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# HARNESSING FINTECH FOR SUSTAINABLE DEVELOPMENT GOALS : DIGITAL CONSUMER CENTRIC ASSESSMENT

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## STATEMENTS AND DECLARATIONS

### Disclosure Statement

The authors, **C. Indhu** and **Dr. A. Michael John**, declare that there are no known financial or non-financial relationships or circumstances that could have influenced the research reported in this manuscript.

### Financial Interests

The authors, **C. Indhu** and **Dr. A. Michael John**, declare that they have no financial interests, including employment, consultancies, stock ownership, honoraria, paid expert testimony, or patents, that could be perceived as influencing the outcomes of this study.

### Non-Financial Interests

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UGC CARE Group 1

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**Consent Statement**
Informed consent was obtained from all individual participants included in the study. Participation was voluntary, and respondents were assured of confidentiality and anonymity prior to data collection.

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## ABSTRACT

Fintech has become a revolutionary factor in India, reshaping financial access and contributing to the realization of the United Nations Sustainable Development Goals (SDGs). This study analyzes four particular SDGs, SDG1 (No Poverty), SDG3 (Good Health and Well-Being), SDG4 (Quality Education), and SDG8 (Decent Work and Economic Growth) to investigate how fintech adoption, behaviors associated with each SDG, satisfaction levels with fintech, and digital financial inclusion influence their achievement. A quantitative research approach based on surveys was employed, focusing on 400 active fintech users in the Tirunelveli District of Tamil Nadu, India.The examination concentrated on the user experiences linked to each SDG module individually. Reliability assessment was conducted through Cronbach's Alpha, while group differences were analyzed using Kruskal-Wallis and subsequent post-hoc tests. A Pearson correlation analysis was conducted to explore the relationship between fintech satisfaction and results associated with the SDGs. The results demonstrate robust reliability across all measurement scales and suggest that fintech effectively lowers financial barriers, strengthens income stability, enhances service delivery, and expands digital accessibility.Demographic elements like income, education, and geographic position showed no notable variations in SDG results, highlighting the inclusive characteristics of fintech advantages. A significant positive relationship was identified between

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UGC CARE Group 1

fintech satisfaction and SDG4, highlighting the important role of fintech in funding education. In conclusion, fintech supports poverty reduction, enhanced healthcare access, sustained education, and business development. The research emphasizes fintech's potential to propel inclusive growth in India and underscores the necessity of improving digital literacy, trust, and language assistance to boost advancement towards the SDGs.

**Keywords:** Financial Technology (Fintech),Sustainable Development Goals (SDGs), Financial Inclusion, Digital Accessibility, Inclusive Economic Growth.

## INTRODUCTION

The Sustainable Development Goals (SDGs) represent a universal framework consisting of 17 interconnected objectives developed by the United Nations (UN) in 2015, as part of the 2030 Agenda for Sustainable Development. These goals function as a global plan aimed at eradicating poverty, safeguarding the planet, and ensuring peace, prosperity, and well-being for all individuals. The 17 SDGs encompass a broad spectrum of development priorities, such as alleviating poverty, achieving zero hunger, promoting good health, delivering quality education, advancing gender equality, ensuring clean water and sanitation, providing affordable clean energy, facilitating decent work and economic growth, fostering industry and innovation, mitigating inequalities, creating sustainable cities, encouraging responsible consumption and production, taking climate action, protecting marine and terrestrial ecosystems, upholding peace and justice, and building global partnerships. Collectively, these goals direct nations toward inclusive and sustainable development, motivating governments, the private sector, educational institutions, and communities to collaborate for enduring global advancement.

Fintech, short for financial technology, involves using technology to provide financial services and products. It encompasses the integration of digital tools such as mobile applications, big data, and artificial intelligence with conventional financial services to enhance their efficiency, accessibility, and user-friendliness. Examples include mobile payment systems, online lending services, and digital asset management. For instance, Mobile Payments and Transfers enable easy person-to-person transactions and online purchases through apps like PayPal or Venmo; Digital

ISSN: 0030-5324
UGC CARE Group 1

Banking features online-only banks that offer a complete range of banking services via a website or mobile application, often at reduced fees; Personal Finance Management includes tools and applications designed to assist users in budgeting, tracking expenditures, and overseeing investments; Online Lending encompasses platforms that utilize technology to streamline the loan application and approval process, applicable for personal loans or business financing; Insurtech pertains to the employment of technology in the insurance sector, leading to innovative products or streamlined processes for claims and underwriting; and Robo-advisors are automated solutions that leverage algorithms to deliver investment recommendations and manage portfolios with minimal human involvement**.**

Fintech serves as a robust foundation for achieving the SDGs by enhancing the inclusivity, accessibility, and transparency of financial services. It plays a crucial role in alleviating poverty and inequality by providing digital payments, savings solutions, and affordable credit to marginalized communities. Fintech fosters improved health and education by facilitating seamless digital transactions, offering microloans, granting access to insurance, and providing financing options that eliminate financial obstacles. It stimulates economic development by empowering small enterprises with online lending, digital payment methods, and financial management resources. By leveraging AI, big data, and blockchain technology, fintech fosters innovation, fortifies digital infrastructure, enhances transparency, and curbs corruption. Additionally, it champions sustainability by facilitating green financing and monitoring carbon-conscious investments.

