



A Study on Digital Financial Services and Financial Planning Among Young Adults

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ABSTRACT :

Digital financial services (DFS) are now the middle of payments, saving and investing functionality for young adults — but it's not obvious whether they have to do with deliberate financial planning. This study aims to understand the relationship of awareness, accessibility and convenience of DFS along with financial literacy of young adults in Vijayawada, India with respect to investment planning. Structured questionnaire of 15 five-point Likert items was used for primary data collection and 136 respondents (98% were 18-22 years old; 85% were students) were surveyed. The computer software used for chi-square tests, one-way ANOVA and multiple linear regression was Microsoft Excel. The biggest usage was for UPI apps with 85% adoption rate, with 57% of respondents using a maximum of one type of their service. Usage diversity differed by gender ($\chi^2(1) = 8.93$, $p = .003$) and occupation ($\chi^2(1) = 7.17$, $p = .007$). The scores for accessibility and convenience differed between genders ($\eta^2 = .10-.28$). Among the four DFS conditions (accessibility and convenience, awareness, types of the application used, financial literacy), accessibility and convenience was the most significant predictor of investment planning in regression ($\beta = .75$, $p < .001$; model $R^2 = .59$); financial literacy interacted with the DFS–investment planning link (interaction $p = .016$), the number of DFS types used was marginal ($p = .056$), and the link between awareness and planning to invest was not significant ($p = .053$). The accessibility result and the income and occupation gradients were also verified by a sensitivity analysis of the 53 unique response patterns, although the sensitivity results for the average literacy and gender-usage or moderation results did not support this. The study findings indicate that using or being aware of is not a strong predictor of young adult usage; the most important correlate of usage relates to access. The limitations include use of a convenience sample and self-reported cross sectional data/duplicated response patterns in the data.

Keywords: Digital financial services, financial planning, financial literacy, investment planning, young adults, UPI in India.

Introduction

Digital financial services (DFS) have changed how people access and use, and manage financial services and products. Financial Services through Digital Technologies means financial services that are provided using digital technologies such as mobile banking, Internet banking, digital payments, mobile wallets, Unified Payments Interface (UPI), digital investment platforms etc. Financial services are becoming more accessible, convenient and faster, in which internet connectivity, fintech use, and smartphones are playing a significant role, especially on the younger populations. According to the OECD, the presentation identifies young people as among the most active users of DFS and the introduction of digitalisation has increased access to financial products via online and mobile channels.

Digitalisation has been a major factor in impacting the attitude of transactions in India. According to Reserve Bank of India (RBI), digital payment volumes have grown significantly and UPI has played a major role in the revolution of the retail payments system. Financial inclusion has also improved with greater availability of DFS, as the RBI Financial Inclusion Index increased from 43.4 in March 2017 to 64.2 in March 2024, moving towards access, usage and quality.

It is important that young adults are studied for the purposes of DFS, as it is their time to start working, earning some discretionary income, spending in their own name and developing long term spending patterns. DFS provide them with convenient methods of payments, expense tracking, saving, investing and getting financial information. But simple and quick deals can sometimes make people go on a spending spree easily and they get exposed to products that they don't really understand and scams, especially issues relating to privacy. Digital financial products are increasingly available to consumers, which leads to new financial risks that young people are exposed to, according to OECD research.

Financial planning is thus a crucial component of good financial habits. It relates to the need to budget and manage income and expenditure, to save on a regular basis and to plan for the future and investments. Financial literacy is a part of this process as knowledge, skills, attitudes and behaviours lead to financial choices, and the OECD/INFE calls for effective budgeting and long-term planning to assist in building financial resilience and well-being.

Accordingly, the present study attempts to explore the relationship between awareness, accessibility, convenience and usage of DFS with respect to financial planning behaviour of youth and its transactions for savings, investing, budget planning and to achieve future financial goals among young adults.

1.1 Research gap

Current research around DFS has focused mostly in banking productivity and operational efficiency, largely using secondary data from commercial banks. There has been little focus on the customers' side and how awareness, accessibility and convenience of DFS is affecting the financial behaviours of young adults. Many other financial planning outcomes related to the use of a DFS remain under-researched, including the use of savings practices or investment planning and financial decision-making. Since this has not been investigated so far, the present study looks into the association empirically with primary data between DFS and financial planning behaviour among young adults.

1.2 Problem statement

Mobile banking, digital payments, internet banking and fintech applications have revolutionised the way that young adult's access and interact with financial services. While handy, accessible, and efficient, these services do not necessarily provide effective financial planning, especially if they are used on a frequent basis. Many young adults may use and want to make only transactions and payments in DFS and pay little attention to budgeting, saving, planning investments and other long-term decisions. Existing literature has been mainly on the adoption of digital finance, financial inclusion or financial services efficiency, while not much has been done in terms of individual financial planning behaviour. In this study, the researchers explore the link between the concept of DFS and Young Adults' financial planning behaviour, as well as evidence of their financial decision-making practices.

1.3 Research questions

How aware and familiar youths are of DFS.

