Chapter 8
Infoeconomics

ABSTRACT
The chapter discusses economics of informing or infoeconomics, which refers to costs and benefits of informing agents and to their contribution to organizational performance. Controversies questioning contributions of IT/IS to productivity (IT productivity paradox) and to competitiveness (IT commodification argument) are discussed. It is argued that new infoeconomic measurement and better management may assist in leveraging productivity gains from the microeconomic to the macroeconomic level. Several methods of assessing costs and benefits of informing agents are proposed. It is further argued that the commodification argument points correctly that IT is no longer scarce but fails to account for a management factor and still prohibitive direct costs. Assessing benefits from IT/IS is quite challenging since these usually have support roles in organizations. The assessment of benefits of data, knowledge, and information is even more challenging since it depends on familiarity and hindsight. Valuing of professional knowledge is particularly important because it mediates in creation of business information. The challenges have become more pressing with the data analytics and big data trends. However, research lags behind. It is further argued that matching costs and benefits of informing agents is usually applied to a particular IS and calculated in some form of financial returns compared with fixed and variable lump costs of IT/IS. The chapter recalls several research cases to demonstrate relationships between IVO aspects and infoeconomics. The infoprocess perspective is characterized as a reliable guide for study and management of infoeconomics. The balanced scorecard methodology suits such an analysis. The point is made on Cloud computing, framing it as a new rental methods of IS services with certain benefits and still partly opaque costs.

INTRODUCTION
Economics of informing, or infoeconomics for short, refers to the part of organizational economics that intersects with organizational informing agents. This part of organizational economics is influenced by IS, knowledge, wisdom, and the management of organizational data. Infoeconomics has a benefit and a cost rubric. Another useful stance is that of organizational performance, which can be understood in terms of efficiency (productivity expressed in tangible measure of money, quantity, and time) and effectiveness (the accomplishment of any significant goal formulated...
Infoeconomics

in organizational plans, strategies, and management or professional realms).

Infoeconomic analysis is focused on the contribution of informing agents to organizational performance. Such an analysis takes into account other IVO aspects discussed in this book. This IVO slant differentiates infoeconomics from studying the sheer relationship between organizational performance and IT. The domain of infoeconomics represents a manager’s test bed for the payback from data, knowledge, information (in IVO, the meaning outcome of interpreting data), and IT assembled in IS.

The cases presented in the preceding chapters carry infoeconomic connotations which this chapter will explore. The discussion will start by looking at some general and controversial issues of evaluating economic effects of IT/IS, which have occupied academic and management discourse. The discussion will proceed to exploring IVO-based measures of efficiency on the organizational level. Next, relationships between infoeconomics and other IVO aspects will be demonstrated by taking a look back at the topics of previous chapters and the case organizations. The infoprocesses perspective will be emphasized as particularly important for practical purposes. The escalating trend of renting IT and IS services will be addressed in the end of the chapter.

EFFICIENCY PUZZLE

Researchers in the United States have for long been occupied with evaluating economic effects of information technology (IT) and resources. Research has targeted two domains—operational and strategic effects, the former was concerned with efficiency (productivity) and the latter with broadly defined effectiveness (accomplishment of organizational goals—financial and others). Efficiency analysis is the topic of this section.

Two levels of productivity analysis have been used: (1) macroeconomic (an economic sector, such as manufacturing or services; e.g., Roach, 1989); and (2) microeconomic (the level of a firm or of a firm’s unit; e.g., Brynjolfsson, 1993). Researchers have usually correlated some measure of organizational output (e.g., a figure on financial return) with some measure of “IT costs” (e.g., the total spending for computer software, hardware, facilities, training, etc.). A historical premise behind implementing IT and IS was that these were vehicles for working faster and for completing more work with same or less hands. The background of this premise can be located in the manufacturing and other branches of technology. The premise’s genealogy can be traced back to the era of industrial revolution and inception of the science of economics, both originating in Great Britain. The essential idea is that an investment in new technology pays back so that a worker can produce more pieces of something within a unit of time. This happened with the transition from manual to machine-supported work in the industrial revolution. The efficiency rationale maintains that the same should happen with IT.

Early studies of efficiency attributable to IT were microeconomic. They delivered well-known cases, some of which have identified a contribution of IT to efficiency in particular organizations. For example, the customer service process at Otis Elevator was found to be faster owing to the use of devices for automatic tracking of functioning of the elevators the company installed on customer premises. Similarly, American Hospital Supply Corporation’s network (a precursor to technology for B2B e-commerce) enabled a quicker and labor-saving sales process. Interestingly, this fact did not show up in the efficiency equations due to a high cost of technology. The real benefit was in the rubric of effectiveness because the company differentiated its sales process to be more convenient for customers; over time, this resulted in an increase in the company’s market share.

Other early studies detected cost avoidance as the major efficiency benefit. For example, a new database system at Radio Corporation of