THE INFLUENCE OF INNOVATION ON PERSONAL FINANCIAL MANAGEMENT AND FINANCIAL LITERACY

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How to cite this paper: Mamo, J., Vangjel, R., & Zyko, M. (2024). The influence of innovation on personal financial management and financial literacy. *Risk Governance and Control: Financial Markets & Institutions, 14*(2), 54–64.
https://doi.org/10.22495/rgcv14i2p6

ISSN Online: 2077-4303
ISSN Print: 2077-429X

Received: 05.06.2023
Accepted: 17.05.2024

JEL Classification: G51, G53, G59
DOI: 10.22495/rgcv14i2p6

Abstract

Financial planning evaluates a person's financial goals by identifying the necessary steps to achieve them according to their financial resources. With the increased influence of technology on day-to-day life and the countless innovations, incorporating new opportunities into the financial planning process increases the possibilities of achieving settled purposes. Using smartphone applications to manage personal finances improves economic behaviour, knowledge, attitudes, and motivation. In this study, we will analyse the changes brought about by using cash management applications among young people and through the delivery of a survey, we could gather their feedback. The answers are then analysed through SPSS Statistics, using Pearson correlation analysis. We measure the strength and direction of the relationship between variables related to what leads to using or not using cash management applications. At the end of the analyses, we conclude a weak positive relationship between using cash management applications and improving personal finances, according to Good Things Foundation (n.d.). From analysing the ties between smartphone usage and cash management apps, resulting in a fragile negative relationship, we conclude that the weak relationship between cash management apps and improved personal finances results from a low recognition in this typology of applications.

Keywords: Household Saving, Borrowing, Debt and Wealth, Financial Literacy, Public Economics, Financial Sector, Innovation

Authors' individual contribution: Conceptualization — M.Z.; Methodology — R.V.; Formal Analysis — R.V.; Data Collection — M.Z.; Writing — Original Draft — M.Z.; Writing — Review & Editing — R.V.; Supervision — J.M.; Project Administration — J.M.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

Acknowledgements: This study is funded by University "Aleksandër Moisiu" Durrës.

1. INTRODUCTION

Financial planning includes many issues related to planning the activities of the financial market with clear economic objectives, providing forecasts based on market sentiment and income inflows and outflows from operations, and planning many other ways to improve usage and offer resources to expenses (Grozdanovska et al., 2017). Awareness of

the proper use of advanced opportunities to help organise financial planning is an important part, thought feasible in those cases where we have developed financial knowledge. Gaining financial literacy consists of wise financial attitudes and behaviour, leading to developing the ability to determine financial aimings, prepare an adequate financial plan, manage finances effectively, and the capacity to make peculiar financial decisions on day-to-day activities (Sugiharti & Maula, 2019).

Effective personal finance management involves general awareness and understanding of opportunities and ways to maximise personal finance success. Advanced technologies have released personal financial planning and management apps so people can save and spend efficiently. Smartphone personal finance apps are aimed at supporting personal finances and improving spending. According to various studies, people who use these apps show better skills, self-control in financial decisions, and financial knowledge.

This study analyses the inclusion of cash management apps among young people in their financial typology. A review of critical previous studies is developed, focusing on topics such as financial literacy and its importance, cash management based on youngsters' habits and the relationship that is being created between technology and financial planning nowadays. The correlation analysis in SPSS Statistics seeks to define the relationship between mobile usage and cash management usage, the effect of cash management app usage on financial information and the impact of using cash management apps in financial decisions and youngsters' budgets.

The importance of this paper is that it contributes to improving the literature in the same field of study because there are gaps in this field.

The research questions of this study are as follows:

RQ1: Does mobile usage increase the use of new opportunities in helping personal finances?

RQ2: Do cash management apps improve youngsters' financial planning and increase financial information over their activities?

RQ3: Are personal finances improved with the use of a cash management application?

A case study has been settled for the above research questions, and hypotheses are established and tested for each case study.

The structure of this paper is as follows. Section 2 reviews the relevant literature. In Section 3, the methodology is explained based on the analysis of a survey distributed among people aged 21–28 years old. Section 4 presents the results where data exploration separated in case study appears according to the analysis set on SPSS. Section 5, based on the conclusions from the survey analysis and the feedback from the reviewed literature, emphasises the paper's value and importance and implies possible recommendations. In Section 6, the conclusions of this paper are displayed, reflecting a summary of the relationships established between the variables taken in the study.

2. LITERATURE REVIEW

Financial management behaviour includes the definition of good decision-making and management behaviour in financial issues and how to plan, analyse, and budget income and savings to meet individual needs and desires (Apriyanti & Ramadita, 2022).

According to different studies, financial literacy and financial management behaviour are positively related. Analyses by Amalia et al. (2021) and Veriwati et al. (2021) confirm a strong impact of financial literacy on the financial management behaviour of students.

Gahagho et al. (2021) indicate that financial attitude indicators include saving activity, budgeting, and economic. Studies from Parmitasari et al. (2020) and Syaliha et al. (2022) state a positive relationship and significant impact of lifestyle on financial management behaviour.

According to the Organisation for Economic Co-Operation and Development (OECD, 2018), digital literacy is "the ability to effectively find, critique, evaluate and create information using various digital technologies" (p. 3). Increasing digital literacy is very important in promoting financial behaviour; budgeting and a financial goals tracker can improve financial management skills and manage individuals' finances.

The lack of financial literacy is a widespread problem at a global level and is also visible and present in developed economies. This means that many individuals who need more financial literacy have been deterred from embracing innovative financial products and making sound financial planning decisions (Lone & Bhat, 2024).