- What effect does accessibility and ease of use of DFS have on the financial planning behaviour of young adults?
- What are the impacts of using DFS on saving and investment planning behaviour of young adults?
- What are the links between young admissions of defaulters' financial planning and admission's overall financial planning behaviours?

2.1 DFS and banking performance

The majority of available studies include bank-side assessments of DFS. On the other hand, Veluthedan and Kiran (2024) revealed that Indian banking can improve the productivity through mobile banking, online banking, ATM and POS transactions by analysing secondary data. According to Shree et al. (2020), digital technologies, enhance the efficiencies of banking operations, minimize expenses, and optimizes the experiences of the customers; Hameed and Majon (2025) reported that digital transformation of banks leads to improved performance, therefore efficiency and quality in banks operation in the Iraqi banks sector. Kumar et al (2024), observed that digital banking can help enhance operational efficiency, reduce costs, and increase customer access, while presenting cybersecurity challenges. In addition, Gassanova (2025) and Siddquee (2025) also highlight efficiency, customer experience and satisfaction, and cyber security and staff readiness, respectively, as a direct result of digital transformation and fintech use. Murharsito and Muharam (2022) concluded that digital financial inclusion enhances bank efficiency through a reduction in interest-rate spreads. But the findings are not all supportive: In Kenya, Wachira, Kalui and Gathii (2021) found that mobile money and peer-to-peer transfers hurt the profitability of commercial banks and in Egypt, Wagdi and Fathi (2025) noted that financial inclusion dampened the link between DFS and banking stability. The European Central Bank (2021) also pointed out that digital transformation brings benefits of an efficient, resilient and competitive financial sector, but also calls for robust cybersecurity and governance to safeguard these advantages, while Wang et al. (2020) investigated how digital finance contributes to financial efficiency. In all of these studies, the relationship between the financial planning behaviour of young adults and any of the DFS were not explored.

2.2 DFS adoption and financial inclusion

A second group of studies looks at adoption and inclusion. Asif et al. (2023) found that service trust, usability, behavioural intention and social influence positively affect fintech adoption and financial inclusion in India. Mavlutova et al. (2023) reported that digital transformation and digital payments improve financial inclusion and operational efficiency and support savings and account ownership, although at the institutional and sector level. Sharma and Das (2021) found that consumers prefer digital banking to fintech services because of higher security, ease of use and trust, and Stefanelli, Manta and Toma (2023) found that fintech partnerships, API adoption and open banking foster innovation and better customer experiences. Liu et al. (2021) showed that access to DFS promotes green technology advances across Chinese regions. These studies establish that usability, trust and access drive adoption, but they stop at adoption or regional outcomes and do not follow users into their saving, investment and planning decisions.

2.3 The customer and youth perspective

Only a few studies focus on young users. Heitmann, Peterson and Kinzinger (2018) found that young people in Sub-Saharan Africa had high awareness of DFS but that actual usage depended on accessibility, affordability, reliability and ease of use. Pak, Chatterjee and Choung (2026) found that DFS use positively influences financial well-being and life satisfaction, with well-being rather than planning behaviour as the outcome of interest. Neither study examined how awareness, accessibility and convenience relate to saving, investment and planning behaviour among young adults, which is the question addressed here.

3. Conceptual Framework, Objectives and Hypotheses

The conceptual framework (Figure 1) treats DFS, represented by awareness and by accessibility and convenience, as the main explanatory construct and financial planning behaviour, represented by saving behaviour and investment planning, as the outcome. Financial literacy (financial knowledge and financial skills) is expected to influence planning behaviour directly and to condition the way DFS are translated into planning.

