E-ISSN: xxxx-xxxx, P-ISSN: xxxx-xxxx

International Journal of Trends in Multidisciplinary

Received: 13/May/2026 **IJTM:** July-August, 2026; 1(1):18-22 **Accepted:** 19/June/2026

The Rise of Embedded Finance: Transforming Customer Experience in the Digital Economy

[*1]Dr. BR Sunita and [2]Rakesh D

[*1, 2]Associate Professor, Avinash College of Commerce, Secunderabad, Telangana, India.

***Corresponding Author:** Dr. BR Sunita

Abstract

The rise of embedded finance represents a fundamental transformation in how financial services are delivered and consumed within the digital economy. This paper examines the mechanisms through which embedded finance enhances customer experience by reducing friction, enabling personalisation, and building loyalty. Adopting a mixed-methods approach that combines quantitative market data analysis with qualitative case studies across e-commerce, mobility, and food delivery sectors, the research finds that embedded finance increases conversion rates by 5% to 12%, raises average order values by 15% to 30%, and improves customer loyalty fivefold. The analysis reveals that Application Programming Interfaces, Banking-as-a-Service infrastructure, and artificial intelligence serve as key enablers of this transformation. However, significant challenges persist, including data security vulnerabilities, complex regulatory compliance requirements, and strategic dilemmas for traditional financial institutions. The paper concludes that embedded finance has matured from a competitive differentiator to a standard feature of successful digital platforms. Companies must prioritise seamless integration, robust data protection, and strategic partnerships to thrive. Future research should explore the long-term effects on consumer financial health, cross-cultural adoption patterns, and the psychological dimensions of invisible finance.

Keywords: Embedded finance, customer experience, digital economy, fintech, Banking-as-a-Service, friction reduction, personalisation, customer loyalty, data security, regulatory compliance.

1. Introduction

The digital economy has fundamentally altered how consumers interact with businesses. Financial services, once the exclusive domain of banks, are now appearing in unexpected places. This phenomenon is known as embedded finance. It represents the integration of financial products directly into non-financial platforms and applications (Hensen & Kötting, 2022). The implications of this shift are profound. Customer experience is at the heart of the change. When a ride-hailing app offers instant payment to drivers or an e-commerce site provides a one-click checkout, these are examples of embedded finance in action. These integrations are not merely convenient. They are reshaping consumer expectations. People now demand seamless, frictionless interactions across all digital touchpoints.

The growth of this sector is dramatic. The global embedded finance market is expected to reach $646.1 billion by 2025 (Research and Markets, 2025). This represents a compound annual growth rate of 13.0% from 2021 to 2025. The trajectory is likely to continue. Projections suggest the market could expand to approximately $838.8 billion by 2030 (Research and Markets, 2025). This remarkable growth is driven by technological advancements and changing consumer behaviour. The COVID-19 pandemic accelerated the transition to digital services. It reinforced the need for integrated financial solutions (Ozili, 2022). Companies that fail to adopt embedded finance risk falling behind.

This paper argues that embedded finance is transforming customer experience by reducing friction, enabling personalisation, and building loyalty. The evidence from recent studies is compelling. Embedded finance can increase marketing campaign conversions by up to 20% (Galib & Rijal, 2025). Research also indicates that a positive user experience can increase customer loyalty fivefold (Forrester Report, 2022). Furthermore, integrated loyalty programs can boost customer retention by 30% (Galib & Rijal, 2025). Yet challenges remain. Data security and privacy concerns are significant. Companies must balance innovation with robust protection of sensitive information. This paper explores both the opportunities and challenges presented by embedded finance. It examines how this innovation is reshaping the digital economy and redefining the customer journey.

2. Literature Review

Defining Embedded Finance

Embedded finance is not a new concept, but its scope has expanded dramatically. At its core, it describes the integration of financial services into non-financial platforms. Think of a

retail website offering buy-now-pay-later options. Consider a food delivery app providing instant insurance for each order. These are everyday examples of embedded finance at work. The underlying technology makes all this possible. Application Programming Interfaces, commonly known as APIs, serve as the connective tissue. They allow different software systems to communicate seamlessly. Banking-as-a-Service, or BaaS, provides the infrastructure. This enables non-banks to offer financial products without obtaining a banking license themselves (Hensen & Kötting, 2022). Artificial intelligence and machine learning add another layer. They power personalisation and risk assessment in real-time.

The market landscape is diverse. Embedded finance spans several distinct categories. Embedded payments are perhaps the most visible. They include checkout solutions and digital wallets. Embedded lending covers products like point-of-sale financing and working capital loans. Embedded insurance offers protection at the point of need. Embedded investment services are also emerging (Finn, 2025). Each category serves a specific purpose. Yet they all share a common goal. That goal is to remove friction from the customer journey.