Financial literacy generally means understanding the markets and making decisions based on financial terms and conditions. Also commonly understood, financial literacy is knowledge of financial management, including budgeting, savings, investment, and insurance (Saeedi & Hamedi, 2018).

OECD (2016) defined financial literacy as knowledge and understanding of financial strategies and risks and the ability, motivation, and confidence to use this knowledge and experience to make sound and profitable financial decisions that improve financial health, the well-being of individuals and communities and economic cooperation.

Another topic is "spending behaviour", which is affected by each lifestyle, depending on activities, hobbies, etc., allocating expenses in a different location based on personal lifestyle (Dewi et al., 2021). Studies have defined spending behaviour as how people utilise their money to accomplish their needs with no control (Abawag et al., 2019).

Spending habits and financial management of young people will determine their financial future. Budgeting is an essential tool for financial success. Using money wisely will make it quicker to achieve goals. Planning is a way to manage spending ahead of time, and knowing what to spend and why leads to a better understanding of finance. It also helps keep on the right track in the budget and expenses (Bona, 2018).

Budget creation is essential for young people's cash management, which is considered to help keep track of their income, spending, and savings. Tracking spending on a budget allows youngsters to make informed spending decisions and avoid overspending. Young people should evaluate their spending options and make sound decisions based on their financial goals. Saving is also an indicator of good cash management. Setting aside some income or emergency financial assistance can provide security and reduce the need to rely on credit cards or loans in times of crisis (Ameliawati & Setiyani, 2018).

Conversely, technology is essential in empowering people financially by providing them with tools and resources to manage their finances better. Monitoring and follow-up expenses are necessary for young people. This can be done in several ways, such as keeping a spreadsheet, using a personal finance app, or keeping receipts. By tracking spending, students can understand spending patterns, identify areas for overspending, and make adjustments to stay within budget (French et al., 2020).

Individuals with responsible ability and mindset will engage in financially intelligent behaviour whenever their finances allow (French, et al., 2021). The usage data for downloaded apps on cash management shows that from 600,000 apps in the iOS App Store, 400,000 of them have never been downloaded, whereas 80% of paid Android apps have gotten less than 100 downloads (Lim et al., 2015, p. 40).

Good Things Foundation (n.d.) analysed the effectiveness of online-assisted digital transactions in improving financial skills. The study's conclusion showed that through the development of financial skills using technology, people's confidence was increased, helping their financial future.

3. RESEARCH METHODOLOGY

3.1. Methodology

In this section, our research will demonstrate the effectiveness of the personal financial management practice. The analysis will focus on data gathered from youngsters aged 21 to 28 years old, included in a survey distribution regarding using cash management apps, financial management, and expense control, according to Jian et al. (2020). Our sample consists of people from Tirana and Durres cities. Considering that our survey is distributed only to youngsters, we targeted this group because financial difficulties are at the highest levels at this age. During this period, the job market is difficult for individuals without work experience, where even in the case of employment, the wages are meagre, the exploitation of young people is high, and the desire to spend is endless.

The motivation for this study stems from the difficulty young people face managing their low incomes. According to the findings of a group of 50 students at the university University "Aleksandër Moisiu" Durrës from an essay topic on 'Facing Financial Challenges in the Student's Aspect', in nearly 90% of this group, the authors concluded that the gap between income and spending is an essential issue in students' lives, which lead to the importance of studying this field. Considering the labour market's problems, this situation takes time to resolve or vanish among this age category. Therefore, we aim to support the use of cash management applications by identifying, for those who have never used such applications, the benefits of financial management expense control and sharing the experience of those who have used or are still using such apps.

To structure the survey (mainly the questions that included the use of applications for cash management) following the different experiences that the users of these applications may have had or currently have, we tested various applications considering their organisation and the options offered.

Applications tested were chosen based on the ratings in the Play Store, selecting the highest-rated apps. 'Budget', 'Money Manager+', and 'Expense, Budget & Bill Tracker' are some applications used to test cash management app construction. These are some cash management applications used to record income and expenses. The applications offer several classifications for costs and revenue, giving flexibility in their use. Users can also see graphical representations of their expenses.

3.2. Data collection

After testing the apps, conducting the survey, and identifying our targeted group, we collected data by spreading a study. The analysis aims to understand whether interacting with applications affects cash management and to understand the youngster's finances and financial planning (if applied). The survey was distributed to 93 people and completed by 72 of them. Four people tested the study before the information was required to ensure the targeted group understood the questions.

We used the correlation model for our analysis to identify the variables affecting the use of cash management applications and the effects brought after using this application. In other words, to see how different variables correlate and test for linear relationships between data. The statistical package SPSS 26 was used to measure the Pearson correlation coefficient between variables, basing our data analysis on the study of Habili et al. (2022). Other models can also be used to study the field chosen, including other types of samples, taking into consideration different categories of age, concluding alternative financial planning used by them and then comparing with cash management applications as in the study of Tejero et al. (2019), where Shapiro-Wilk test it is used.

During the survey design, respondents needed to understand each question clearly, so each of them, when required, was explained in terms of what needed to be done. To understand the reasons for not using the apps and the feedback from users, the survey was divided into two parts, including two groups of young people: those who used the app for cash management and those who did not or in other words, those who follow cash management and those who do not.

4. RESULTS

Our data analysis will be done according to what we aim to study and the hypothesis we have arisen, separating the analysis of the results into cases as follows.

In Table 1 below, we introduce some main features of our sample, such as their gender, their monthly income, the source of these incomes, and if they have achieved savings till this time. Creating a background of the sample is essential in better understanding the analysis done in the following section and helpful in the paper's conclusions. The summary of the variable is as below, presented in frequencies and percentages.

