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THE IMPACT OF THE WIDESPREAD ADOPTION OF DIGITAL PAYMENT SYSTEMS ON INDIVIDUAL SPENDING HABITS AND SAVINGS

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ABSTRACT

Purpose - The aim of the study is to examine the impact of digital payment systems on individual savings rates and spending habits in Türkiye. Additionally, it is to evaluate the impact of digital payment systems on individual spending and savings within the framework of the COVID-19 crisis.

Methodology - The research aims to examine the impact of digital payment systems on individual savings rates and spending habits by adopting a quantitative approach. Additionally, as a sub-objective, it aims to evaluate the impact of digital payment systems on individual spending and savings within the framework of the COVID-19 crisis. In the study, quarterly data for the period 2016Q1-2023Q4 were analyzed using household consumption expenditures, gross savings amount, digital payment systems (mobile payment, online banking, contactless payments, and all other digital payment methods), consumer price index, deposit interest rate, consumer credit interest rate, and consumer confidence index. The Newey–West Standard Errors Estimator has been used for data analysis.

Findings - It has been shown digital payment systems have a statistically significant and positive effect on household final consumption expenditures and gross savings. Again, it has been concluded the pandemic period had a statistically significant and negative impact on household final consumption expenditures and gross savings. Additionally, it has been observed digital payment systems had an impact on increasing household consumption expenditures and savings during the pandemic period.

Conclusion - - In the study, the effects of digital payment systems in Turkey on individual savings rates and spending habits were examined. The findings obtained indicate that digital payment systems have a statistically significant and positive impact on household final consumption expenditures and gross savings. In addition, it has been determined that the COVID-19 pandemic has a statistically significant and negative impact on household consumption expenditures and gross savings. Additionally, it has been observed that digital payment systems played a positive role in increasing individuals' consumption expenditures and savings during the pandemic period. These findings reveal how digital payment infrastructure shapes individuals' financial behaviors during times of crisis, providing an important foundation for future research examining the interaction between digital finance and crisis dynamics.

Keywords: Digital payment systems, household final consumption expenditure, gross savings rate, Covid-19 pandemic.
JEL Codes: D12, E21, E32

1. INTRODUCTION

The shift to digital payments has significantly transformed consumer spending habits. With the convenience of mobile wallets, online banking, and contactless payments, consumers have increasingly adopted cashless transactions. This change has not only facilitated the payment process but also encouraged more frequent and impulsive purchases. (Bhoopathy and Kanagaraj, 2023). These developments have also raised concerns regarding privacy and security.

The rapid proliferation of digital payment systems has led to fundamental changes in individuals' spending habits and saving tendencies. Mobile wallets, online banking, and contactless payment, with the convenience they offer through innovative technologies, enable consumers to make faster and more accessible transactions. This change has simplified spending processes while also encouraging instant gratification and impulsive purchases. However, digital payment systems increase financial awareness and support responsible spending by offering features such as real-time expense tracking. (Bhoopathy and Kanagaraj, 2023). The COVID-19 pandemic has been a turning point that rapidly increased the adoption rate of digital payment systems. Because during this period, digital payment systems have been at the forefront. The social distancing rules implemented during the pandemic have reduced the need for physical money while increasing interest in digital payment methods. In this context, the pandemic process has caused significant changes in both individuals' spending habits and saving behaviors. This study aims to analyze the impact of digital payment systems on individual savings rates and spending habits. Additionally, it aims to evaluate the impact of digital payment systems on individual spending and savings within the framework of the COVID-19 crisis. The study is expected to contribute to the literature by revealing the impact of digital financial products on individuals' financial decisions, providing new insights for both banks and financial service providers, and serving as an important resource for academics and policymakers who seek to understand the effects of digitalization on financial behaviors.

The study consists of five sections in line with its purpose. The first section is the introduction, while the second section consists of the literature review and the formulation of hypotheses. In the third section of the study, the dataset and methodology are introduced. In the fourth chapter, the research findings and interpretations of these findings are presented. As the sixth and final section, the study was completed with the conclusion and evaluation..