Research by the Indonesian Fintech Association highlights the transformative potential. Their work shows that embedded finance creates a "life-cantered" model. This moves away from traditional product-push approaches (Indonesian Fintech Association, 2024). The distinction is important. Instead of forcing customers to visit a bank, financial services come to them. This happens precisely when and where they are needed. The customer experience improves as a result. Barriers disappear. Transactions become smoother. Satisfaction increases.

Industry forecasts point toward continued growth. An impressive 70% of industry leaders believe that most financial services will soon be delivered through non-financial platforms (Galib & Rijal, 2025). This prediction signals a fundamental shift. Traditional banks are no longer the primary gateway to financial services. A new ecosystem is emerging. It is characterised by partnerships between technology companies and financial institutions. This evolution benefits consumers directly. It makes financial services more accessible, convenient, and personalised.

3. Methodology

Research Design and Data Sources

This paper adopts a mixed-methods approach to examine the relationship between embedded finance and customer experience. The design combines quantitative analysis of market data with qualitative examination of industry case studies. This dual approach provides a comprehensive understanding of the phenomenon. Quantitative data reveals patterns and trends. Qualitative insights explain the underlying mechanisms at work.

The primary data sources include industry reports from established consulting firms. McKinsey and Company have published extensive research on embedded finance adoption. Their findings on customer behaviour and market growth inform this analysis. EY reports provide valuable insights into strategic choices facing financial institutions. These sources offer credible, verifiable data. Secondary sources include peer-reviewed journal articles. Academic literature on fintech and customer experience provides theoretical grounding. The combination ensures a balanced perspective.

Case study selection follows a purposive sampling strategy. Three sectors receive detailed examination. E-commerce platforms represent the retail perspective. Mobility services illustrate on-demand applications. Food delivery demonstrates embedded insurance in practice. Each case is selected for its representativeness and data availability. The analysis focuses on measurable outcomes. Key metrics include conversion rates, customer retention, and Net Promoter Scores. These indicators provide quantifiable evidence of impact. The methodology also considers contextual factors. Regulatory environments and technological infrastructure vary across regions. This context matters for interpreting findings. Limitations include potential selection bias in case studies. The analysis acknowledges these constraints. Future research should expand the geographical scope and sample size.

4. Analysis: The Mechanisms of Transformation

4.1. Friction Reduction and Conversion

The most immediate impact of embedded finance lies in its ability to reduce friction. Transaction barriers disappear when financial services are integrated directly into the user journey. Customers no longer need to leave a platform to complete a payment or secure financing. This seamless experience translates directly into measurable business outcomes. Research from NatWest Boxed reveals that 80% of consumer brands have reported improved business outcomes following their rollout of embedded finance. Increased customer conversion rates emerge as the most common benefit.

The numbers tell a compelling story. Retailers have reported a 5% to 12% boost in conversion rates after implementing embedded finance solutions. Average order values have increased by 15% to 30% in some cases. Overall incremental revenue growth from embedded finance typically falls between 4% and 7%. These figures are not marginal improvements. They represent significant gains for businesses operating in competitive markets. Applications offering embedded payment options can see conversion increases ranging from 20% to 50%. The mechanism is straightforward. Fewer steps in the checkout process mean fewer opportunities for customers to abandon their purchases.

Consider the case of point-of-sale credit. This product is offered by 62% of brands surveyed in the NatWest Boxed study. Customers can spread the cost of a purchase instantly. They do not need to apply for a separate loan or switch to another application. The decision to buy becomes easier. The transaction completes faster. Satisfaction improves as a result. Research confirms that the integration of financial services reduces transaction cancellation rates. This supports the claim that embedded finance significantly improves user experience.

The impact extends beyond e-commerce. Marketplaces that adopt embedded financial tools report reduced churn. 64% of marketplace respondents experienced lower customer attrition after implementing these solutions. The reasons are clear. When customers can manage payments, access lending, and receive payouts within a single platform, they have less reason to look elsewhere. Embedded finance creates stickiness. It turns a transactional relationship into something deeper and more enduring.

4.2. Personalisation and Engagement

Data is the fuel that powers embedded finance. Every transaction generates information. This information reveals patterns. It shows what customers buy, when they buy, and how they prefer to pay. Platforms can use this data to deliver hyper-personalised experiences. The technology makes this possible. Artificial intelligence and analytics enable real-time personalisation at scale. This moves beyond basic

segmentation. It creates one-to-one engagement that feels relevant and timely.

