

**INTERNATIONAL PRACTICES FOR PROMOTING CASHLESS PAYMENTS AND
THEIR EFFECT ON ECONOMIC GROWTH**

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ana.cirlan@ase.md***Abstract**

The dynamic development of the cashless payment system, the increase in their share due to cash payments, it would seem, demonstrates the organic transition of settlements in the world economy from the cash sphere to the non-cash one. However, many developed and developing countries at the legislative level stimulate an increase in the share of cashless payments in national economies, including through restrictions on the maximum amounts set for cash payments. This article will analyze international experiences with cashless payments and their effect on economic growth. Thus, various individual measures have been adopted at the international level to encourage electronic payments and replace cash ones. The solutions presented in this study are based on diverse applicability mechanisms, some based on mandatory implementation and others focused on incentives offered to consumers or traders. Therefore, the examples presented in this article illustrate the impact of different solutions on economic growth, the reduction of the dark economy, and the improvement of public budget receipts.

Key words: *cashless payments; economic growth; electronic payment; cashless payment instruments.*

JEL Classification: E42, O52

I. INTRODUCTION

The world of cashless payments is developing at an accelerated pace due to the emergence of innovative payment instruments that allow transactions to be processed in seconds. This is the result of decades of development and evolution, and changes in information technology have impacted all aspects of life, including how to pay for goods and services.

In an era of digitization, cashless payments have managed to experience a remarkable evolution in the last ten years. Thus, worldwide, there has been an explosion in the use of cashless payments through a wide range of payment instruments and innovative technological solutions, which allow a payment to be made from any corner of the world at any time of the day. In this context, one cannot ignore the benefits they bring within an economy, such as: minimizing the shadow economy, eliminating tax evasion, and removing the phenomenon of salary in the envelope. Therefore, in recent years, this topic has become the subject of numerous studies in the international arena these being carried out by international organizations involved in the processing of payments, but also by numerous central banks whose strategic objective is to promote cashless payments.

The analysis of cashless payments on economic growth in different countries is justified by the many benefits they bring. In this context, it is essential to emphasize the need to implement measures that would contribute to the promotion of cashless payments, which in turn will contribute to the efficiency of the operation of several branches of the national economy thanks to the transparency they offer.

The publication aims to analyze cashless payments internationally to determine their impact on economic growth and, therefore, to assess their importance within a national economy.

II. LITERATURE REVIEW

The concept of cashless payment, in specialized literature, has various definitions. Thus, A. B. Paul and O. Friday (2012) claim that cashless transaction refers to the economic framework through which goods and services are bought and paid for by employing electronic devices.

Hock-Han Tee and Hway-Boon Ong (2016) opine that the development of cashless payments is fueled by the evolution of information technologies.

Next, Oginni O. (2013) states that technological innovation has changed the prospects for the development of payment systems, showing that they tend, now, towards an electronic world. Thus, new payment methods appear every year that certainly change people's habits of making daily payments.

Rogers E. M. (1995) analyzing cashless payments, formulates the "diffusion of innovations theory" (eng. diffusion of innovations - DOI), which shows how innovations are adapted by individuals in society. According

to her, cashless transactions are dependent on the adoption of cashless payment methods and how consumers will use the new technology. Moreover, users, being different according to their sensitivity to innovation, are classified into different adaptation categories, each having a different speed of adaptation to cashless payments.

In developing the DOI theory, Mallat N. (2007) highlights five factors that stimulate consumers to attach new technologies to make a cashless payment: relative advantage, complexity, compatibility, trust, and costs.

According to the European Central Bank, the formal approach states that cashless payments involve the transfer of funds between payment accounts. Moreover, as a follow-up, cashless payment is a secure transaction for customers while helping to increase revenue and improve the operational efficiency of sellers.

