

Assessing Household Financial Behavior During COVID-19: A Focus on Expenditure and Savings

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Abstract

This study aims to investigate the effects of the COVID-19 pandemic on household expenditure, savings, and financial behavior in low- to middle-income households in Indonesia. The research analyzes how the pandemic influenced household financial management, particularly in terms of spending reductions and shifts in saving behaviors. Data were collected from 100 households through structured surveys, and the analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). The methodology allowed for both direct and indirect relationships between household expenditure, savings, and the economic shock of COVID-19 to be explored. The results indicate a positive correlation between household expenditure and savings, where higher-income households were able to save more despite greater spending. However, the pandemic negatively impacted both expenditure and savings, with households reducing non-essential spending and relying on their savings due to income uncertainty. Additionally, the pandemic indirectly influenced savings by affecting household expenditure. These findings highlight the financial vulnerability of lower-income households during economic disruptions and underscore the importance of enhancing financial resilience. Policy recommendations include promoting financial literacy, expanding access to financial resources, and providing targeted support to help households navigate future economic crises.

Keywords: financial behavior, expenditure, saving, covid 19, SEM.

1. Introduction

The COVID-19 pandemic has had a profound impact on household financial behavior worldwide, disrupting economic activities and significantly altering spending and saving patterns. Previous studies have emphasized the importance of understanding these changes in order to devise effective policy responses that can enhance household financial resilience during times of crisis (Fox & Bartholomae, 2021; Amari, 2020). However, most of the existing research focuses on developed economies, with limited attention to how households in developing countries, like Indonesia, manage financial uncertainties. This study addresses this research gap by exploring the interplay between household expenditure, savings, and the economic impact of the COVID-19 pandemic in the context of Indonesia. Specifically, it offers insights into how households adapt their financial behaviors in response to income uncertainties and economic downturns in a developing country context, where informal employment and limited social safety nets often exacerbate financial instability (Béné, 2020; Grossmann et al., 2021).

The motivation behind this study stems from the need to understand how households in Indonesia, particularly low- and middle-income groups, have managed their finances during the pandemic. The economic strain caused by lockdowns and restrictions forced many households to reassess their spending habits, prioritize essential expenditure, and sustain savings despite reduced incomes (Chakrabarty & Mukherjee, 2022). This study contributes to the literature by analyzing how sociodemographic factors such as income, education, and occupation influence spending and saving patterns during a crisis. While previous studies have examined household financial behavior during economic recessions, they often overlook the unique challenges faced by households in developing countries. By focusing on Indonesia, this research provides a novel perspective on household resilience during times of economic hardship (Loaba, 2022; Lugauer et al., 2019).

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This research introduces an innovative approach by employing a structured model that not only examines the direct relationship between household expenditure and savings but also incorporates the pandemic's mediating role. The study's innovation lies in its examination of how the economic impact of COVID-19 alters these relationships in real-time, providing a dynamic understanding of household financial behavior during a global crisis. The structured model tests four key hypotheses that explore both direct and indirect effects, which allows for a more comprehensive understanding of the financial adjustments households make under pandemic-induced financial stress. Additionally, by focusing on a sample of Indonesian households, this study brings new empirical evidence to the global conversation on financial resilience, offering lessons that can inform policies in other developing countries facing similar challenges (Amari, 2020; Grossmann et al., 2021).

This paper makes a novel contribution by offering a detailed analysis of household financial behavior in Indonesia during the COVID-19 pandemic, highlighting the mediating role of expenditure in the relationship between the pandemic and savings. This research fills a critical gap in the literature by focusing on a developing economy and identifying specific factors that influence household financial resilience in such contexts. The findings have important implications for policymakers seeking to improve household financial resilience, especially through the promotion of financial literacy and the development of policies that encourage household savings during periods of economic instability (Amari, 2020; Shabor Rameli & Marimuthu, 2018). The study's contribution is its comprehensive analysis of the complex interplay between household expenditure, savings, and external shocks, providing a foundation for future research and policy development.

