

## THE DYNAMIC ASSESSMENT OF INFORMATION TECHNOLOGY INVESTMENT

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**ABSTRACT.** *Evaluating the effectiveness of Information Technology (IT) investment has always been an elusive but important goal of IS researchers. The purpose of this paper is to present new dynamic approaches in the IT benefits evaluation. We use essential financial indicators to measure the impact of sample entities which performed IT investment before December 31, 2004 in China and Taiwan. From the field study we find that both in China and Taiwan, the IT investment make a negative impact. However, from the Taiwan experience, most entITrises will meet the temporary decline situation after implementing the IT investment, but in the long-term, about 4 years, it will make a significant financial progress. While in China after IT investment, it always keeps a negatively related performance.*

**Keywords:** Information technologies, Fuzzy theory, Performance evaluation

1. **Introduction.** Investments by firms in information technologies (IT) have increased rapidly over the past three decades. IT investment decisions have the potential to either improve a firm's competitive position or to allow the firm to become more vulnerable to competitive forces. Recent evidence indicates that IT investments have been a very important contributor to productivity [2,5,6]. These literatures suggest that IT investment has a significant impact on firm performance and, therefore, is of value to the firm.

Unfortunately, empirical support for these claims consists almost exclusively of individual case studies [8-10,20]. As a result, there is some doubt about whether the claimed impacts can be generalized from the individual cases to all firms. A number of recent empirical studies have suggested that IT investment do not benefit firms as much as the case studies might lead one to expect [3,14,15,18].

People have concluded from their own study and studies conducted by others, that IT investment have not resulted in significant productivity gains [2-4]. These studies cast doubt as to the real value of IT investment to firms. Determining whether IT investment