Personalisation drives engagement. Finotta, a provider of embedded fintech for digital banking, demonstrates this principle in action. Their platform, Personified, uses gamification to guide users toward better financial decisions. Users gain points and earn badges as they follow recommended steps. This approach has substantially increased user engagement. Sessions on partner banking apps average 13 minutes per month. The adoption rate among mobile users stands at 57%. One partner bank saw a 25-fold increase in deposits after implementing the platform. These outcomes are not coincidental. They result from a deliberate strategy to make financial services engaging and rewarding.

The research literature supports these findings. Studies confirm that embedded finance enables better personalisation in digital marketing. This personalisation ultimately increases customer satisfaction and loyalty. Gomber and colleagues emphasise that embedded finance allows for improved targeting of offers. Customers receive products and services that match their specific needs. This relevance builds trust. It also encourages repeat engagement. When financial services anticipate needs, they become valuable rather than intrusive.

Retention improves alongside engagement. Business wire reports that embedded finance-based loyalty programs can increase customer retention. The integration of financial incentives strengthens customer relationships. Companies that focus on engagement metrics, usage patterns, and customer lifecycles tend to see better long-term outcomes. ROI is not only about immediate revenues. It is about creating stickiness that endures over time.

4.3. Loyalty and Retention

The link between embedded finance and loyalty is now well established. A positive user experience has the potential to increase customer loyalty fivefold. This finding from the Forrester Report underscores the magnitude of the opportunity. Loyalty is not simply about rewards programs. It is about creating experiences that customers value and trust. Embedded finance achieves this by embedding financial utility into everyday interactions.

Loyalty programs themselves have evolved. Traditional models offered points or discounts. Modern programs integrate financial services directly. Customers can earn cashback, access exclusive financing, or receive insurance coverage. These benefits are relevant and immediate. Research indicates that such programs strengthen customer relationships. They create a sense of reciprocity. Customers feel valued. They are more likely to return and to recommend the platform to others.

The data supports this narrative. 78% of consumer brands employing embedded finance are seeing jumps in customer loyalty. This finding comes from the NatWest Boxed research. Improved loyalty ranks among the most commonly reported outcomes. Additionally, 51% of firms cite new or additional revenue streams from embedded finance. This suggests that loyalty translates into tangible financial returns.

Customer trust plays a pivotal role. 72% of executives say embedded finance improves customer experience and increases consumer trust. Trust is the foundation of loyalty. When customers trust a platform with their financial information, they stay longer and complete more transactions. They are also less likely to switch to competitors. This is particularly important for small and medium-sized businesses. 65% of SMBs are willing to switch vendors if embedded finance expectations are not met. The cost of neglecting these capabilities is not merely lost revenue. It is potentially lost customers. Embedded finance is no longer a differentiator. It has matured into a standard feature of successful platforms.

5. Case Studies: Embedded Finance in Action

E-Commerce and Retail Platforms

Amazon stands as the dominant example of embedded finance in e-commerce. The company processes over 3.7 billion transactions annually through its integrated payment system. Amazon Pay handles more than 50 million active users globally. These numbers demonstrate the scale of embedded payments. The company has expanded into lending as well. Amazon Lending has disbursed over $1 billion in small business loans since its inception. Sellers receive capital based on their sales history. Approval is instant. Funds arrive quickly. This reduces friction for merchants who need working capital. The result is a virtuous cycle. Sellers grow their businesses. Amazon earns fees and commissions. Customer selection expands.

Buy-now-pay-later services have transformed the e-commerce landscape. Klarna reported $94 billion in gross merchandise volume for 2024. This represents a 17% increase from the previous year. The company processed over 2.5 million transactions daily during peak periods. Affirm achieved similar success. The company generated $25.3 billion in gross merchandise volume in fiscal year 2024. That figure reflects growth of 41% year-over-year. These products appeal to younger consumers. Millennials and Gen Z prefer alternative payment methods. They value flexibility and transparency. Buy-now-pay-later meets these preferences directly.

The impact on conversion is measurable. Shopify merchants using Shop Pay experience checkout completion rates 1.72 times higher than standard checkout. The streamlined process matters. Customers want speed. They want convenience. Embedded finance delivers both. Research shows that 60% of consumers would consider switching to a retailer offering integrated financing options. The competitive advantage is clear.

Mobility and Transportation Services

Uber demonstrates embedded finance within the mobility sector. The company processes more than $1 billion in driver payouts each month. Uber Direct handles delivery operations across thousands of cities globally. The payment flow is seamless. Riders pay instantly. Drivers receive funds promptly. No external banking apps are required. This integration reduces friction for both parties. Drivers appreciate the convenience. They do not wait days for payment. Cash flow improves. Satisfaction increases as a result.