III. MATERIALS AND METHODS

Several European countries have opted to limit cashless payments, thus implementing policies requiring employers to offer salary payments using a bank account. This measure introduces the obligation to make salary payments through an electronic system. In essence, the mentioned measure requires such payments to be made using a payment account opened at a bank so that they can be transparent. In this regard, countries such as Croatia, Slovenia, Bosnia, and Herzegovina oblige employers to pay wages by using bank transfers; as a result, some employees have opened a payment accounts to receive wages. This is a first step towards the development of financial culture and the possibility of using the infrastructure developed in payment systems. Thus, this should increase the volume of electronic payments (especially payments made using payment cards), replacing cash transactions, which should lead to economic growth.

Electronic payment of wages has an impact on how people make a payment. In this case, people should make an extra effort to use cash (e.g., withdraw cash from ATMs). Therefore, the habit of making transactions via payment card or other non-cash payment channels is emerging, and each contributes to the reduction of the unseen economy (Fig. 1). The introduction of electronic payments to settle the salary obligation should generate low costs. The likely costs would be associated with the additional maintenance of a payment account. These costs can be covered by the employer, the employee, or even the government or shared between them. However, it is worth noting that in 2020, Parliament passed legislation (Directive, 2015) to increase the availability of holding a payment account for all consumers.

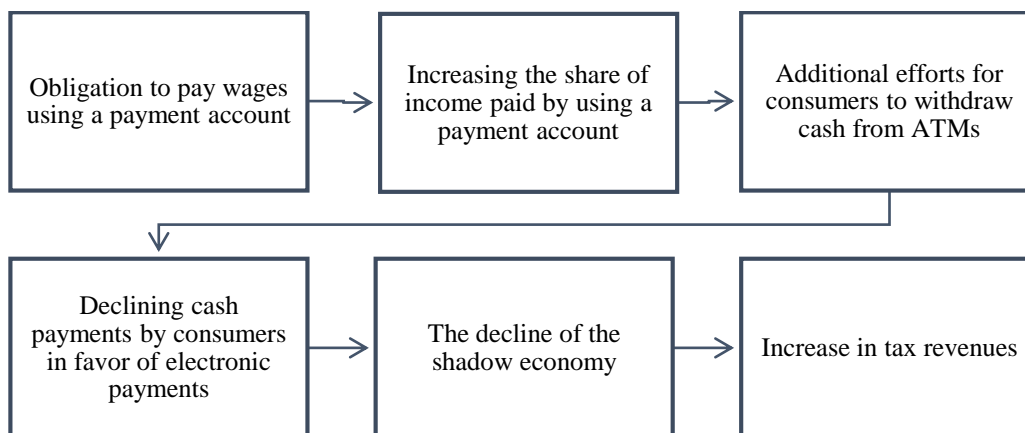


Figure 1 - The mechanism of influence of the measure to limit cash salary payments

According to the authors of the study Reducing the Shadow Economy through Electronic Payments, the estimated impact of the introduction of such a measure should take place almost immediately after its introduction.

Also, another measure used internationally is the introduction of the obligation to pay social payments electronically. This action involves the obligation of the government to pay social benefits in the form of electronic payments, e.g., by bank transfers and prepaid cards. The operation mechanism of this measure is like the one presented for the obligation to pay salaries through bank transfers. The main difference is the target group, which in this case are those who benefit from social payments from the state, and public institutions make the payments.

Unemployment and disability benefits are paid by bank transfer in countries such as Bulgaria, Croatia, and Slovenia. In Italy, all social aid payments are made using prepaid cards. Moreover, in Denmark, all social payments, including pensions, are paid electronically, while in Sweden, they are paid electronically, or prepaid cards are issued.

It should also be noted that traditional pension payment methods, such as delivery by post, can be relatively expensive. For example, according to the Polish Institute of Social Insurance (ZUS), the cost of delivering pensions by post is ten times higher than if these services are provided electronically. For this reason, in Poland, ZUS, together with a licensed bank, decided to promote the possibility of opening a particular bank account for

pensioners (an account with unique features, such as the "cash back" facility for payments at pharmacies and other facilities offered of banking such as no fees and commissions for bank transfers or cash withdrawals for two years after opening the account.