Table 1. Gender, monthly income, source of income and savings (variables the study has taken into analyses): Frequency summary

Characteristics	*Category*	*Frequency*	*Percent (%)*
Gender	Male	63	87.5
	Female	9	12.5
	Total	**72**	**100.0**
Monthly income	under 40,000 lek	28	38.9
	40,001–80,000 lek	29	40.3
	80,001–140,000 lek	14	19.4
	Over 140,001 lek	1	1.4
	Total	**72**	**100.0**
Income sources	Employment	35	48.6
	Family	36	50
	Other	1	1.4
	Total	**72**	**100.0**
Savings	No	46	63.9
	Yes	26	36.1
	Total	**72**	**100.0**

Source: Survey results in SPSS Statistics 26.

We can see that our sample includes primarily females, their monthly incomes (around 79% of the respondents) are below 80,000 lek, the source of revenues, family and employment come up with a shared percentage showing us a split sample between those who have created financial independence and those who still depend on their families.

4.1. First case study: Studying the relationship between mobile usage and cash management apps usage

This study considers that the dependent variable is the *Cash management apps usage*, and the *Mobile usage* is the independent one. Considering that cash management apps are used by phone, we presume a positive relationship between the two variables. This application requires registering every monetary transaction acquired within the period used, meaning it needs a close relationship with your smartphone. From this, we can derive the following hypothesis.

$H1_0$: There is no association between mobile usage and cash management apps usage.

H1: There is a positive association between mobile usage and cash management apps usage.

The younger people use their mobile, the more they are disposed to use a cash management app.

Table 2. Mobile usage frequencies (time spent on smartphones among the participants of the survey)

Time spending		*Frequency*	*Percent*	*Valid percent*	*Cumulative percent*
Valid	under 1 hour	1	1.4	1.4	1.4
	1–3 hour	20	27.8	27.8	29.2
	over 3 hours	51	70.8	70.8	100.0
	Total	**72**	**100.0**	**100.0**	

Source: Survey results in SPSS Statistics 26.

Table 3. Cash management apps usage frequencies (participants who have been once users of cash management apps)

Question/Answer		*Frequency*	*Percent*	*Valid percent*	*Cumulative percent*
Valid	Yes	52	72.2	78.8	78.8
	No	14	19.4	21.2	100.0
	Total	66	91.7	100.0	
Missing	System	6	8.3		
Total		**72**	**100.0**		

Source: Survey results in SPSS Statistics 26.

Mobile usage among young people is seen at the highest level, over 3 hours per day, for 51 participants from 72 included in the survey. A relatively high amount of time is spent considering the preoccupations a person of that age can have. Apps for cash management now of survey distribution were used only by four young people; 48 of them have at least used one such app and then, for different reasons, have interrupted it, and 14 respondents have never used a cash management app before.

Table 4. Cash management apps usage and mobile usage: Correlation matrix

		Mobile usage	*Cash management apps usage*
Mobile usage	Pearson correlation	1	-0.025
	Sig. (2 tailed)		0.845
	N	72	66
Cash management apps usage	Pearson correlation	-0.025	1
	Sig. (2 tailed)	0.845	
	N	66	66

Source: Survey results in SPSS Statistics 26.

Table 5. Cash management app usage and mobile usage: Model summary

Model	*R*	*R-square*	*Adjusted R-square*	*Std. error of the estimate*
1	0.025[a]	0.001	-0.015	0.41502

Note: a. Predictors (constant): Mobile usage.
Source: Survey results in SPSS Statistics 26.

Table 6. Coefficients

Model		*Unstandardized coefficients*		*Standardized coefficients*	*t*	*Sig.*
		Beta	*Std. error*	*Beta*		
1	(Constant)	1.265	0.276		4.587	0.000
	Mobile usage	-0.020	0.102	-0.025	-0.197	0.845

Note: Dependent variable: Cash management apps usage.
Source: Survey results in SPSS Statistics 26.

$$Y_1 = \beta_0 + \beta_1 X_1$$
$$Y_1 = 1.265 - 0.02 X_1 \quad (1)$$
$$Cash\ management\ apps\ usage = 1.265 - 0.02\ Mobile\ usage$$

Using Pearson correlation analysis, we measure the strength and direction of the relationship between the *Cash management apps usage* and *Mobile usage* and define whether the changes in one variable affect the transformation of the other variable.

In our case, the Pearson correlation is at -0.025. Firstly, we define a negative relationship as the value is a negative number. Secondly, we scale the Pearson correlation from -1 to +1, representing the strength of the relationship. Our correlation coefficient is at a value of -0.025, which shows a weak correlation. The p-value for our study is 0.845, meaning it is more than 0.05. We cannot say that we have a significant value.

R-square indicates the amount of variance in the *Cash management apps usage* variable (the dependent variable) accounted for or explained by the *Mobile usage* variable (the independent variable). The value 0.025 indicates that 2.5% of the variance of *Cash management apps usage* is negatively dependent on the variable *Mobile usage*, which is a very non-considerable value and confirms the weak negative relationship.

From the regression equation, we define the effects of unstudied factors over cash management usage when assuming that all the independent variables are zero, calculated at 1.265. According to the beta coefficient, we define that the cash management usage is impacted by -0.02 from 1 change in mobile use.

Overall, we define that the $H1_0$ hypothesis is confirmed. This means that because we are studying young people with high smartphone usage, it does not mean that it positively affects cash management apps. According to the results of the survey, the low use of cash management apps for an extended period comes not from the accessibility to this application but from the decision of youngsters not to benefit because of the low information over the advantages that come after the use in the long term of this technology.

