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IMPACT OF DIGITAL BANKING ON PERSONAL FINANCIAL MANAGEMENT: A SYSTEMATIC LITERATURE REVIEW

[1] Anurag Dwivedi, [2] Sakshi Sharma, [3] Shabdika Sharma, [4]Dr. Sneha Singh
[1,2,3] Student, Department of Business Administration, Vindhya Institute of Technology and Science, Satna, MP
[4]Associate Professor, Department of Business Administration, Vindhya Group of Institutions, Satna, MP

[4] Email – snehasingh682@gmail.com

Abstract: *Digital banking has fundamentally changed how individuals access, monitor, and manage their money. This paper presents a systematic literature review examining the impact of digital banking — including mobile banking apps, budgeting and personal financial management (PFM) tools, and "buy now, pay later" (BNPL) services — on personal financial management outcomes such as saving, spending, debt, and financial confidence. Following a structured methodology (defined scope, search strategy, source-selection criteria, and thematic analysis), ten peer-reviewed studies, institutional datasets, and industry reports published between 2020 and 2025 were reviewed and synthesized around four themes: financial access, budgeting-tool effectiveness, instant-credit risk, and security/trust.*

Keywords: *Digital banking, Personal financial management, fintech, financial literacy.*

1. INTRODUCTION:

1.1 Background:

Over the past decade, banking has moved decisively from physical branches to smartphones. Mobile banking apps, digital wallets, budgeting tools, and installment-payment services have become the primary way many people interact with their money. This shift has been described as transformative for personal money management, since digital financial services give individuals faster, cheaper, and more continuous access to their accounts than traditional banking ever did (Koskelainen et al., 2023). At the same time, the same convenience that makes digital banking attractive — instant payments, real-time balances, one-tap credit — has raised new questions about whether these tools genuinely help people manage their finances better, or whether they simply make it easier to spend.

1.2 Problem Statement:

Much of the public discussion of digital banking treats new features — more spending categories, more real-time alerts, more embedded credit options — as self-evidently beneficial to users. However, the empirical research on whether these features actually improve personal financial management outcomes is scattered across disciplines (consumer finance, behavioral economics, information systems) and has not been pulled together in a single, structured review. Without such a synthesis, it is difficult to say with any precision which aspects of digital banking help personal financial management, which are neutral, and which actively work against it.

2. LITERATURE REVIEW:

Digital banking refers to the delivery of banking and payment services through digital channels, mobile apps, online portals, and application programming interfaces — rather than physical branches. **Personal financial management (PFM)** refers to the set of individual practices — budgeting, saving, spending control, and debt management — through which people allocate income to meet short- and long-term goals. **Fintech** is the broader category of technology-driven financial services, of which digital banking and PFM apps are a subset. **Digital financial literacy**, as distinguished from general financial literacy, refers to the skills needed to understand not just financial concepts but how digital platforms, interfaces, and behavioral "nudges" shape

financial decisions (Koskelainen et al., 2023).
This concept recurs throughout the reviewed literature as a moderating factor: the same digital banking feature can have different effects on financial management outcomes depending on the user's digital financial literacy.
"Buy now, pay later" (BNPL) is a short-term, often interest-free installment credit product offered at the point of sale, increasingly embedded directly into digital banking and payment platforms rather than offered as a standalone product (Jose et al., 2025).These four concepts — digital banking, PFM, digital financial literacy, and BNPL — form the conceptual vocabulary used throughout the remainder of this review

3. OBJECTIVES:

- To examine how digital banking has affected access to formal financial services
- To evaluate the documented effect of budgeting and personal-finance tools on actual financial behavior, not merely on financial awareness
- To examine how security, privacy, and trust shape consumers' engagement with digital banking tools.

Significance of the Study:

The findings are relevant to three audiences: financial institutions and fintech designers deciding how to build budgeting and credit features; consumers and financial educators seeking an evidence-based view of which digital tools help versus hinder financial management; and policymakers considering disclosure or design regulation for BNPL and other embedded-credit products.

