Empowering Street Vendors: Digital Knowledge for Better Financial Management

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This study investigates the Digital Financial Knowledge (DFK) and Financial Management Behavior (FMB) of street vendors in Tamil Nadu, emphasizing their impact on business sustainability and growth. Utilizing a quantitative research design, data were collected from 149 street vendors through structured questionnaires and analyzed using Structural Equation Modeling (SEM) via Smart-PLS. The findings reveal a moderately strong positive correlation (Pearson correlation = 0.677) between FMB and DFK, indicating that higher financial knowledge is associated with improved financial management practices. With a Cronbach's alpha of 0.794, the scale demonstrates acceptable reliability. The research underscores the need for strategies that enhance financial inclusion.

Keywords: Digital Financial Knowledge, Financial Management Behavior, Street Vendors, Urban Economy

1. Introduction

In recent years, the informal economy has received a significant attention as an important aspect of economic growth, especially in developing nations like India. Among the several segments of the informal economy, street vendors play an important role in urban areas by offering basic goods and services while also contributing to local economies (Martínez, 2022). The street vendors used to set up their businesses on sidewalks, near markets, bus stops and railway stations. Despite their importance in enhancing local commerce and supporting livelihoods, street vendors frequently confront a variety of obstacles, including restricted access to financial resources, insufficient financial literacy, and poor financial management techniques (Kavipriya, 2023). These problems impede their capacity to sustain and expand their enterprises efficiently.

The majority of the street vendors fall into this unique group as "own account workers representing a vulnerable group of individuals who engage in the sale of goods and services on the streets. Some of the street vendors are utilizing the temporary plastic covers to protect their goods from adverse weather conditions. Economic empowerment for the poor and impoverished can take many forms, including increased incomes, savings, social standing, education, and improved health outcomes (Sivasubramanian, 2021). The rapid urbanization and population expansion in Indian cities have resulted in a significant labor supply. However, many individuals are without formal employment opportunities. Street vending has arisen as a feasible economic activity for those who are jobless or have a low income groups. Nevertheless, a lack of financial knowledge among street vendors frequently results in bad money management practices. There is insufficient knowledge of budgeting, saving and investing and lead to poor resource allocation and lost opportunities for business growth (Foenay, 2021).

The objectives of the study include evaluating the financial management behavior of street vendors, analyzing the level of digital financial knowledge among street vendors and its correlation with their financial management behavior, identifying the key indicators that influence the financial management behavior and digital financial knowledge among street vendors and improving financial management practices among street vendors through enhanced digital financial knowledfe that contributing to their resilience and growth in a digital economy.

Financial knowledge is necessary to improve and secure long-term financial well-being and the context of the financial decision making process (van de Vrande, 2009). Positive and responsible financial behavior can also improve the financial well-being and achieve a greater financial satisfaction (Morgan, 2019). Digital financial knowledge is closely related to financial knowledge. So, understanding the digital financial knowledge requires an initial understanding of financial knowledge and it helps to support the financial decisions (Lestari, 2019). Financial knowledge plays an important role in improving the financial management behavior to take financial decision making. Financial knowledge is one of an integral part of financial literacy (Nugroho, 2015). Financial literacy has a significant effect on financial behavior. Financial knowledge is the main variable in shaping financial behavior. Subjective and objective financial knowledge significantly affects financial management behavior (Normawati, 2021). Effective financial management is a crucial skill that empowers individuals to navigate the complexities of personal finance. By filtering essential information and making informed decisions, individuals can enhance their financial well-being and stability. Sound financial practices not only alleviate economic stress but also pave the way for achieving long-term financial goals. In a world, where financial literacy is increasingly important, mastering the art of managing finances can lead to a more secure and prosperous future. This study contributes to the literature by analyzing in an interdisciplinary relationship between the behavior and knowledge of street vendors with financial management.

