powered virtual HRM can serve as a strategic lever for fostering OCB amid macroeconomic uncertainty, provided organisations address challenges related to algorithmic transparency, employee trust, and the preservation of human-centric workplace relationships. The article contributes to the emerging discourse on digital HR transformation in emerging economies and offers practical implications for HR practitioners navigating the complexities of the contemporary Indian IT landscape.

Keywords: De-dollarisation, Artificial Intelligence, virtual human resource management, organisational citizenship behaviour, Indian it industry, digital HR transformation

Introduction

The Indian information technology sector, a cornerstone of the nation's economy employing nearly 6 million professionals and generating over $30 billion in annual revenue for leading firms such as Tata Consultancy Services, is undergoing unprecedented transformation. Two powerful forces are reshaping the industry's landscape: macroeconomic pressures stemming from global currency realignments and the rapid proliferation of artificial intelligence across business functions. These forces, in turn, are fundamentally altering how human resource management is conceived and executed in India's IT enterprises.

De-dollarisation—the process of reducing global dependence on the US dollar in international trade and finance—has emerged as a critical macro-level concern for India's export-driven IT sector. With Indian IT firms billing predominantly in dollars while incurring substantial costs in rupees, currency volatility directly impacts profitability, talent acquisition strategies, and workforce planning. The rupee's slide to record lows above 96 against the dollar has provided short-term earnings relief, yet it has simultaneously introduced uncertainty that compels organisations to reconsider their human capital investments.

Concurrently, AI is reshaping the very fabric of IT work. Research indicates that 37 per cent of entry-level tasks in India are already performed by AI, with 18 per cent of human resources leaders reporting that AI now handles half or more of entry-level work. Industry leaders such as TCS have signalled that traditional hiring models are undergoing fundamental change, with AI agents expected to become as numerous as human employees. This shift is transforming not only operational workflows but also the HRM function itself, where AI has moved from pilot projects to daily-use tools across recruitment, payroll, performance management, and employee support.

Within this context of macroeconomic volatility and technological disruption, the cultivation of organisational citizenship behaviour assumes heightened significance. OCB—defined as discretionary, pro-social employee actions that extend beyond formal job expectations yet are critical to collective organisational success—has been identified as a pivotal determinant of organisational efficacy in the Indian IT sector. Singh *et al*. (2025) found that a substantial 70.60 per cent of an IT company's efficacy can be attributed to OCB-influencing factors. Similarly, recent research employing artificial neural networks has demonstrated that AI can predict OCB with 93.33 per cent accuracy, suggesting significant potential for technology-enabled OCB cultivation.

This article addresses a critical gap in the literature by examining the intersection of these three phenomena: de-dollarisation as a macroeconomic driver, AI-powered virtual HRM as a technological enabler, and OCB as a strategic organisational outcome.

Specifically, the article seeks to answer the following research questions:

1. How do de-dollarisation pressures influence HRM strategies in India's IT sector?
2. In what ways can AI-powered virtual HRM foster organisational citizenship behaviour?

3. What integrative framework can explain the relationship between macroeconomic forces, technological HRM interventions, and OCB outcomes?

Literature Review

1. De-dollarisation and the Indian IT Sector

The Indian IT services sector's profound dependence on dollar-denominated revenues creates a unique vulnerability to currency fluctuations. Top Indian IT companies derive over 70–80 per cent of their revenues from overseas markets, making them natural beneficiaries of rupee weakness yet simultaneously exposed to the uncertainties of global currency markets. Every 1 per cent depreciation of the rupee against the dollar results in a revenue spike in rupee terms, with operating margins improving by 20–30 basis points for US export-heavy IT companies.

However, the relationship between currency depreciation and organisational well-being is more complex than margin expansion alone suggests. While a weaker rupee provides short-term earnings support, it also introduces volatility that complicates workforce planning, compensation structuring, and talent retention. The Nifty IT index remained under pressure throughout 2026 amid weaker revenue visibility, slower hiring trends, and concerns over AI-led changes. As one industry observer noted, "Today's layoffs in IT are not because of AI. The real reason is much deeper—and far older," pointing to the dollar-driven salary inflation that created unsustainable compensation structures.

India's engagement with de-dollarisation extends beyond passive currency exposure. Since 2022, India has actively negotiated bilateral trade arrangements with Russia, Iran, the United Arab Emirates, and African nations to conduct trade in national currencies rather than the dollar. While these initiatives remain nascent, they signal a strategic orientation that could, over time, reshape the currency dynamics underlying India's IT export model.