In summary, this research addresses the gap in understanding household financial behavior in developing countries during crises, introduces innovative methods to examine the role of expenditure in savings behavior, and offers novel insights into the impact of COVID-19 on household finances. By integrating these elements, the study contributes to both the academic literature and policy discussions on financial resilience, especially for vulnerable populations in developing economies. Through quantitative analysis and an exploration of demographic factors, this study provides a comprehensive understanding of household financial resilience, offering practical implications for future economic crises.

2. Literature Review

2.1. Respond to Covid 19

The COVID-19 pandemic has severely affected global food security, disrupting supply chains and worsening vulnerabilities in both urban and rural populations. Béné (2020) highlights that the resilience of local food systems was tested by the pandemic, with many regions struggling to maintain food availability due to reduced workforce and logistical challenges. This disruption was particularly evident in developing countries where informal markets play a critical role in food distribution (Wegerif, 2020). Chiwona-Karlton et al. (2021) also emphasize that the crisis induced anxiety around food security, pushing policymakers to rethink strategies that ensure food access for the most vulnerable populations. Devereux et al. (2020) argue that the impacts of COVID-19 on household food security were multifaceted, affecting not only food availability but also income and social stability, leading to long-term economic consequences for already impoverished communities.

Lockdown measures and mobility restrictions also significantly affected food consumption patterns, particularly in urban settings where access to food was restricted. Hirvonen et al. (2021) observed a substantial decline in food availability in Addis Ababa, Ethiopia, as movement restrictions hindered access to markets. Similarly, Inegbedion (2021) points out that in many emerging economies, reduced household purchasing power further exacerbated food insecurity, as families struggled to meet their basic nutritional needs. Meanwhile, Lal (2020) highlights the rise of urban agriculture, including home gardening, as an adaptive response to the pandemic, offering a sustainable solution to address food shortages. Elshahoryi et al. (2020) add that the global crisis led to a shift in dietary habits, with many households cutting back on essential nutrients due to economic constraints, which in turn impacted public health, particularly in food-insecure regions.

2.2. Household Expenditure

Household expenditure is a multifaceted aspect of financial decision-making influenced by various factors, including income, education, family size, and cultural norms. Amari (2020) emphasizes the significant impact of sociodemographic characteristics on saving behavior, showing that financial education improves financial literacy,

leading to more prudent spending and savings decisions. This finding aligns with research by Chakrabarty and Mukherjee (2022), who discuss how financial inclusion leads to diversified household consumption, improving overall welfare and allowing households to manage their expenditures more effectively. Reddi & Høgersen (2019) add that cultural practices, such as intergenerational wealth transfer, also play a critical role in shaping household expenditure, particularly in countries like China where familial obligations often dictate spending patterns.

The COVID-19 pandemic dramatically altered household spending patterns, further exposing economic vulnerabilities. Fox and Bartholomae (2021) reported a shift in consumer behavior, where households reduced discretionary spending due to income uncertainty and increased savings as a precautionary measure. Similarly, Nicola Fuchs - SchÜndeln, Paolo Masella (2020) examined how cultural determinants influence household saving behaviors, showing that households with strong cultural ties to savings are better able to withstand economic shocks. Despard et al. (2020) highlight the importance of financial capability in managing household expenditure, pointing out that households lacking emergency savings are more likely to struggle during crises. Furthermore, Ortigueira & Siassi (2021) discuss the U.S. tax-transfer system's role in influencing household expenditure, showing how low-income families adjust their spending and savings behaviors in response to government policies. These studies collectively underscore the need for improved financial literacy and policies that promote resilience in household finances, particularly during periods of economic uncertainty.