2. Literature Review

Previous research highlights the effect of digital financial knowledge on financial management behavior. Rahmat (2022) discussed that the financial Management Behavior is one of the important concepts in a person's life. It also arises from the influence of perosn's desire to fulfill his life needs based on the level of income earned.

According to Chen (1998), financial knowledge includes four things, namely:

1. **General Knowledge of finance** refers how individuals manage their income and expenses and ability of individuals who understand the financial concepts to manage their financial assets.
2. **Savings and Borrowing:** Knowledge of savings is defined as the person's knowledge in managing savings or funds which is not used at a specified period of time. Knowledge of borrowing is the knowledge about funds obtained from other parties with specific considerations.
3. **Insurance Knowledge:** Insurance knowledge is knowledge about financial protection to get reimbursement from unexpected events (risks) through payment of many funds (policy) to the risk insurer.
4. **Investment Knowledge:** Investment knowledge is knowledge about the behavior of issuing funds with obtaining capital flows by obtaining large amounts of funds in the future.

Financial knowledge is the ability to understand, analyze and manage finances to make right financial decisions to solve their financial problems.

According to Morgan (2019) from the Asian Development Bank Institute mentioned the digital financial literacy dimensions which represent financial management behavior. There are four dimensions namely,

1. **Digital products and services** represent a basic understanding of digital products and services which was realized from the traditional products and services.
2. **Digital financial risks:** It is an additional risk while using digital products and services, the risks of using the products and services are more significant than using traditional products and services.
3. **Digital financial risk control:** The risk which are undertaken by using digital products and services.
4. **Consumer rights and redress procedures:** Awareness of consumer rights is vital for individuals using with digital products and services.

Ameliawati (2018) revealed that digital financial knowledge has an essential role in realizing financial management behavior. The person who has the knowledge and makes payments digitally will affect the level of sound financial management. It helps to manage their finances in one application, make payment transactions, and monitor expenses and income more effectively and efficiently.

Saha (2009) identified that a vendor without a permanent shop is classified as a street vendor. Bruntha (2015) found that the challenges faced by street vendors such as low level of education, lack of identity proof, limited interest from banks, low credit support from financial institutions, limited technological knowledge and low financial literacy.

3. Methodology

3.1 Research Questions

- What is the level of Digital Financial Knowledge (DFK) among street vendors in Tamil Nadu?
- How does Financial Management Behavior (FMB) correlate with Digital Financial Knowledge among street vendors?
- What are the key indicators influencing the financial management behavior and digital financial knowledge of street vendors?

3.2 Research Objectives

- To assess the financial management behavior of street vendors in Tamil Nadu
- To analyze the level of digital financial knowledge among street vendors, determining their understanding of digital financial tools and concepts.
- To investigate the correlation between Digital Financial Knowledge (DFK) and Financial Management Behavior (FMB) among street vendors, establishing how knowledge influences management practices.
- To identify key indicators that influence both Financial Management Behavior and Digital Financial Knowledge among street vendors, providing insights into factors that enhance or hinder financial practices.
- To develop recommendations for improving financial management practices among street vendors through enhanced digital financial knowledge, contributing to their resilience and growth in a digital economy.