The HRM implications of de-dollarisation are multifaceted. Currency volatility affects talent acquisition costs, particularly for firms that hire locally in the US through H-1B visas or global capability centres. It influences decisions regarding offshore versus onshore staffing. Perhaps most significantly, it creates an environment of macroeconomic uncertainty that can undermine employee confidence, reduce organisational commitment, and diminish discretionary behaviours—precisely the domains in which OCB operates.

2. AI-Powered Virtual HRM in the Indian IT Context

The integration of artificial intelligence into human resource management represents one of the most significant transformations in contemporary organisational practice. In the Indian context, AI in HR has transitioned from experimental pilots to mainstream operational tools across multiple domains. AI-powered systems now perform resume screening and candidate matching, cutting review time substantially while applying consistent criteria to every application. Attrition prediction models analyse engagement signals, leave patterns, performance trajectories, and manager feedback to flag turnover risk before it materialises. Conversational AI assistants embedded in HRMS platforms answer policy questions, guide employees through leave applications, and explain payroll deductions instantly. Performance review systems now surface goal progress data, flag inconsistencies, and help managers write evidence-backed evaluations.

Thangaraju and Palani (2025) explored how AI-powered sustainable HR practices influence employee creative performance within India's IT sector, applying structural equation modelling to survey data from 360 IT professionals. Their research revealed that AI-based training and performance management systems raise creative performance levels, though contextual differences emerged regarding the mediating role of idiosyncratic deals. The study contributed significant theoretical advancements by analysing AI-HRM systems in emerging economies and exploring the limits of personal work arrangements in tech-heavy settings.

Virtual HRM—the delivery of human resource services through digital platforms and remote-enabled processes—has become increasingly prevalent in India's IT sector. The post-pandemic shift toward remote and hybrid work has accelerated the adoption of virtual HRM practices, with over 90 per cent of large IT firms in India adopting cloud-based HR and workforce management systems by 2025. However, the transition has not been without challenges. Infosys, for instance, moved to a hybrid hiring model after internal concerns over the quality of pandemic-era virtual recruitment, citing risks including fake profiles, reduced opportunity to build personal rapport, and technical connectivity issues.

The convergence of AI and virtual HRM creates new possibilities for employee engagement and behaviour management. AI-powered virtual HR systems can deliver personalised learning recommendations, conduct continuous sentiment analysis through pulse surveys, and enable evidence-based performance reviews that transcend the limitations of traditional annual assessments. These capabilities have direct implications for OCB cultivation, as they enable HR functions to identify and respond to employee needs with unprecedented speed and precision.

3. Organisational Citizenship Behaviour: Definition, Antecedents, and Significance

Organisational citizenship behaviour encompasses discretionary employee actions that contribute to organisational effectiveness but are not explicitly required by formal job descriptions. These behaviours include helping colleagues voluntarily, speaking positively about the organisation to outsiders, making constructive suggestions, and demonstrating conscientiousness beyond minimum requirements. OCB is not an abstract ideal but a practical necessity in hypercompetitive, globalised economies where human capital represents an organisation's most valuable and non-replicable asset.

The significance of OCB in the Indian IT sector has been empirically established. Singh *et al.* (2025) conducted a cross-sectional survey of 378 middle- and senior-level IT administrators across various organisations, employing multiple regression and path analysis techniques. Their findings revealed that a substantial 70.60 per cent of an IT company's efficacy can be attributed to OCB-influencing factors. This finding underscores that fostering OCB is not merely a desirable HR objective but a strategic imperative for organisational success.

Research has identified multiple antecedents of OCB in the Indian IT context. Job embeddedness has been positioned as a profound influence on enhancing OCB and overall organisational performance, particularly given the highly volatile nature of the Indian IT industry. Job satisfaction demonstrates a strong, favourable association with OCB among work-from-home employees, with job satisfaction explaining 39.5 per cent of the variance in OCB. Organisational culture determinants have also been shown to significantly influence OCB manifestations.