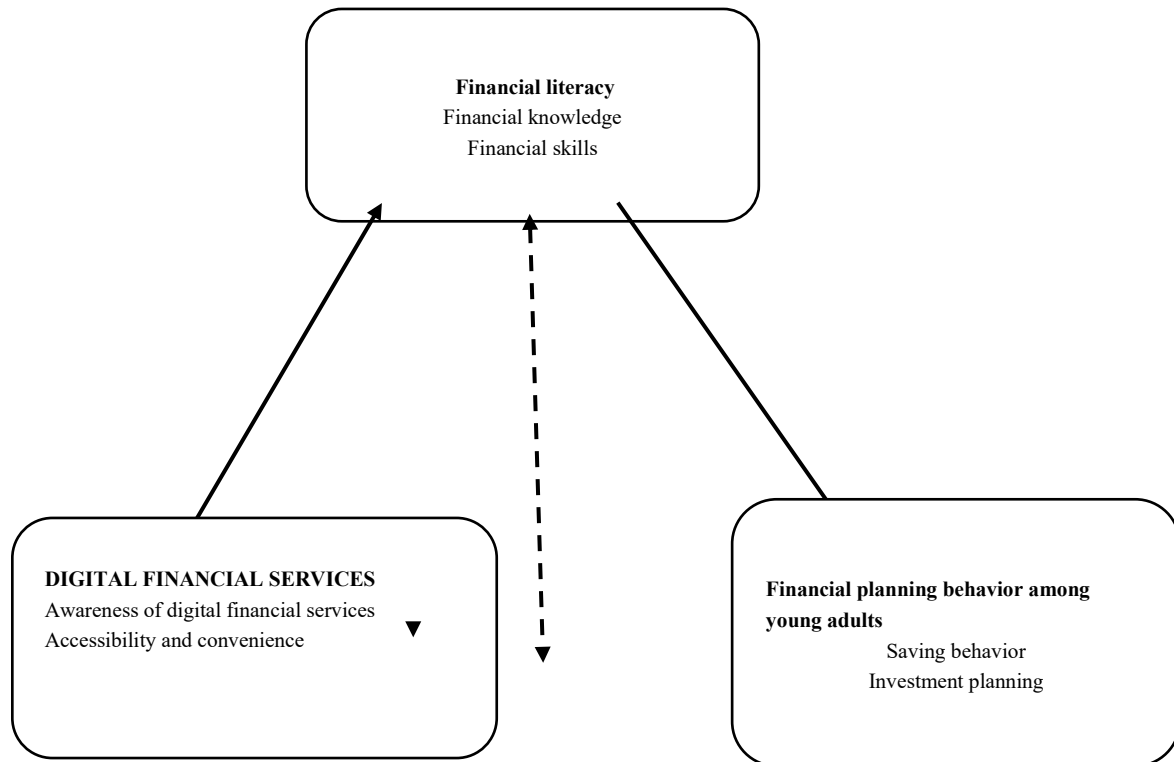


Figure 1. Conceptual framework

3.1 Objectives

1. To assess the impact of financial literacy on the financial planning behaviour of young adults.
2. To understand the effect of accessibility and convenience on saving behaviour and investment planning.
3. To assess how awareness, accessibility and convenience of DFS influence saving and investment planning.
4. To investigate the role of financial literacy in the relationship between DFS and financial planning behaviour.
5. To examine the effect of investment planning on digital financial services.

3.2 Hypothesis

Null Hypothesis(H0_1): Digital financial services have no significant impact on financial access, usage, or inclusion across different age group, gender, and also income levels.

- Alternative Hypothesis(H0_1): Digital financial services have a significant impact on financial access, usage, or inclusion across different age group, gender, and also income levels.
- Null Hypothesis(H0_2): Understanding and accessibility convenience does not have significant effect on saving behavior and investment planning.
- Alternative Hypothesis(H0_2): Understanding and accessibility convenience have significant effect on saving behavior and investment planning.
- Null Hypothesis(H0_3): There is no financial planning behavior among young adults on financial literacy.
- Alternative Hypothesis(H0_3): There is financial planning behavior among young adults on financial literacy.

- Null Hypothesis(H0_4): Financial knowledge does not substantial vary across different demographic factors of age, gender, income level.
- Alternative Hypothesis(H0_4): Financial knowledge has substantial vary across different demographic factors of age, gender, income level.
- Null Hypothesis(H0_5): There is no considerable use of digital financial services and investment planning.
- Alternative Hypothesis(H0_5): There is considerable use of digital financial services and investment planning.

Review of literature:

Valuthaden Kiran (2024) found that mobile banking, online banking, ATM, and pos transactions positively improve the productivity of Indian banks. however, the study focused on bank productivity using secondary data and did not examine customer adoption, awareness or financial planning behavior among young adults.

Asif et al. (2023) found the service trust, behavioral intention and usability positivity influence fintech adoption and financial inclusion in India. However, the study did not examine how digital financial services affect financial planning behavior among young adults.

Stefanelli et al. (2023) found that fintech partnerships, API adoption, and open banking enhance innovation and improve customer experiences. However, the study did not examine the influence of digital financial services on financial planning behavior among young adults.

Pak et al (2026) found that the use of digital financial services positively influences financial well-being and life satisfaction rather than financial planning behavior among young adults.

European central bank (2021) highlighted that digital transformation improves banking, efficiency, resilience, and competitiveness while requiring strong cybersecurity and governance. However, the report focused on banking supervision and resilience rather than the customers financial planning behavior.

Sharama and das (2021) found that consumers prefer digital banking services due to their higher security, ease of use and trust compared with fintech services. However, the study did not examine how digital financial services influence financial planning behavior among young adults.

Hameed and majon (2025) found that digital transformation has a positive effect on banking performance, operational efficiency, and service quality. However, the study focused on the Iraqi banking sector and did not examine financial planning behavior among young adults.

Liu et al. (2021) found that access to digital financial services significantly promotes green technology advancements and is influenced by regional competition. however, the study focused on regional level outcomes and did not examine young adults use of DFS for saving, investment, and financial planning.

Wagdi and Fathi (2025) found the digital financial services significantly improve financial inclusion and influence banking stability, with financial inclusion strengthening this relationship. However, the study focused on the banking stability in Egypt and did not examine young adults saving, investment, or financial planning behavior.

Wachira, kalui, and gathii (2021) found the digital financial services, particularly mobile money and peer to peer transfers, had a negative effect on the profitability of commercial banks in kenya. however, the study focused on the banks performance and did not examine young adults saving, investment, or financial planning behavior.

Heitmann, Peterson, and Kinzinger (2018) found that young people had high awareness of the digital financial services, but actual usage was influenced by accessibility, affordability, reliability, and ease of use. however, the study did not examine how DFS affects saving, investment, and financial planning behavior among adults.