3.3 Research Framework
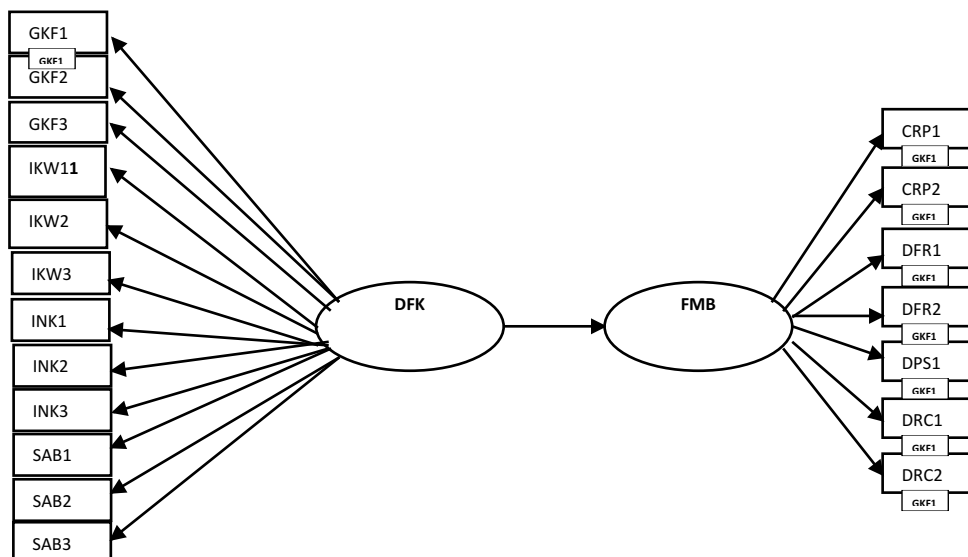
3.4 Hypothesis

H1$_0$: There is no significant correlation between digital financial knowledge and financial management behavior.
H2$_0$: There is no significant impact between digital financial knowledge and financial management behavior

3.5 Research Tools

The study employs structured questionnaires for data collection utilizing statistical tools such as SPSS for descriptive analysis and Smart-PLS for Structural Equation Modeling (SEM), Correlation analysis, collinearity statistics, Discriminant validity, and Construct Validity and Reliability to analyze relationships between variables.

3.6 Data Collection

Data were collected through a structured questionnaire designed to gather information on financial knowledge, management practices, and demographic details.

3.7 Sampling Techniques

A simple random sampling technique was employed, resulting in a sample size of 149 street vendors from various urban areas in Tamil Nadu.

3.8 Limitations of the study

The study's limitations include its focus on a specific geographic area (Tamil Nadu), which may affect the generalizability of findings to other regions. Additionally, reliance on self-reported data may introduce bias, as respondents may overestimate their financial knowledge or management behaviors. Future research could expand to include diverse locations and employ mixed methods for a more comprehensive understanding.

4. Data Specification

This section deals with various findings includes descriptive analysis, correlation analysis, and collinearity analysis.

4.1 Descriptive Analysis

The below table 1 summarizes respondents' perceptions of the financial management behavior with related to digital financial knowledge:

Table 1 *Descriptive Analysis*

Indicator	Average
Digital Financial Knowledge	
Know how to manage business finances	4.29
Prepare good financial reports	3.89
Ability to project unexpected expenses	3.46
General Knowledge Index(General financial knowledge)	
1. Setting aside operating profit for savings	3.61
2. Make bill payments on time	3.48
3. Knowing service products and the risks of savings and loans	3.19
Saving and Borrowing Index (knowledge of savings and loans)	
1. Understand the basic principles of business and labor insurance	3.71
2. Setting aside operating profit for insurance	3.78
3. Knowing the types of trusted insurance services and products	3.56
Insurance knowledge index	
1. Invest in for own business development	3.19
2. Investing in a business outside of own business	3.40
3. Knowing the types of investment services trusted	3.56
Investment knowledge index	
Total Digital Financial Knowledge Analysis	3.59
Financial Management Behavior	
1. Knowing the types and products of digital financial services	3.29
2. Realizing the advantages and disadvantages of digital financial service products	3.33
Digital products and services	
1. Knowing the risk of phishing, pharming, spyware, SIM card swaps	3.07
2. Understand the risks of digital footprints for hacking and profiling	3.51
Digital financial risk	
1. Know how to secure a digital financial account password or PIN	3.28
2. Understand how to secure personal information	3.15
Digital financial risk control	
1. Know the procedure (how to administer) compensation	3.07
2. Knowing the place and object of the complaint	3.51
Consumer rights and redress procedures	
Total Analysis of Financial Management Behavior	3.38

Source: *Primary data. Processed by SPSS 20*

4.2 Correlation Analysis
The below table 2 suggests a correlation between digital financial knowledge and financial management behavior.

