The Power of Incentives in Decision Making

Geraldine Ryan
University College Cork, Ireland

Edward Shinnick
University College Cork, Ireland

Most of economics can be summarised in four words: "People respond to incentives." The rest is commentary.

Rauh and Seccia (2005, p.1) quoting Landsburg (1993, p.3)

INTRODUCTION

The organisation of the workplace is evolving. In many industries, mass production by large, vertically integrated, hierarchically organised firms is being replaced with more flexible forms of both internal organisation and industrial structure (Brynjolfsson & Mendelson, 1993). Work is increasingly accomplished through networks of smaller, more focused enterprises. Added value is generated by ever-changing coalitions, where each member of a coalition specialises in its area of core competence and controls it through the use of strategic partnerships.

The information systems (IS) revolution has had an enormous influence on how organisations are managed. Electronic access, communication, and decision support influence several managerial processes and systems including the nature and scope of managerial roles, organisational structure, strategic planning systems, budgeting, performance measurement and review, incentive compensation systems, and knowledge management.

In today's world of business, investors must ask how they can motivate independent, self-interested, self-organising, somewhat-coordinated managers so they focus their skills on the common goal of maximising the value of the company. Meanwhile, managers must also inspire their employees to work hard, their suppliers to provide a good service at the right price, and their customers to purchase their products. Within companies, team structures are replacing the traditional hierarchical form and incentives are being used to encourage performance (Baker, 1992; Holmstrom, 1979).

What are incentives? Incentives are mechanisms offered to you to help in the decision-making process. In economics, an incentive is any factor that provides a motive for a particular course of action. Some incentives make people better off and reward them for their actions. Other incentives leave people worse off and penalize them for their actions. Economics is to a large extent a study of incentives: incentives to work hard, to produce high quality goods, to study, to invest, to save, and so forth (Laffont & Martimort, 2002).

The aim of this article is to examine how incentives assist in the managerial decision-making process at individual, group, and firm level. We argue that incentives are an integral component of a successful business. Suitably designed incentives provide a tool to elicit correct and timely information, to encourage and reward performance, and to promote coordination and cooperation between firm owners, managers, and employees. We begin by examining the source of the incentive problem and the associated principal-agent literature. We highlight the importance of incentives in solving hidden action and hidden knowledge problems in information security. We look at the concept of contract design and examine how contracts can be used to alleviate one of the problems associated with outsourcing the development of IS. We also look at how incentives can be designed to minimise information problems in auctions. Finally, we discuss the limitations of incentives and we conclude by outlining some avenues for future research.

BACKGROUND

Traditional economic theory concerned itself with understanding how prices are formed in competitive markets and failed to ask such questions as how own-

Copyright © 2008, IGI Global, distributing in print or electronic forms without written permission of IGI Global is prohibited.

ers of firms can motivate their employees to strive for the same goal—profit maximisation. In modern organisations, particularly those owned by a large number of shareholders, firm owners must relinquish some control of their firm and delegate tasks to their employees. As soon as one acknowledges that owners and employees have different objectives, delegation becomes problematic (see for example, Baker, 1992; Davenport & Prusak, 1998; Eisenhardt, 1989; Fama, 1980; Holmstrom, 1979, 1982; Gibbons, 1998; Milgrom & Roberts, 1992; Mirrlees, 1997; Pratt & Zeckhauser, 1985).

If the interests of the owners and employees are fully aligned, there is no incentive problem. The problem arises when there is conflict between the incentives of both parties and when there is less than perfect information (see for example Holmstrom, 1979, 1982; Mirrlees, 1997, Vickrey, 1961[1]). The following three examples demonstrate how differences in the incentives between the principal (the employer) and the agent (the employee) can arise: (1) An insurance company wants its salespeople to be looking for customers, but the salespeople might prefer to be shopping. (2) A new author, seeking fame, wants his/her book to be reasonably priced so as to achieve high sales and a larger readership, the publisher, seeking high profits prefers a higher price. (3) An IT subcontractor wants to pass any production-cost increases to the price contactor[2] while the prime contractor wants the subcontractor to be responsible (as least in part) for any cost increases (McMillan, 1992). All of these examples have the same underlying structure. The person designing the terms of the contract, the principal, has one aim whereas the person performing the task, the agent, has a different aim (Pratt & Zeckhauser, 1985). In economics, this is known as the principal-agent problem.