Murharsito and muharam (2022) found that digital financial inclusion improves bank efficiency by reducing interest rate spreads and enhancing operational performance. however, the focuses on the banking efficiency and does not examine the impact of digital financial services on saving, investment, or financial planning behavior among young adults.

Kumar et al. (2024) found the digital banking improves operational efficiency, reduces costs and expands, customer reach, while also creating cybersecurity challenges. however, the study does not examine how digital banking influences saving, investment, and financial planning behavior among young adults.

Gassanova (2025) found that digital transformation improves banking efficiency, customer experiences, and operational performances, while emphasizing the importance of the cyber security and employee readiness. however, the study focused on bank level outcomes and did not examine digital financial services adoption or its influence on financial planning behavior among young adults.

Siddquee (2025) found that digital transformation and fintech adoption improve banking efficiency and customer satisfaction through convenience, reduced costs, and faster transactions. However, the study mainly focused on the banking performance and adoption barriers and did not examine the impact of the digital financial services on the saving, investment planning, and financial planning behavior among young adults.

Mavlutova et al. (2023) found that digital transformation and digital payments improve financial inclusion and operational efficiency, while also supporting savings and account ownership. However, the study focused mainly on the institutional and financial sector outcomes and did not specifically examine financial planning behavior, investment planning or saving decisions among young adults.

4. Research Methodology

4.1 Research design and data collection

The study follows a quantitative, cross-sectional survey design supported by secondary literature. Primary data were collected with a structured self-administered questionnaire from students and employees in Vijayawada, Andhra Pradesh, between 17 and 26 September 2026 (dates of the response timestamps). A total of 136 completed responses were available for analysis.

4.2 Sampling

The sample is dominated by students aged 18–22 (Table 2), which indicates a non-probability convenience sample rather than a stratified random sample. The results therefore describe this group of respondents and should not be generalised to all young adults in India.

4.3 Instrument

The questionnaire has six sections: (A) respondent profile and DFS usage; (B) financial literacy (financial knowledge and skills); (C) accessibility and convenience of DFS; (D) awareness of DFS and perceived benefit; (E) the link between financial literacy and DFS use; and (F) investment planning. Sections B to F contribute three items each, rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The instrument was checked for clarity and validity before final administration. Composite scores were computed as the mean of the three items in each section (FL = B1, B5, B8; AC = C1, C4, C6; AW = D1, D2, D8; LIT = E1, E2, E6; INV = F1, F3, F8). A DFS index was computed as the mean of AC and AW. Ten item cells (0.5% of all item responses) were blank, and composites use the items answered.

4.4 Data analysis

All analyses were carried out in Microsoft Excel. Chi-square tests of independence (with expected counts, $\chi^2 = \sum(O-E)^2/E$ and Cramér's V) compared usage patterns across demographic groups; categories were collapsed so that all expected counts were at least 5. One-way ANOVA ($F = MSB/MSW$, with η^2 as effect size) compared construct scores across gender, income, duration of use and occupation, with Tukey HSD post-hoc comparisons. Linear regression (Excel LINEST) tested the effect of AC, AW and FL on INV; a moderation model added a mean-centred DFS $\times$ FL interaction. Reliability was assessed with Cronbach's alpha. The significance level was 5%. Levene's test, Kruskal–Wallis tests and Tukey HSD, which Excel does not provide, were computed with Python (SciPy and statsmodels) and are reported as supplementary checks.

5. Data Analysis and Results

5.1 Respondent profile and DFS usage

Table 2. Profile of respondents (N = 136)

Characteristic	Category	<i>n</i>	%
Age group	18–22 years	133	97.8
	23–26 years	3	2.2
Gender	Female	85	62.5
	Male	48	35.3
	Prefer not to say	3	2.2
Education	Undergraduate	121	89.0
	Postgraduate	9	6.6
	Professional degree	3	2.2
	Others	3	2.2

Characteristic	Category	<i>n</i>	%
Occupation	Student	116	85.3
	Salaried employee	14	10.3
	Unemployed	3	2.2
	Others	3	2.2
Monthly income / allowance	₹0–₹15,000	102	75.0
	₹15,001–₹30,000	21	15.4
	₹30,001–₹50,000	7	5.1
	Above ₹50,000	6	4.4
Duration of DFS use	Less than 1 year	37	27.2
	1–3 years	68	50.0
	3–5 years	22	16.2
	More than 5 years	9	6.6

The typical respondent is an undergraduate student aged 18–22 with a monthly allowance below ₹15,000, who has used DFS for one to three years. Women make up 62.5% of the sample. Only three respondents are aged 23–26, so age-group comparisons could not be tested.

Table 3. DFS types currently used (multiple response)

DFS type	Users	% of respondents
UPI payment apps (GPay, PhonePe, Paytm)	116	85.3
Mobile banking	61	44.9
Internet / net banking	28	20.6
Online investment / trading apps	15	11.0
Digital wallets	3	2.2
Robo-advisory platforms	3	2.2
None of the above	6	4.4

UPI apps dominate (85.3%), while online investment apps are used by only 11.0% of respondents. The mean number of DFS types used is 1.66; 58 respondents (42.6%) use two or more types (“diversified” users), and 78 (57.4%) use none or one. Awareness is therefore high but usage is concentrated in payments rather than investing, which answers the first research question.