4.2. Second case study: Cash management apps' effects on financial planning for young people and financial information over their activities

A part of the survey focuses on young people with experience with cash management apps. For this, we need to analyse if variables like *Increased expenses information* and *Reduction of unnecessary expenses* are promoted after using these applications, through which we can easily access every expense we have done and have a clearer view of them.

4.2.1. Increased expenses information after cash management apps usage

Considering the dependent variable, the *Increased expenses information*, and independent the *Cash management apps usage*, the hypothesis is:

$H2_0$: There is no association between increased expenses information and cash management apps usage.

H2: There is a positive association between increased expenses information and cash management apps usage.

The younger people use the cash management app, the more they can increase the information regarding their expenses.

Table 7. Increased expenses information frequencies

Question/Answer		*Frequency*	*Percent*	*Valid percent*	*Cumulative percent*
Valid	Yes	38	52.8	73.1	73.1
	No	14	19.4	26.9	100.0
	Total	52	72.2	100.0	
Missing	999.00	20	27.8		
Total		**72**	**100.0**		

Source: Survey results in SPSS Statistics 26.

The above table represents the frequencies of participants who have experienced increasing information about their expenses after using a cash management app. Of those who once used a cash management app (52), 38 expressed that their information over costs they made increased, while 14 did not approve an increased expenses information.

Table 8. Increased expenses information and cash management apps usage: Correlation matrix

		Cash management apps usage	*Increased expenses information*
Cash management apps usage	Pearson correlation	1	0.286*
	Sig. (2-tailed)		0.044
	N	66	50
Increased expenses information	Pearson correlation	0.286*	1
	Sig. (2-tailed)	0.044	
	N	50	52

*Note: * Correlation is significant at the 0.05 level (2-tailed).*
Source: Survey results in SPSS Statistics 26.

Table 9. Increased expenses information and cash management apps: Model summary

Model	*R*	*R-square*	*Adjusted R-square*	*Std. error of the estimate*
1	0.286[a]	0.082	0.063	0.42892

Note: a. Predictors (constant): Cash management apps usage.
Source: Survey results in SPSS Statistics 26.

Table 10. Coefficients

Model		*Unstandardized coefficients*		*Standardized coefficients*	*t*	*Sig.*
		Beta	*Std. error*	*Beta*		
1	(Constant)	0.847	0.208		4.067	0.000
	Cash management apps usage	0.362	0.175	0.286	2.071	0.044

Note: Dependent variable: Increased expenses information.
Source: Survey results in SPSS Statistics 26.

$$Y_2 = \beta_0 + \beta_2 X_2$$
$$Y_2 = 0.847 + 0.362 X_2 \quad (2)$$
$$Increased\ expenses\ information = 0.847 + 0.36\ Cash\ management\ apps\ usage$$

The strength and direction of the relationship between the usage of cash management applications and increased information over expenses is being measured using Pearson correlation analysis, together with defining whether the changes in the constant variable *Cash management apps usage* affect the evolution of the dependent variable *Increased expenses information.*

In our case, the Pearson correlation is at the value of 0.286. Firstly, we define a positive relationship as the deal is a positive number. Secondly, we scale the Pearson correlation from -1 to +1, representing the strength of the relationship. Our correlation at value 0.286 shows us a weak correlation. We also need to specify the significance level between the two chosen variables. Knowing that the p-value for our case is 0.044, meaning it is less than 0.05, we can say that we have a significant value.

R-square indicates the amount of variance in the *Increased expenses information* variable (the dependent variable) that is accounted for or explained by the *Cash management apps usage* variable (independent variable). The value 0.286 indicates 28.6% of the variance of increased expenses. Information can be predicted from the *Cash management apps usage* variable, which could be much higher and show a stronger relationship between the two variables.

From the regression equation, we define the effects of unstudied factors over the *Increased expenses information* when assuming that all the independent variables are zero, which is calculated at 0.847. According to the beta coefficient, we define that the *Increased expenses information* is impacted by 0.362 from 1 change in the *Cash management apps usage.*

Overall, we can define that the hypothesis *H2* is approved, even though it has a weak positive relationship. The younger people use cash management apps, the more they are disposed to increase the information regarding their expenses.

4.2.2. Reduction of unnecessary expenses after cash management apps usage

In this case, the dependent variables is the *Reduction of unnecessary expenses*, and the independent variable is *Cash management apps usage.*

$H3_0$: There is no association between the reduction of unnecessary expenses and cash management apps usage.

H3: There is a positive association between the reduction of unnecessary expenses and cash management apps usage.

The younger people use the cash management app, the more they are disposed to reduce their unneeded expenses.

Table 11. Reduction of unnecessary expenses frequencies

Question/Answer		*Frequency*	*Percent*	*Valid percent*	*Cumulative percent*
Valid	Yes	35	48.6	70.0	70.0
	No	15	20.8	30.0	100.0
	Total	50	69.4	100.0	
Missing	999.00	22	30.6		
Total		**72**	**100.0**		

Source: Survey results in SPSS Statistics 26.

From 50 youngsters who answered this question and used cash management apps, 35 replied that they noticed an expense reduction after keeping track and building up a history of what their money was spent on, which translates to 48.6% of positive financial feedback.

Table 12. Reduction of unnecessary expenses and cash management apps usage: Correlation matrix

		Cash management apps usage	*Reduction of unnecessary expenses*
Cash management apps usage	Pearson correlation	1	0.589**
	Sig. (2-tailed)		0.000
	N	66	48
Reduction of unnecessary expenses	Pearson correlation	0.589**	1
	Sig. (2-tailed)	0.000	
	N	48	50

*Note: ** Correlation is significant at the 0.01 level (2-tailed).*
Source: Survey results in SPSS Statistics 26.

