

DIGITAL PAYMENT ADOPTION AND HOUSEHOLD CONSUMPTION PATTERNS IN URBAN WEST JAVA A CONCEPTUAL FRAMEWORK

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Abstract

Purpose: This conceptual article explains the relationship between digital payment adoption and household consumption in the Indonesian context. **Approach:** It integrates the theoretical arguments and prior studies cited in the manuscript through a structured narrative review. **Conceptual synthesis:** The framework identifies payment convenience, transaction visibility, and reduced purchasing friction as the principal explanatory channels. The strength and direction of these relationships depend on financial literacy, household budgeting discipline, merchant acceptance, and consumer protection. **Conclusion:** The proposed framework clarifies causal pathways, identifies practical decision points, and provides testable propositions for future empirical research. No primary survey, interview, experiment, or regression result is claimed in this article.

Keywords: Digital Payment, QRIS, Household Consumption, Mental Accounting, Financial Literacy, West Java

Introduction

Indonesia has experienced one of the fastest transitions toward digital payments in Southeast Asia. Following the introduction of the Quick Response Code Indonesian Standard (QRIS) by Bank Indonesia in 2019, merchants ranging from modern retailers to street vendors have been able to accept payments from multiple e-wallets and mobile banking applications through a single QR code (Bank Indonesia, 2019). The COVID-19 pandemic further accelerated the use of contactless and online payments as households sought to reduce physical contact and as merchants moved sales to digital channels. Global evidence from the Global Findex Database shows that the share of adults making or receiving digital payments in developing economies increased substantially between 2014 and 2021 (Demirgüç-Kunt et al., 2022). In urban West Java, a province with a large and densely populated metropolitan corridor linking Bandung, Bekasi, Bogor and Depok, digital payment has become part of daily life for a growing proportion of households.

The macroeconomic narrative around digital payments usually emphasizes efficiency: lower transaction costs, faster settlement, a smaller need for cash handling, and the creation of digital transaction records that can support access to credit. These benefits are important, but they do not exhaust the economic consequences of a change in payment method. Behavioral economics suggests that the way people pay affects how much they spend. Payments that are less salient, less immediate or less physically "painful" than handing over cash tend to weaken

the psychological brake on spending (Prelec & Loewenstein, 1998; Soman, 2001). Experimental and field studies have found that consumers are willing to pay more when using cards rather than cash (Prelec & Simester, 2001) and that the physical form of payment changes spending decisions (Raghubir & Srivastava, 2008). If similar mechanisms operate for QR-based and e-wallet payments, the diffusion of digital payment could raise household consumption, shift its composition toward discretionary items, and in some cases weaken household saving.

At the same time, digital payment could have the opposite effect for some households. Digital transaction records make spending easier to monitor, and many e-wallet applications provide transaction histories, notifications and budgeting features. For households with adequate financial literacy, these features may support better control of expenditure and more deliberate consumption (Lusardi & Mitchell, 2014). Evidence from mobile money in Kenya also shows that digital payment can improve households' ability to smooth consumption in the face of shocks by lowering the cost of transfers within social networks (Jack & Suri, 2014), and that long-run access to mobile money is associated with improved consumption and reduced poverty (Suri & Jack, 2016). The net effect of digital payment on household consumption is therefore theoretically ambiguous and must be established empirically.

Existing Indonesian studies on digital payment have largely focused on adoption intention, using models such as the Technology Acceptance Model (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003). These studies explain why people adopt digital payment but say relatively little about what happens to household economic behavior after adoption. There is also limited evidence that separates the effect of digital payment on the level of consumption from its effect on the composition of consumption. A change in composition, for example toward food delivered through platforms, entertainment or impulse purchases, may be economically meaningful even if total expenditure is only modestly affected.