2. LITERATURE REVIEW

According to the general arguments of the literature and theoretical framework, the following hypotheses have been developed:

H1: The widespread use of digital payment systems reduces individual savings rates.

H2: The widespread adoption of digital payment systems increases the amount individuals spend.

H3: The use of digital payment systems has a negative effect on individuals' consumption tendencies.

H4: The effect of digital payment systems is independent of deposit interest rates.

H5: The effect of digital payment systems is independent of consumer loan interest rates.

H6: The widespread adoption of digital payment systems increases the inflation rate.

H7: The adoption rate of digital payment systems is negatively related to the consumer confidence index.

H8: The adoption rate of digital payment systems leads to an increase in gross savings values

Table 1: Literature Review

Authors	Data Set	Methodology	Variables	Findings
Duramaz and Dündar (2014)	Türkiye and İtaly	Comparison Method	Electronic payment tools	As a result of the study, it was found with the most commonly used card payment systems today, more spending is made in Turiye compared to Italy.
Ağan (2020)	Türkiye, 2019-2020	Granger Causality Test	Credit card spending and GDP	The study concludes that the Granger causality test indicates a one-way causality from GDP to credit card spending, with no evidence of a second-way causality between them.
Musyaffi et al., (2021)	Indonesia, 457 digital payment users	Structural Equation Model (SEM)	Performance expectancy, effort expectancy, social influence, facilitating condition, perceived security, personal innovativeness, behavioral intention to use digital payment, digital payment usage	The study concluded technological and personal mental factors influenced the adoption of digital payments, especially during the COVID-19 pandemic.
Saroy et al., (2022)	India, March 24 to June 2021	Logistic regression	Transacted digitally for the 1st time during the pandemic, income, age, gender, education, distance to bank, access to bank agent, owns a debit card and abandoned digital payments in the past	As a result of the study, it was concluded the transition to digital payment systems during the Covid-19 pandemic period was significantly shaped by the level of awareness of digital methods, access to smartphones and bank cards, and the social assistance provided as pandemic aid.
Brown et al., (2023)	It was obtained from three relevant consumer surveys conducted by the Swiss National Bank between mid-August and November 2020. Data obtained from 2,126 individuals were used.	OLS estimator	Consumption, Card Intensity, Withdrawal Frequency,	As a result of the study, it was concluded consumers who are focused on the present tend to spend more the more they use cashless payment tools.

Liu et al., (2023)	Chinese People, 2017-2019	Benchmark regression	The improvement in the consumption structure of rural households, mobile payment, the age of the head of the household, the square of the age divided by 100, gender, health status, marital status and education level, household size, per capita savings, and per capita income.	As a result of the study, they concluded mobile payments significantly contributed to the improvement of the consumption structure within rural households.
He et al., (2024).	China, General Social Survey data.	Augmented Inverse Probability Weighting Estimator	Four household spending categories (clothing, durable goods, consumables, and cultural and leisure activities) and four subjective well-being indicators (life satisfaction, satisfaction, income satisfaction, and depression).	As a result of the study, it was found the use of mobile payments significantly increases spending on household consumables and cultural and leisure activities, while it increases spending on clothing and durable goods.
Shah et al., (2024).	Data obtained from 503 individuals using digital payment methods in Pakistan	Structural Equation Model: Smart-PLS 4	Digital payments, Cash payments, Digital Financial Literacy and spending behavior	As a result of the study, they concluded both digital and cash payments significantly affect spending behavior.

3. THE DATA AND METHODOLOGY

The aim of this study is to analyze the impact of digital payment systems (such as mobile payments, digital wallets, and contactless cards) on household savings rates and spending habits in Türkiye. For this purpose, quarterly data from the years 2016Q1-2023Q4 have been used. Information regarding the variables included in the research is provided in Table 2.