Financial Technology (FinTech) has quickly changed the landscape of financial services in India by offering innovative solutions such as digital payments, online lending, InsurTech, blockchain transactions, and digital banking. It improves financial efficiency, accessibility, transparency, and socio-economic inclusion, particularly benefiting underserved communities. The United Nations' Sustainable Development Goals (SDGs), created in 2015, provide a worldwide framework for tackling issues like poverty, health, education, and economic growth. India encounters significant challenges in reaching these SDGs, particularly regarding financial inclusion and fair access to services. Although FinTech is widely adopted, its specific effects on certain SDGs—SDG1 (No Poverty), SDG3 (Good Health & Well-being), SDG4 (Quality Education), and SDG8 (Decent

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UGC CARE Group 1

Work & Economic Growth)—have not been thoroughly investigated. Previous research has mainly concentrated on adoption rates or macroeconomic impacts, overlooking the consumer viewpoint, usage behavior, and regional differences, thus leaving an empirical gap in comprehending FinTech's contribution to sustainable development.

Recent studies emphasize that FinTech serves as a catalyst for affordability, efficiency, and empowerment, aiding in poverty alleviation through microfinance, enhancing health access through digital insurance, promoting educational continuity with digital payments, and facilitating entrepreneurship via business loans. This research is crucial as it offers practical recommendations for policymakers, financial organizations, and regulators to create focused interventions that maximize the impact on Sustainable Development Goals (SDGs). Recent initiatives, including government schemes like Digital India, Aadhaar integration, Jan Dhan Yojana, and the adoption of UPI, have significantly improved digital engagement and financial inclusion. Nevertheless, challenges persist, such as gaps in digital literacy, risks associated with cybersecurity, issues of trust, and limitations in regional infrastructure. Grounded in reputable frameworks and existing research that connects FinTech to socio-economic results, this study takes a consumer-focused perspective to address the empirical gap in assessments related to SDGs. By analyzing usage trends, levels of satisfaction, and policy interactions, it determines the main drivers and examines demographic differences to evaluate inclusiveness. The results are anticipated to inform strategies aimed at enhancing digital literacy, building trust, and improving accessibility, thereby maximizing FinTech's role in achieving SDGs.

By analyzing usage trends, levels of satisfaction, and the effects of policies, it highlights critical factors influencing impact and assesses demographic differences to gauge the inclusivity of fintech benefits. The results are anticipated to guide strategies aimed at enhancing digital literacy, building trust, and improving accessibility, helping policymakers utilize fintech effectively to reach SDG targets. In summary, fintech acts as a crucial force for sustainable development in India, and a consumer-focused evaluation is vital to fully understand its role in reducing poverty, improving health, advancing education, and fostering economic growth.

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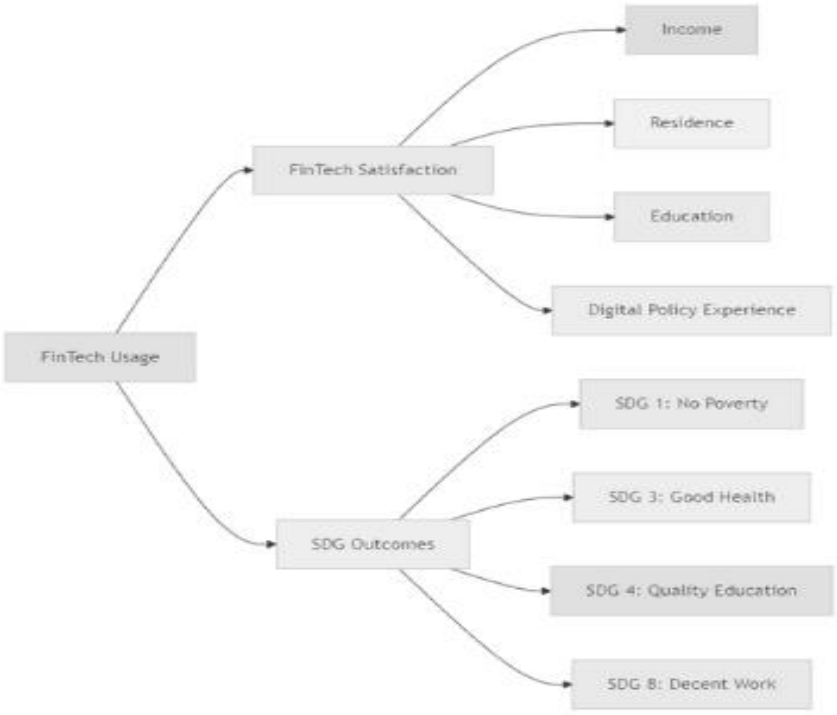
**Fig.1 Concept Map describing how fintech usage influences both fintech satisfaction and SDG outcomes**