Table 13. Reduction of unnecessary expenses and cash management app: Model summary

Model	*R*	*R-square*	*Adjusted R-square*	*Std. error of the estimate*
1	0.589[a]	0.347	0.333	0.37522

Note: a. Predictors (constant): Cash management apps usage.
Source: Survey results in SPSS Statistics 26.

Table 14. Coefficients

Model		*Unstandardized coefficients*		*Standardized coefficients*	*t*	*Sig.*
		Beta	*Std. error*	*Beta*		
1	(Constant)	0.381	0.192		1.984	0.053
	Cash management apps usage	0.810	0.164	0.589	4.943	0.000

Note: Dependent variable: Reduction of unnecessary expenses.
Source: Survey results in SPSS Statistics 26.

$$Y_3 = \beta_0 + \beta_3 X_3$$
$$Y_2 = 0.381 + 0.810 X_3 \quad (3)$$
$$Expenses\ reduction = 0.381 + 0.810\ Cash\ management\ apps\ usage$$

Using Pearson correlation, we measure the strength and direction of the relationship between the usage of the cash management application and the reduction of unnecessary expenses. Through the R-square level, we will also determine the effects of changes to the independent variable on the dependent variable.

The significance level, shown by the p-value at 0.000, which is lower than 0.05 and even lower than 0.01, shows a significant relationship. The Pearson correlation has a value of 0.589, showing a strong relationship between usage of *Cash management apps usage* and *Reduction of unnecessary expenses.* R-quare indicates the variance in the *Reduction of unnecessary expenses* variable (the dependent variable) accounted for or explained by the *Cash management apps usage* variable (the independent variable). The value 0.589 indicates that 58.9% of the variance of *Reduction of unnecessary expenses* can be predicted from the variable *Cash management apps usage.*

From the regression equation, we define the effects of unstudied factors over the reduction of unnecessary expenses when assuming that all the independent variables are zero, which is calculated at 0.381. According to the beta coefficient, we define that the cost decrease is impacted by 0.81 from 1 change in the cash management app usage.

Overall, we can conclude that the hypothesis *H3* is approved, in this case, a very strong one. The younger people use cash management apps, the more they are disposed to reduce their unneeded expenses.

4.3. Third case study: Improving personal finances through cash management applications

In this case, we suppose that the dependent variable is *Improved finances* and the independent one is *Cash management apps usage.*

$H4_0$: There is no association between improved finances and cash management apps usage.

H4: There is a positive association between improved finances and cash management apps usage.

The younger people use cash management app, the more they are disposed to improve their finances.

Table 15. Improved finances frequency

Question/Answer		*Frequency*	*Percent*	*Valid percent*	*Cumulative percent*
Valid	Yes, ability to cover more my expenses, and not search for other sources of incomes.	14	19.4	28.0	28.0
	Yes, even achived to save a part of the incoes.	22	30.6	44.0	72.0
	No, the situation remains the same as before the budget app usage.	14	19.4	28.0	100.0
	Total	50	69.4	100.0	
Missing	999.00	22	30.6		
Total		**72**	**100.0**		

Source: Survey results in SPSS Statistics 26.

The above table shows the results and feedback of participants using cash management apps even once. Of 50 youngsters who answered this question and used cash management apps, 36 had noticed differences in their finances for the better, whereas 14 remained in the same situation.

Table 16. Improved finances and cash management apps usage: Correlation matrix

		Cash management apps usage	*Improved finances*
Cash management apps usage	Pearson correlation	1	0.263
	Sig. (2-tailed)		0.071
	N	66	48
Improved finances	Pearson correlation	0.263	1
	Sig. (2-tailed)	0.071	
	N	48	50

Source: Survey results in SPSS Statistics 26.

Table 17. Improved finances and cash management apps: Model summary

Model	*R*	*R-square*	*Adjusted R-square*	*Std. error of the estimate*
1	0.263[a]	0.069	0.049	0.73896

Note: a. Predictors (constant): Cash management apps usage.
Source: Survey results in SPSS Statistics 26.

Table 18. Coefficients

Model		*Unstandardized coefficients*		*Standardized coefficients*	*t*	*Sig.*
		Beta	*Std. error*	*Beta*		
1	(Constant)	1.310	0.378		3.463	0.001
	Cash management apps usage	0.595	0.323	0.263	1.846	0.071

Note: Dependent variable: Improved finances.
Source: Survey results in SPSS Statistics 26.

$$Y_4 = \beta_0 + \beta_4 X_4$$
$$Y_4 = 1.310 + 0.595 X_4 \quad (4)$$
$$Improved\ finances = 1.310 + 0.595\ Cash\ management\ apps\ usage$$

In conclusion, finalising our analyses by understanding whether we have improved finances for the application users is essential.

Using Pearson correlation, we measure the strength and direction of the relationship between the usage of *Cash management apps usage* and *Improved finances*. Through the R-square level, we will also determine the effects of changes to the independent variable on the dependent variable. The significance level, shown by the p-value at 0.071, which is lower than 0.1, shows us a significant relationship.

As for the relationship between the two variables, firstly, we define a positive relationship because of a positive value of Pearson correlation. The correlation coefficient is 0.263, showing a weak relationship between using cash management apps and improved finances.

R-square indicates the amount of variance in the *Improved finances* variable (the dependent variable) that is accounted for or explained by the *Cash management apps usage* variable (independent variable). The value 0.263 indicates that 26.3% of the variance of I*mproved finances* can be predicted from the variable *Cash management apps usage.*

From the regression equation, we define the effects of unstudied factors over the improved finances when assuming that all the independent variables are zero, calculated at 1.31. According to the beta coefficient, we define improved finances as impacted by 0.595 from 1 cash management app usage change.