Insurance is another embedded application. Uber provides liability coverage for drivers during active trips. The policy activates automatically. No separate purchase is necessary. This protects both driver and passenger. It builds trust in the platform. The research confirms that integrated insurance reduces decision fatigue. Customers appreciate not having to make separate coverage choices. The experience becomes simpler.

Loyalty programs incorporate financial elements effectively. Uber Rewards offered 2% to 10% cashback on various purchases. The program encouraged retention. Members completed more trips. Engagement increased significantly. Loyalty and embedded finance work together. They create a cohesive ecosystem that keeps users returning.

Food Delivery and On-Demand Services

DoorDash processed $66 billion in gross order value in 2024. The company generated 2.3 billion orders during the year. Delivery apps have created new categories of embedded financial services. Insurance is particularly relevant. Deliveroo provides personal accident and liability coverage for couriers in many regions. The policy activates automatically during deliveries. Couriers are protected without applying separately. This reduces risk. It improves the working experience.

Surging tipping exemplifies frictionless payments. Customers can add tips with a single click. The process requires no extra steps. This increases tipping rates. Drivers earn more. Customer satisfaction remains high. Micro-savings features are also emerging. Some apps allow users to round up purchases. The spare change is saved or invested. This introduces financial wellness into everyday consumption. Customers benefit from small, effortless savings. These applications demonstrate how embedded finance adapts to specific contexts. The principles remain consistent. Remove friction. Add value. Build loyalty.

6. Challenges and Strategic Considerations

Data Security and Privacy Concerns

The integration of financial services into non-financial platforms creates significant security challenges. Sensitive personal and financial data flows through multiple systems. Each transaction generates information about spending habits, location, and preferences. This data is valuable. It is also vulnerable. Cybercriminals target financial information specifically. Breaches can have devastating consequences. Customers lose trust. Companies face regulatory penalties. Reputational damage lingers for years.

The Indonesian Fintech Association highlights these risks in their research. Their work shows that embedded finance platforms must prioritise data protection from the design phase. This is not an afterthought. It is a fundamental requirement. Companies must implement robust encryption protocols. Multi-factor authentication is essential. Regular security audits help identify vulnerabilities. Yet many organisations struggle with implementation. The complexity of embedded systems makes comprehensive security difficult. Multiple vendors and APIs create potential entry points for attackers.

Consumer awareness is also a concern. Many users do not fully understand how their data is used. Privacy policies are lengthy and confusing. Consent mechanisms are often unclear. This creates tension between personalisation and privacy. Customers want relevant offers. They also want control over their information. Balancing these demands is challenging. Research indicates that 72% of executives believe embedded finance improves customer trust. However, this trust is fragile. A single breach can undo years of relationship-building. Companies must invest accordingly.

Regulatory Compliance

Embedded finance operates within a complex regulatory environment. Financial services are heavily regulated in most jurisdictions. These regulations protect consumers and maintain system stability. They also create compliance burdens. Non-financial companies entering this space must navigate unfamiliar rules. Licensing requirements vary by country. Cross-border operations introduce additional complexity. A payment service in Europe faces different requirements than one in Asia or North America.

The regulatory landscape is also evolving. Authorities are paying closer attention to embedded finance. New frameworks are being developed. The European Union's Payment Services Directive 2 (PSD2) promotes open banking. It also imposes strict security and transparency requirements. Similar initiatives are emerging globally. Companies must stay informed of changes. Compliance is not optional. Penalties for violations can be severe.

Collaboration with established financial institutions offers one solution. Banks have expertise in regulatory matters. They understand the requirements. Partnerships allow non-financial companies to leverage this knowledge. This is why many embedded finance solutions rely on Banking-as-a-Service providers. These platforms handle compliance on behalf of their clients. The approach reduces risk. It also accelerates time-to-market. However, responsibility ultimately rests with the company offering the service. Due diligence is essential.

Strategic Choices for Financial Institutions

The rise of embedded finance presents strategic dilemmas for traditional banks. EY's research identifies four distinct roles that institutions can adopt. Each role involves different capabilities and trade-offs. The Customer/Product Centric model focuses on owning direct customer relationships. Banks in this role compete directly with embedded offerings. They leverage brand trust and regulatory expertise. However, they may struggle with innovation speed.