2.3. Household Saving

Household saving behavior is influenced by a myriad of economic, demographic, and technological factors, with recent literature focusing on how financial tools, life cycle changes, and government policies affect savings. According to Lugauer et al. (2019), Chinese households with dependent children tend to save more to support their offspring, showcasing how family size and obligations directly influence saving patterns. Similarly, Loaba (2022) noted that the adoption of mobile banking in West Africa has made financial services more accessible, improving household saving habits. Wang & Wang (2022) reinforced this by demonstrating that digital financial inclusion enhances risk-sharing mechanisms in China, ultimately boosting savings. Shabor Rameli and Marimuthu (2018) highlighted that attitudes toward retirement also play a critical role, with individuals who actively plan for retirement showing higher saving intentions, especially in preparation for their post-work years.

In addition to these individual and technological factors, macroeconomic variables significantly affect household saving behavior. Grossmann et al. (2021) found that rising housing costs, especially in urban areas, reduce the capacity of households to save, as more of their income is diverted to cover rent. Kovacs et al. (2021) explored how permanent and temporary income shocks impact savings across the business cycle, with low-income households being disproportionately affected by economic downturns. Furthermore, Harding & Klein (2022) examined the influence of monetary policy on household net worth, showing that changes in interest rates can either encourage or dissuade households from saving. Bollinger et al. (2022) added that the expansion of higher education in China has had a profound impact on household savings, as better-educated individuals tend to save more. These studies collectively underline the complexity of household saving behavior, which is shaped by both personal circumstances and broader economic conditions.

3. Research Method

This study employs a quantitative approach to explore the relationships between household expenditure, savings, and the economic impact of the COVID-19 pandemic in Indonesia. The objective is to understand how households, particularly in low- to middle-income groups, adapted their financial behaviors in response to the crisis. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used for data analysis, utilizing SmartPLS3 software, which is widely recommended for analyzing complex models with latent variables (Joseph F. Hair et al., 2022).

The sample consisted of 100 households from various regions across Indonesia, selected using a purposive sampling technique. Data were collected through a Google Form survey, which was distributed online via social media platforms, emails, and community networks. This method allowed for broader outreach and efficient data collection while maintaining safety and social distancing during the pandemic. The survey included both closed-ended and open-ended questions, structured to gather information on household demographics (e.g., age, education, occupation, household income) as well as detailed data on monthly household expenditure (e.g., food, utilities, transportation, entertainment, and savings).

The questionnaire was developed based on existing literature (Amari, 2020; Despard et al., 2020) and validated through a pilot test to ensure clarity and relevance. Respondents were asked to evaluate their financial situation during the pandemic using a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree), which allowed for the quantification of subjective financial impacts. The data collection through Google Forms provided convenience and flexibility for respondents, while also ensuring high-quality, structured data for analysis.

PLS-SEM was chosen for this analysis due to its ability to handle smaller sample sizes and estimate complex models with both direct and indirect relationships (Joseph F. Hair et al., 2022). The technique allows for robust testing of relationships between latent constructs and observable variables, making it ideal for examining the mediating effects of household expenditure on savings behavior during the pandemic.

The data collected via Google Forms were analyzed using SmartPLS3. The first step involved assessing the reliability and validity of the measurement model. Cronbach’s Alpha and Composite Reliability were used to evaluate the internal consistency of the constructs, while Average Variance Extracted (AVE) was calculated to assess convergent validity. Cronbach’s Alpha and Composite Reliability values above 0.7, and AVE values above 0.5, were deemed acceptable. All constructs in the model met these thresholds, confirming their reliability and validity.

After confirming the measurement model’s adequacy, the structural model was analyzed to test the hypotheses. Path coefficients (β), T-statistics, and p-values were computed to evaluate the significance of the relationships. A bootstrapping method was applied to estimate the standard errors and generate confidence intervals, following Sarstedt et al. (2020).

The materials used in this study included a structured questionnaire distributed via Google Forms to collect data from households. The questionnaire was designed based on previous studies (Amari, 2020; Despard et al., 2020) and validated through a pilot test to ensure it captured relevant aspects of household financial behavior. SmartPLS3 software was utilized for data analysis, allowing for the testing of the structural equation model and providing insights into the relationships between household expenditure, savings, and the COVID-19 pandemic. Ethical approval was obtained for the study, and all participants provided informed consent. The data were anonymized to ensure privacy and confidentiality.