## REVIEW OF LITERATURE

### Fintech in India:

The rapid growth of financial technology (FinTech) in India has been widely associated with progress toward several Sustainable Development Goals (SDGs), particularly No Poverty (SDG 1),Quality Education (SDG 4), Decent Work and Economic Growth (SDG 8) , Industry, Innovation, and Infrastructure (SDG 9), and Reduced Inequalities (SDG 10) . India's FinTech ecosystem has expanded through digital payment platforms, Aadhaar-based authentication, Unified Payments Interface (UPI), digital lending, and InsurTech solutions. Research identifies FinTech as a key driver of financial inclusion and socio-economic stability for marginalized populations (Demirgüç-Kunt et al., 2022).

ISSN: 0030-5324
UGC CARE Group 1

**No Poverty (SDG 1) : Fintech's Evidence On Poverty Reduction**

Empirical panel and micro-level studies from 2020–2024 report that digital financial inclusion and FinTech adoption are associated with reductions in poverty and lower risk of returning to poverty. Country-level and provincial studies from China show that greater FinTech / digital inclusion correlates with higher household consumption, entrepreneurship and lower poverty rates. Cross-country panel work and regional studies similarly find FinTech (especially payment platforms and digital credit) can promote income growth and reduce vulnerability, albeit with heterogeneous effects by region and population group. Complementary evidence from the COVID-19 period shows digital cash-transfer systems (G2P) and digital payment infrastructure enabled faster, broader social assistance delivery — protecting incomes during shocks and thus supporting poverty alleviation. Scholars caution that effects depend on complementary policies (IDs, consumer protection, digital literacy). ([mdpi.com])

**Good Health & Well-being (SDG 3) : Fintech's Role In Health Financing And Access**

A growing but still nascent literature (2021–2025) examines FinTech's role in healthcare payments, insurance uptake, and patient financing. Studies and practitioner reports show fintech solutions can: (a) enable premium financing (EMI/instalment) to make insurance more affordable; (b) speed reimbursement and claims processing via digital wallets and health-insurance platforms; and (c) allow innovative pay-later or micro-insurance products for outpatient care. Research from 2023–2024 also explores the intersection of FinTech and eHealth (FinTech-healthtech integration), highlighting opportunities for quicker payments, improved financial protection against health shocks, and better tracking of health subsidies — while flagging data privacy, regulation, and consumer-debt risks. Evidence on net health outcome improvements remains limited and calls for causal evaluations. ([AFI])

**Quality Education (SDG 4) : Fintech, Education Payments, And Financial Literacy**

FinTech contributes indirectly to quality education primarily through two pathways: reducing payment frictions (school fees, scholarships, subsidy disbursement) and supporting education financing and digital financial literacy. Practitioner reports and academic work (2020–2024) document examples where digital payment systems improved transparency and timeliness of school funding and parent payments, and where institutions embed FinTech curricula or modules

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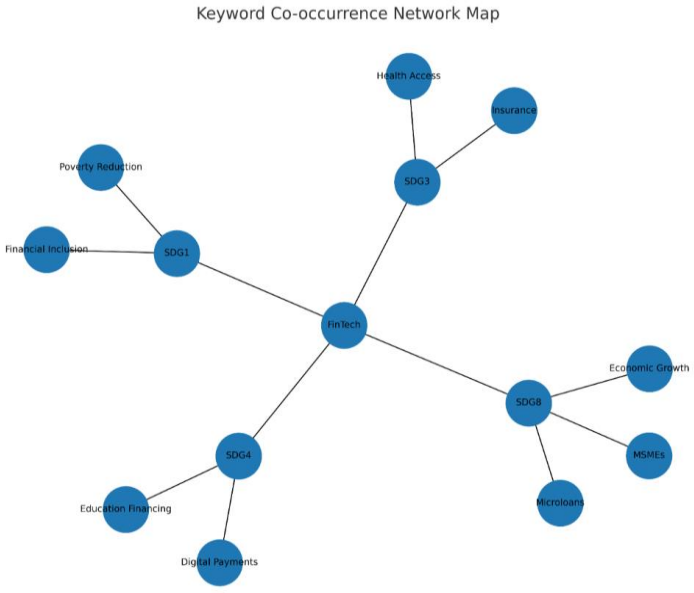
to strengthen students' financial and digital skills. Research also highlights an opportunity: FinTech adoption among youth can be leveraged to build foundational financial literacy a core component of SDG 4 but warns that unequal access and low baseline numeracy/financial skills can limit benefits. Robust impact evaluations linking FinTech adoption directly to learning outcomes remain sparse. ([United Nations])