3. RESEARCH METHOD:

3.1. Research Design:

This study adopts a **qualitative, descriptive research design** in the form of a **systematic literature review**. Rather than collecting primary survey or interview data, the study systematically identifies, evaluates, and synthesizes existing empirical research, institutional datasets, and industry reports on digital banking and personal financial management. A systematic review design was chosen because the research questions concern the *state of existing evidence* on digital banking's behavioral effects, rather than a new, untested causal claim — making synthesis of existing studies, rather than new primary data collection, the methodologically appropriate approach within the scope of a college-level research assignment.

3.2. Research Approach:

The study follows a **deductive, thematic approach**: four themes were defined in advance, directly derived from the research questions ,financial access; budgeting-tool effectiveness; instant-credit risk; security and trust), and evidence was then systematically searched for and mapped onto each theme, rather than allowing themes to emerge purely inductively from the sources. This approach keeps the review tightly scoped to the research questions it set out to answer.

3.3. Data Collection and Sources:

Sources were identified through structured web-based academic and institutional searches, using combinations of the search terms: "digital banking," "mobile banking," "personal financial management," "fintech," "budgeting app," "buy now pay later," "financial inclusion," and "digital banking security," each combined with terms such as "behavior," "study," and the years 2023–2025 to prioritize recency. Four categories of sources were included:

1. **Peer-reviewed journal articles** (e.g., *Journal of Consumer Affairs*, *Management Science*);
2. **Central bank and government research publications** (e.g., Federal Reserve Bank of Kansas City, Central Bank of Ireland, World Bank);
3. **Non-profit and academic research-institute reports** (e.g., Filene Research Institute; a university working paper); and
4. **Industry survey reports**, included only where no peer-reviewed equivalent was available, and explicitly flagged as such (e.g., Javelin Strategy & Research, Alkami, Entersekt).

4. DISCUSSION:

A **thematic synthesis** method was used: findings from each retained source were extracted and grouped under the four predefined themes (Section 3.2), and within each theme, findings were compared for convergence (multiple sources reporting a similar effect) or divergence (sources reporting conflicting effects). Convergent findings are reported in Section 4 as more firmly supported conclusions; divergent findings are explicitly reported as mixed evidence rather than resolved in favor of one side, consistent with good review practice.

3.4. Conceptual Framework

Figure 1 summarizes the conceptual framework guiding this review: digital banking is treated as a bundle of distinct components — financial access, budgeting/PFM tools, BNPL/instant credit, and security/trust each with a potentially different, independently evaluated relationship to personal financial management outcomes, moderated in the case of budgeting tools and BNPL by the user's digital financial literacy.