Thus, transferring pensions directly to a bank account instead of delivery to the post would reduce the state's costs related to paying pensions. However, on the other hand, there is a barrier to this, namely the technological barrier for elderly pensioners, who may have difficulty using payment cards and may also be unwilling to use a bank account.

Another measure implemented is the limitation of cash payments, whereby transactions exceeding a certain value threshold can only be made through non-cash payment instruments. Consequently, high-value cash transactions should disappear and be replaced by electronic transactions, thereby reducing the size of the shadow economy, and increasing government revenue. Thresholds for cashless payments are installed in Bulgaria, Croatia, the Czech Republic, Slovakia, and Slovenia. However, the current thresholds are relatively high (between EUR 5,000 and EUR 15,000), so their impact on reducing cash payments is relatively limited, as most transactions have a value below the imposed threshold.

Another initiative to encourage cashless payments has been implemented in Sweden, where cash transactions are limited at the counters of licensed banks.

Another critical moment of the market that has a significant impact on the development of electronic payments is, of course, the stimulation of the development of the infrastructure of the payment system, such as the obligation to install POS terminals by merchants who reach an inevitable turnover. In addition, the development of the acceptance network is an essential determinant to stimulate the popularity of electronic transactions, which would ultimately have a positive macroeconomic effect, such as collecting higher revenues to the budget (fig. 2).

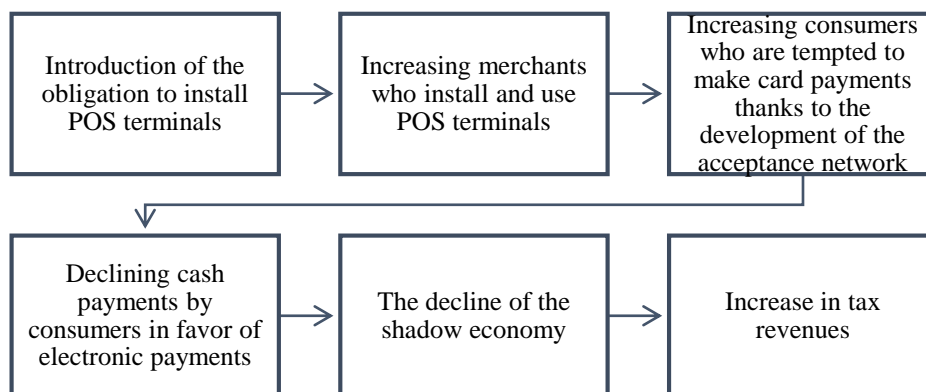


Figure 2 -The influence mechanism of cashless payments through the development of the acceptance network

This measure could be effective, especially in the case of sectors where the number of informal transactions has a high weight, as well as in case certain businesses prefer something other than the use of POS terminals. In this sense, South Korea is known for promoting electronic transactions by applying a wide range of instruments. For example, in 2001, VAT-paying merchants were required to have the necessary infrastructure to be able to accept payment by payment card. In addition, in 2002, South Korea imposed fines if a consumer was refused a card payment. In European countries, there is an impressive increase in the number of POS terminals, offering consumers the opportunity to pay with a payment card. At the same time, Great Britain and Poland are among the first European countries that tend to implement the latest technologies (for example, contactless technology or mobile payments). These measures appeared as a result of some private initiatives, merchants investing in the infrastructure of electronic payments to stimulate consumption and, implicitly, the development of their businesses.

Another way to promote cashless payments is to make them more financially attractive to consumers than cash. This can be done by providing various benefits to payment cardholders through discounts, cash back, or other rewards. Private financial institutions have widely used such methods, and their effectiveness has been confirmed by several studies (ECB, 2011). By analogy, such a technique can also be implemented at the state level, for example, the creation of fiscal incentives to reduce the fiscal component of retail prices, namely VAT, provided that the consumer makes a cashless payment through the card of payment at the point of sale. This should boost cashless payments but also help reduce the shadow economy. It should be noted that such consumer incentives can be introduced through various mechanisms, many of which allow governments to reduce their costs.