The research model, illustrated in Figure 1, was designed to test four key hypotheses (H1–H4) concerning the relationships between household expenditure, savings, and the COVID-19 pandemic. The hypotheses explore (H1) the direct relationship between household expenditure and household savings, (H2) the impact of the pandemic on household expenditure, (H3) the direct impact of the pandemic on household savings, and (H4) the indirect effect of the pandemic on household savings through household expenditure.

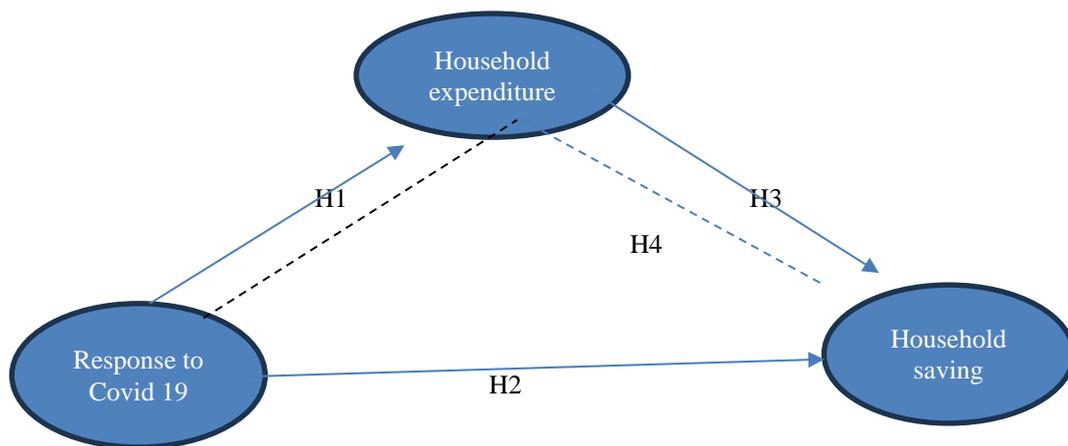


Figure 1. Research Model

Development of Hypotheses

The relationship between household expenditure and savings is complex, with higher-income households often able to save more despite having higher expenditure. Research by Loaba (2022) and Lugauer et al. (2019) suggests that households with higher expenditure—such as those with dependents or higher educational attainment—may still

allocate significant portions of their income to savings. This is often due to better financial literacy and access to financial resources, which enable households to manage expenditure and savings more effectively (Chakrabarty & Mukherjee, 2022). Additionally, Reddi and Høgersen (2019) highlight that cultural practices, such as intergenerational wealth transfer, also play a role in maintaining higher savings despite greater spending. Therefore, the relationship between household expenditure and savings may be positive, particularly among financially well-off households. Thus, we hypothesize:

H1: Household expenditure positively influence household savings.

The economic disruption caused by the COVID-19 pandemic significantly altered household spending patterns. Studies by Fox and Bartholomae (2021) and Fuchs-Schündeln et al. (2020) found that households responded to the uncertainty by cutting non-essential spending, including entertainment, travel, and luxury goods, to prioritize essential needs such as food and healthcare. Lal (2020) and Devereux et al. (2020) also observed that restricted mobility and lockdowns forced households to reduce discretionary spending, contributing to an overall decline in household expenditure during the pandemic. Furthermore, research by Wegerif (2020) emphasizes the impact of COVID-19 on informal markets in developing countries, further decreasing household expenditure. Based on these findings, we hypothesize:

H2: The COVID-19 pandemic negatively affects household expenditure.