Table 2 *Correlation Analysis*

	DFK	FMB
DFK	1	0.866
FMB	0.866	1

Source: *Primary Data. Processed by SPSS 20*

There is a strong positive relationship between digital financial knowledge and financial management behavior (0.866) indicating that individuals with higher digital financial knowledge are likely to exhibit better financial knowledge behavior.

4.3 Collinearity Analysis
The collinearity analysis examines the relationships among independent variables in a regression model to identify potential multicollinearity.

Table 3 *Collinearity Statistics*

	VIF
CRP1	1.627
CRP2	1.758
DFC1	1.51
DFC2	1.342
DFR1	1.298
DFR2	1.58
DPS1	1.55
DPS2	1.619
GKF1	2.888
GKF2	2.756
GKF3	1.676
IKW1	1.815
IKW2	1.768
IKW3	2.008
INK1	1.38
INK2	1.604
INK3	2.234
SAB1	1.595
SAB2	2.055
SAB3	1.391

Source: *Primary Data. Processed by SPSS 20*

From the given data, all VIF values are below 5, with the highest being 2.888 (for GKF1). The results suggest that the regression model is stable, and the coefficients can be interpreted.

4.4 Data Analysis Results
Discriminant validity is measured to know that each concept of each latent variable is different from other variables. A model has good discriminant validity if each cross-loading value of a latent variable has the most significant value compared to other cross-loading values for other latent variables. In the below table 4, the results of the discriminant validity test for each variable are explained.

Table 4 *Discriminant Validity (Cross Loading) Value*

Code	DFK	FMB
CRP1	0.711	0.74
CRP2	0.672	0.743
DFR1	0.481	0.541
DFR2	0.545	0.664
DPS1	0.532	0.675
DPS2	0.559	0.69
DRC1	0.568	0.64
DRC2	0.432	0.542
GKF1	0.807	0.665
GKF2	0.811	0.72
GKF3	0.591	0.514

IKW1	0.664	0.608
IKW2	0.629	0.44
IKW3	0.659	0.622
INK1	0.402	0.34
INK2	0.487	0.433
INK3	0.664	0.559
SAB1	0.553	0.557
SAB2	0.642	0.493
SAB3	0.453	0.388

Source: *Primary Data. Processed by Smart PLS3*

Table 5 *Discriminant Validity - Fornell Larcker Criterion*

	DFK	FMK
DFK	0.658	
FMB	0.866	0.625

Source: *Primary Data. Processed by Smart PLS3*

The table 4 and 5 shows that all cross-loading values for each indicator of each latent variable have the most significant cross-loading value compared to the cross-loading value of other variable indicators. It shows that each latent variable has good discriminant validity.

In addition to this method, testing the value of convergent and discriminant validity, it can also be done by searching at the value of Average Variance Extracted (AVE) value. A good AVE value is recommended greater than 0.5. The following is the result of calculating the AVE for each variable.

Table 6 *Construct Validity and Reliability*

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
DFK	0.851	0.869	0.881	0.791
FMB	0.811	0.823	0.858	0.654

Source: *Primary Data. Processed by Smart PLS3*

The above Table 6 shows that the AVE value resulting from this study is more than 0.5. Likewise, the result mentioned of cross-loading value. It shows that each indicator has met the predetermined criteria. Likewise, with the resulting cross-loading value, it can be seen that each indicator has complied with the predetermined criteria. The composite reliability value in this study is above 0.7, and Cronbach's alpha value of each variable in this study also has a value above 0.6. So it can be concluded that the data from this study is reliable. So, from the results of the measurement model (outer model), further analysis can be conducted to evaluate the structural model (inner model).