In 1999, South Korea introduced such a program whereby consumers could deduct 10 percent of the amount paid via credit card that exceeds 10 percent of a person's total salary from their income tax base. The deduction ceiling was set at 10 percent of the annual salary to prevent excessive tax deductions. Another similar example is

in Colombia, where consumers paying with a payment card are entitled to receive a 2 percent discount on the VAT.

In several countries, consumers are discouraged from using cards for payment due to the limited places where they can be accepted. The slow development of POS terminal networks may result from the high costs of card payments in some countries. On the other hand, high fees imposed on merchants can influence the degree of penetration of electronic payments in the economy. It should be noted that if few people in a market make payments employing a payment card, the costs borne by merchants are very high, as the cost of maintaining the infrastructure concerning the small number of transactions leads to high fees per transaction. In such cases, tax incentives for merchants reduce the cost of accepting a payment card and become more attractive to them. Such a merchant-oriented policy was implemented in South Korea, which entails the deduction of VAT, and the deduction of income tax varies depending on the categories of goods and services offered, being repealed in 2011). Another example is Uruguay, where the VAT deduction for electronic payments accepted by merchants has recently been introduced.

Stimulating electronic transactions bring good results in increasing the taxation of transactions. In this sense, organizing various tax lotteries can contribute to this objective. Specifically, consumers are incentivized to claim the tax receipt so that it will eventually serve as a ticket in a tax lottery, giving the holder a chance to win various prizes. In the longer term, this measure aims to educate consumers to ask for the tax receipt from the merchant. Such lotteries were first introduced in Taiwan in the 1950s to increase the volume of receipts declared by merchants. In Slovakia, Malta, and Portugal, the lottery is a continuous solution, while in other states, it is designed to operate for a fixed period. Slovakia achieved an estimated 2.5% reduction in the gray economy of GDP by organizing tax lotteries and submitting tax receipts to the tax authorities by end consumers. Success was ensured by several aspects such as the ways of registering tax receipts in the competition (physical, online, by SMS), the frequency of draws (monthly and later weekly), the number and value of the prizes awarded (the prizes awarded vary between 100 – EUR 10,000, a car, or the chance to participate in the "fair price" competition). In Poland, the program is explicitly introduced for 12 months. Bulgaria and Croatia also organize several rounds of tax lotteries regularly. Usually, such lotteries are part of the national financial education campaigns to raise awareness of the hidden economy).

Poland is among the success stories of countries that have managed to boost electronic payments. Poland managed to reduce the gray economy by 6.0 percent of GDP because of the development of the infrastructure necessary for electronic payments, namely the increase in POS and new technologies.

These measures appeared because of some private initiatives, merchants investing in the infrastructure of electronic payments to stimulate consumption and implicitly the development of their own business.

Another example would serve Italy, the country that managed to reduce the gray economy by 5.0 percent of GDP, limiting cashless payments through several mechanisms:

- Limitation of the house ceiling to one of the lowest levels among EU countries (5 percent of net monthly income per capita).
- The granting of social aid on pre-paid cards, a measure whose success is mainly due to the widespread promotion of these payment mechanisms and the vast number of merchants who grant price reductions to the beneficiaries of these cards.

Slovakia achieved an estimated 2.5 percent reduction in the gray economy of GDP by organizing tax lotteries and submitting tax receipts by final consumers to the tax authorities. The number and value of prizes awarded vary between EUR 100 and EUR 10,000.

Every three years, Turkey renews its action plan for the gray economy reduction strategy, adopting measures that address the leading causes (e.g., undeclared work). This achieved an estimated reduction of the gray economy by 6.5 percent of GDP because of the implementation of some categories of measures, namely the limitation of cash payments (Limitation of a cash payment of wage rights) and the strengthening of the administration and control capacity (Bases of integrated data, cash registers with integrated POS).