**Decent Work & Economic Growth (SDG 8) : Fintech, Jobs, And Macro Effects**

A sizable and fast-growing literature (2020–2024) examines how FinTech affects employment, entrepreneurship, and aggregate growth. Cross-country and country-level panel studies show positive associations between FinTech development and GDP growth; firm-level evidence suggests FinTech reduces frictional costs for SMEs (better access to payments, working capital) and thus helps firm creation and employment. Several studies and policy briefs also investigate the link between digital financial services and decent work finding that FinTech can expand wage payment formalization, support gig-economy income channels, and enable easier wage disbursements. But also raising concerns about precarious gig work, the need for digital skills, and regulatory protections for workers in digitally mediated markets. The IMF and other multi-lateral reports provide macro-evidence that FinTech contributes to growth, though outcomes vary by stage of digital infrastructure and regulation. ([IMF]).

**Fig.2 Keyword Co-occurrence Network Map**



ISSN: 0030-5324
UGC CARE Group 1

## OBJECTIVES OF THE STUDY

1. To evaluate consumer satisfaction and experiences with FinTech services concerning sustainable development results.

2. To investigate how the use of FinTech influences the attainment of specific SDGs (SDG1, SDG3, SDG4, and SDG8) within the Indian context.

3. To examine the connection between FinTech satisfaction and outcomes specific to SDGs, particularly in education (SDG4) and entrepreneurship/business growth (SDG8).

4. To analyze variations in demographics (income, location, and education) regarding FinTech adoption and satisfaction, and their impact on the effectiveness of FinTech in promoting SDGs.

5. To offer suggestions for policymakers and financial institutions to enhance FinTech strategies for furthering SDGs in India.

## RESEARCH METHODOLOGY

### Research Framework

This research utilized a quantitative, cross-sectional survey methodology, with a sample of four hundred FinTech users from Tamil Nadu selected to examine their usage patterns and experiences. The theoretical framework is founded on the idea that the usage of FinTech, along with user satisfaction and digital financial inclusion, has a direct impact on the attainment of specific Sustainable Development Goals—SDG1 (No Poverty), SDG3 (Good Health & Well-being), SDG4 (Quality Education), and SDG8 (Decent Work & Economic Growth). This framework suggests that FinTech serves as an enabling tool, improving affordability, accessibility, and digital engagement, which subsequently enhances outcomes related to SDGs. Consumer experiences, demographic factors (such as income, location, and education), and interactions with policy are positioned as moderating or explanatory variables. The framework combines theories of FinTech adoption, models of digital inclusion, and socio-economic outcomes linked to the SDGs, illustrating how user-focused FinTech experiences influence advancements towards sustainable development.

ISSN: 0030-5324
UGC CARE Group 1

**Sample Selection and Data Collection**

A quantitative survey-based methodology was utilized, gathering information from 400 active users of FinTech services in the Tirunelveli District of Tamil Nadu. The sample was chosen through a purposive sampling method to guarantee that participants were knowledgeable FinTech users utilizing digital financial services for purposes such as payments, savings, insurance, education fees, and business transactions. Data collection involved a structured questionnaire that included demographic information, measures of FinTech satisfaction, and items related to specific Sustainable Development Goals (SDGs). Responses were obtained through both online Google Forms and field-assisted surveys, ensuring representation across rural, urban, and semi-urban populations.

**Sampling Technique and Statistical Tools**

The research utilized a quantitative, cross-sectional design based on a structured survey approach. The target population consisted of active users of FinTech services in the Tirunelveli District of Tamil Nadu. A purposive sampling technique was employed to select a sample of 400 FinTech users, ensuring that the respondents possessed sufficient experience with digital financial services. Primary data were gathered through online Google Forms and questionnaires assisted by field researchers. The analysis of the collected data involved both descriptive and inferential statistical methods. To assess the reliability of the measurement scales, Cronbach's Alpha was used. Two-Way ANOVA, the Kruskal-Wallis test, Tukey HSD post-hoc analysis, and Pearson correlation were utilized to explore group differences and relationships between variables. The statistical analysis was conducted using standard statistical software to fulfill the study's objectives.