This study addresses these gaps by asking three questions. First, is the intensity of digital payment use associated with higher total household consumption expenditure among urban households in West Java, after controlling for income and household characteristics? Second, is digital payment intensity associated with a higher share of discretionary expenditure in the household budget? Third, does financial literacy moderate these relationships? By answering these questions, the study contributes to the literature on the behavioral consequences of payment innovation in emerging markets and provides evidence

for policymakers who promote digital financial inclusion while also being responsible for consumer protection.

Literature Review and Hypothesis Development

Consumption theory and the role of payment method

Standard consumption theory treats consumption as a function of income and wealth over the life cycle. The permanent income hypothesis argues that households base consumption on their expected long-term income rather than on current income, smoothing consumption over time (Friedman, 1957). Within this framework, the method of payment is irrelevant as long as it does not change income, wealth or the cost of borrowing. Digital payment could still influence consumption through conventional channels: it can reduce transaction costs, widen access to merchants and online markets, and make credit products such as pay-later schemes more accessible. However, the most distinctive prediction about payment method comes from behavioral economics rather than from standard theory.

Mental accounting and the pain of paying

Mental accounting describes the set of cognitive operations people use to organize, evaluate and keep track of financial activities (Thaler, 1999). One element of mental accounting is the "pain of paying", the immediate negative feeling associated with parting with money. Prelec and Loewenstein (1998) argue that consumers engage in "prospective accounting" in which the pleasure of consumption is weighed against the pain of payment, and that the coupling between the two is influenced by payment method. Payment methods that decouple payment from consumption or that make payment less transparent reduce the pain of paying and can increase willingness to spend. Soman (2001) shows that payment mechanisms that do not require the consumer to write down or physically hand over the amount, and whose effect on the account balance is not immediate, weaken the memory of past expenses and increase subsequent spending. Raghubir and Srivastava (2008) further demonstrate that the form of payment, including gift cards and cards compared with cash, shapes spending behavior.

Digital wallet and QR payments share several features with card payments that these studies describe. The consumer does not physically hand over cash; the transaction is completed with a scan and a PIN or biometric confirmation; and the amount is deducted from a balance that is not always visible. These features suggest that digital payment may reduce the salience of spending. The effect could be stronger for small, frequent transactions such as

food, beverages and transport, which are precisely the categories where QRIS has been most widely adopted.

Digital payment, financial inclusion and consumption smoothing

The financial inclusion literature offers a complementary perspective. Digital payment reduces the cost of sending and receiving money and can connect households to savings and credit products. In Kenya, the spread of M-Pesa enabled households to receive remittances more readily after negative shocks, allowing them to maintain consumption (Jack & Suri, 2014). Over the longer run, access to mobile money was associated with higher per capita consumption and a reduction in poverty, particularly among female-headed households (Suri & Jack, 2016). These results suggest that digital payment can increase consumption by relaxing liquidity constraints and improving risk sharing, a channel that is conceptually different from the behavioral channel. For urban households in West Java, which are already relatively well connected to formal finance, the behavioral channel may be more relevant, but the inclusion channel cannot be ruled out, particularly for lower-income households and informal workers.

Adoption versus intensity of use

Technology acceptance models explain adoption through perceived usefulness, perceived ease of use, social influence and facilitating conditions (Davis, 1989; Venkatesh et al., 2003). These models are useful for understanding why households begin to use digital payment, but the economic consequences of adoption depend on the intensity of use. A household that uses an e-wallet occasionally for online purchases is in a very different position from a household that pays for most daily purchases through QRIS. This study therefore measures digital payment adoption as intensity: the share of the number and value of household transactions made through digital instruments in a reference period.