5.2 Descriptive statistics and reliability

Table 4. Construct scores and reliability (N = 136)

Construct	Mean	SD	Cronbach’s α	Reliability
Financial literacy (FL)	3.41	0.79	.765	Acceptable
Accessibility & convenience (AC)	3.52	0.93	.859	Good
DFS awareness & perceived benefit (AW)	3.59	0.78	.814	Good
Literacy–DFS link (LIT)	3.46	0.79	.846	Good
Investment planning (INV)	3.58	0.75	.694	Marginal

All construct means lie between 3.4 and 3.6, slightly above the scale midpoint, indicating moderate agreement. Among individual items, the highest mean is for F1 (investment goals determine the DFS chosen; 3.75) and C1 (DFS are accessible anytime and anywhere; 3.65), and the lowest for E2 (literacy is needed to benefit from DFS; 3.29) and B5 (preparing a budget; 3.32). Budgeting is thus the weakest planning practice. Reliability is good for AC, AW and LIT, acceptable for FL and marginal for INV ($\alpha = .694$), so INV results should be read with caution. Figure 2 shows the means with 95% confidence intervals.

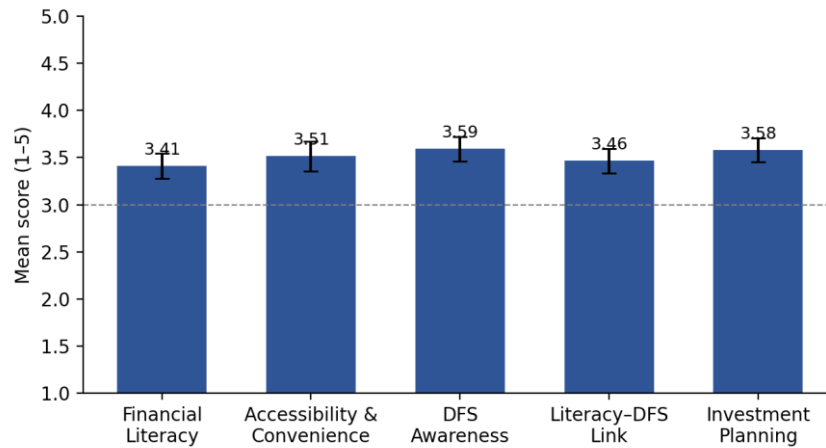


Figure 2. Mean construct scores (error bars: 95% CI)

Table 5. Pearson correlations (N = 136)

	FL	AC	AW	LIT	INV	DFS types
Financial literacy (FL)	1	.58	.56	.26	.37	.25
Accessibility & convenience (AC)	.58	1	.64	.77	.76	.29
DFS awareness & perceived benefit (AW)	.56	.64	1	.57	.54	.22
Literacy–DFS link (LIT)	.26	.77	.57	1	.74	.20
Investment planning (INV)	.37	.76	.54	.74	1	.16

$|r| \geq .17$ is significant at $p < .05$ (two-tailed, $N = 136$). “DFS types” = number of DFS types used.

All construct correlations are positive and significant. Accessibility and convenience has the strongest association with investment planning ($r = .76$) and with the literacy–DFS link ($r = .77$), whereas the number of DFS types used correlates only weakly with the constructs.

5.3 Chi-square tests: DFS usage pattern and respondent characteristics

Usage pattern (limited = 0–1 DFS type; diversified = 2 or more types) was cross-tabulated with gender, income, occupation and duration of use. Groups were collapsed to keep expected counts above 5 (the three “prefer not to say” respondents were excluded from the gender test).

Table 6. Chi-square tests of independence: usage pattern by respondent characteristic

Characteristic	% diversified users	χ^2	df	p	Cramér's V
Gender (Male vs Female; $n = 133$)	58.3% vs 31.8%	8.93	1	.003	.26
Income ($\leq ₹15,000$ vs $> ₹15,000$)	41.2% vs 47.1%	0.36	1	.548	.05
Occupation (Student vs Non-student)	37.9% vs 70.0%	7.17	1	.007	.23
Duration (< 1 yr / 1–3 yrs / 3+ yrs)	32.4% / 50.0% / 38.7%	3.28	2	.194	.16

Men are considerably more likely than women to use two or more DFS types (58.3% vs 31.8%), and non-students are more likely than students to do so (70.0% vs 37.9%). Both associations are small to moderate in size. Usage diversity does not differ significantly by income band or by length of DFS experience. These results partly support H1: usage differs by gender and occupation but not by income. Age could not be tested.

