



Reducing Remittance Cost through UPI: Evidence from India's Global Collaborations

Urvi Wadhwa

ABSTRACT

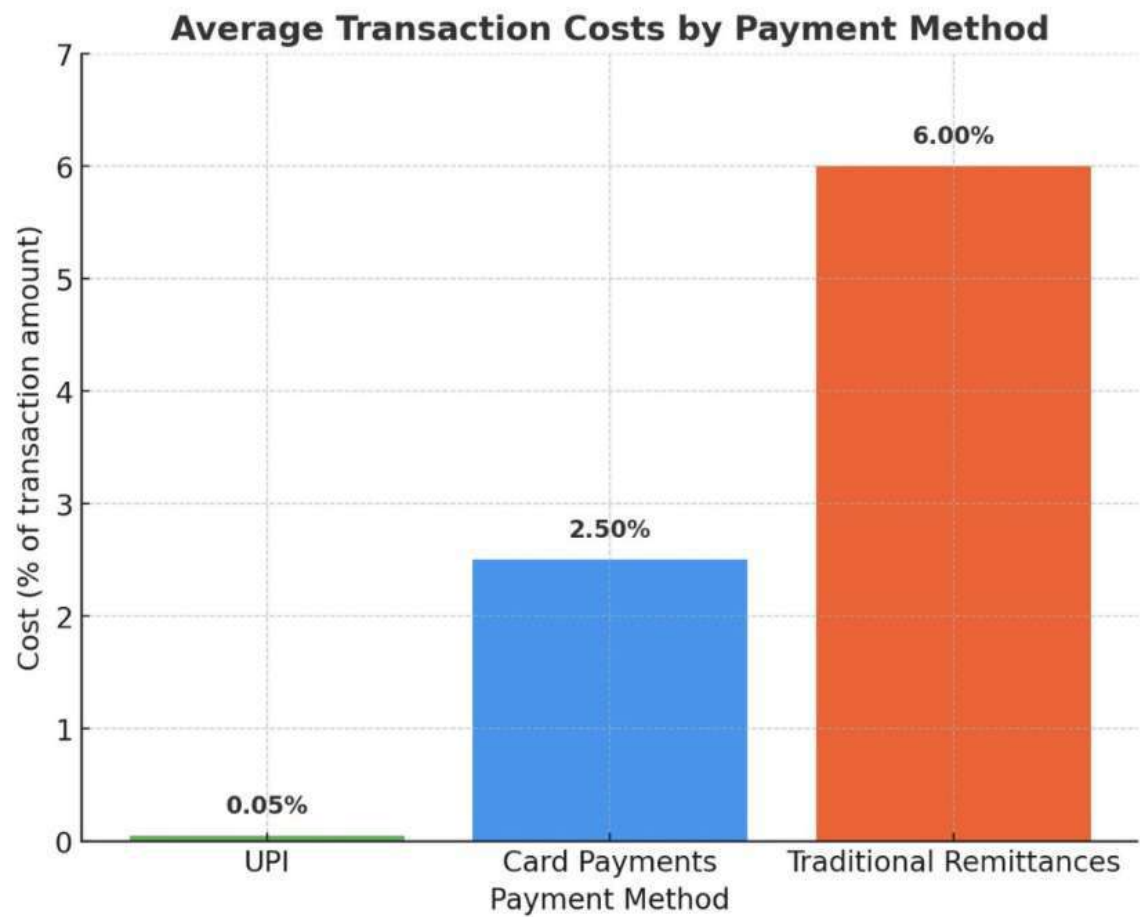
This paper investigates whether India's Unified Payments Interface (UPI) can serve as a scalable model for reducing transaction costs and enhancing financial integration in cross-border payments. UPI has revolutionised India's domestic payment ecosystem by reducing costs, improving efficiency, and fostering financial inclusion. Building on this success, India has pursued cross-border collaborations with Singapore, the UAE, Bhutan, and Nepal. Using a case study and comparative analysis methodology, this paper reviews secondary data from the RBI, NPCI, BIS, IMF, and World Bank to assess the role of UPI in cross-border integration. The findings suggest that while UPI reduces costs and improves access, challenges such as interoperability, foreign exchange management, and regulatory harmonisation remain. The study applies Transaction Cost Economics and Network Effects theory to frame UPI's scalability and evaluates policy implications for the G20's cross-border payment agenda. The paper concludes that UPI offers a promising framework, though its global adoption depends on sustained policy coordination and technical interoperability.