Overall, we can define that the hypothesis *H4* is approved. However, our study shows a fragile relationship. The younger people use cash management app, the more they are disposed to improve their finances. This is made possible through increased access to the financial movements they carry out and their faster and more accurate identification, creating the possibility of making more accurate decisions in the future.

5. DISCUSSION

The study addresses the level of cash management application inclusion in young people aged 21 to 28, aiming to increase performance over their incomes and expenses. To encourage the use of these opportunities, the study also shows the benefits of using such apps from a part of the achieved sample. Offering a good adaptation of the application to the youngsters but a low level of information among them at the beginning of the study, we also indicate different methods to increase enlightenment over new options offered through technology in personal finances.

From the early stages, educational institutions are the cornerstone for creating bridges between young people and online applications for the benefit of good management of personal finances. Taking into consideration that financial planning may continue after the age of 18 years old (we take this age as youngsters enter the adult life stage and gain the possibility to earn their incomes, making cash management an opportunity for better financial achievement), we will consider some applicable implementations, which are as follows:

On-site activities. Activities to inform and implicate, in the case of this study, cash management applications can be developed in different environments populated with young people. Representing the benefits and difficulties that may come up will create a smooth presentation and connection between youngsters and cash management apps, thus avoiding the abandonment of these applications after short use.

Increased notification (email usage). It is essential that young people are informed and well-equipped with the latest information about financial planning when they start earning their incomes. In this way, it would be appropriate to provide detailed information on different possibilities of cash management app usage and determine what kind would be more suitable for specific groups based on age, income, and lifestyle.

6. CONCLUSION

Through the study implied in this field, this paper aimed to define the integration of emerging technologies in personal financial management, paving a path on exploring further applications or advanced methods in the future supported by increased financial literacy in order to lead in innovative solutions to improve to results of now only youngsters but also for a wider group of population.

According to the first case study of the survey results, the null hypothesis was approved, making no relationship between cash management apps and usage of smartphones, mainly because of the low information over the benefits of this technology in the long term, and also supported by the conclusions of Lone and Bhat (2024) we conclude that financial planning among youngsters needs to be higher, implying a significant gap in the information this population group possesses on the innovative possibilities that can be used to create more effective management of income and expenses.

As stated from the hypothesis confirmed in the second case study, there is a positive association between increased expense information and cash management app usage, and there is a positive association between the reduction of unnecessary expenses and cash management app usage. It has come to an end that basing financial decisions over budgeting skills provided or bloomed through the use of cash management applications shows an improvement of the overall financial habits of youngsters, a confirmation in accordance also with the study of French et al. (2020).

By the positive link between improved finances and cash management applications usage and consistent with the conclusion reached in the study of Good Things Foundation (n.d.), it is highlighted that the increased information provided by cash management applications leads to precise financial decisions, succeeding in improving personal improvements.

To end up, we would focus on maintaining an appropriate usage of cash management apps for the positive effect of these applications, such as improved finances, to unfold. To eradicate the above constraints, the researcher recommends increasing accounting staff, expanding sources of funds, record keeping, and providing financial education.

We conclude that the weak relationship between cash management apps and improved personal finances results from a low recognition of this typology of applications. This is evident from analyzing the ties between smartphone usage and cash management apps, which reveals a fragile negative relationship. Several limitations in our study may have contributed to this finding. Firstly, the sample size and demographic diversity were limited, which might not fully represent the broader population. Secondly, self-reported data on financial habits and app usage can introduce biases. Lastly, the rapidly evolving nature of financial technology means that user adoption and app functionalities are continually changing, potentially impacting the results of such analyses.

REFERENCES

Abawag, C. F. N., Ancheta, J. R. S., Domingo, I. J. B., Rabina, G. A., Saclote, A. D. N., & Taguinod, G. M. M. (2019). *Spending behavior of management students.* University of Saint Louis. https://www.studocu.com/ph/document/holy-trinity-college-of-general-santos-city/accountancy/spending-behavior-of-management-students/38436578

Alvarez, F., & Lippi, F. (2015). *Cash burns: An inventory model with a cash-credit choice* (Working Paper No. 21110). National Bureau of Economic Research (NBER). https://doi.org/10.3386/w21110

Amalia, R. D., Utomo, S. W., & Sulistyowati, N. W. (2021). Determinan perilaku pengelolaan keuangan mahasiswa pendidikan akuntansi UNIPMA [Determinants of financial management behavior of UNIPMA accounting education students]. *Tangible Journal, 6*(1), 77–93. https://doi.org/10.47221/tangible.v6i1.137

Ameliawati, M., & Setiyani, R. (2018). The influence of financial attitude, financial socialization, and financial experience to financial management behavior with financial literacy as the mediation variable. *KnE Social Sciences 3*(10), 811–832. https://doi.org/10.18502/kss.v3i10.3174

Apriyanti, A., & Ramadita, R. (2022). The influence of financial literature, financial technology, and income on financial behavior. *Jurnal Ilmiah Manajemen & Bisnis, 6*(3), 33–47. https://doi.org/10.22441/indikator.v6i3.14235

Bagwell, S., Hestbaek, C., Harries, E., & Kail, A. (2014). *Financial capability outcomes framework*. New Philanthropy Capital (NPC). https://www.thinknpc.org/wp-content/uploads/2018/07/Financial-Capability-Outcome-Frameworks-MAS.pdf

Bertocchi, G., Brunetti, M., & Torricelli, C. (2014). Who holds the purse strings within the household? The determinants of intra-family decision making. *Journal of Economic Behavior & Organization, 101*, 65–86. https://doi.org/10.1016/j.jebo.2014.02.012