5.4 One-way ANOVA: differences in construct scores

Table 7. One-way ANOVA of construct scores by respondent characteristic (F and p)

Construct	Gender F	p	Income F	p	Duration F	p	Occup. F	p
FL	5.17	.025	1.38	.252	5.07	.002	9.35	$< .001$
AC	15.15	$< .001$	17.15	$< .001$	2.37	.073	19.26	$< .001$

Construct	Gender F	<i>p</i>	Income F	<i>p</i>	Duration F	<i>p</i>	Occup. F	<i>p</i>
AW	0.29	.588	1.21	.308	1.34	.265	10.07	< .001
LIT	16.46	< .001	6.91	< .001	1.30	.278	10.67	< .001
INV	1.16	.283	9.16	< .001	1.38	.252	6.18	.003

df: gender (1, 131), income (3, 132), duration (3, 132), occupation (2, 133). Occupation groups: student, salaried employee, unemployed/others (the last merged because $n = 3$ each). Effect sizes (η^2): AC by gender .10, income .28, occupation .22; INV by income .17, occupation .09; FL by gender .04, duration .10, occupation .12.

Table 8. Mean scores for selected groups

Group	<i>n</i>	FL	AC	AW	LIT	INV
Gender						
Female	85	3.50	3.70	3.60	3.64	3.63
Male	48	3.19	3.09	3.52	3.10	3.48
Monthly income / allowance						
0 – ₹15,000	102	3.35	3.25	3.52	3.30	3.42
₹15,001–₹30,000	21	3.68	4.49	3.78	4.03	4.22
₹30,001–₹50,000	7	3.62	4.43	3.88	3.95	4.07
Above ₹50,000	6	3.17	3.50	3.83	3.67	3.50
Occupation						
Student	116	3.31	3.34	3.48	3.34	3.50
Salaried employee	14	4.21	4.71	4.36	4.17	4.21
Unemployed / others	6	3.50	4.17	4.00	4.17	3.67
Duration of DFS use						
Less than 1 year	37	3.41	3.34	3.68	3.62	3.48
1–3 years	68	3.31	3.53	3.51	3.39	3.70
3–5 years	22	3.92	3.91	3.82	3.56	3.38
More than 5 years	9	2.93	3.11	3.35	3.15	3.61

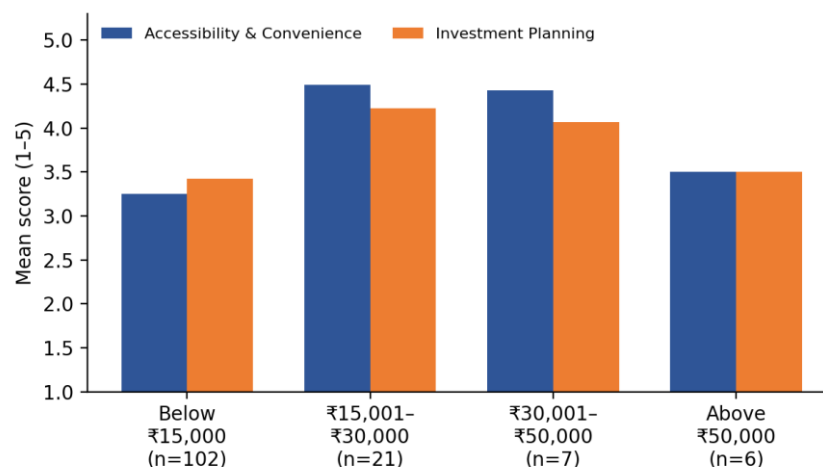


Figure 3. Accessibility & convenience and investment planning by income group Tukey HSD test indicates where the difference among incomes and occupation is located. Respondents with a monthly income of ₹15,001–₹30,000 scored higher than those below ₹15,000 on accessibility and convenience (difference = 1.24, $p < .001$), investment planning (0.80, $p < .001$) and the literacy–DFS link (0.73, $p < .001$); the ₹30,001–₹50,000 group also scored higher on accessibility (1.18, $p = .001$). Salaried employees scored higher than students on financial literacy (0.91, $p < .001$), accessibility (1.38, $p < .001$), investment planning (0.73, $p < .001$), and the literacy–DFS link (0.73, $p < .001$).

.001), awareness (0.88, $p < .001$) and investment planning (0.71, $p = .002$). There was no difference between the scores for men and women on awareness, with women outperforming men on accessibility and convenience (3.70 to 3.09) and financial literacy (3.50 to 3.19), and on the literacy–DFS link. Respondents with 3–5 years' DFS experience were most financially literate, while more than 5 years' score – significantly lower ($p = .006$) – was also significantly lower than 1–3 years' score ($p = .006$). Because overlap exists in income and occupation, we cannot separate the effect of the two in this sample (all 14 of the highest income group are salaried and the 6 respondents in the highest income group are students and unemployed respondents), and the number of respondents in the higher income groups is small ($n = 6-21$). The means of these groups are given in Table 8 and in Figure 3. As for the hypotheses, H4 is supported in part, as the financial literacy scores differed according to the gender ($p = .025$), length of usage ($p = .002$) and occupation ($p < .001$), but not income ($p = .252$). H1 is partially met as accessibility and convenience are not equal across gender and income groups and investment planning is not equal across income groups. As shown in the supplementary sheet in the workbook, Levene's test showed 10 of the 20 comparisons had unequal variance, whereas Kruskal-Wallis tests performed the same number and on the same 10 of the 20, showed the same significance conclusion (for each of which the p -value was < 0.05).