IV. RESULTS AND DISCUSSION

Each measure was substantiated based on an analysis carried out by the authorities regarding the implementation effort (existing infrastructure), respectively, the potential to reduce the gray economy. For example, databases for checking taxpayers declared versus realized income were implemented before the introduction of integrated POS cash registers, as they involved minimal implementation effort - commercial banks transmitting already available information (i.e., card payment data).

POS cash registers will replace integrated databases once they are widely implemented nationwide, as they provide the same type of information.

When talking about the digitization of payments, big cities are inevitably opting to adopt new technologies, and the direct benefits can be more easily observed. The shift to digital payments brings a catalytic effect on the economy (increased GDP, creation of new jobs, increased wages, and productivity), completeness, and viability.

Initiatives to stimulate electronic payments favor the taxation of the gray economy and lead to an increase in the collection of taxes and fees, respectively, of revenues collected at the consolidated state budget, which would

allow the authorities to reduce taxation in the long term. In addition, better taxation of the economy will contribute to creating a competitive and healthy business environment, stimulating sustained development with real effects in raising the population's standard of living.

Regarding the latest trends recorded at the European level in the use of cards (Payments Cards & Mobile 2018), it is noted that during the last years, cashless payments at points of sale and through electronic commerce have grown considerably in almost all European countries. The development of contactless technologies, electronic wallets, and NFC-type mobile payments has supported these developments.

At the same time, at the European level, payments through POS terminals registered a substantial increase, while cash withdrawals increased slightly.

The most noticeable trends in this regard are:

- Currently, payment card payments have continued to grow both in number and value, more than the compound annual growth rate (CAGR) over this period.

- Contactless cards and payments through them are standard in Europe. In addition, HCE and NFC mobile payments are gaining more and more popularity.

- Digital payments continue to grow, supported by digital wallets such as MasterPass from Mastercard, Visa Checkout, and Paylib offered by French banks.

- Payments via Android, Apple Pay, and Samsung Pay have been launched in several European countries and are spreading across the European continent.

However, globally cash is still the most widespread form of payment in all regions of the world, and its circulation is increasing. According to a global study, "World Cash Report" (2020), 47 countries covering 77 percent of the global population, and more than 90 percent of the world GDP were analyzed. The results show that the demand for cash continues to grow worldwide, despite the increase in electronic payment options, including mobile ones, in recent years. As a result, cash in circulation relative to GDP rose to 9.6 percent across all continents, up from 8.1 percent.

The report highlights the diversity of payment habits in different regions. In Europe, 80 percent of point-of-sale transactions are made in cash, while in North America. Where card payments are most regularly used, cash consumption still accounts for 31 percent. In Asia, the growth of online commerce does not mean that cash is taken out of the equation; more than 3 out of every four online purchases are paid for with cash on delivery.

The World Cash Report highlights that wherever people are in the world, they use and appreciate various payment options. There is no region where everyone chooses the same way to pay, and cash remains extremely important worldwide.

IV. CONCLUSION

In the last 20 years, the world of technology has experienced a surprising evolution, thanks to which many aspects of life have changed, including how to pay. Thus, the progress recorded has made a massive contribution to people's perception of cash payments, facilitating the emergence and further development of a cashless society where goods and services can be procured just a click away.

Cash is becoming a secondary payment method, used less and less in economic relations worldwide. This trend is motivated by the emergence of new non-cash payment methods, which are becoming used by the population.

Cashless payments have gained momentum worldwide due to their convenience, simplicity, and security. In addition to the advantages presented, they bring a wide range of benefits to the entire society, contributing to economic growth and eliminating the dark economy. Furthermore, thanks to the transparency offered by electronic payments, negative phenomena such as corruption, tax evasion, and economic crimes can be eliminated.

For this reason, many less developed countries, especially those facing a dark economy, have conducted a series of studies identifying the size of the impact of cashless payments on an economy. Thus, in the context in which the Republic of Moldova also ranks in the top with the largest share in GDP of the unnoticed economy at the European level, it is reasonable to draw special attention to this subject and state policies to be oriented towards the promotion of cashless payments.

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