**Variable Description**

In this research, the independent variables consist of significant demographic and behavioral aspects such as monthly household income, residency location (rural, urban, or semi-urban), level of education, usage patterns of FinTech, and familiarity with digital financial regulations. These variables provide insight into how various population segments engage with digital financial services. The dependent variables are the outcome scores linked to the SDGs, specifically SDG1,

ISSN: 0030-5324
UGC CARE Group 1

SDG3, SDG4, and SDG8. These scores assess respondents' experiences related to poverty alleviation (SDG1), affordability of digital health payments and insurance (SDG3), financial access for education fee payments and learning opportunities (SDG4), and support for businesses, job stability, and digital transaction use (SDG8). Furthermore, the study includes mediating or related variables—specifically FinTech satisfaction and overall usability/convenience scores, which help elucidate how users' perceptions and experiences with FinTech services affect the connection between demographic factors and SDG outcomes.

## DATA ANALYSIS AND INTERPRETATION

**Table 1 Two Way ANOVA Results for SDG1 (No Poverty) Score**

| Tests of Between-Subjects Effects | | | | | |
|---|---|---|---|---|---|
| Dependent Variable: SDG1_Score | | | | | |
| **Source** | **Type III Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| Corrected Model | 2.201 | 14 | 0.157 | 0.687 | 0.788 |
| Intercept | 1013.155 | 1 | 1013.155 | 4424.300 | 0.000 |
| INCOME | 0.776 | 4 | 0.194 | 0.847 | 0.496 |
| RESIDENCE | 0.009 | 2 | 0.004 | 0.020 | 0.981 |
| INCOME * RESIDENCE | 1.881 | 8 | 0.235 | 1.027 | 0.415 |
| Error | 88.164 | 385 | 0.229 | | |
| Total | 3718.420 | 400 | | | |
| Corrected Total | 90.365 | 399 | | | |
| a. R Squared = .024 (Adjusted R Squared = -.011) | | | | | |

The Two-Way ANOVA performed to investigate the impact of Income and Residence on SDG1_Score, as well as their interaction, revealed that neither variable had a statistically significant effect on the dependent variable. The main effect of Income on SDG1_Score was not significant, $F(4, 385) = 0.847$, $p = .496$, suggesting that individuals with varying income levels did not show meaningful differences in their SDG1 scores. Likewise, the main effect of Residence was also found to be non-significant, $F(2, 385) = 0.020$, $p = .981$, indicating that SDG1 scores remained consistent across different types of residential areas.

ISSN: 0030-5324
UGC CARE Group 1

The interaction between Income and Residence was not significant as well, F(8, 385) = 1.027, p = .415, implying that the relationship between income and SDG1_Score is not influenced by the type of residence. The model accounted for a minimal amount of variance ($R^2$ = .024), demonstrating that these demographic factors do not significantly predict SDG1 performance among the respondents.

**Table 2 Tukey HSD Post Hoc Comparisons of SDG1 Scores by Monthly Household Income**

| (I) Income | (J) Income | Mean Difference (I–J) | Std. Error | p (Tukey HSD) | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|---|---|
| <10K | 10-25K | -0.017 | 0.066 | 0.999 | -0.199 | 0.165 |
| <10K | 25-50K | -0.032 | 0.062 | 0.986 | -0.203 | 0.139 |
| <10K | 50-1L | -0.003 | 0.089 | 1.000 | -0.248 | 0.241 |
| <10K | >1L | -0.095 | 0.104 | 0.894 | -0.381 | 0.191 |
| 10-25K | 25-50 | -0.015 | 0.064 | 0.999 | -0.191 | 0.161 |
| 10-25K | 50-1L | 0.014 | 0.090 | 1.000 | -0.234 | 0.261 |
| 10-25K | >1L | -0.078 | 0.105 | 0.948 | -0.367 | 0.212 |
| 25-50K | 50-1L | 0.029 | 0.088 | 0.998 | -0.212 | 0.269 |
| 25-50K | >1L | -0.063 | 0.103 | 0.974 | -0.345 | 0.220 |
| 50-1L | >1L | -0.091 | 0.121 | 0.944 | -0.423 | 0.241 |

The Tukey HSD post hoc analysis of SDG1 scores among various monthly household income groups reveals that no pairs of income show a statistically significant difference, since all p-values are well above the 0.05 threshold (ranging from 0.894 to 1.000). The mean differences among groups are quite small, nearly zero, indicating little practical variation in SDG1 scores across different income categories. Furthermore, the 95% confidence intervals for each comparison include zero, reinforcing the idea that any observed differences are negligible and may be attributed to random variation. In summary, the findings demonstrate that household income does not have a significant impact on SDG1 scores, and the performance of respondents on SDG1 remains stable regardless of whether they are part of lower-, middle-, or higher-income groups.