The pandemic also had a severe impact on household savings, particularly among low- and middle-income households. Many families faced reduced incomes due to job losses or pay cuts, forcing them to dip into their savings to cover essential expenditure (Amari, 2020; Despard et al., 2020). Rozaki (2020) notes that the economic challenges posed by COVID-19 made it difficult for many households in Indonesia to maintain savings levels, especially given the high cost of living and reduced employment opportunities. Similarly, Béné (2020) highlights that vulnerable populations, especially in developing countries, were hit hardest by the pandemic's economic effects, resulting in a depletion of emergency savings. Therefore, we hypothesize:

H3: The COVID-19 pandemic negatively affects household savings.

The pandemic not only directly affected savings but also influenced savings indirectly through its impact on household expenditure. Research by Fox and Bartholomae (2021) and Lal (2020) suggests that as households cut back on discretionary spending during the pandemic, some may have redirected these savings into long-term savings. However, Despard et al. (2020) argue that many low-income households, where essential expenditure constitute a large portion of income, experienced difficulties saving due to reduced earnings. This indirect relationship between pandemic-induced expense reductions and savings behavior reflects the varying financial strategies employed by households depending on their income levels and access to financial resources (Bollinger et al., 2022; Kovacs et al., 2021). Thus, we hypothesize:

H4: The COVID-19 pandemic indirectly affects household savings through its impact on household expenditure.

4. Results and Discussions

Table 1 presents a detailed profile of the respondents. It captures key demographic variables such as food expenditure, utility costs, transportation, entertainment, savings, age, education level, occupation, marital status, number of family members, and household income.

Table 1. Respondent profile

Description	Variable	frequency	Percentage
Food Expenditure	< 1 million	9	9
	1-2 million	35	35
	>2 million	56	56
Utility Expenditure	<0.5 million	27	27
	0.5- 1 million	45	45
	>1 million	28	28
Transportation Expenditure	<0.5 million	50	50
	0.5- 1 million	37	37

	>1 million	13	13
Entertainment Expenditure	<0.5 million	64	64
	0.5- 1 million	25	25
Saving	>1 million	11	11
	<0.5 million	45	45
	0.5- 1 million	28	28
Age (years)	>1 million	27	27
	<25	18	18
	26-30	13	13
	31-35	9	9
	36-40	12	12
	>41	48	48
Education	Senior High School	19	19
	Diploma	5	5
	Bachelor	35	35
	postgraduate	38	38
	doctoral	3	3
Occupation	ASN	18	18
	Non ASN	82	82
Status	Marry	74	74
	single	23	23
	Widow/widower	3	3
Number of family	<2	11	11
	2-5	55	55
	>5	34	34
Household Income	<2 million	11	11
	2-3 million	17	17
	>3-4 million	13	13
	>4-5 million	13	13
	>5 million	46	46

The data indicates that food expenditure are a significant component of household expenditure. A large majority (56%) of respondents report spending more than 2 million IDR per month on food. This aligns with the general trend in household consumption patterns, where food typically represents one of the largest expenditure. Interestingly, only 9% of respondents spend less than 1 million IDR on food, suggesting that food costs are a primary concern for most households, which could directly influence their capacity to save.

Utility costs, such as electricity and water, show a broad distribution among the respondents. A significant portion (45%) of the sample spends between 0.5 to 1 million IDR, while 28% of respondents report spending more than 1 million IDR. This high level of expenditure on utilities may reflect increasing costs of living, particularly in urban areas. Households with higher utility costs may have less disposable income for savings or other forms of spending.

Half of the respondents (50%) spend less than 0.5 million IDR per month on transportation, which may indicate a reliance on public transport or reduced mobility, particularly during the COVID-19 pandemic. The fact that only 13% spend more than 1 million IDR on transportation suggests that transportation is not a major expense for most households, possibly due to work-from-home policies or restrictions on movement during the pandemic.

Entertainment expenditure is relatively low for the majority of respondents, with 64% spending less than 0.5 million IDR. This could be a reflection of the economic uncertainty during the pandemic, where households likely prioritized essential spending over discretionary activities such as entertainment. However, 25% of the respondents still spend between 0.5 and 1 million IDR, suggesting that a portion of the population continues to allocate resources to leisure activities despite the financial challenges posed by the pandemic.