Furthermore, the structural model (inner model) is tested to see the relationship between the constructs. Following are the results of the evaluation of the structural research model

In Figure 1, the R-square value is shown as 0.750, indicating that 75 % of the variability in the dependent variable is explained by the independent variables. The path coefficient values of correlation between Digital Financial Knowledge and Financial Management Behavior is 0.866. From the above diagram, it is concluded that digital financial knowledge has a stronger influential path coefficients for Financial Management Behavior. The coefficient of determination R-Square (R^2) tests the structural model for each dependent variable. Below are the results of the coefficient of determination test from this research:
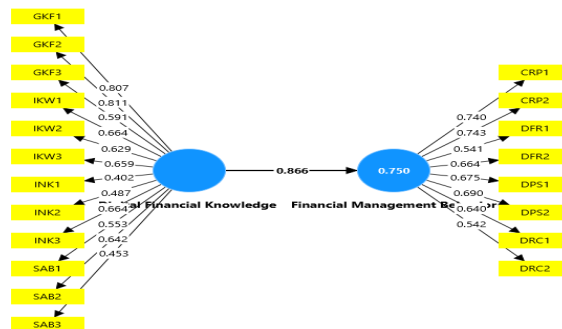

Figure 1 *Structural Equation Model*

Table 7 *R-Square*

	R-square	R-square adjusted
Digital Financial Knowledge	0.75	0.748

Source: Primary data. Processed by Smart PLS3
Table 8 *Path Coefficient*

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
DFK-> FMB	0.866	0.87	0.026	33.921	0.000

Source: *Primary Data. Processed by Smart PLS3*

The results in Table 8 indicate a strong positive path coefficient of 0.866 between Digital Financial Knowledge (DFK) and Financial Management Behavior (FMB), suggesting that an increase in digital financial knowledge is associated with improved financial management practices among street vendors. The sample mean of 0.87 supports the consistency of this relationship across the sample. With a standard deviation (STDEV) of 0.026, the low variability indicates reliable responses. The T-statistic value of 33.921, which exceeds the threshold of 1.96, confirms statistical significance, while the P-value of 0.000 indicates that this relationship is highly significant, reinforcing the importance of enhancing digital financial knowledge to improve financial management behavior.

5. Discussions
This study provides valuable insights into the relationship between Digital Financial Knowledge (DFK) and Financial Management Behavior (FMB) among street vendors in Tamil Nadu. The findings show a moderately strong positive correlation and suggesting that as street vendors enhance their digital financial knowledge; their financial management behaviors improve as well. This relationship emphasizes the need of digital literacy in promoting effective financial practices, which are required for the long-term viability and expansion of street vending firms. The study also highlights that many street vendors still face challenges due to lack of financial literacy and access to financial resources, which can hinder their ability to manage their finances effectively. This emphasizes the importance of focused interventions that not only educate street vendors about financial management but also provide them with the necessary digital skills to navigate modern financial tools.

6. Practical Implications
This research has major practical consequences for various stakeholders, including policymakers, financial institutions, and non-governmental organizations (NGOs). First, there is an obvious need to implement training programs aimed at improving digital financial literacy among street vendors. Budgeting, cash flow management, and the usage of digital payment systems are all important topics to address in these programs. Budgeting, cash flow management, and the usage of digital payment systems are all important topics to address in these programs.

7. Conclusion and Scope for Future Research
In conclusion, this study underscores the importance of Digital Financial Knowledge in shaping the Financial Management Behavior of street vendors in Tamil Nadu. The positive correlation identified suggests that improving financial literacy can lead to better financial outcomes for these vendors, supporting their business sustainability in a competitive market environment. Future research should explore longitudinal studies to assess the long-term impacts of enhanced financial literacy programs on street vendors' business performance. Additionally, expanding research to include diverse geographic regions and different types of informal workers could provide a broader understanding of digital financial literacy's effects across various contexts. Investigating other factors influencing financial behavior, such as socio-economic status or access to technology, will further enrich the discourse surrounding financial inclusion in informal economies. By continuing to explore these areas, future studies can contribute to more comprehensive strategies aimed at empowering street vendors and improving their economic stability.

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