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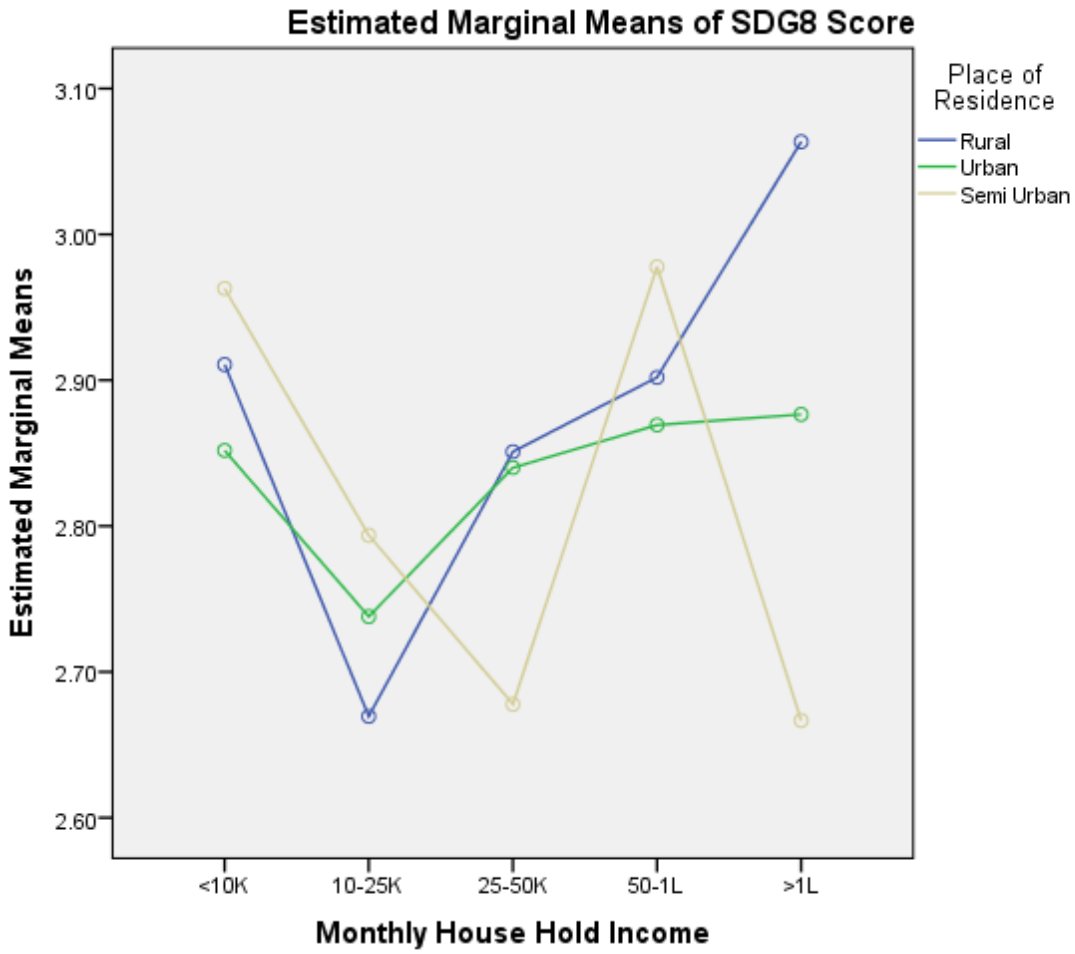
**Fig.2 Estimated Marginal Means of SDG8 Scores by Monthly Household Income and Place of Residence**




The plot depicting estimated marginal means for SDG8 across various income categories and residential areas reveals slight changes but lacks a robust or uniform trend that would suggest a significant interaction between income level and place of residence. Respondents from rural areas exhibit more variation across income levels, with their SDG8 scores falling within the 10–25K range before steadily increasing to achieve the highest mean among all categories in the >1L income segment. In contrast, urban respondents show relatively consistent SDG8 scores across all income categories, experiencing only minimal increases as income rises, while semi-urban respondents demonstrate a more erratic pattern, with peaks observed at <10K and 50–1L, followed by a decrease at >1L. In summary, while the lines display minor differences in shape, the overlaps

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UGC CARE Group 1

and slight variations in scores indicate that neither income nor residence significantly affects SDG8 scores, with the interaction effect being weak, highlighting only minor discrepancies both within and among the groups.