Recent scholarship has begun exploring the relationship between AI and OCB. A comparative study employing seven machine learning models—Support Vector Machine, Linear Discriminant Analysis, Random Forest, XGBoost, K-Nearest Neighbours, Naïve Bayes, and Artificial Neural Network—found that AI is a reliable predictor of OCB. The ANN model achieved the highest accuracy rate of 93.33 per cent, with sustainable training practices perceived by employees as assisting personal growth emerging as a robust predictor of OCB. This finding suggests significant potential for AI-enabled HRM systems to actively induce desired employee behaviours through data-driven interventions.

Theoretical Framework

This article proposes an integrative framework that synthesises insights from three theoretical perspectives: institutional theory, social exchange theory, and the technology acceptance model.

Institutional theory: Provides a lens for understanding how de-dollarisation pressures function as institutional forces that shape organisational strategies and HRM practices. As India's IT firms navigate currency volatility, shifting trade arrangements, and evolving global economic alignments, they face institutional pressures to adapt their human capital strategies. These adaptations—including adjustments to compensation structures, talent acquisition approaches, and workforce planning—represent organisational responses to macroeconomic institutional forces.

Social exchange theory: Illuminates the mechanisms through which HRM practices influence OCB. According to this perspective, employees reciprocate organisational investments in their well-being with discretionary behaviours that benefit the organisation. AI-powered virtual HRM systems that personalise learning, provide timely feedback, and demonstrate organisational care can strengthen the psychological contract between employees and employers, thereby fostering OCB.

The technology acceptance model: Explains the conditions under which AI-powered virtual HRM systems are likely to be effectively adopted and utilised. Employee acceptance of these technologies depends on perceived usefulness and perceived ease of use. Organisations that design AI-HRM systems with user experience in mind, provide adequate training, and maintain human oversight are more likely to realise the OCB-enhancing potential of these technologies.

The integration of these theoretical perspectives yields the following propositions:

- **Proposition 1:** De-dollarisation pressures create macroeconomic uncertainty that negatively affects employee psychological safety and organisational commitment, thereby potentially diminishing OCB.

- **Proposition 2:** AI-powered virtual HRM systems can mitigate the adverse effects of de-dollarisation-induced uncertainty by providing personalised, timely, and data-driven employee support that strengthens the psychological contract.

- **Proposition 3:** The effectiveness of AI-powered virtual HRM in fostering OCB is moderated by employee trust in AI systems, organisational culture, and the extent to which human-centric values are preserved in technology implementation.

The Interplay of De-dollarisation, AI-Powered Virtual HRM, and OCB

1. De-dollarisation as a Driver of HRM Transformation

Currency volatility associated with de-dollarisation trends creates both challenges and opportunities for HRM in India's IT sector. On the challenge side, rupee depreciation, while improving reported revenues, introduces uncertainty that complicates long-term workforce planning. The temporary nature of currency benefits—described by analysts as a "cushion" rather than a structural growth driver—means that organisations cannot rely on favourable exchange rates as a sustainable basis for talent investment.

Moreover, the dollar-driven dynamics of the Indian IT sector have historically created salary expectations that may not be sustainable in the long term. As the sector faces pressure from AI-driven automation and shifting global demand patterns, the compensation structures that once attracted top talent may require fundamental reconsideration. This creates a complex HRM challenge: how to maintain employee satisfaction and discretionary behaviour while potentially restructuring compensation and benefit packages.

However, de-dollarisation pressures also create opportunities for HRM innovation. The imperative to do more with less—to maintain organisational effectiveness amid margin pressure—can accelerate the adoption of efficiency-enhancing technologies, including AI-powered HRM systems. Organisations that leverage these technologies strategically may achieve not only cost efficiencies but also enhanced employee engagement and OCB.

2. AI-Powered Virtual HRM as an OCB Enabler

AI-powered virtual HRM systems offer multiple pathways for fostering OCB in the Indian IT context:

a. **Personalised employee development:** AI-driven learning systems that match employees to specific courses or mentoring based on performance gaps and role requirements demonstrate organisational investment in employee growth. Such investments, consistent with social exchange theory, can elicit reciprocal OCB.

b. **Continuous feedback and recognition:** Traditional annual performance reviews are increasingly recognised as inadequate for fostering engagement and discretionary behaviour. AI systems that surface goal progress data, flag inconsistencies, and enable real-time recognition can create a culture of appreciation that encourages OCB.

c. **Proactive well-being support:** Attrition prediction models and sentiment analysis tools enable HR to identify and address employee concerns before they escalate. This proactive approach demonstrates organisational care, strengthening the psychological contract and encouraging reciprocal citizenship behaviours.

d. **Equitable and transparent processes:** AI-powered recruitment and performance systems can reduce bias and increase perceived fairness. Perceptions of organisational justice are well-established antecedents of OCB; when employees believe they are treated fairly, they are more likely to engage in discretionary pro-social behaviours.

e. **Virtual community building:** AI-powered platforms can facilitate connection and collaboration among distributed teams, addressing one of the key challenges of virtual work. By enabling social interaction and relationship building, these platforms can help preserve the social fabric that supports OCB in traditional workplace settings.