Savings are a critical factor in household financial management, especially during economic downturns. The data shows that 45% of respondents save less than 0.5 million IDR per month, with only 27% saving more than 1 million IDR. This distribution indicates that a significant portion of the population struggles to save substantial amounts, which may be due to high living costs or limited income. These savings patterns are likely influenced by various demographic factors, such as household income and occupation, which are explored further in the analysis.

The age distribution of the sample is skewed towards older respondents, with 48% aged over 41 years. This suggests that the study includes a significant number of experienced, working-age individuals who are likely more established in their careers and financial stability. However, only 18% of respondents are below 25 years, indicating that younger households are underrepresented in this sample, which may affect the generalizability of findings related to youth spending and savings behavior.

The education profile of the respondents reveals a highly educated sample, with 38% holding postgraduate degrees and 35% having a bachelor's degree. This suggests that the respondents are likely to have a higher awareness of financial management, which may influence their spending and saving decisions. Additionally, the high education levels may correlate with higher income brackets, contributing to the household's ability to manage finances during the pandemic.

The majority of respondents (82%) are non-ASN workers, while only 18% are ASN employees. This occupational distribution highlights a predominance of private-sector or non-civil servant workers, which could influence household income stability, particularly during periods of economic instability like the COVID-19 pandemic. ASN employees, typically considered to have more secure incomes, might display different saving and spending behaviors compared to non-ASN workers, who may face more precarious employment conditions.

The data indicates that 74% of respondents are married, and the majority of households (55%) consist of 2-5 family members. Larger households generally have higher expenditure, which may explain some of the patterns in food and utility spending. Additionally, married households may prioritize savings differently than single or widowed individuals due to family responsibilities, such as children's education and future financial planning.

The income profile shows that nearly half (46%) of the respondents earn more than 5 million IDR per month, while only 11% earn less than 2 million IDR. This wide income range provides a valuable context for analyzing the variability in household expenditure and savings. Higher-income households are more likely to manage the economic impact of the pandemic better, while lower-income groups may experience greater financial strain, leading to lower savings rates and reduced discretionary spending.

Table 2. Validity and Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Household expenditure	0.823	0.831	0.883	0.653
Household saving	1.000	1.000	1.000	1.000
Response to Covid 19	0.744	0.892	0.808	0.554

Table 2 presents the validity and reliability of the variables used in the research model, including household expenditure, household saving, and response to COVID-19. These variables are essential to understanding the research's robustness, as they reflect the consistency and accuracy of the data used to measure key aspects of the study.

Cronbach's Alpha is a commonly used measure of internal consistency, with values ranging from 0 to 1. Higher values indicate greater reliability of the measurement scale. Household expenditure have a Cronbach's Alpha of 0.823, which exceeds the commonly accepted threshold of 0.7, suggesting that the items measuring household expenditure are reliable and exhibit a high level of internal consistency. Household saving demonstrates an exceptional Cronbach's Alpha value of 1.000, indicating perfect internal consistency, which suggests that the scale used to measure this variable is highly reliable.

Response to COVID-19 has a Cronbach's Alpha of 0.744. While this value is slightly lower than those of the other variables, it is still above the minimum acceptable threshold of 0.7, indicating sufficient reliability for this variable. Overall, the Cronbach's Alpha scores suggest that the measurement scales used for household expenditure, household savings, and response to COVID-19 are highly reliable and provide consistent results.

The rho_A values, which represent another measure of reliability, reinforce the findings from Cronbach's Alpha. Values closer to 1 indicate a stronger degree of reliability. Household expenditure have a rho_A value of 0.831, which aligns closely with the Cronbach's Alpha score, indicating high reliability. Household saving has a perfect rho_A value of 1.000, further validating the reliability of the scale for this variable. Response to COVID-19 shows a rho_A value of 0.892, which is higher than its Cronbach's Alpha, suggesting a robust reliability score. These values confirm that the measurement scales are reliable and appropriate for the analysis of relationships between household expenditure, savings, and the response to the pandemic.