Bona, J. T. (2017). Spending behavior among college students. *Science International (Lahore), 29*(4), 749–753. http://www.sci-int.com/pdf/636367905598414204.pdf

Bona, J. T. (2018). Factors affecting the spending behavior of college students. *Journal of Fundamental and Applied Sciences, 10*(3s), 142–152. https://www.ajol.info/index.php/jfas/article/view/171490

Campbell, J. (2006). Household finance. *The Journal of Finance, 61*(4), 1553–1604. https://doi.org/10.1111/j.1540-6261.2006.00883.x

Choi, J. J., Laibson, D., & Madrian., B. C. (2009). Mental accounting in portfolio choice: Evidence from a flypaper effect. *American Economic Review*, 99(5), 2085–2095. https://doi.org/10.1257/aer.99.5.2085

Dewi, N. L. K., Gama, A. W. S., & Astiti., N. P. Y. (2021). Pengaruh literasi keuangan, gaya hidup hedonisme, dan pendapatan terhadap pengelolaan keuangan mahasiswa UNMAS [The influence of financial literacy, hedonistic lifestyle, and Income towards the financial management of UNMAS students]. *EMAS Journal, 2*(3), 74–86. https://e-journal.unmas.ac.id/index.php/emas/article/view/1820/1475

Firli, A. (2017). Factors that influence financial literacy: A conceptual framework. *IOP Conference Series: Materials Science and Engineering, 180*, Article 012254. https://doi.org/10.1088/1757-899X/180/1/012254

Fogarty, M. (2012). *Save, invest, grow*. Readers Digest.

French, D., McKillop, D., & Stewart, E. (2020). The effectiveness of smartphone apps in improving financial capability. *The European Journal of Finance, 26*(4–5), 302–318. https://doi.org/10.1080/1351847X.2019.1639526

French, D., McKillop, D., & Stewart, E. (2021). Personal finance apps and low-income households. *Strategic Change, 30*(4), 367–375. https://doi.org/10.1002/jsc.2430

Gahagho, Y. D., Rotinsulu, T. O., & Mandeij, D. (2021). The influence of financial literation on financial attitudes and revenue resources on financial management behavior of students of the Faculty of Economics and Business UNSRAT with intention as intervening variables. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 9*(1), 543–555. https://ejournal.unsrat.ac.id/v3/index.php/emba/article/view/32337

Garcia, M. B., & Claour, J. P. (2021). Mobile bookkeeper: Personal financial management application with receipt scanner using optical character recognition. In *Proceedings of the 2021 1st Conference on Online Teaching for Mobile Education (OT4ME)* (pp. 15–20). IEEE. https://doi.org/10.1109/OT4ME53559.2021.9638794

Good Things Foundation. (n.d.). *Changing behaviour around online transactions*. https://www.goodthingsfoundation.org/insights/changing-behaviour-online-transactions/

Grozdanovska, V., Bojkovska, K., & Jankulovski, N. (2017). Financial management and financial planning in the organizations. *European Journal of Business and Management, 9*(2), 120–125. https://core.ac.uk/download/pdf/234627714.pdf

Habili, M., Muharremi, O., & Hoxhaj, M. (2022). Analysis of the variables influencing people's propensity to use online banking services in Albania. *International Journal of Finance & Banking Studies, 11*(4), 58–65. https://doi.org/10.20525/ijfbs.v11i4.2266

Hastings, J., & Mitchell, O. (2011). *How financial literacy and impatience shape retirement wealth and investment behavior* (Working Paper No. 16740). National Bureau of Economic Research (NBER). https://doi.org/10.3386/w16740

Hershfield, H. E., Goldstein, D. G., Sharpe, W. F., Fox, J., Yeykelis, L., Carstensen, L. L., & Bailenson, J. N. (2011). Increasing saving behavior through age-progressed renderings of the future self. *Journal of Marketing Research, 48*(SPL), S23–S37. https://doi.org/10.1509/jmkr.48.SPL.S23

Isomidinova, G., & Singh, J. S. K. (2017). Determinants of financial literacy: A quantitative study among young students in Tashkent, Uzbekistan. *Electronic Journal of Business & Management, 2*(1), 61–75. http://surl.li/sxosx

Jian, B. K. W., Subarmaniyan, S. A. L., & Joo, M. O. T. (2020). Personal financial planning and management APPS (PFPMA). *International Journal of Management, 11*(11), 2202–2228. https://iaeme.com/Home/article_id/IJM_11_11_206

Jurevičienė, D., & Ivanova, O. (2013). Behavioural finance: Theory and survey. *Mokslas — Lietuvos Ateitis/Science — Future of Lithuania, 5*(1), 53–58. https://doi.org/10.3846/mla.2013.08

Lim, S. L., Bentley, P. J., Kanakam, N., Ishikawa, F., & Honiden, S. (2015). Investigating country differences in mobile app user behavior and challenges for software engineering. *IEEE Transactions on Software Engineering, 41*(1), 40–64. https://doi.org/10.1109/TSE.2014.2360674

Lone, U. M., & Bhat, S. A. (2024). Impact of financial literacy on financial well-being: A mediational role of financial self-efficacy. *Journal of Financial Services Marketing, 29*, 122–137. https://doi.org/10.1057/s41264-022-00183-8

Lusardi, A., & Mitchell, O. S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics, 54*(1), 205–224. https://doi.org/10.1016/j.jmoneco.2006.12.001

Lusardi, A., & Mitchell., O. S. (2013). *The economic importance of financial literacy: Theory and evidence* (Working paper No. 18952). National Bureau of Economic Research (NBER). https://doi.org/10.3386/w18952