5.5 Regression analysis

Financial literacy, accessibility and convenience and awareness (M1) were regressed with investment planning. The variance inflation factors on FL, AC and AW were 1.66, 1.93 and 1.84 respectively which indicated that there was no severe multicollinearity. Table 9. Model 1 included multiple regression explaining investment planning ($N = 136$).

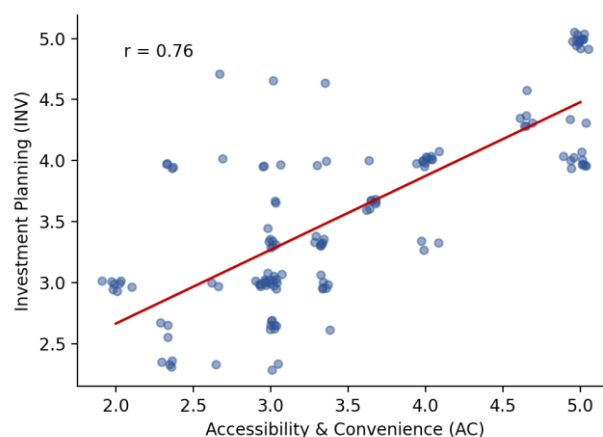
Predictor	B	SE	β	t	p
Constant	1.449	0.217	–	6.69	$< .001$
Financial literacy (FL)	–0.141	0.068	–.15	–2.06	.041
Accessibility & convenience (AC)	0.598	0.062	.75	9.65	$< .001$
DFS awareness (AW)	0.143	0.073	.15	1.96	.053

$R^2 = .590$, adjusted $R^2 = .580$, $F(3, 132) = 63.23$, $p < .001$; standard error of estimate = 0.483. The model accounts for 59% of the variance (Figure 4) in investment planning. Accessibility and convenience is the best predictor ($\beta = .75$). This awareness is low, with $p = .053$. The numerical result is actually a small negative partial correlation, although the simple correlation with financial literacy is positive ($r = .37$); this indicates positive common variance with accessibility ($r = .58$) and is a reading artifact, not a negative relation between financial literacy and investment planning. When only AC and AW are entered (Model 2), the model is significant ($R^2 = .576$, $F(2, 133) = 90.50$, $p < .001$), with AC significant ($B = 0.552$, $p < .001$) and AW not ($B = 0.098$, $p = .165$). Accessibility and convenience are desired but do not warrant support for H2; awareness does not warrant support for H2. Table 10.

Model (predictor → outcome)	B	β	R^2	F	p
M3: FL → INV (H3)	0.352	.37	.137	21.31	$< .001$
M4: No. of DFS types → INV (H5)	0.109	.16	.027	3.72	.056
M5: INV → DFS index (Obj. 5)	0.753	.73	.528	150.14	$< .001$

Investment planning is related to financial literacy with significant prediction ($\beta = .37$, $R^2 = .137$, supporting H3) but with a small prediction power which is only 14%. Breadth of usage is not particularly associated with investment planning ($p = .056$) and there was no significant difference between those who use online investment apps ($n = 15$) compared to others (3.91 vs 3.54, Welch $p = .096$). The fact is, the perceptual DFS measures (accessibility, convenience and awareness) are more important for H5 than a count of services used. The fifth objective was also predicted by investment planning; the index of investment planning is called released to the group DFS index ($\beta = .73$, $R^2 = .528$), and as they are both measured in the same time, the direction of the effect cannot be determined.

Figure 4. Accessibility & convenience and investment planning (jittered; fitted line)



5.6 Moderating role of financial literacy

mean-centred financial literacy and their product (Model 6; $R^2 = .561$, $F(3, 132) = 56.22$, $p < .001$). The DFS index has a strong positive effect ($B = 0.836$, $p < .001$) and the interaction is negative and significant ($B = -0.186$, $SE = 0.077$, $p = .016$). Simple slopes show that the DFS–investment planning To test the fourth objective, investment planning was regressed on the mean-centred DFS index, association is steeper for respondents with lower literacy ($B = 0.98$ at -1 SD of FL) than for those with higher literacy ($B = 0.69$ at $+1$ SD). In other words, convenient, well-understood DFS are associated with planning most strongly among those with less financial knowledge. This is consistent with financial literacy conditioning the way DFS relate to planning, although the interaction is modest.

