

Why are merchants reluctant to accept digital payments?

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1 Introduction

Paying is one of the most important economic activities. It has changed dramatically over history, from barter to payment cards (Balakrishnan & Shuib, 2021). Now, payment systems are changing again, in response to the new wave of digitization brought about by smartphones and the Internet. Digitization facilitates transactions, with benefits for consumers, retailers and merchants (Zhang et al., 2019); it also enables near-instant, remote payments, thereby dramatically reducing frictions and making trade increasingly easier. Moreover, digital payments leave auditable trails and are therefore considered as a tool that can hinder tax evasion (Immordino & Russo, 2018; Sung et al., 2017). Conversely, cash is untraceable, and thus allows to easily conceal the history of transactions. This facilitates the underreporting of revenues and, consequently, tax evasion (Immordino & Russo, 2018). Given this, several governments have tried implementing policies to foster traceable payments while reducing cash usage. For instance, in 1999 South Korea introduced a program to promote payments made using credit cards, debit cards, and electronic cash receipts in Business to Consumer (B2C) transactions (Sung et al., 2017). More recently, in 2019, the Italian government devised the so-called *Piano Italia Cashless*, i.e. a bundle of incentives and deterrents to foster digital payments to curb tax evasion.

However, despite the benefits provided and the rising interest by policymakers, cash is still essential. Indeed, while its penetration has been declining over the past years, cash keeps playing a relevant role in most countries.

On another note, in their review of the literature, Dahlberg et al. (2015) show that research on mobile payment is mainly focused on two topics, namely (1) consumer adoption and (2) technology aspects. Conversely, research on the merchant perspective is still scarce, thereby leaving a knowledge gap. Also, extant studies limit the analysis to merchant adoption of mobile payment only. However, the other forms of digital payments, such as payment cards, are still

far from being universally adopted and most of governmental policies target digital payments in general (including credit or debit cards).

Accordingly, the paper aims to assess why small merchants in Italy are reluctant to accept digital payment, deepening the interplay of the various drivers and the barriers characterizing it.

2 Empirical context

In this section, we first define digital payments. Then, we describe the digital payment landscape in Italy.

2.1 Digital payments

Digital payments are defined as transactions made for the purchase of goods or services made by digital means only. More specifically, the definition includes payment cards, which are defined by the European Central Bank (ECB)¹ as “*payment instruments, which are based on the rules of a card scheme, used to withdraw or place cash and/or enable a transfer of value at the request of the payer (via the payee) or the payee in respect of an end-user account linked to the card*”; i.e., instruments that enable holders to pay sellers directly at the point of sale (in-store payments) or over the internet (e-commerce). Payment cards can be credit cards, debit cards, or prepaid cards (e-money). The definition of digital payments also includes mobile payment, which is defined by the ECB² as “*a payment where a mobile device is used at least for the initiation of the payment order and potentially also for the transfer of funds*”. In other words, it is the payment made using a smartphone.

The definition of digital payments does not include either cheques, since they are paper-based instruments, or bank transfers and direct debits since their usage is comparably low in B2C transactions.

2.2 Digital payments in Italy

The Italian context represents an interesting setting to study digital payment usage for different reasons. The statistics published by the European Central Bank (2021) show that the infrastructure for the acceptance of digital payments is well-developed. As of 2020, at 60,647 per million inhabitants, the number of POS terminals was well above the EU average of 32,663. The same is true for the number of payment cards per capita which, at 1.99, was slightly above the EU average (1.92). Nevertheless, the usage of digital payments in Italy is still low. In 2020

¹ For more information see: <https://www.ecb.europa.eu/services/glossary/html/glossp.en.html>

² For more information see: <https://www.ecb.europa.eu/services/glossary/html/glossm.en.html#598>

the number of transactions with payment cards per capita was 81, compared to 146 in the EU (European Central Bank, 2021).

The Italian scenario of mobile payment is similar. Despite the high penetration of smartphone users – 73.0%³ compared to 79.5% in Europe⁴ – the usage of such phones for payments is still very low. Indeed, in 2021 mobile payment transactions represented only 8.3% of the total number of payments at the Point of Sale (POS), substantially less than the 14.4% in the EU⁵. Also, mobile payment in Italy can be classified into two types: (1) digital wallets that use near-field-communication (NFC) technology – e.g., Apple Pay, Google Pay and Samsung Pay – and (2) digital wallets that resort to other technology, such as geolocation or QR codes. An example of the second type of wallet is the apps that allow users to make account-to-account payments, both consumer-to-business and peer-to-peer. The most popular app in Italy is Satispay, with over 4 million users and almost 300,000 merchants⁶.

In addition, in 2019 the Italian government introduced the *Piano Italia Cashless* policy. The policy includes incentives and deterrents that target both consumers and retailers, with the goals of encouraging the usage of digital payments, reducing the usage of cash and, eventually, curbing tax evasion. For the purpose of the analysis, we focus on the measures that target merchants. More specifically, a tax rebate equal to 30% of the fees spent for the acceptance of digital payments by small merchants. Further, a receipt lottery was introduced on February 1st, 2021. It is a lottery where the ticket number is incorporated in purchase receipts if the transaction is made via digital payments. The monetary prizes of the lottery are for both merchants and consumers.

3 Theoretical foundation

Digital payments represent a technological innovation in the field of financial services (Moghavvemi et al., 2021). Researchers have investigated the adoption of digital payments by consumers and merchants using several theories, such as the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), the Innovation Resistance Theory (IRT), etc. However, as shown in Section 1, literature is mainly focused on mobile payment adoption by consumers, while the merchants' perspective and other payment instruments – like cards – have been neglected.