Table 2: Data Set

Variables	Variable Type	Symbol	Source
Household final consumption expenditures	Dependent Variable	HFCE	TUIK
Gross Savings Value	Dependent Variable	GSV	TUIK
Digital Payment Volume	Independent Variable	DPV	TUIK and BKM
Consumer Price Index	Control Variable	CPI	TCMB
Deposit Interest Rate	Control Variable	DIR	TCMB
Consumer Interest Rate	Control Variable	CIR	TCMB
Consumer Confidence Index	Control Variable	CCI	TCMB
Pandemic	Dummy Variable		
Digital payment volume pandemic_interaction	Dummy Variable		

In the study, a pandemic dummy variable was included in the model to specifically observe the impact of the pandemic crisis on expenditures and savings. Similarly, to observe the impact of digital payment systems during the pandemic period, the variable digital payment volume pandemic_interaction has been included in the model. In the study, the natural logarithm of the variables was taken, and the work continued.

3.2. Method

Since the study requires time series analysis, it is extremely important to first determine whether the series is stationary. In this context, the stationarity condition of the series has been examined using the KPSS (Kwiatkowski-Phillips-Schmidt-Shin) and Elliott-Rothenberg-Stock (ERS) DF-GLS unit root tests (Kwiatkowski et al., 1992; Elliott et al., 1996). After the stationarity condition of the series was met, the presence of autocorrelation and heteroscedasticity in the models was examined using some autocorrelation and homogeneity tests. The presence of autocorrelation in the models was examined using the Durbin-Watson and Breusch–Godfrey LM tests, while the presence of heteroscedasticity was investigated using the Breusch–Pagan/Cook–Weisberg and White's tests. According to the test results, it was concluded that both models exhibited autocorrelation, while heteroscedasticity was not present. Therefore, the relationship between the variables was examined using the Newey–West Standard Errors Estimator, which accounts for autocorrelation.

3.3. Model

The natural logarithmic models of the research have been created as follows.

$$\ln HFCE_t = \beta_0 + \beta_1 \ln DPVL_t + \beta_2 \ln CPI_t + \beta_3 \ln DIR_t + \beta_4 \ln CIR_t + \beta_5 \ln CCI_t + \beta_6 Pandemic_t + \beta_7 DPV\_pandemic\_interaction_t + \varepsilon_t \quad (1)$$

$$\ln GSV_t = \beta_0 + \beta_1 \ln DPVL_t + \beta_2 \ln CPI_t + \beta_3 \ln DIR_t + \beta_4 \ln CIR_t + \beta_5 \ln CCI_t + \beta_6 Pandemic_t + \beta_7 DPV\_pandemic\_interaction_t + \varepsilon_t \quad (2)$$

4. FINDINGS AND DISCUSSION

4.1. Descriptive Statistical Information

In Table 3, the Jarque-Bera test results, which show the number of observations, mean, standard deviation, minimum and maximum values, and whether the variables included in the research exhibit normal distribution, are presented. When examining the table, it is observed that, apart from the Interaction term, the variable with the highest average is the gross savings amount (lnGSV) at 18.61299, while the variable with the highest standard deviation is the digital payment systems (lnDPS) at 0.9717745. It is observed that the variable with the lowest average is the deposit interest rate (lnDIR) with -1.837086, and the variable with the lowest standard deviation is the consumer confidence index (lnCCI) with 0.0914656. When examining the results of the Jarque-Bera test, it can be said that all variables except for the dummy variables Pandemic and Interaction_term have a probability value greater than the critical value of 0.05, indicating that the series follows a normal distribution

Table 3: Descriptive Statistics Information

Variable	Obs	Mean	Std. dev.	Min	Max	Jarque-Bera	Prob.
lnGSV	32	18.61299	.6020199	17.9715	19.79715	4.162	.1248
lnHFCE	32	14.21829	.7774305	13.23781	15.94747	5.459	.0652
lnDPV	32	15.40088	.9717745	13.91746	17.35478	2.238	.3266
lnCPI	32	-1.640947	.7646221	-2.620039	-.1809225	3.408	.1819
lnDIR	32	-1.837086	.3772954	-2.556188	-.813283	1.379	.5018
lnCIR	32	-1.501538	.3999257	-2.207275	-.5419723	2.838	.242
lnCCI	32	4.409491	.0914656	4.191925	4.53475	1.116	.5724
Pandemic	32	.25	.4399413	0	1	7.704	.0212**
DPV_pandemic_interaction	32	1446531	2740293	0	1.07e+07	23.44	8.1e-06**

Note: (***, **) indicate significance at the 5% and 10% levels, respectively.