Composite reliability measures the overall reliability of a set of items, providing a more comprehensive view of internal consistency than Cronbach's Alpha alone. It also ranges from 0 to 1, with values above 0.7 considered acceptable. Household expenditure have a composite reliability of 0.883, well above the threshold, indicating strong internal consistency across the items used to measure this variable. Household saving again exhibits a perfect score of 1.000, which confirms the reliability of the items used to measure savings. Response to COVID-19 has a composite reliability of 0.808, further supporting the reliability of the measurement scale for this variable. These composite reliability values indicate that all constructs in the model are measured consistently and that the scales are reliable across different items.

The Average Variance Extracted (AVE) measures the amount of variance captured by the construct in relation to the amount of variance due to measurement error. An AVE value greater than 0.5 indicates that the construct explains more variance than the error. Household expenditure have an AVE of 0.653, indicating that more than half of the variance in household expenditure is explained by the items in the model, which is a positive result for the construct's validity. Household saving again has a perfect AVE of 1.000, reflecting that the measurement model explains all of the variance for this construct with no error. Response to COVID-19 has an AVE of 0.554, which is slightly above the threshold of 0.5, confirming that the items used to measure the response to the pandemic explain an adequate amount of variance with a minimal amount of error. The AVE scores suggest that the measurement model has good convergent validity, meaning the items that are supposed to measure the same construct are highly correlated.

Table 3. Hipotesis Test

	β	T Statistics
Household expenditure -> Household saving	0.521	7.65***
Response to Covid 19 -> Household expenditure	-0.263	3.28***
Response to Covid 19 -> Household saving	-0.139	1.80*
Response to Covid 19 -> Household expenditure -> Household saving	-0.137	2.91***

Table 3 presents the results of the hypothesis tests, detailing the path coefficients (β), T-statistics, and significance levels for the relationships between household expenditure, savings, and the COVID-19 pandemic.

Household Expenditure → Household Savings (H1)

The hypothesis H1, which posited that household expenditure positively influence household savings, is strongly supported by the data ($\beta = 0.521$, $T = 7.65$, $p < 0.001$). This significant positive relationship suggests that households with higher expenditure tend to save more, which may seem counterintuitive but is consistent with findings in previous research. Higher-income households often have larger expenditure, yet they simultaneously save more due to their greater financial flexibility and disposable income. This aligns with the work of Loaba (2022) and Lugauer et al. (2019), who found that households with dependents or higher educational attainment often manage both high expenditure and savings due to better financial literacy and resource management.

Additionally, cultural factors, such as intergenerational wealth transfer, can explain this relationship. In countries like China, for instance, saving behavior is strongly influenced by familial obligations and cultural expectations to save for future generations, despite higher expenditure (Reddi & Høgersen, 2019). Similarly, in Indonesia, families may prioritize savings for long-term goals, such as education or property investments, even while managing significant household expenditure (Rozaki, 2020). The ability of higher-income households to balance expenditure and savings further highlights the importance of financial planning and education (Chakrabarty & Mukherjee, 2022).

Response to COVID-19 → Household Expenditure (H2)

Hypothesis H2, which suggested that the COVID-19 pandemic negatively affects household expenditure, is supported by the results ($\beta = -0.263$, $T = 3.28$, $p < 0.001$). The negative coefficient indicates that households reduced their expenditure during the pandemic, focusing primarily on essential needs such as food, utilities, and healthcare, while cutting back on discretionary spending. This behavior is well-documented in the literature, with several studies reporting similar reductions in household expenditure due to economic uncertainty and restrictions on movement during the pandemic (Fox & Bartholomae, 2021; Fuchs-Schündeln et al., 2020).