The principal-agent problem refers to the difficulties that arise under conditions of incomplete and asymmetric information when a principal hires an agent (Eisenhardt, 1989). The hiring person gets dependent on the other's action. If the principal and the agent are perfectly in agreement then there is no need for one to create incentives for the other. Therefore the best solution is for the principal to hire a person whose interests are directly aligned with his/her own. For example, if he/she wants to move furniture then he/she should hire a fitness fanatic rather than a couch potato; the fitness fanatic is more likely to see the task as an opportunity for a workout and therefore more amenable to carrying out the task (McMillan, 1992).

In the world of business it is very difficult to find principals and agents with identical interests. Since it is not possible to constantly monitor the work of every employee within a firm, the principal must either change the agents' preferences or offer the agent some form of reward to induce the agent to do what he or she really does not want to do (Mirrlees, 1997). In today's society this is achieved by fostering a corporate culture, by encouraging pride in teamwork, and by developing corporate goals (McMillan, 1992). Motivating devices including money (stock options and periodic bonuses), peer pressure, pride in craftsmanship, work ethic help to align the interests of the principal and the agent while the treat of being fired or not having a contract renewed also incentives agents. The upshot is that in order to get people to do something they would prefer not to do you must offer some sort of reward, or you must punish their actions in some way (Laffont & Martimort, 2002; Mirrlees, 1997; Rauh & Seccia, 2005).

Principle-agent theory makes two basic assumptions: firstly, both the principal and the agent are self-interested, utility-maximisers and secondly, the agent is risk-averse, while the principal is risk-neutral or at least less risk-averse than the agent (Gibbons, 1998). Since a utility-maximising agent does not necessarily act entirely in the principal's interest, agency-theory proposes that contracts should be designed to provide the agent with incentives that make him act in the best interest of the principal (Mirrlees, 1997).

Holmstrom (1979) examines the use of performance measures in incentive contracts. In particular he shows how the owner of a company can reach his/her targets by including additional performance measures. Looking at the managerial labour market, Fama (1980) shows how the present performance of a manager (the agent) acts as a signal about his/her talents and thus about his/her future performance. He concludes that because managers are concerned about their reputation, incentives can be used to induce them to work harder. Latham and Lee (1986) show that workers who are given specific goals, outperform workers who are not given any goal. Baker (1992) extends this analysis to non-profit firms and government agencies and finds similar results.

6 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/power-incentives-decision-making/11314

Related Content

Populating Knowledge Based Decision Support Systems
Ignacio García-Manotas, Eduardo Lupiani, Francisco García-Sánchezand Rafael Valencia-García (2010). *International Journal of Decision Support System Technology (pp. 1-20).*
www.irma-international.org/article/populating-knowledge-based-decision-support/40915

An Adaptive Neural Network for the Cost Estimation of E-Learning Projects in the United Kingdom
Raul Valverde (2017). *International Journal of Decision Support System Technology (pp. 54-71).*
www.irma-international.org/article/an-adaptive-neural-network-for-the-cost-estimation-of-e-learning-projects-in-the-united-kingdom/181492

Compatibility Welding Parameters with the Results Obtained in Testing of Fracture Mechanics in HSLA Steel
Rafael González-Palma, María Carmen Carnero, Carlos López-Escobar, David Almorzaand Pedro Mayorga (2017). *Optimum Decision Making in Asset Management (pp. 163-193).*
www.irma-international.org/chapter/compatibility-welding-parameters-with-the-results-obtained-in-testing-of-fracture-mechanics-in-hsla-steel/164051

Maintenance Strategy Evaluation Using ANP and Goal Programming
Sarojini Jajimoggala, V. V. S. Kesava Raoand Beela Satyanarayana (2013). *Management Theories and Strategic Practices for Decision Making (pp. 117-138).*
www.irma-international.org/chapter/maintenance-strategy-evaluation-using-anp/70954

A Framework for Analysis, Design and Management of Complex Large-Scale Interconnected Open Sociotechnological Systems
Ali Mostashariand Joseph M. Sussman (2009). *International Journal of Decision Support System Technology (pp. 53-68).*
www.irma-international.org/article/framework-analysis-design-management-complex/3900