



Chapter VI

Information Technology Spending and the Value of the Firm: The Case of Mexican Banks

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This paper analyzes the relationship between IT expenditure and the monetary value of organizations. Based on the case of the Mexican banking industry from 1982–1992, the paper's hypotheses test the relationship between IT expenditure and the real and perceived market values of banks. Correlations are performed between annual IT expenditures for a 10 year period —when Mexico's commercial banks were owned by the federal government— and bank selling prices, when the industry divestiture took place in 1992. The main findings are that IT spending has a positive impact on the value of the firm, when the value of the firm reflects the change of ownership or the control of the firm. Second, firms spending more on IT do not tend to reach higher selling prices. Other findings are presented. The model and its results are discussed in terms of the literature about value of investment and the productivity paradox.

INTRODUCTION

The contribution of information technology (IT) to nations' or organizations' productivity, performance, and value has been strongly questioned. Even today, when we face a transition into an "e-world" with an electronic alternative for activities such as e-banking, e-learning, e-government, etc., the value of IT and its contributions generate mixed opinions. On one side, to some economists, for example, the robust U.S. economy in the late 1990s was linked to information technology. On the other hand, doubts were reinforced when successful e-businesses, like Amazon.com, showed small or no profits on their financial statements. In the early 1990s, the productivity paradox triggered a notable academic effort to study the impact of IT on national economies, industrial sectors, firms, and individuals. There have been a number of research studies using different levels of analysis (Strassman, 1990; Scott Morton, 1991; Harris & Katz, 1991; Weill, 1992; Ahituv & Giladi, 1994; Loveman, 1994; Nault & Dexter, 1994; Dewan & Kreamer, 1998). The present researchers have investigated the productivity paradox in Mexico at the both the firm and industry levels (for the latter, see Navarrete and Pick, 2002).

The overall body of studies does not come to a conclusion regarding the validity of the productivity paradox. The issue would seem to depend upon such factors as the time, place, research model, and unit of analysis. Taking advantage of the 11-year Mexican government ownership of the banking industry and its divestiture process, this chapter studies whether or not IT spending contributes to the monetary value of organizations.

The federal government ownership of the Mexican commercial banks during the period from 1982 to 1992 offered an opportunity to empirically study the productivity paradox. During this 11-year period, each bank in Mexico was required to present its information technology budget to the federal government's Finance and Planning Office. This policy requirement had the following implications:

- Information about IT expenditures was available for all commercial banks.
- Banks used the same IT definitions and budgetary practices and procedures.
- A consistent longitudinal data set on banks' IT investment was available that had not existed before or since.

Between 1991 and 1992, the government sold back the commercial banks to investing groups through a divestiture process. In this process, the government first assessed the value of each bank through several normative approaches. Then, the divestiture committee used these values to set a minimum price for each bank, which later was used as a starting point for the bidding stage of the selling process. Several groups took part in the bidding stage, each group giving an offer to obtain control

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