The findings of Wegerif (2020) and Devereux et al. (2020) further support this, noting that informal markets, which are a significant part of the economy in developing countries like Indonesia, were severely impacted during the pandemic. Households limited their spending on non-essential goods and services, contributing to an overall decline in household expenditure. This reduction in spending reflects the broader adjustments made by households in response to financial stress during the pandemic, as they focused on maintaining short-term liquidity (Lal, 2020).

Response to COVID-19 → Household Savings (H3)

The hypothesis H3, which posited that the COVID-19 pandemic negatively affects household savings, is also supported by the data ($\beta = -0.139$, $T = 1.80$, $p < 0.05$). The negative coefficient suggests that the pandemic led to a reduction in household savings, with many households having to draw on their savings to cover essential living expenditure due to income reductions and job losses. This aligns with findings from Amari (2020), who noted that households with limited financial resilience struggled to maintain their savings during the pandemic, particularly in developing economies.

Many households faced income uncertainty, which reduced their ability to save. Despard et al. (2020) pointed out that low-income households, which often lack emergency savings, were disproportionately affected by the economic fallout from the pandemic. This situation was exacerbated in Indonesia, where economic challenges, such as rising unemployment and inflation, made it difficult for households to accumulate or maintain savings (Rozaki, 2020). The depletion of savings during the pandemic highlights the importance of financial preparedness and access to social safety nets (Béné, 2020).

Response to COVID-19 → Household Expenditure → Household Savings (H4)

Hypothesis H4, which proposed that the COVID-19 pandemic indirectly affects household savings through its impact on household expenditure, is confirmed by the results ($\beta = -0.137$, $T = 2.91$, $p < 0.01$). The negative coefficient for the indirect effect suggests that the pandemic's impact on household savings is partly mediated by reductions in household expenditure. As households cut back on non-essential spending, their capacity to save was also reduced. This is consistent with the findings of Fox and Bartholomae (2021) and Lal (2020), who observed that although some households managed to save by reducing discretionary expenditure, many others—particularly low-income households—struggled to save due to income constraints.

Lower-income households, in particular, experienced significant challenges in saving during the pandemic, as they often had little to no flexibility in reducing essential expenditure (Inegbedion, 2021). As a result, even as expenditure decreased, their ability to save was limited. Bollinger et al. (2022) and Kovacs et al. (2021) further highlight that households facing income shocks often prioritize immediate consumption over savings, particularly during times of crisis. This finding underscores the importance of targeted financial assistance and interventions to support savings behavior during economic disruptions.

5. Conclusion

This study explored the complex relationships between household expenditure, savings, and the economic impact of the COVID-19 pandemic among Indonesian households. Using Partial Least Squares Structural Equation Modeling (PLS-SEM) with data collected from 100 households, the research identified significant patterns in financial behavior during times of crisis. The findings revealed that household expenditure positively influence household savings, indicating that higher-income households, despite higher spending, tend to save more. This supports the notion that financial flexibility and resource management are crucial in maintaining savings, even in households with greater financial obligations.

The COVID-19 pandemic, however, significantly disrupted this balance. The results showed that the pandemic negatively affected both household expenditure and savings, with households reducing discretionary spending and, in many cases, relying on their savings to meet essential needs due to income losses. The indirect effect of the pandemic on savings, mediated by reductions in household expenditure, underscores the financial strain experienced by many households, particularly those in lower-income brackets. These households had limited capacity to save as they struggled to cover basic expenditure, highlighting the vulnerability of such populations during economic crises.

Overall, the research underscores the importance of financial resilience in navigating periods of economic uncertainty. Policies aimed at improving financial literacy, expanding access to financial resources, and providing social safety nets are crucial for helping households maintain financial stability during future crises. Additionally, the findings emphasize the need for targeted interventions to support lower-income households, which are disproportionately affected by economic shocks. By addressing these vulnerabilities, policymakers can help strengthen household financial resilience and promote long-term economic recovery.

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