Keywords: Unified Payments Interface, cross-border payments, financial integration, transaction cost economics, network effects



INTRODUCTION

Although they are still expensive, slow, and dispersed, cross-border payments are essential for international trade, remittances, and financial integration. The World Bank (2023) reports that the average cost of remittances worldwide is roughly 6.2% of the transaction amount, which is significantly higher than the 3% Sustainable Development Goal (SDG) target set by the UN. India, the biggest recipient of remittances worldwide, has a compelling reason to lower these expenses. At home, India's Unified Payments Interface (UPI) has revolutionised digital payments by handling more than 10 billion transactions every month at almost no cost (NPCI, 2024). With an emphasis on partnerships with Singapore, the United Arab Emirates, Bhutan, and Nepal, this study investigates whether UPI's success at home can be expanded as a scalable model for cross-border payments.





LITERATURE REVIEW

Inefficiencies in legacy systems like SWIFT, which include numerous intermediaries, exorbitant fees, and settlement delays, are highlighted in the literature on cross-border payments (BIS, 2022). Instant payment systems such as SEPA in Europe, PIX in Brazil, and UPI in India are examples of recent innovations. Research from the IMF (2023) and BIS (2023) highlights how crucial regional integration and interoperability are to lowering transaction costs. The G20 and World Bank have acknowledged UPI as a model for financial inclusion. But scholarly research also highlights cybersecurity threats, regulatory obstacles, and the difficulties of currency conversion in international settings (RBI, 2023).

THEORETICAL FRAMEWORK

This study makes use of network effects theory and transaction cost economics (Coase, 1937; Williamson, 1985). How UPI lowers search, negotiation, and enforcement costs in payments is explained by transaction cost economics. UPI drastically reduces transaction costs by doing away with middlemen and offering real-time settlement. According to network effects theory, UPI's value rises as more institutions and users embrace the system, thereby enhancing its scalability. These frameworks draw attention to the conflict between efficiency improvements and the difficulty of harmonizing regulations in cross-border payments



METHODOLOGY

This study examines UPI's contribution to improving financial integration and lowering the cost of cross-border transactions using a comparative case study methodology. Due to their strategic importance, the cases of Singapore, the United Arab Emirates, Bhutan, and Nepal were chosen. Singapore is a major global financial center with significant remittance flows to India, the UAE is a popular destination for Indian migrant workers, and Bhutan and Nepal are smaller neighboring economies where UPI has been implemented in the retail and tourism sectors. The analysis of UPI's suitability for advanced, middle-income, and developing contexts is made possible by this diversity.

The research relies primarily on secondary data sources, including databases from the World Bank (Remittance Prices Worldwide), IMF working papers, BIS reports, and official publications from the RBI

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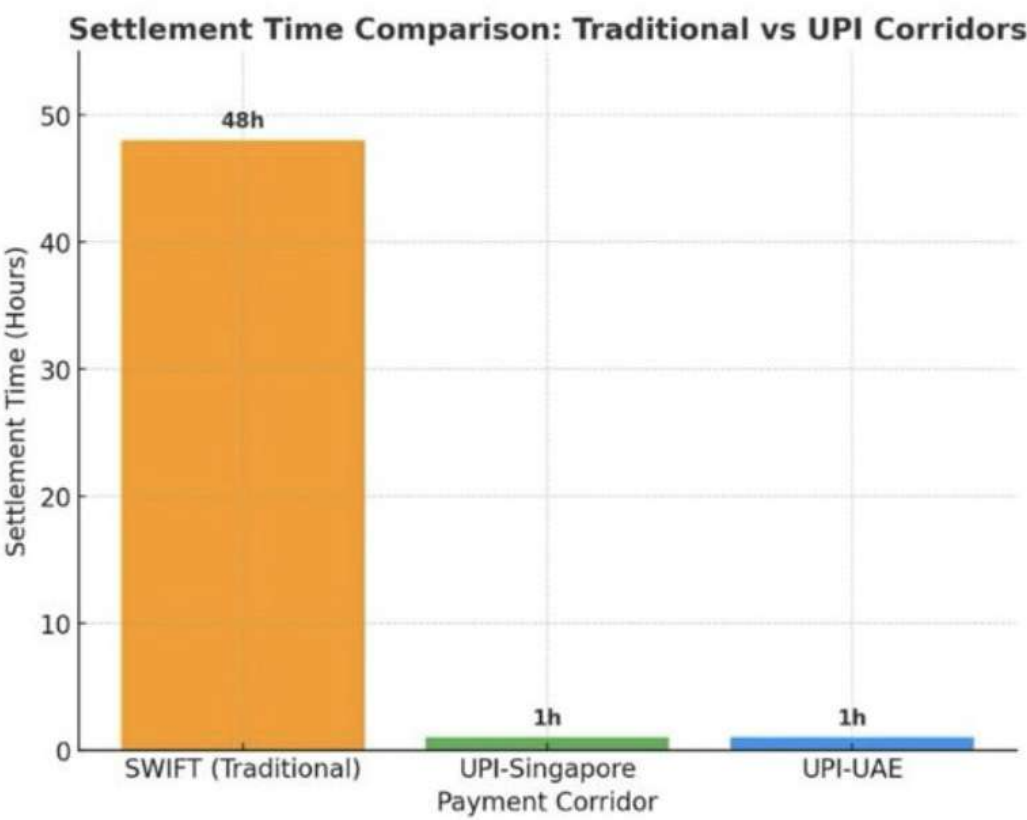
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CASE EVIDENCE AND DATA ANALYSIS