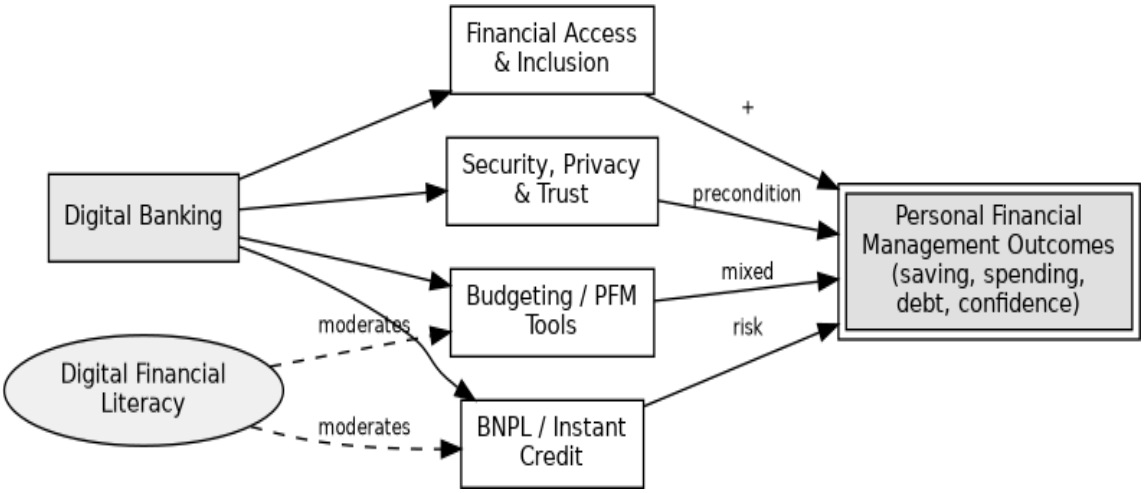


Figure 1. Conceptual framework linking the four reviewed components of digital banking to personal financial management outcomes.

3.5. Scope and Limitations of the Methodology:

This review is a secondary, desk-based synthesis rather than a primary empirical study: no new survey, interview, or transaction data were collected. The search was conducted using a general web-based search approach rather than a single indexed academic database (e.g., Scopus or Web of Science) with a formal PRISMA-style flow diagram, which is an appropriate but less exhaustive approach for a college-level research assignment of this scope.

4. FINDINGS :

Digital Banking and Financial Access (RQ1):

The most unambiguous effect of digital banking has been on financial inclusion — whether people have access to a formal account and formal financial services at all. According to the World Bank's Global Findex Database 2025, which surveyed roughly 145,000 adults across 141 economies, 79% of adults worldwide now have an account with a bank, another financial institution, or a mobile money provider, up from 74% in 2021 and just 51% in 2011 (World Bank, 2025). Much of this growth has been driven by mobile phones and the internet rather than by expansion of physical bank branches: in 2024, 62% of adults worldwide reported making or receiving a digital payment, and in low- and middle-income economies specifically, 40% of adults were saving through a formal account — a 16-percentage-point increase since 2021, driven largely by mobile money (World Bank, 2025). In Sub-Saharan Africa, mobile money accounts have in many cases substituted for traditional bank accounts rather than supplemented them, with formal savings rising to 35% of adults in 2024 and some countries, such as Senegal, seeing formal savings rates climb from 46% to 67% between 2021 and 2024; in Latin America and the Caribbean, a mixed model combining mobile platforms with conventional banking has been more common (World Bank, 2025).These figures matter for personal financial management because a formal account is a precondition for most other financial-management behavior: budgeting, systematic saving, and credit-history building are difficult without one. Digital banking has lowered the practical cost of opening and maintaining an account, pulling large numbers of previously unbanked adults into the formal financial system (World Bank, 2025). However, access is not the same as effective use: Koskelainen et al. (2023) argue that traditional financial literacy does not automatically transfer to a digital environment, and that without digital financial literacy, the same technology that expands access also expands exposure to products — like instant credit — that are easy to access but harder to manage responsibly (Section 4.3).

Budgeting Tools, PFM Apps, and Behavior Change (RQ2)

The evidence on budgeting and PFM apps is more mixed than the intuitive assumption that more spending visibility should produce better financial decisions. A Filene Research Institute study tested three budgeting apps (Mint, Wally, and You Need a Budget) and two investing apps (Stash and Acorns) with 27 participants aged 18–34 over one month. The study found that the apps tended to raise participants' *awareness* of their spending and investing habits more than they changed actual behavior (Maurer et al., 2020) — the tools succeeded at the diagnostic function of showing people where their money was going, but this awareness did not reliably translate into different financial decisions.