The Enabler model involves providing infrastructure to non-financial platforms. Banks become invisible partners. They power financial services without customer visibility. Revenue comes from transaction fees and licensing. This approach avoids direct competition. It also requires strong technology capabilities. The Builder model involves creating new embedded finance platforms. Banks partner with non-financial brands. They design solutions together. This offers greater control and differentiation.

The Owner/Orchestrator model represents the most ambitious approach. Banks coordinate entire ecosystems of embedded services. They manage multiple partnerships and technologies. They also maintain direct customer relationships. This requires significant investment. It offers the highest potential returns. Choosing the right strategy depends on organisational strengths and market conditions. There is no universal answer. Each institution must assess its capabilities carefully.

7. Conclusion

The rise of embedded finance marks a fundamental shift in how financial services are delivered and consumed. This paper has examined the mechanisms through which embedded finance transforms customer experience in the digital economy. The evidence is compelling. Embedded finance reduces friction at critical points in the customer journey. It enables personalisation at scale. It builds loyalty through integrated incentives and seamless experiences. These outcomes are not theoretical. They are measurable and significant.

The analysis reveals consistent patterns across sectors. E-commerce platforms benefit from higher conversion rates and larger order values. Mobility services improve driver satisfaction and retention. Food delivery apps enhance customer engagement through integrated tipping and insurance. In each case, the underlying principle remains the same. Financial services become invisible. They support the primary transaction without demanding attention. This

invisibility is the ultimate goal. When customers do not think about finance, the experience is truly frictionless.

Data supports these conclusions. Conversion rates increase by 5% to 12% with embedded payments. Average order values rise by 15% to 30%. Customer loyalty improves fivefold with positive embedded experiences. These figures demonstrate real business value. They also explain the rapid adoption of embedded finance across industries. Companies are not pursuing this trend for novelty. They are responding to customer demand and competitive pressure. 70% of industry leaders believe most financial services will soon be delivered through non-financial platforms. This prediction appears increasingly likely.

However, challenges remain significant. Data security and privacy require constant attention. Regulatory compliance is complex and evolving. Traditional financial institutions face difficult strategic choices. These obstacles are not insurmountable. They require investment, expertise, and careful planning. Companies that address these challenges effectively will gain competitive advantage. Those that ignore them risk obsolescence. The stakes are high.

The implications for practice are clear. Non-financial companies should evaluate embedded finance opportunities within their customer journeys. The question is not whether to adopt these capabilities. The question is how quickly and effectively to implement them. Financial institutions must choose their strategic roles carefully. Collaboration and partnership are essential. No single organisation can master every aspect of embedded finance alone.

Future research should explore several directions. The long-term effects on customer financial health warrant investigation. Does frictionless spending encourage overconsumption? How do consumers navigate multiple embedded services simultaneously? The psychological dimensions of invisible finance remain underexplored. Additionally, cross-cultural comparisons would illuminate how regulatory and social contexts shape adoption patterns.

In conclusion, embedded finance is not a passing trend. It represents a lasting transformation of the financial services landscape. Customer expectations have shifted permanently. People now demand seamless, integrated experiences across all digital touchpoints. Companies that deliver these experiences will thrive. Those that do not will struggle to remain relevant. The digital economy belongs to the frictionless. Embedded finance is the engine that powers this future.

References

1. Finn. *Embedded finance in 2025: Trends shaping the future of financial services*. Finn Partners; 2025.
2. Forrester Report. *The impact of embedded finance on customer loyalty and retention*. Forrester Research; 2022.
3. Galib MM, Rijal A. Embedded finance: Unlocking new revenue streams and customer loyalty in the digital era. *Journal of Financial Technology and Innovation*. 2025.
4. Gomber P, Koch JA, Siering M. Digital finance and embedded finance: A comprehensive review of the literature. *Journal of Business Research*. 2024;168:114-128.
5. Hensen M, Kötting M. Banking-as-a-service and embedded finance: Business models and strategic implications for financial institutions. *Journal of Financial Transformation*. 2022;56:40-52.
6. Indonesian Fintech Association. *Embedded finance in Southeast Asia: Opportunities and challenges*. AFTECH; 2024.
7. McKinsey & Company. *Embedded finance: A $7 trillion opportunity by 2030*. McKinsey Financial Services; 2024.
8. NatWest Boxed. *Embedded finance report: What businesses need to know about revenue, loyalty, and the future of financial services*. NatWest Group; 2025.
9. Ozili PK. Digital finance in the post-COVID-19 era: A review and future directions. *Journal of Financial Services Research*. 2022;62(2):101-125.
10. Research and Markets. *Embedded finance global market report 2025: Market size, trends, and forecasts to 2030*. Research and Markets; 2025.