By 2024, India's UPI handled more than INR 15 trillion in transactions every month (NPCI, 2024). According to studies, the average cost per transaction for UPI is almost zero, while the costs for cards range from two to three percent, and those for traditional remittances range from five to seven percent. Real-time transfers between Indian and Singaporean accounts are made possible by Singapore's PayNow-UPI linkage (2023), which lowers expenses by less than 3% (MAS, 2023). Strong remittance flows from Indian workers are a benefit of the UAE corridor; preliminary pilots show that settlement times have decreased from two days to less than an hour. Bhutan improved transactions pertaining to tourism by implementing UPI for merchant payments. Nepal increased transaction volumes by integrating UPI QR codes for Indian tourists (IFC, 2025). Foreign exchange management, AML/CFT compliance, and disparities in regulatory standards are still obstacles, though.

Corridor	Avg. Cost Reduction	Settlement Time	Use Case
Singapore	<3%	<1 hr	Worker remittances
UAE	Under pilot	<1 hr	Gulf remittances
Bhutan	N/A	Real-time	Tourism payments
Nepal	N/A	Real-time	Tourist QR adoption





FINDINGS

According to the analysis, UPI considerably lowers transaction costs when compared to conventional payment methods, where typical remittance fees hover around 5–7%. Network effects show UPI's potential scalability, while its near-zero cost model and real-time settlement show its technical efficiency. With settlement times shortened from two days to less than an hour, cross-border pilots with Singapore and the UAE demonstrate quantifiable improvements in speed and affordability. Similarly, UPI's role in extending financial access is highlighted by Bhutan and Nepal's adoption of it for retail and tourism payments. However, ongoing issues such as currency conversion, AML/CFT compliance, and disparate regulatory frameworks suggest that multilateral cooperation and robust policy support will be necessary for wider adoption.

DISCUSSION

UPI is positioned as a viable model for lowering remittance costs and promoting financial inclusion globally due to its domestic success and cross-border pilots. The results support India's leadership in digital payment innovation and are in line with the G20 Roadmap for Improving Cross-Border Payments. Global scalability, however, necessitates intricate agreements across jurisdictions, regulatory harmonisation, and strong cybersecurity measures, in contrast to domestic implementation. The Bank for International Settlements' Project Nexus, which aims to connect real-time payment systems globally, can learn a lot from UPI's experience. Although there is evidence that UPI has the potential to be a game-changer, its long-term effects will depend on ongoing international collaboration, efficient foreign exchange management, and the capacity to strike a balance between innovation and regulatory protections.

POLICY IMPLICATIONS

The findings imply several policy actionable recommendations: (1) strengthen bilateral and multilateral agreements to expand UPI linkages; (2) harmonize regulatory frameworks for AML/CFT; (3) ensure transparent FX conversion mechanisms; (4) invest in cybersecurity resilience; and (5) support G20 and BIS initiatives for interoperability. These steps could make UPI a cornerstone in the global payment architecture.

CONCLUSION

According to this study, a scalable and economical framework for cross-border payments is offered by India's Unified Payments Interface (UPI). Real-time settlement and almost zero transaction costs have contributed to its domestic success, highlighting its distinct advantages over conventional systems. UPI's potential to lower remittance costs and improve financial inclusion globally is demonstrated by its early partnerships with Singapore, the United Arab Emirates, Bhutan, and Nepal.

However, overcoming obstacles pertaining to cybersecurity, foreign exchange management, and regulatory harmonization will be necessary for wider adoption. UPI has the potential to be a key component of the G20's vision for quicker, less expensive, and more inclusive cross-border payments with effective policy coordination and international cooperation, establishing India as a pioneer in determining the direction of future global financial integration.

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