More strikingly, budgeting feedback can sometimes backfire. Huang and Ghosh (2022), studying a popular fintech budgeting app, found that giving consumers real-time, precise information about remaining budget tended to *increase* spending later in the budget period, because consumers who knew they had money remaining in a category felt licensed to spend it — a pattern consistent with mental-accounting theory in behavioral economics. A large-scale field experiment using the Clarity Money app (later acquired by Goldman Sachs) randomized over 9,000 users into different budgeting formats — a single overall number versus itemized category budgets — against an informational control with no budgeting feature. While the budgeting feature increased user engagement with the app, the experiment found neither a clear positive nor a clear negative effect on actual spending reduction relative to the control group. Synthesizing across these three sources, the convergent finding is that digital budgeting tools reliably increase *engagement* and *awareness*, but do not reliably produce better saving or spending outcomes, and in at least one documented case produced the opposite of the intended effect. This suggests the effect of budgeting tools depends heavily on *design* — how and when spending information is framed and delivered — rather than being an automatic consequence of simply providing more data.

BNPL and the Risk of Overspending (RQ3):

The clearest evidence that digital banking can actively work against sound personal financial management comes from the rapid growth of BNPL — short-term, often interest-free installment loans offered at checkout through fintech apps and increasingly embedded directly into digital banking platforms. A behavioral field experiment conducted by the Central Bank of Ireland with a nationally representative sample of 3,000 Irish consumers found that participants spent, on average, 4.39% more when offered BNPL at checkout compared with paying by debit card, and were 22.2% more likely to make a discretionary purchase when BNPL had inflated their perceived available funds through a mental-accounting effect (Jose et al., 2025). The same study found that merely knowing BNPL would be available for a *future* purchase increased current debit-card spending by 3.1%, indicating the effect is not limited to the moment of the BNPL transaction itself.

These behavioral effects appear to translate into measurable financial strain. Using banking-transaction data for 10.6 million U.S. consumers, deHaan et al. (2024) found that new BNPL users experienced significantly faster growth in bank overdraft charges and credit-card interest and fees than comparable non-users after adopting BNPL — a pattern consistent with BNPL facilitating overborrowing rather than simply smoothing cash flow. Using a separate, nationally representative U.S. survey, Hayashi and Routh (2025) similarly found that BNPL users tend to be more financially vulnerable than non-users, and that consumers who made late payments on BNPL loans were disproportionately likely to also be experiencing broader financial distress. All three sources converge on the same conclusion, using three independent methods (a controlled field experiment, large-sample transaction-data analysis, and a nationally representative survey): BNPL's low-friction design measurably increases spending and, for a meaningful subset of users, compounds rather than resolves financial constraints.

Security, Privacy, and Trust (RQ4):

A final factor shaping digital banking's impact on personal financial management is trust. Industry research consistently identifies privacy and fraud protection, rather than convenience or features, as the leading driver of consumer trust in a digital banking provider (Javelin Strategy &

Research, 2024 — industry report, not peer-reviewed). This matters for personal financial management because a consumer who does not trust a platform is less likely to consolidate accounts within it or adopt the budgeting and automation features discussed in Section 4.2, and more likely to maintain a defensive, cash-oriented posture that limits the access benefits discussed in Section 4.1. The scale of the underlying risk is substantial: reported U.S. consumer and business fraud losses exceeded $12.5 billion in 2024, a 25% increase over 2023, according to industry reporting (Alkami, 2025 — industry report, not peer-reviewed). Industry surveys of digital banking users consistently find that large majorities rate data and fraud protection as important, and a meaningful share report they would switch financial institutions over authentication and security practices alone (Alkami, 2025; Entersekt, 2025 — both industry reports, not peer-reviewed). While these sources are not academically peer-reviewed and should be read with that caveat, they

are broadly consistent with one another and with the academic literature's emphasis on trust as a precondition for digital engagement (Koskelainen et al., 2023), which strengthens confidence in the general pattern even where individual figures should be treated cautiously.

5. DISCUSSION:

Mapped against the four research questions, the synthesized evidence points to a more complicated picture than either "digital banking is good for personal finance" or "digital banking is bad for personal finance."

RQ1 (access): the evidence is clear and convergent — digital banking has brought tens of millions of previously unbanked adults into the formal financial system (World Bank, 2025), which is a genuine, population-level improvement in the preconditions for personal financial management.