Pay-later instruments and access to short-term credit

A further development that complicates the relationship between digital payment and consumption is the integration of short-term credit into payment applications. Many e-wallets and e-commerce platforms in Indonesia offer pay-later options that allow consumers to defer payment for a few weeks or to split purchases into instalments. From the perspective of the permanent income hypothesis, access to credit allows liquidity-constrained households to align consumption more closely with expected income (Friedman, 1957). From the perspective of mental accounting, however, deferring payment further separates the pleasure

of consumption from the pain of paying, which Prelec and Loewenstein (1998) associate with a greater willingness to spend. Pay-later use can therefore amplify the behavioral effect of digital payment and, for some households, lead to accumulated short-term debt. For this reason, the present study records pay-later use separately within the digital payment intensity measure so that its contribution can be examined in a sensitivity analysis.

Financial literacy as a moderator

Financial literacy refers to people's ability to process economic information and make informed decisions about financial planning, saving, borrowing and spending (Lusardi & Mitchell, 2014). Financially literate consumers are more likely to budget, track expenses and plan for the future. In the context of digital payment, financial literacy may determine whether households use the tracking features of digital instruments to control spending or whether they are more exposed to the reduced salience of digital transactions. It is therefore plausible that the positive effect of digital payment intensity on consumption, and particularly on discretionary consumption, is weaker among households with higher financial literacy.

Hypotheses

Based on the discussion above, the study proposes the following hypotheses.

H1: Digital payment intensity has a positive effect on total household consumption expenditure among urban households in West Java.

H2: Digital payment intensity has a positive effect on the share of discretionary expenditure in total household consumption.

H3: Financial literacy weakens the positive effect of digital payment intensity on total household consumption expenditure.

H4: Financial literacy weakens the positive effect of digital payment intensity on the share of discretionary expenditure.

Conceptual Review Method

This article uses a structured narrative review to integrate the literature already identified in the manuscript. Sources are interpreted according to their contribution to the relationship between digital payment adoption and household consumption, the mechanisms they propose, and the conditions under which those mechanisms may strengthen, weaken, or change direction. The review does not present itself as a systematic review or meta-analysis, and it

does not generate new numerical estimates. Instead, it organizes established concepts into an explicit framework that can guide later empirical testing.

Conceptual Synthesis

The synthesis indicates that digital payment adoption and household consumption should not be treated as a single direct relationship. The first layer consists of payment convenience, transaction visibility, and reduced purchasing friction. These channels explain how an institutional, technological, managerial, or behavioral change is translated into an economic or organizational outcome. They also show why apparently similar actors may respond differently to the same intervention.

The second layer consists of boundary conditions: financial literacy, household budgeting discipline, merchant acceptance, and consumer protection. These conditions shape exposure, capability, incentives, and the capacity to respond. Accordingly, the conceptual model predicts conditional rather than universal effects. Future research should measure the mediating mechanisms separately and test interactions with the identified boundary conditions instead of relying only on a single aggregate association.

Conceptual Propositions

Proposition 1. The relationship between digital payment adoption and household consumption operates through the combined influence of payment convenience, transaction visibility, and reduced purchasing friction.

Proposition 2. The magnitude and direction of the relationship vary according to financial literacy, household budgeting discipline, merchant acceptance, and consumer protection.

Proposition 3. Outcomes are more sustainable when organizational capability, stakeholder trust, and governance safeguards develop together rather than independently.

Practical and Research Implications

For practitioners and policymakers, the framework suggests that interventions concerning digital payment adoption and household consumption should be designed as coordinated packages. Technology or formal policy alone is unlikely to produce consistent results without capability development, credible communication, monitoring, and accessible support. For researchers, the framework provides a transparent basis for selecting constructs, specifying mediators and moderators, and comparing different Indonesian regions or organizational settings.

Conclusion

This article reframes digital payment adoption and household consumption as a conditional process rather than a simple one-directional effect. The conceptual contribution is the integration of payment convenience, transaction visibility, and reduced purchasing friction

with the boundary conditions of financial literacy, household budgeting discipline, merchant acceptance, and consumer protection. The framework offers testable propositions while avoiding unsupported empirical claims. Future studies can evaluate the propositions using verified survey, administrative, qualitative, or longitudinal evidence.

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