3. Challenges and Boundary Conditions

The potential of AI-powered virtual HRM to foster OCB is not without limitations. Several challenges warrant attention:

a. **Algorithmic transparency and trust:** Employees may resist AI-driven HRM systems if they perceive them as opaque or untrustworthy. Organisations must invest in transparency and communication to build trust in AI-HRM systems.

b. **Preservation of human connection:** The shift toward virtual and AI-mediated HRM risks eroding the human relationships that underpin organisational commitment and OCB. Hybrid approaches that combine AI efficiency with human empathy may be most effective.

c. **Contextual adaptation:** AI-HRM systems designed for Western contexts may not fully account for the cultural nuances of the Indian workplace. Localisation and contextual adaptation are essential for effective implementation.

d. **Digital divide and skills gaps:** Not all employees possess equal digital literacy. Organisations must ensure that AI-HRM systems are accessible and that employees receive adequate training and support.

Implications for Practice and Future Research

1. Practical Implications

For HR practitioners in India's IT sector, this article offers several actionable insights:

First, organisations should view AI-powered virtual HRM not merely as a cost-saving measure but as a strategic tool for fostering employee engagement and OCB. The 70.60 per cent contribution of OCB to organisational efficacy suggests that investments in OCB-enhancing HRM practices yield substantial returns.

Second, the design and implementation of AI-HRM systems should prioritise transparency, fairness, and human-centric values. Employees who perceive AI systems as fair and supportive are more likely to reciprocate with discretionary behaviours.

Third, organisations should adopt hybrid approaches that combine AI efficiency with human empathy. While AI can automate routine tasks and provide data-driven insights, human judgment remains essential for interpreting results and maintaining meaningful employee relationships.

Fourth, HR leaders should actively monitor and address the psychological impacts of macroeconomic uncertainty. Proactive communication about organisational strategy, transparent career development pathways, and robust well-being support can mitigate the negative effects of uncertainty on employee engagement and OCB.

2. Future Research Directions

This conceptual article identifies several avenues for future empirical research:

a. **Quantitative studies:** Examining the relationship between AI-powered virtual HRM adoption and OCB outcomes in Indian IT firms, controlling for organisational size, culture, and macroeconomic conditions.

b. **Longitudinal research:** Tracking how de-dollarisation pressures influence HRM strategies and OCB over time, particularly as India's engagement with currency realignment evolves.

c. **Comparative studies:** Exploring how AI-HRM systems affect OCB differently across generations, job roles, and cultural contexts within the Indian IT workforce.

d. **Qualitative investigations:** Into employee perceptions of AI-powered virtual HRM, including how these perceptions influence discretionary behaviour and organisational commitment.

e. **Intervention studies:** Evaluating the effectiveness of specific AI-HRM practices—such as personalised learning recommendations or continuous feedback systems—in fostering OCB.

Conclusion

The Indian IT sector stands at a transformative juncture where macroeconomic pressures, technological disruption, and evolving workplace dynamics converge. This article has examined the interplay between de-dollarisation, AI-powered virtual HRM, and organisational citizenship behaviour, arguing that these phenomena are not discrete but deeply interconnected.

De-dollarisation creates macroeconomic uncertainty that challenges traditional HRM approaches and threatens the psychological conditions that foster OCB. AI-powered virtual HRM offers a powerful response to these challenges, enabling organisations to provide personalised, timely, and data-driven employee support that strengthens the psychological contract and encourages discretionary behaviours. However, the realisation of this potential depends on thoughtful implementation that prioritises transparency, trust, and human-centric values.

As India's IT sector navigates the complexities of the contemporary global economy, the strategic integration of AI-powered virtual HRM represents not merely an operational choice but a strategic imperative. Organisations that succeed in leveraging these technologies to foster OCB will be better positioned to weather macroeconomic uncertainty, attract and retain talent, and achieve sustainable competitive advantage.

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