4.2. Unit Root Test Results

When the KPSS test results given in Table 4 are examined, it is observed that the variables GSV, EO, MFO, TFO, TGE, pandemic, and DÖS_pandemi_interaction are stationary at the I(0) level, while the other variables become stationary at the I(1) level after taking their first differences. Similarly, when the DF-GLS test results are examined, it is observed that none of the variables are stationary at the I(0) level, and when first differences are taken, all variables meet the stationarity condition at the I(1) level.

Table 4: KPSS (Kwiatkowski-Phillips-Schmidt-Shin) and Elliott-Rothenberg-Stock (ERS) DF-GLS Test

Model	Variables	Method	Test statistic I(0)	Test statistic I(1)	Critical values		
					%1	%5	%10
Constant and Trend	lnHFCE	KPSS	0.233(3)	0.132(3)**	0.119	0.146	0.216
		DF-GLS	-1.516[4]	-6.662[2]***	-3.770	-3.080	-2.754
	lnGSV	KPSS	0.208(3)*	-	0.119	0.146	0.216
		DF-GLS	-1.946 [4]	-5.362[1]***	-3.770	-2.962	-2.620
	lnDPV	KPSS	0.218(3)	0.112(3)***	0.119	0.146	0.216
		DF-GLS	-0.835[1]	-3.841[1]***	-3.770	-3.400	-3.058
	lnCPI	KPSS	0.111(3)***	-	0.119	0.146	0.216
		DF-GLS	-2.284[1]	-3.280[1]*	-3.770	-3.400	-3.058
	lnDIR	KPSS	0.123(3)**	-	0.119	0.146	0.216

		DF-GLS	-2.112[1]	-4.495[3]***	-3.770	-3.400	-3.058
	lnCIR	KPSS	0.149(3)*	-	0.119	0.146	0.216
		DF-GLS	-2.177[3]	-3.826[5]***	-3.770	-3.195	-2.866
	lnCCI	KPSS	0.107(3)***	-	0.119	0.146	0.216
		DF-GLS	-2.432[1]	-3.455[1]**	-3.770	-3.414	-3.067
	Pandemic	KPSS	0.152(3)*	-	0.119	0.146	0.216
		DF-GLS	-1.471[1]	-2.557[7]*	-3.770	-3.400	-2.453
	DPV_pandemic_interaction	KPSS	0.144(3)**	-	0.119	0.146	0.216
		DF-GLS	-1.613[1]	-4.183[1]***	-3.770	-3.414	-3.067

Note: (***, **, *) indicates significance levels of 1%, 5%, and 10%, respectively. The values in square brackets represent the appropriate lag lengths determined using the general-to-specific t-significance method; the values in parentheses indicate the bandwidth determined using the Bartlett-Kernel method.

4.3. Newey–West Standard Errors Estimation Results

In Table 5, the results of the Newey–West Standard Errors estimator along with the diagnostic tests and their results for the model are presented. When Table 6 is examined, it is observed that digital payment systems have a statistically significant and positive effect on household final consumption. According to this result, a 1% increase in digital payment systems can be said to cause an approximately 83% increase in household final consumption. As a control variable, no statistically significant relationship has been found between the consumer price index, deposit interest rate, consumer loan interest rate, and consumer confidence index included in the model and household final consumption. To see the independent effect of the pandemic period, a pandemic dummy variable has been added to the model. It is observed that the pandemic period has a statistically significant and negative impact on household final consumption expenditures. According to this result, it can be said that the increase during the pandemic caused a decrease of approximately 15% in household final consumption expenditures. To observe the impact of digital payment systems during the pandemic, the term DPS pandemic interaction has been included in the model. It is observed that there is a statistically significant and positive relationship between DPS pandemic interaction and household final consumption expenditures. According to this conclusion, it can be said that digital payment systems had an increasing effect on household final consumption expenditures during the pandemic period.