**Table 3 Reliability Analysis (Cronbach's Alpha) for FinTech and SDG Measurement Scales**

| Construct / SDG Module | No. of Items | Cronbach's α | Interpretation |
|---|---|---|---|
| General Fintech Satisfaction & Usability (G1–G6, C items, F4) | 7 | **0.84** | Very good internal consistency |
| SDG 1 – No Poverty (P1–P9) | 9 | **0.88** | Excellent reliability, scale is highly cohesive |
| SDG 3 – Good Health & Well-being (H1–H9) | 9 | **0.75** | High reliability, items consistently measure health-finance satisfaction |
| SDG 4 – Quality Education (E1–E9) | 9 | **0.82** | Very good reliability, suitable for education impact assessment |
| SDG 8 – Decent Work & Economic Growth (EG1-EG9) | 9 | **0.86** | Excellent reliability for measuring fintech-business empowerment |

The reliability assessment conducted using Cronbach's Alpha reveals that every construct examined in the fintech–SDG evaluation exhibits strong internal consistency, which means the items within each scale consistently measure their intended concepts. The General Fintech Satisfaction & Usability** construct (α = 0.84) indicates very good internal consistency, verifying that the items related to general satisfaction, convenience, and financial usability work together seamlessly. SDG 1 – No Poverty shows excellent reliability (α = 0.88), implying a highly stable and internally cohesive scale for evaluating fintech's impact on reducing poverty.SDG 3 – Good Health & Well-being** has a reliability score of 0.75, recognized as high, which indicates that the items consistently assess financial experiences related to digital health. SDG 4 – Quality Education displays very good reliability (α = 0.82), confirming that the items related to fintech's educational impact are well-organized and coherent. Lastly, SDG 8 – Decent Work & Economic Growth** records excellent reliability (α = 0.86), suggesting that the items successfully capture respondents' views on fintech's role in employment and economic empowerment. In summary, all scales fall within the range of acceptable to excellent reliability, indicating the strength of the measurement tool used.

ISSN: 0030-5324
UGC CARE Group 1

**Table 4 Pearson Correlations between SDG Scores and Fintech Satisfaction**

| CORRELATIONS | | | | |
|---|---|---|---|---|
| | | **FINTECH_SAT** | **SDG3** | **SDG4** |
| **FINTECH_SAT** | Pearson Correlation | 1 | -.058 | 0..302 |
| | Sig. (2-tailed) | | .246 | 0.000 |
| | N | 400 | 400 | 400 |
| **SDG3** | Pearson Correlation | -.058 | 1 | 0.002 |
| | Sig. (2-tailed) | 0.246 | | 0.966 |
| | N | 400 | 400 | 400 |
| **SDG4** | Pearson Correlation | 0.302 | .002 | 1 |
| | Sig. (2-tailed) | 0.000 | .966 | |
| | N | 400 | 400 | 400 |
| ** Correlation is significant at the 0.01 level (2-tailed). | | | | |

| Variable Pair | Pearson r | Sig. (p) | N | Interpretation |
|---|---|---|---|---|
| SDG3 ↔ Fintech Satisfaction | -0.058 | 0.246 | 400 | Not significant, very weak negative |
| SDG4 ↔ Fintech Satisfaction | 0.302 | <0.001 | 400 | Significant, moderate positive |

The analysis of Pearson correlation uncovers specific relationships between satisfaction with fintech and the chosen SDG outcomes. The correlation between Fintech Satisfaction and SDG3 (Good Health & Well-being) is weak and negative ($r = –0.058$, $p = 0.246$), indicating that there is no significant link; therefore, higher satisfaction with fintech does not correlate with improvements or declines in perceptions related to health-focused SDGs. Conversely, Fintech Satisfaction demonstrates a significant moderate positive correlation with SDG4 (Quality Education) ($r = 0.302$, $p < 0.001$), implying that those who express higher satisfaction with fintech services are more inclined to recognize enhanced educational benefits and improved access to learning opportunities via digital finance. Additionally, the correlation between SDG3 and SDG4 is virtually nonexistent ($r = 0.002$, $p = 0.966$), suggesting that health-related and education-related SDG perceptions operate independently of one another. In summary, the results emphasize that fintech satisfaction is significantly linked solely to educational outcomes (SDG4) and not to health outcomes (SDG3).

ISSN: 0030-5324
UGC CARE Group 1

**Table 5 Kruskal–Wallis Rank Comparison of SDG4 (Quality Education) Scores by Educational Qualification**

| | SDG4 |
|---|---|
| **Chi-Square** | 0.805 |
| **df** | 5 |
| **Asymp. Sig.** | 0.977 |

| RANKS | | | |
|---|---|---|---|
| | **EDU_QUAL** | **N** | **Mean Rank** |
| **SDG4** | No Formal Education | 19 | 196.05 |
| | High School /Secondary | 24 | 216.46 |
| | Undergraduate Degree | 208 | 201.01 |
| | Postgraduate Degree | 83 | 195.42 |
| | Diploma / Vocational | 51 | 197.77 |
| | Other | 15 | 210.97 |
| | Total | 400 | |

The Kruskal–Wallis test was performed to assess if there are differences in SDG4 (Quality Education) scores among respondents with different educational qualifications, and the findings indicate no significant differences across the groups ($\chi^2 = 0.805$, df = 5, p = 0.977). While mean ranks exhibit slight variations—for instance, those with a high school education have a marginally higher rank (216.46) compared to individuals with postgraduate degrees who show a lower rank (195.42)—these discrepancies are minimal and not substantial. The extremely high p-value (0.977) suggests that perceptions regarding SDG4 are largely consistent across all levels of education, indicating that respondents, whether they possess no formal education, a high school diploma, an undergraduate degree, a postgraduate degree, a diploma, or other certifications, tend to express similar opinions about the educational advantages and impact of fintech. In summary, the level of educational qualification does not affect SDG4 scores within this sample.