Mathews, M. J. (2017). An analysis on spending and saving pattern of college students in Idukki District. *International Journal of Management (IJM), 8*(3), 199–203. https://iaeme.com/MasterAdmin/Journal_uploads/IJM/VOLUME_8_ISSUE_3/IJM_08_03_022.pdf

Mundy, S. (2011). *Financial capability: Why is it Important and how can it be improved?* CFBT Education Trust. https://financialliteracygroup.com/wp-content/uploads/2015/10/SM3-Improving-Financial-Literacy.pdf

Nofsinger, J. R., Sulaeman, J., & Varma, A. (2019). Institutional investors and corporate social responsibility. *Journal of Corporate Finance, 58*, 700–725. https://doi.org/10.1016/j.jcorpfin.2019.07.012

Organisation for Economic Co-Operation and Development (OECD). (2018). *G20/OECD INFE policy guidance: Digitalisation and financial literacy*. https://web-archive.oecd.org/2018-10-04/490032-G20-OECD-INFE-Policy-Guidance-Digitalisation-Financial-Literacy-2018.pdf

Organisation for Economic Co-Operation and Development (OECD). (2016). *OECD/INFE international survey of adult financial literacy competencies*. https://www.oecd.org/financial/education/oecd-infe-survey-adult-financial-literacy-competencies.htm

Parmitasari, R. D. A., Kara, M., Bulutoding, L., Alwi, Z., & Sriwijaya, M. (2020). Financial behavior of Indonesian Moslem students Scholarship recipients: The role of locus of control and financial knowledge. *International Journal of Advanced Engineering Research and Science, 7*(4), 281–292. https://doi.org/10.22161/ijaers.74.36

Ramya, N., & Ali, M. (2016). Factors affecting consumer buying behavior. *International Journal of Applied Research, 2*(10), 76–80. https://www.allresearchjournal.com/archives/?year=2016&vol=2&issue=10&part=B&ArticleId=2683

Saeedi, A., & Hamedi, M. (2018). *Financial literacy: Empowerment in the stock market*. Palgrave Pivot. https://doi.org/10.1007/978-3-319-77857-0

Servon, L. J., & Kaestner, R. (2008). Consumer financial literacy and the impact of online banking on the financial behavior of lower-income bank customers. *Journal of Consumer Affairs, 42*(2), 271–305. https://doi.org/10.1111/j.1745-6606.2008.00108.x

Sorooshian, S., &. Teck, T. S. (2014). Spending behaviour of a case of Asian University students. *Asian Social Science, 10*(2), 64–69. http://doi.org/10.5539/ass.v10n2p64

Spencer, N. J., Nieboer, J., & Elliott, A. (2015). *Wired for imprudence: Behavioural hurdles to financial capability and challenges for financial education.* RSA. http://surl.li/sxuwe

Spinella, M. Y. (2007). Development of the executive personal finance scale. *International Journal of Neuroscience, 117*(3), 301–313. https://doi.org/10.1080/00207450500534043

Sugiharti, H., & Maula, K. A. (2019). Pengaruh literasi keuangan terhadap perilaku pengelolaan keuangan mahasiswa [The influence of financial literacy on students' financial management behavior]. *Accounthink: Journal of Accounting and Finance, 4*(2), 804–818. https://doi.org/10.35706/acc.v4i2.2208

Syaliha, A., Sutieman, E., Pasolo, M. R., & Pattiasina, V. (2022). The effect of financial literacy, life style, financial attitude and locus of control to financial management behavior. *Public Policy: Jurnal Aplikasi Kebijakan Publik dan Bisnis, 3*(1), 52–71. https://doi.org/10.51135/PublicPolicy.v3.i1.p52-71

Tejero, E. P., Pilongo, L. W. E., & Pamaran, F. T. (2019). Financial literacy in relation to financial management. *University of Bohol Multidisciplinary Research Journal, 7*(1), 138–165. https://doi.org/10.15631/ubmrj.v7i1.125

Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics, 101*(2), 449–472. https://doi.org/10.1016/j.jfineco.2011.03.006

Veriwati, S., Relita, D. T., & Pelipa, E. D. (2021). Pengaruh literasi keuangan terhadap perilaku pengelolaan keuangan mahasiswa program studi pendidikan ekonomi [The effect of financial literacy on financial management behavior of students in economics education program]. *Jurkami: Jurnal Pendidikan Ekonomi, 6*(1), 43–53. https://doi.org/10.31932/jpe.v6i1.1150

Vintere, A., Balkytė, G., Budrienė, L., Liniauskaitė, R., Jurkaitienė, S., Meškelienė, A., & Kontkar, A. (2017). *Personal finance management: Handbook for social workers*. Klaipeda State University of Applied Sciences; Kuressaare College of Tallinn University of Technology; NGO Education innovations transfer centre. https://www.kvk.lt/wp-content/uploads/2020/11/Personal-Finance-Management-Handbook.pdf

Volpe, R. P., Chen, H., & Liu, S. (2006). An analysis of the importance of personal finance topics and the level of knowledge possessed by working adults. *Financial Services Review, 15*, 81–98. http://surl.li/sxykw

Yong, C. C. (2018). Financial knowledge, attitude and behaviour of young working adults in Malaysia. *Institutions and Economies, 10*(4), 21–48. https://ijie.um.edu.my/article/view/13444

Yunita, N. (2020). Pengaruh gender dan kemampuan akademis terhadap literasi keuangan dalam perilaku pengelolaan keuangan pada mahasiswa jurusan akuntansi [The influence of gender and academic abilities on financial literacy in financial management behavior in accounting students]. *Prisma (Platform Riset Mahasiswa Akuntansi), 01*(02), 1–12. https://ojs.stiesa.ac.id/index.php/prisma/article/view/414