5.7 Summary of hypothesis tests

Table 11. Summary of hypotheses

No.	Key evidence	Decision
H1	Usage diversity differs by gender ($p = .003$) and occupation ($p = .007$) but not income or duration; AC differs by gender, income and occupation; INV differs by income and occupation. Age untestable.	Partly supported (reject H0 for gender, occupation, income on AC/INV)
H2	AC $\rightarrow$ INV: $B = 0.552$, $p < .001$; AW $\rightarrow$ INV: $p = .165$ (Model 2); Model 2 $R^2 = .576$.	Supported for AC; not for AW
H3	FL $\rightarrow$ INV: $\beta = .37$, $p < .001$, $R^2 = .137$.	Supported (reject H0)
H4	FL differs by gender ($p = .025$), duration ($p = .002$), occupation ($p < .001$); not by income ($p = .252$). Age untestable.	Partly supported
H5	No. of DFS types $\rightarrow$ INV: $p = .056$; DFS scores $\rightarrow$ INV strong ($\beta = .73$ for INV $\rightarrow$ DFS).	Not supported for breadth of use; supported for perceived DFS quality
Obj. 4	DFS $\times$ FL interaction $B = -0.186$, $p = .016$.	Moderation detected (not robust; see 5.8)

5.8 Sensitivity analysis: duplicated response patterns

Inspection of the data showed that only 53 of the 136 records have a unique combination of profile and all 15 answers; several sets of three to five respondents with different names and demographic details gave identical answers to every item, and 21 respondents gave the same rating to all 15 items. Such patterns can arise from repeated submissions or straight-line responding. Because the cause cannot be verified from the file, all main results above use the full data, and the analyses were repeated on the 53 unique records as a robustness check.

The main results that survive are: accessibility and convenience as the dominant predictor of investment planning ($B = 0.55$, $p < .001$; $R^2 = .42$); the income gradient in AC, LIT and INV; the occupation gradient in all five constructs; and the gender difference in AC and LIT. Results that do not survive are: the gender difference in usage diversity ($p = .763$), the occupation difference in usage diversity ($p = .060$), the gender and duration differences in financial literacy ($p = .245$ and $p = .152$), the negative partial coefficient of financial literacy, the literacy moderation (interaction $p = .708$) and the significance of awareness. Financial literacy alone remains a significant predictor of investment planning ($B = 0.374$, $p = .010$). These findings should be treated as more tentative.

6. Discussion

The first finding is a gap between awareness and depth of use. Awareness of DFS is high (mean 3.59) and UPI is almost universal, yet 57% of respondents use no more than one type of service and only 11% use investment apps. This mirrors Heitmann et al. (2018), who reported high awareness among young people but usage shaped by practical conditions. In this sample, DFS are used mainly for payments rather than for building investments.

The second and most robust finding is that perceived accessibility and convenience is the dominant correlate of investment planning ($\beta = .75$). This is in line with the adoption literature in which usability, ease of use and trust drive DFS uptake (Asif et al., 2023; Sharma & Das, 2021; Siddquee, 2025), and extends it from adoption to planning behaviour, the outcome that earlier bank-level studies did not examine. The result should be interpreted with care: several accessibility and investment-planning items overlap in content (for example, finding it convenient to invest online and choosing DFS according to investment goals), and both scales come from the same respondents at the same time, so part of the strong association may reflect shared method or item overlap rather than a causal effect.

Third, breadth of usage matters little. The number of DFS types used did not significantly predict investment planning, whereas perceptions of accessibility and convenience did. Owning many apps is not the same as planning; what seems to matter is whether financial services feel easy to reach and use for saving and investing.

6.1 Implications

- **For banks and fintech providers:** simplifying onboarding to saving and investment products and making them as easy to reach as UPI payments is likely to matter more for planning than adding features or raising awareness.
- **For educators and policymakers:** financial-literacy programmes for students should be linked to the digital tools they already use, with special attention to students with allowances below ₹15,000 and to budgeting skills.
- **For young adults:** moving beyond payment-only use to goal-based saving and investing through DFS is the step that the data associate with stronger investment planning.

These implications are associations from a single cross-sectional sample and do not establish that improving access would cause better planning.

6.2 Limitations and future research

This study has several limitations. The sample is a non-probability sample from one city, dominated by students aged 18–22, so it cannot represent young adults in general and several subgroups (for example, salaried employees, and income above ₹30,000) are small. Data are self-reported and cross-sectional, so causal direction cannot be inferred. The dataset contains many duplicated response patterns, which weakens confidence in the precise estimates, and the reliability of the investment planning scale is marginal ($\alpha = .69$). Saving behaviour was not measured with a separate scale, so the saving component of the framework could not be tested directly. Likert scores were treated as interval data, and many tests were run without correction for multiple comparisons, so isolated significant results near the 5% level should be treated cautiously. Future research should use a probability sample across a wider age range, validated financial-literacy measures (for example the OECD/INFE instrument), separate saving and investment scales, structural equation modelling of the literacy–DFS–planning pathways, and behavioural or longitudinal data.

7. Conclusion

This study examined how digital financial services relate to the financial planning behaviour of 136 young adults in Vijayawada. Awareness of DFS is high, but usage is concentrated in UPI payments and only 11% use investment platforms. Ease of access and convenience is the strongest and most robust correlate of investment planning, explaining most of the 59% of variance accounted for by the regression model, while the number of DFS types used, and awareness once accessibility is controlled, add little. Financial literacy is positively associated with planning on its own and appears to condition the DFS–planning link, though this finding is fragile. Income and occupation gradients in accessibility and planning are consistent across analyses. The findings indicate that policies and product designs that make saving and investing through digital channels as convenient as payments, supported by targeted financial-literacy programmes, are the most promising route to better financial planning among young adults. The conclusions are subject to the sample and data limitations described above.

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