RQ2 (budgeting tools): the evidence is mixed and, in one case, counterintuitive. Budgeting and PFM tools raise awareness and engagement but do not reliably change saving or spending behavior, and real-time spending feedback can in some cases encourage spending rather than restrain it (Huang & Ghosh, 2022; Maurer et al., 2020). This indicates that tool design, not mere data availability, determines whether budgeting features help or hinder financial management.

RQ3 (BNPL): the evidence is the most consistent of the four themes and points toward real financial harm for a meaningful subset of users — higher overdraft and credit-card costs, and a correlation between late BNPL payments and broader financial distress (deHaan et al., 2024; Hayashi & Routh, 2025; Jose et al., 2025). This is the clearest case in the reviewed literature where digital banking actively works against, rather than merely fails to improve, personal financial management.

RQ4 (security and trust): while the supporting evidence here is weaker in methodological rigor (industry surveys rather than peer-reviewed studies), the pattern is directionally consistent and theoretically coherent: trust functions as a precondition for the other three themes rather than as an independent outcome.

A cross-cutting theme across RQ2 and RQ3 is **digital financial literacy**. Koskelainen et al. (2023) argue that digital financial literacy — the ability to understand how digital tools and platforms shape financial decisions, not merely financial concepts in the abstract — is now a necessary complement to digital banking access. Without it, consumers are well-positioned to receive the access benefits identified under RQ1 but poorly positioned to resist the behavioral risks identified under RQ2 and RQ3.

This has a practical implication for how digital banking products should be evaluated. Much of the public conversation around fintech treats "more features" as inherently positive — more categories to track, more real-time alerts, more one-tap payment options. The synthesized evidence suggests this assumption deserves more scrutiny than it typically receives: a spending alert showing a user their remaining discretionary budget is not a neutral piece of information (Huang & Ghosh, 2022), and a BNPL option embedded at checkout changes the underlying purchase decision itself, before any installment plan is selected (Jose et al., 2025). Regulators, financial institutions, and consumers alike would benefit from evaluating digital banking features by their documented behavioral effects, not only by their convenience.

6. CONCLUSION:

This systematic review set out to examine how digital banking affects personal financial management across four dimensions: access, budgeting tools, instant credit, and security. The synthesized evidence shows that digital banking's effect is not uniform. It has substantially expanded who can participate in the formal financial system — an unambiguous gain. At the same time, the tools built on top of that access have shown mixed-to-negative effects on individual financial behavior in controlled studies, with BNPL in particular showing a consistent, convergent pattern of increased spending and financial strain for vulnerable users.Based on these findings, three recommendations follow. **For financial institutions and fintech designers:** budgeting and credit features should be designed and tested for their behavioral effects, not assumed to be beneficial simply because they provide more data or more convenience. **For consumers and financial educators:** digital financial literacy — specifically, understanding how real-time feedback and frictionless credit can bias decisions — should be treated as a distinct, teachable skill alongside traditional financial literacy. **For policymakers:** given the convergent evidence on BNPL-related financial strain (Section 4.3), disclosure requirements or spending safeguards for BNPL products embedded in digital banking platforms merit consideration.

7. LIMITATIONS:

This review has four limitations, consistent with those flagged in Section 3.7. First, it is a secondary synthesis of existing sources rather than new primary research, so its conclusions are only as strong as the ten underlying sources reviewed. Second, the search process, while systematic and criteria-based, used general web search rather than a single formal academic database with a full PRISMA-style screening record, meaning some relevant peer-reviewed studies may not have been captured. Third, three of the ten sources are industry reports rather than peer-reviewed research

(flagged explicitly in Section 4.4) and should be weighted accordingly. Fourth, the geographic coverage of the underlying studies is uneven — strong for the United States, Ireland, and global aggregate data, but thinner for Asia, Latin America, and Africa individually — which limits how confidently the findings generalize to those regions specifically.

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