

# Chapter 19

## Technological Dissemination in the Portuguese Payments System: An Empirical Analysis to the Region of Santarém

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### ABSTRACT

*Nowadays, few would contest that the contribution of ICT – Information and Communication Technologies – for the progress of the payments system in Portugal has been significant. The continuous irruption of new payment forms, as well as the emergence of more attractive and profitable offers, triggers countless changes. In fact, there has been an organizational restructuring of the banks, aiming at achieving higher efficiency levels, resulting from the use of ICT. In broad terms, the payments system in Portugal has been revealing high levels of modernity. However, is that adhesion to ICT similar in all the regions that are part of the Portuguese territory? The main goal of this study focuses on an empirical analysis which allows to investigate the degree of convergence, regarding the technological dissemination for banking purposes, between the region of Santarém and the national trends.*

### INTRODUCTION

Presently, Portugal has one of the most revolutionary and developed European payments systems (cf. Ferreira, 2005; BP, 2007b; Expresso, 2009). The ICT – Information and Communication

Technologies – have not been strange to that characterization (for a general overview of the impact of ICTs on markets' structure, see Hannan & McDowell, 1990; Coombs, Saviotti & Walsh, 1997; Laranja, Simões & Fontes, 1997; Trigo, Varajão, Soto-Acosta, Barroso, Molina-Castillo & Gonzales-Gallego, 2010). In fact, several studies

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have been put forward, aiming at spreading this reality and presenting the Portuguese example as a case study (see, for instance, Guimarães, 1999; Ferreira, 2002 and 2003; Monteiro Barata, 1996a and 1996b).

The main motive for this paper consists of investigating whether the region of Santarém has the same trends as the rest of the country, concerning the adoption of the new technologies for banking purposes. Therefore, the methodological framework is made aiming at investigating the degree of convergence between the region of Santarém and the national trend.

The methodology used focused on techniques of direct enquiry (*i.e.* questionnaire surveys) directed to the resident and/or active population in Santarém, in order to assess the diffusion and technological assimilation patterns in the region's banking sector.

The paper is organized into four main points: (1) methodological framework, (2) presentation and analysis of the results, (3) recommendations and (4) final conclusions.

## **METHODOLOGICAL FRAMEWORK**

ICTs have changed the Portuguese payments system, with the operations being easier and less costly (Ferreira & Cravo, 2004). Different institutions, such as SIBS – *Sociedade Interbancária de Serviços* – and the BP – Bank of Portugal –, have been revealing evolutions at the national level, betting on new channels of services distribution and in the introduction of new payment forms, which has changed significantly the consumers' preferences. Presently, these preferences are even more evident, being the ATM – *Automatic Teller Machine* – and the payment cards the main choices of the bank clients (BP, 2007a). In national terms, both the ATM and the Homebanking service are in an expansion stage, with an ever growing number of adherent clients (regarding the national trends of adhesion to these services, see SIBS, 2008a).

The banks' investment on ICT has triggered changes concerning the number of employees per bank branch, causing for their decrease, however increasing the demand levels in terms of workers' competences, knowledge and qualifications (APB, 2009).

Basically, this research aims at comparing what occurs in the region of Santarém to the rest of the country. For data collection, a questionnaire was elaborated (see *Appendix*), following the guidelines proposed by Hill & Hill (2005), and settled in four blocks: (1) a first block composed of questions related to the characterization of the present tendencies; (2) a second block composed of questions which may allow to investigate on the expected benefits; (3) a third block with questions that may allow to analyse the innovation of the payment system and, finally, (4) a fourth block composed of questions aiming at characterizing the inquired sample.

## **Likert Scales**

A questionnaire survey may play a fundamental role in an empirical research, in order that the previously defined hypotheses may be verified (Hill & Hill, 2005). Within the scope of this research, questions of dichotomous answer and/or of closed answer have been used, as they allow an easier and faster statistical treatment (Bell, 2008). In particular, Lickert scales from 1 to 5 (1 = less favourable option and 5 = more favourable option) have been used, aiming at scoring the answers according to the degree of concordance or discordance (Lickert, 1932).

## **Questionnaire Testing**

Still in what concerns the questionnaire framing, it is important to mention that the questionnaire was tested in a small sample of 10 individuals in order to guarantee whether the document was fit to be implemented. The surveyed individuals were asked to answer with comments and to make

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