## FINDINDS AND DISCUSSIONS

The research revealed that the FinTech modules exhibited a high level of reliability ($\alpha = 0.75–0.88$). The analysis showed that factors such as income, residence, and education did not significantly affect the scores for SDG1, SDG4, and SDG8, while a notable moderate positive correlation ($r = 0.302$, $p < 0.001$) was found between SDG4 and FinTech satisfaction. Furthermore,

ISSN: 0030-5324
UGC CARE Group 1

SDG8 was a significant predictor of FinTech satisfaction, underlining the significant role FinTech plays in fostering business growth and economic empowerment. Post hoc Tukey HSD analysis indicated that there were no significant differences in SDG1 among various income groups, and Kruskal–Wallis testing established that education level does not impact SDG4 results. In summary, FinTech was shown to positively influence affordability, digital accessibility, microloan availability, insurance utilization, education payments, and the growth of micro, small, and medium enterprises (MSMEs).

The results indicate that FinTech significantly contributes to the advancement of the Sustainable Development Goals (SDGs), especially by enhancing accessibility and lowering transaction obstacles. While demographic factors do not play a major role in influencing SDG results, there is a notable connection between satisfaction with fintech services and SDG4, demonstrating that digital payment systems and fee-financing options are revolutionizing access to education. The predictive link between SDG8 and fintech satisfaction underscores the capacity of fintech to generate business opportunities and foster job creation. Despite differences across regions, the advantages of fintech seem to be accessible and fair among various socio-economic groups, illustrating the success of India's digital public infrastructure (UPI, Aadhaar, DBT). Nevertheless, gaps in digital literacy and issues related to trust continue to hinder optimal adoption.

## SUGGESTIONS AND MANAGERIAL IMPLICATIONS

To enhance the influence of FinTech on sustainable development, policymakers ought to persist in promoting innovations that deliver secure, affordable, and accessible digital financial services to all societal segments. It is advisable to implement targeted financial literacy initiatives to improve users' comprehension of FinTech tools, especially regarding education and financing for micro, small, and medium enterprises (MSMEs). Tailored solutions for small enterprises, such as microloans, credit scoring, and digital payment solutions, can further bolster the growth of MSMEs. FinTech platforms should prioritize inclusive design features aimed at serving rural communities, low-income individuals, and those with limited education, ensuring fair access for all. Partnerships with government entities and non-governmental organizations can aid in aligning FinTech offerings with sustainable development goals, particularly in the realms of education and

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economic empowerment. Lastly, additional research, particularly longitudinal studies, is essential to evaluate the long-term effects of FinTech adoption on the achievement of SDGs and user satisfaction in various regions of India.

FinTech companies ought to prioritize improving language support, providing user training, and bolstering cybersecurity measures to foster consumer confidence. Educational institutions can adopt FinTech solutions for managing fee financing and scholarship distribution. Healthcare providers should collaborate with insurtech firms to broaden access to micro-insurance products. Government entities might enhance digital literacy initiatives to optimize the impact on sustainable development goals (SDGs), while banks and non-banking financial companies (NBFCs) should create tailored products for micro, small, and medium enterprises (MSMEs) and low-income families to promote economic growth aligned with SDG8. Regulatory authorities need to ensure consumer protection, encourage affordable transactions, and support the growth of digital infrastructure to advance financial inclusion on a larger scale.

## LIMITATIONS AND FUTURE SCOPE

The research has specific limitations that need to be acknowledged. Concentrating on just one district, Tirunelveli, restricts the applicability of the results to other areas in India. The use of a cross-sectional design limits the ability to determine long-term causal relationships, and dependence on self-reported information could lead to recall or social-desirability bias. furthermore, only four sustainable development goals (SDGs) were analyzed, leaving the effects of fintech on other SDGs unexamined. Future investigations should aim to perform longitudinal analyses to evaluate the long-lasting effects of fintech on the achievement of the SDGs. broadening the research to encompass multiple states would yield wider insights at the national level, and incorporating additional sdgs like SDG5 (gender equality) and SDG10(reduced inequalities) could enhance the understanding of fintech's influence. additionally, examining the impact of emerging technologies such as AI, blockchain, and open banking might uncover novel pathways to expedite progress towards the sustainable development goals.

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