Business Intelligence Systems and Operating Performance: Future Research Directions

Andy C. L. Yeung

Faculty of Business,

The Hong Kong Polytechnic University

Summary:

Business Intelligence (BI) systems that capture organizational and economic data for decision-making are increasingly important for managers under a dynamic operational environment. Firms make use of BI systems in analyzing general economic and cultural trends, as well as internal operational data such as process efficiency and productivity. Proponents believe that BI systems dramatically improve firms' capabilities in making a more informed decision, improving their intellectual and risk management capabilities, while others believe that BI systems add very little value as they are just an organizational routine. Based on event study and longitudinal analysis on the implementation of BI systems in the United States, we propose to empirically examine the impact of BI systems on firms' operational capabilities (based on the stochastic frontier estimations of their relative efficiency), and perceived credit risks (based on well-recognized credit ratings). We will further examine how the business value of BI systems is contingent on product dynamism of the firm, as indicted by R&D intensity and industry clockspeed. Our research will answer a fundamental question regarding the business value of BI and help understand the operating contexts in which BI systems more critical. Our research is particularly relevant and significant given that nowadays huge volume of business data is available through the internet, such as Web server blogs and social media technologies (i.e., big data).