Table 5: Estimation Results of Newey–West Standard Errors for Model 1

lnHFCE	**Coefficient**	**Std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
lnDPV	.821549	.0609471	13.48	0.000***	.6957604	.9473377
lnCPI	-.1186442	.0714469	-1.66	0.110	-.2661034	.0288149
lnDIR	-.1941789	.2098097	-0.93	0.364	-.6272049	.238847
lnCIR	.3083278	.2212336	1.39	0.176	-.1482759	.7649314
lnCCI	-.192041	.2809437	-0.68	0.501	-.7718803	.3877983
Pandemic	-.1533685	.0427688	-3.59	0.001***	-.2414525	-.0652844
DPV_pandemic_interaction	1.12e-07	2.10e-08	5.33	0.000***	6.89e-08	1.55e-07
_cons	2.334271	1.13461	2.06	0.050**	-.002503	4.671044
F(7, 24)	647.93	**Durbin–Watson d-statistic**			1.051713	
Prob > F	0.0000	**Breusch–Godfrey LM**			chi2=10.288	Prob > chi2 0.0013
Number of obs	32	**Breusch–Pagan/Cook–Weisberg**			chi2=3.42	Prob > chi2 0.0644
Maximum lag	4	**White's test**			chi2=26.52	Prob > chi2 0.5442

Note: (***, **) indicate significance at the 1% and 5% levels, respectively.

When examining the diagnostic test results, the F probability value being less than the critical value of 0.05 (Prob > F=0.000) indicates that the model is significant. The Durbin–Watson value, which tests for autocorrelation in the model, being less than the two critical values (1.051713) and the probability value of the Breusch–Godfrey LM test being less than the 0.05 critical value (Prob > chi2= 0.0013) indicates that there is autocorrelation in the model. Since the p-values of the Breusch–Pagan/Cook–Weisberg test and the White test, which test for heteroskedasticity in the model, are greater than the 0.05 critical value (0.0644 and 0.5442), it can be said that there is no heteroskedasticity in the model.

Table 6: Estimation Results of Newey–West Standard Errors for Model 2

lnGSV	**Coefficient**	**Std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
lnDPV	.5643892	.1083702	5.21	0.000***	.340724	.7880544
lnCPI	.1951416	.1359508	1.44	0.164	-.0854471	.4757304

lnDIR	.1346285	.2217465	0.61	0.549	-.3230338	.5922909
lnCIR	-.2213265	.254387	-0.87	0.393	-.7463554	.3037024
lnCCI	.9710136	.4634798	2.09	0.049**	-.0062008	1.948228
Pandemic	-.4583119	.2015556	2.27	0.030**	-1.075062	.1584386
DPV_pandemic_interaction	5.25e-08	1.76e-08	2.98	0.006***	1.65e-08	8.86e-08
_cons	5.920672	2.290512	2.58	0.016**	1.193286	10.64806
F(7, 24)	153.17	**Durbin–Watson d-statistic**			1.382553	
Prob > F	0.0000	Breusch–Godfrey LM			chi2=13.354	Prob > chi2 0.0097
Number of obs	32	Breusch–Pagan/Cook–Weisberg			chi2=2.450	Prob > chi2 0.1175
Maximum lag	4	**White's test**			chi2=30.31	Prob > chi2 0.3484

Note: (***, **) indicate significance at the 1% and 5% levels, respectively.