³ <https://www.statista.com/topics/3341/smartphone-market-in-europe/#topicOverview>

⁴ <https://www.statista.com/study/136505/telecoms-in-europe/>

⁵ <https://www.statista.com/forecasts/1256541/mobile-pos-payment-penetration-rate-by-country>

⁶ <https://www.satispay.com/en-it/>, accessed on September 28th, 2023.

Moreover, as shown in Section 2, the usage of digital payment in Italy is still low, if compared to the rest of the EU. For these reasons, the goal of our paper is to shed lights on why Italian merchants are reluctant to accept digital payments, deepening the interplay of the various drivers and the barriers characterizing it.

Our research will be based on the main components of TAM – to analyze the drivers – and the IRT – to analyze the barriers.

TAM has been widely used in the literature to investigate the adoption of various technologies. TAM was first proposed by Davis (1986) as an adaptation of the Theory of Reasoned Action (TRA). Its objective is to explain the user acceptance of Information Systems, being at the same time theoretically solid and parsimonious (Davis et al., 1989). Indeed, TAM includes two constructs only: perceived usefulness and ease of use. Perceived usefulness is defined as *"the degree to which an individual believes that using a particular system would enhance his or her job performance"* (Davis, 1986, p. 26). Perceived ease of use is defined as *"the degree to which an individual believes that using a particular system would be free of physical and mental effort"* (ibid.).

In addition, we decided to investigate the barriers to usage. New technologies bring novelty to which people need to adjust. However, new technologies could be challenging for people to fully understand, which causes resistance (Musyaffi et al., 2022). IRT – first formulated by Ram (1987) and modified by Ram & Sheth (1989) – identifies five barriers that obstruct the adoption of an innovation. The first three barriers are defined as functional barriers, i.e., obstructions that arise if people perceive that the adoption of the innovation causes significant changes (Ram & Sheth, 1989). These barriers are: (1) the usage barrier, which refers to the adjustments that people need to undergo to use the technology, in other words, it is linked to the usability of the innovation itself; (2) the value barrier, which derives from the comparison of the innovation's performance and its monetary value with its alternatives; and (3) the risk barrier, which is represented by the degree of risk perceived by people (o.c.). The remaining two barriers are classified as psychological barriers, i.e. obstacles that emerge when the innovation contrasts with people's prior beliefs (o.c.). These two types are (1) the tradition barrier, which occurs when the new technology is in contrast with previously established traditions and, as a consequence, requires a cultural change for people; and (2) the image barrier, which arises when people have a negative perception – or image – of the innovation; this negative image can derive, for instance, from the product category or the country of origin (o.c.).

To these, we will add two factors, namely: network externalities and government policies. Network externalities arise when “the utility that a given user derives from the good depends

upon the number of other users who are in the same "network" as is he or she" (Katz & Shapiro, 2023, p. 424). We believe that network externalities can have an impact on merchants' usage of digital payments because these types of payment are an example of network goods (Van Hove, 1999). Government policies include both measures to hinder the usage of cash and incentives for the usage of digital payments. We decided to include government incentives since they are measures specifically designed to affect people's behavior and therefore should have an impact on the use of digital payments.

4 Method

The paper uses an exploratory multiple case study methodology to theorize why small merchants in Italy are reluctant to accept digital payments, identifying the main drivers and barriers and how they interact, i.e., how they affect one another. We resorted to a qualitative approach because it allows to gain insights on the merchants' perspective (Moghavvemi et al., 2021), thereby suiting the goal of our paper.

Data will be collected using face-to-face interviews with small merchants in Italy. The in-depth interviews will allow for detailed investigation of merchants' point of view. The questions will be based on the main components of TAM and IRT, to which we add questions on network externalities and government policies (see Section 3).

The interviews will be conducted in Italian by the main authors and two junior researchers, in October-November 2023. We will interview managerial personnel, i.e., owners or workers that manage the POS, know the costs of each payment instruments, and can decide which type to accept. The interviews will follow a semi-structured format, that will ensure both structure and flexibility. In other words, we will design a topic guide, with the key issues to cover during the interview to ensure comparability, but also we will leave room for spontaneous questions that may raise during the interview itself.

The interviews will be audio-recorded, and the audio will be transcribed for the analysis and the coding. The coding will be performed by two researchers independently, to decrease the level of bias.

To identify the industry to analyze, we follow the Eisenhardt Method (Eisenhardt, 1989, 2021) to enhance the method's rigor and deal with potential biases. Given the goal of the paper, we will select merchants whose choice of whether to adopt digital payments is not trivial, meaning, merchants that operate in cash-intensive industries. For this reason, we focus on the food and beverage industry – i.e. bars and small restaurants – because the average consumers' spending is low, making it a cash-intensive sector. Also, we focus on small merchants because

it is the category targeted by government incentives, i.e., the one that has the choice of whether to adhere to those incentives.

5 Relevance of the research and contributions

This study will add to the literature by providing an analysis of the drivers and the barriers to the use of digital payments by merchants in Italy. Also, it will add to the literature by considering both card and mobile payments. This will allow to provide practical implications for policymakers and digital payment providers that wish to foster the usage of digital payments in countries that are similar to Italy in terms of the usage of payment instruments.

Finally, we also attempt to integrate TAM and IRT to suggest a new theoretical framework that takes into account both drivers and barriers, as well as factors that are specific to the context.

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