Article

Financial markets

Payment systems, a key infrastructure for economic development

Content available in
Spanish Catalan

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In 1328, Pope John XXII sent 60,000 florins in coins from Rome to Lombardy. In spite of being guarded by 150 men, the expedition fell into an ambush and half the treasure was stolen. Many years later, between 1567 and 1632, Madrid successfully sent 500 million florins to the Netherlands. In other words, a much greater amount, in recurring payments and over a longer distance but at a lower cost and less risk. How was such a development possible? Fundamentally, thanks to the fact that a payment instrument that already existed in the Late Middle Ages, the letter of exchange, formed part of a broader network of institutions and relations between economic agents. That is to say, because a payment system had

developed, understood as a series of financial, legal and institutional infrastructures, that enables monetary transactions between different economic agents. The universalisation of this system turned out to be fundamental to the global mobilisation of financial resources and to fund the commercial revolution of the Late Middle Ages and Renaissance.

This historical lesson reminds us of the importance of financial innovations and more specifically of the progress made in payment systems, in economic modernisation. However, although the relationship between having efficient payment systems and economic development seems self-evident, the fact that new high tech methods have appeared in the last few years (online banking, mobile devices, etc.) has revived this discussion and the analysis of the overall benefits generated, both private and social. As it has also become necessary to analyse, once again, the direction of the causal relationship between payment systems and economic development: does an improvement in payment systems affect economic development or does economic development actually result in the modernisation of payment systems?

To review this issue, we must first make a broad distinction between payment systems based on the agents involved: namely institutional and retail. The former is mainly made up of large transactions between financial institutions and central banks whereas the retail payment system facilitates monetary transactions carried out by individuals and firms through the main payment instruments: cash, cheques, credit and debit cards, bank transfers, automatic debit (mainly direct debit and standing orders) and, more recently, online transactions, especially from mobile applications.

Focusing our attention on the retail payment system, the empirical evidence points towards a positive relation between, on the one hand, the level of development and the quality of a certain payment system and, on the other hand, economic growth. More specifically, various studies have analysed the economic impact on three groups of economic agents: consumers, firms and banks. Regarding consumers, improving the effectiveness and efficiency of payment instruments directly affects individuals' consumption habits. Having an extensive, efficient and secure payment structure boosts trade in goods and services and other transactions between

individuals because it encourages the mobilisation of monetary resources quickly and cheaply and improves the confidence of consumers themselves. Access to credit to acquire goods and services also helps to distribute the fluctuations in individuals' consumption over time which, in turn, helps to improve consumers' spending decisions. Estimates by Hasan, De Renzis and Schmiedel(1) for the European Union countries as a whole show that, controlling for endogeneity, electronic payments methods have the greatest effect on the level of income, at a considerable distance from alternative payment instruments such as cash or bank cheques. These estimates suggest that the direction of causality is the former of the two mentioned previously: the improvement in payment systems leads to greater economic development.

The business sector also benefits from an efficient payment system as there is a larger number of consumers with different, faster, more secure and efficient alternatives which, in turn, encourages corporate investment and ultimately economic growth. Lastly, one crucial element is the role played by banks in the whole process as they are the main suppliers of payment methods and platforms. The relation between adopting new payment instruments and their impact on banking performance has attracted the attention of a large number of economists from various disciplines such as macroeconomics, monetary policy, finance and banking. Of note regarding this last area is the fact that modernising payment channels results in notable gains in terms of productivity and efficiency: many of the costs involved in the most frequent operations decrease with the introduction of technical innovations, which helps to exploit economies of scale.(2) At the same time, improving the operational efficiency of financial institutions frees up resources that can be used to boost their commercial activity and thereby encourage business investment and growth in general.(3)

Although the relation between the modernity of payment systems and economic development is generally positive, we should remember that whether full advantage is taken of its potential will depend critically on factors of a highly diverse nature, such as a country's degree of development, its point in the economic cycle,(4) the extent and sophistication of its financial system and capital markets or the quality of its legal and governmental institutions, among others. In

this respect, the study by Hasan, De Renzis and Schmiedel highlights two important milestones: (i) it is the emerging countries or those in transition (such as Bulgaria, Romania and Poland) where the use of electronic payment methods has had the greatest impact on overall consumption and GDP; (ii) the segment of leisure consumer goods has reacted to a greater degree to an increase in the use of payment instruments such as cards and mobile devices. Similarly, and unlike countries in the developed block, emerging economies show a high propensity to use traditional payment methods such as cash or cheques. Some economists such as Callado, Hromcova and Utrero(5) argue that this is largely due to the high intermediation costs of banking and the limited accumulation of the human capital required to develop and spread new technologies. In summary, the positive effects associated with the modernisation and variety of payment systems and instruments result in higher levels of consumption and investment, encouraging economic development and growth. This happened in the dim and distant past of the Middle Ages in a few European cities, is still occurring in advanced countries and will be repeated in emerging economies as they achieve the minimum conditions required.

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(1) Hasan, De Renzis and Schmiedel (2013). «Retail Payments and the Real Economy», European Central Bank.

(2) See Hasan, Koetter and Wedow (2009) «Regional Growth and Finance in Europe: Is There a Quality Effect of Bank Efficiency», Journal of Banking and Finance vol. 33.

(3) In particular, see Berger (2003). «The Economic Effects of Technological Progress: Evidence from the Banking Industry», Journal of Money, Credit and Banking. Hasan, Schmiedel and Song (2012). «Return from Retail Banking and Payments», Journal of Financial Services Research.

(4) See Gual, J. (2009). «El carácter procíclico del sistema financiero». Financial Stability

Review no. 16, Bank of Spain.

(5) See Callado, Hromcova and Utrero (2009). «Cash, Paper-based and Electronic Payments: a Theoretical Approach» for a description of a theoretical equilibrium model with several payment instruments: the opportunity costs faced by consumers influence the use of different payment alternatives.

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