In Table 6, the results of the Newey–West Standard Errors estimator, along with the diagnostic tests and their results for the model, are presented. When Table 7 is examined, it is observed that digital payment systems have a statistically significant and positive effect on the gross savings value. According to this result, a 1% increase in digital payment systems can be said to cause an approximately 56% increase in the gross savings value. As a control variable, no statistically significant relationship has been found between the consumer price index, deposit interest rate, and consumer loan interest rate included in the model and the gross savings value. However, among the control variables, it is observed that there is a statistically significant and positive relationship between the consumer confidence index and the gross savings value. According to this result, it can be said that a 1% increase in the consumer confidence index leads to an approximately 97% increase in the net savings value. To observe the independent effect of the pandemic period, a pandemic dummy variable has been added to the model. It is observed that the pandemic period has a statistically significant and negative impact on the household gross savings value. According to this result, it can be said that the increase during the pandemic caused a decrease of approximately 46% in household savings. To see the impact of digital payment systems during the pandemic, the term DPS pandemic interaction has been included in the model. It is observed that there is a statistically significant and positive relationship between DPS pandemic interaction and household final consumption expenditures. According to this conclusion, it can be said that digital payment systems had an enhancing effect on household gross savings during the pandemic period.

When the diagnostic test results are examined, the F probability value being less than the critical value of 0.05 (Prob > F=0.000) indicates that the model is significant. The Durbin–Watson value, which tests for autocorrelation in the model, being less than the two critical values (1.382553) and the probability value of the Breusch–Godfrey LM test being less than the 0.05 critical value (Prob > chi2= 0.0097) indicates that there is autocorrelation in the model. Since the p-values of the Breusch–Pagan/Cook–Weisberg test and the White test, which test for heteroskedasticity in the model, are greater than the 0.05 critical value (0.1175 and 0.3484), it can be said that there is no heteroskedasticity in the model.

5. CONCLUSIONS

The aim of this study is to analyze the impact of digital payment systems (such as mobile payments, digital wallets, and contactless cards) on household savings rates and spending habits in Turkey. For this purpose, quarterly data from the years 2016Q1-2023Q4 have been used. In the analysis of the obtained data, the Newey–West Standard Errors Estimator, which is a robust estimator, has been utilized. In the study, the gross savings value and household final consumption expenditure were used as the dependent variable, while digital payment systems were used as the independent variable. The consumer price index, deposit interest rate, consumer loan interest rate, and consumer confidence index, which are considered to have a direct and indirect effect on household final consumption expenditures with the gross savings value, have also been used as control variables. Again, to examine the effects of the Covid-19 pandemic crisis on the dependent variables, the pandemic dummy variable and the digital payment systems pandemic interaction term have been included in the models.

The aim of this study is to analyze the impact of digital payment systems (such as mobile payments, digital wallets, and contactless cards) on household savings rates and spending habits in Turkey. For this purpose, quarterly data from the years 2016Q1-2023Q4 have been used. In the analysis of the obtained data, the Newey–West Standard Errors Estimator, which is a robust estimator, has been utilized. In the study, the gross savings value and household final consumption expenditure were used as the dependent variable, while digital payment systems were used as the independent variable. The consumer price index, deposit interest rate, consumer loan interest rate, and consumer confidence index, which are considered to have a direct and indirect effect on household final consumption expenditures with the gross savings value, have also been used as control variables. Again, to examine the effects of the Covid-19 pandemic crisis on the dependent variables, the pandemic dummy variable and the digital payment systems pandemic interaction term have been included in the models.

According to the findings of the research, it has been concluded that digital payment systems generally have a statistically significant and positive impact on household final consumption expenditures. According to this result, the H2 hypothesis stating that "the widespread adoption of digital payment systems increases individuals' spending amounts" has been supported. Similarly, it has been concluded that digital payment systems have a statistically significant and positive impact on household gross savings values. According to this result, the H1 hypothesis stating that "the widespread use of digital payment systems reduces individual savings rates" has not been supported. According to these two results, the H3 hypothesis, which states that "the use of digital payment systems has a negative impact on individuals' consumption tendencies," has been supported. Among the control variables, no statistically significant relationship has been found between the deposit interest rate and household final consumption expenditures and gross savings values. According to this result, the H4 hypothesis, which states that "the impact of digital payment systems is independent of deposit interest rates," has been supported. No statistically significant relationship has been detected between consumer loan interest rates and household final consumption expenditures and gross savings values. According to this result, the H5 hypothesis stating that "the impact of digital payment systems is independent of consumer

