

An Empirical Analysis of the Relationship Between IT Training Sources and IT Value

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Information technology (IT) training has been identified as a key factor for the success of IT applications and the most frequently applied coping mechanism to handle changing IT. However, there is a question as to how IT training has to be conducted to obtain desired outcomes (higher levels of IT value). This paper analyses the presence of IT training sources used by firms and examines the influence on IT business value. Here, IT training is studied according to three IT training sources: in-house IT training, outside IT training, and self IT training by employees. In addition, differences in IT training sources are analysed according to two contingency factors: business size and business industry. Results show a positive relationship between IT training sources (outside and self IT training) and IT business value and confirm that IT training sources are positively related to business size and differ moderately by business industry.

Keywords Information technology; training; IT training; IT value; business value

1. INTRODUCTION

Today, the contribution of information technologies (ITs) to economies is unquestioned (Stehr, 2007). IT has been considered fundamental for the development of productivity and knowledge-intensive products and services. Jobs demanding IT skills from employees have increased exponentially all over the world. For example, it is estimated that today there are 4.2 million IT practitioners within the European Union (EU) and that approximately 180 million people are using ITs at work (CEPIS, 2007). In addition, in 2005 the share of employed persons in the EU using computers in their normal work routine exceeded 50% for the first time (Eurostat, 2006).

New hardware, software, and mobile computational devices are constantly being launched, and it seems that this trend will continue in the future (Strohecker, 2005). Companies are committing more and more financial resources in order to acquire the latest technology available. This rapid growth faces a barrier, however; namely the capability of the labour force to understand

and use IT applications. In this sense, IT investments often are underused, or are not used appropriately; this is mainly because employees do not possess sufficient IT skills to use them. This fact may cause IT to become obsolete before it pays off.

Most IT experts recognize that IT training is critical to achieve productive use of the technology (Yi & Davis, 2001). This has also been confirmed by research. IT training has been identified as a key factor for the success of IT applications (McLean, Kappelman, & Thompson, 1993). Sircar, Turnbow, and Bordoloi (2000) found a positive relationship between IT training and firm performance. Furthermore, investigations have shown a positive significant correlation between IT skills and efficient use of IT resources (Lee, Kim, & Lee, 1995) and other studies' findings (e.g., Mata, Fuerst, & Barney, 1995; Ravichandran & Lertwongsatien, 2005) confirmed that IT skills may be source of competitive advantage. Thus, IT training is an important link to productive IT use, which in turn may affect IT value. Nonetheless, there is a question as to how IT training has to be conducted to obtain desired outcomes (higher levels of IT value).

The training process can be divided into three phases (Compeau, Olfman, Sein, & Webster, 1995): (1) the initiation phase, which is concerned with needs assessments and the design and development of training materials; (2) the formal training and learning phase, which refers to the training methods used (lectures, computer-based, case studies, videotapes, etc.) and choice of training sources (outside, in-house, and self IT training by trainees); and (3) the post-training phase, which examines the long-term effects of training in terms of its influence on workplace behaviours. This research focuses on the second phase, the choice of training IT sources (in-house, outside, and self-training by employees), and presents three main contributions. First, it provides knowledge about the IT training sources used by firms. Second, the effect of IT training sources on IT business value is assessed. Finally, the presence of these training sources is analysed according to two contingency factors: business size and business industry.

The paper consists of seven sections and is structured as follows. Section 2 reviews the relevant literature. In section 3, hypotheses are specified. Following that, the methodology

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