Information Technology and Corporate Profitability: A Focus on Operating Efficiency

Stephan Kudyba, New Jersey Institute of Technology, USA
Donald Vitaliano, Rensselaer Polytechnic Institute, USA

ABSTRACT
This work involves an empirical analysis, incorporating firm-level investment in information technology and financial statement information, which provides an accurate measure of operating revenue in a profitability function over the period from 1995-1997. The results indicate that IT can enhance firm level profitability. Factors such as advanced computer processing, the proliferation of PCs to the consumer and business environment, the development of the Internet, and advanced software applications have significantly augmented previously existing information technology. This new IT has provided infrastructure for advanced information networks which facilitate the flow of value added information to decision makers and enable corporate enterprises to more easily operate in the new global economy. As a result, larger companies can provide a variety of goods and services that more effectively meet consumer preferences in a more efficient, cost-effective manner.

Keywords: firm-level profitability; advanced information networks; operating efficiency

The information age, as many have labeled the 1990s and new millennium, is characterized by ever-increasing investment in information technology consisting of hardware, software, and telecommunications. Organizations in all industries are utilizing this technology in the attempt to enhance operating efficiency and ultimately increase productivity and profitability.

This paper addresses the controversial issue of whether increased investment in information technology enhances corporate profitability by conducting an empirical analysis incorporating firm-level investment in IT capital in a profitability function over the period from 1995–1997. This period is of particular interest as it encompasses such events as the proliferation of personal computers to individual consumers and the business environment in addition to innovations such as the introduction of advanced computer processing, the Internet as a commercial vehicle, and “state-of-the-art” software applications, all
of which provide noteworthy improvement over previously existing information technology.

CONTINUED FOCUS ON OPERATING EFFICIENCY

The strategy of streamlining operations to increase productivity is not unique to the 1990s. The Bureau of Labor Statistics highlighted the notion of minimizing input costs with regards to the manufacturing sector (Gullickson, 1995). “For the 2 digit industries, costs of materials and business service inputs together represent 40 percent to 80 percent of all costs. Developments such as price increases in energy and other materials in the 1970s and the growth of service inputs such as computer services and temporary labor are clearly sufficient to affect production decisions. In addition, many modern manufacturing, productivity enhancement techniques are aimed at improving the efficiency with which both intermediate inputs and primary inputs are used. Just-in-Time production, statistical process control, computer aided design and manufacturing, and many other developments in production techniques reduce error rates and thus cut down on sub-standard, rejected production. In so doing, they reduce waste of materials as well as workers’ time.”

In the 1980s high technology firms witnessed a significant increase in the growth of material inputs in their production of equipment. They accordingly adopted production processes that economized the use of materials to gain a competitive edge (Diwan, 1991).

The character of the 1990s is depicted in recent Bloomberg news releases (McElroy, 1999), the first which reported US labor productivity statistics and stated…”Increases in worker productivity and business efficiency are important reasons the economy can expand. Companies have invested heavily in computers and other innovations to boost efficiency and reduce costs.” A special report on AT&T’s operations cited that the firm cut more than 20,000 jobs in 1998 and reduced selling and general administrative expenses by $1.6 billion. The firm expected SG&A costs to fall to less than 21 percent of revenue in 1999. The strategy was to reduce inefficient allocations of productive inputs.

Microeconomic Theory and Firm Profitability

One way to increase operating efficiency is through the appropriate use of available productive resources. These resources are a source of costs for firms where more efficient allocation of corresponding inputs can reduce costs.

The popular measure of corporate costs are reported in corresponding financial statements under the headings “Cost of Goods Sold” which generally refer to costs incurred in the production of goods and services such as materials, labor, and manufacturing overhead. The other is “Selling and General Administrative Expenses” which include the costs of selling a product or service. In order to increase profitability, firms have increasingly adopted strategies to minimize these costs as a portion of corresponding sales. By achieving this, operating income, a measure of profitability can increase.

Operating income is a widely accepted measure of firm profitability in financial theory. It is derived from corporate income statements and is estimated as a company’s earnings from its core operations less its cost of goods sold and its general operating expenses (Weston, 1986).
11 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage:

www.igi-global.com/article/information-technology-corporate-profitability/1233?camid=4v1


Recommend this product to your librarian:

www.igi-global.com/e-resources/library-recommendation/?id=2

Related Content

A Simulation-Based Decision Support System for Managing Information Technology Project Portfolios
Zohar Laslo and Gregory Gurevich (2013). International Journal of Information Technology Project Management (pp. 1-17).

www.igi-global.com/article/simulation-based-decision-support-system/77875?camid=4v1a
The Impact of Training on Virtual Project Teams: A TIP Investigation
www.igi-global.com/article/impact-training-virtual-project-teams/62573?camid=4v1a

Power Conflict, Commitment and the Development of Sales and Marketing IS/IT Infrastructures at Digital Devices, Inc.
www.igi-global.com/chapter/power-conflict-commitment-development-sales/6368?camid=4v1a

Knowledge Management Challenges in the Non-Profit Sector
www.igi-global.com/chapter/knowledge-management-challenges-non-profit/13910?camid=4v1a