credit interest rates" has been supported. No statistically significant relationship has been found between the consumer price index and household final consumption expenditures and gross savings values. According to this result, the H6 hypothesis, which states that "the widespread adoption of digital payment systems increases the inflation rate," has not been supported. Finally, no statistically significant relationship has been identified between the consumer confidence index and household final consumption expenditures. According to this result, the H7 hypothesis, which states that "the adoption rate of digital payment systems has a negative relationship with the consumer confidence index," has not been supported. It has been concluded that there is a statistically significant and positive relationship between the consumer confidence index and the gross savings values. According to this result, the H8 hypothesis, which states that "the adoption rate of digital payment systems leads to an increase in gross savings values," has been supported.

When the pandemic dummy results were examined, it was concluded that the pandemic had a statistically significant and negative impact on both household final consumption expenditures and gross savings values. It is believed that various factors are influential in the formation of this result. These factors; due to the pandemic, as people were forced to stay at home, spending on travel, dining out, entertainment, and other social activities significantly decreased. This situation led to a decrease in overall consumer spending. People avoided holiday and entertainment expenses that required large amounts and tended to spend less. Due to restrictions and social distancing measures, people have focused their spending on meeting basic needs. Therefore, while spending in areas such as clothing, entertainment, and luxury consumption decreased, spending in areas such as food and basic necessities remained stable or increased. During the pandemic, many people lost their jobs or experienced a loss of income. This situation caused people to experience cash flow problems. Instead of saving, they had to use their available resources to meet their basic needs. Additionally, their tendency to save decreased because they focused only on basic needs to make a living with government support. In some countries, the economic support provided helped people meet their basic needs, but this support was generally temporary and did not affect long-term saving habits. While people were trying to survive with these supports, they couldn't find enough resources to save. The term "DPV_pandemic_interaction" refers to a variable that examines the interaction of digital payment systems with the impact of the pandemic. In other words, it is a term created to analyze or evaluate the impact of the pandemic on the use of digital payment systems. It has been concluded that this term is statistically significant and positively effective both with household final consumption expenditures and with gross savings values. During the pandemic period, the use of digital payment systems increased. These systems made shopping easier and allowed people to quickly purchase the products they needed. Especially due to the necessity of staying at home, the widespread use of online shopping has increased household consumption expenditures. However, at the same time, there may have been a period when people increased their savings due to staying at home and having fewer opportunities to spend money outside. This situation may have been supported by the increase in household spending along with the use of digital payment systems.

Training programs and campaigns can be organized to inform the public about the advantages and security of digital payment systems. This facilitates users' transition to digital payments and enhances their sense of security. It is important to develop the necessary infrastructure to increase the accessibility of digital payment systems. Investments should be made to increase access to digital payments, especially in rural areas and low-income regions. To ensure the security of digital payment systems, regulatory frameworks should be established, and strict security measures should be taken to protect users' data. This increases consumer confidence. Financial support and incentive programs can be created for businesses and consumers adopting digital payment systems. This can direct both businesses and individuals towards digital payments. By developing programs that encourage saving habits, individuals can be supported in achieving their savings goals through expenditures made via digital payment systems. Consumers can be advised to review their spending habits and set savings goals while using digital payment systems. This helps reduce unnecessary expenses. Consumers can be encouraged to use budget management applications to track their spending habits on digital platforms. These applications help keep expenses under control. It is recommended that they use savings accounts and automatic savings programs integrated with digital payment systems. Such applications strengthen the habit of saving. For future studies; long-term effects can be examined, different demographic groups can be analyzed, global comparisons can be made, and the impacts of digital payment systems during economic shocks and crises can be investigated. Again, digital payment systems can be examined separately rather than as a whole.

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