Governing E-Collaboration in E-Lance Networks

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INTRODUCTION

The close of the twentieth century witnessed unprecedented advances in information and communication technology (ICT), which brought about tremendous changes to almost every facet of society. Although these advances dramatically changed the way we keep in touch, perhaps the biggest change could be in the way that we organize and conduct business transactions. Some would argue that, for the first time in human history, technology has progressed to the point where individuals can now achieve the same benefits as large organizations, without giving up the benefits of freedom, flexibility, and control (Malone, 2004). This revolution has been dubbed the "dawn of the e-lance economy," and the purpose of this article is to define the e-lance phenomenon and elaborate on how ICT enables individuals and organizations to engage in e-collaboration for the purposes of economic exchange without the strong reliance on formal contracts and control mechanisms normally associated with market exchanges, or hierarchical structures associated with formal organizations.

While there are many forms of "freelance" or networked organizations, this research focuses on e-lance networks that are aggregations of autonomous e-lancers (freelance employees integrating their efforts through networked ICTs) communicating and collaborating primarily through information and communication technologies to achieve common goals. Based on this definition, e-lancers are autonomous in that they do not share a common organizational affiliation, are goal-directed as they come together to accomplish a specific task, and are virtual due to reliance upon computer-mediated communications to coordinate efforts. While networked organizational forms are not new (i.e., the film industry), what is new about e-lance networks is the ability to coordinate work without same-time and same-place interactions through e-collaboration tools. In the e-lance economy, projects are posted by customers, requests for proposals or online bidding is transmitted electronically from suppliers, and individuals or small teams accomplish work based on their unique personal skills. Once the project is completed, the network disbands and participants pursue other opportunities.

In this article, we focus on the role of brokers as the essential facilitators of e-collaboration. E-lance brokers are Web-based and serve as online clearinghouses for information about customers and their projects, as well as suppliers of services seeking work, allowing knowledge work to be traded like a commodity. Brokers bring together those seeking services and those who can provide those services to meet the particular

needs of the customer. The study of the different e-collaboration tools used by e-lance brokers provides important insights into how loosely coupled, autonomous agents exchange services through e-lance forms of organization. Examining the different e-collaboration mechanisms and how these mechanisms translate into successful transactions, is essential for understanding the future of knowledge work. Since knowledge-based work can be codified and shared electronically, such as software development, consulting, translation, and accounting, e-collaboration tools enabled through ICTs present viable alternatives to traditional models of organizing.

One organization that has been able to capitalize on the concept of e-lance to support innovation is pharmaceutical giant Eli Lilly. Recognizing that it was impossible to "own" more than a small fraction of all of the greatest scientists/scientific discoveries in the world, Eli Lilly and Company launched InnoCentive LLC, to create an open network of scientists and researchers and accelerate innovation. Through its Web site, innocentive.com, innovation-driven companies can post scientific problems to be solved by a global community of scientists and researchers in the areas of biology and chemistry. To date, innocentive.com has over 90,000 registered scientists worldwide, has awarded over $1.5 million to solvers, and notes that the success rate has been far higher than in-house performance, at around one-sixth of the cost (http://www.innocentive.com/about/newsandpress.html).

The key contribution of this article is to examine how e-collaboration between customers and suppliers is facilitated by the technical features offered by the brokers. This article will unfold as follows. First, we will define and describe network forms of governance, explaining how e-lance differs from more traditional mechanisms for exchange. Next, we will explore how e-lance brokers use ICTs to augment market controls (formal contracts and payment systems) with the social controls associated with network forms of governance to safeguard against opportunistic behavior and failure to perform. We follow with examples from one of the more popular e-lance Web sites, www.elance.com.

BACKGROUND

Transaction cost economics (TCE) proposes that there are costs associated with conducting economic exchanges, and the purpose of selecting a form of governance is to minimize those transaction costs (Williamson, 1994). The main focus of TCE is how to best minimize three sources of transaction costs: (1) the costs associated with adapting exchanges, (2) the costs associated with coordinating exchanges, and (3) the costs incurred to safeguard exchanges. For a governance form to emerge and thrive, it must address these exchange problems more efficiently than other governance forms (Williamson, 1994). The basic economics of organizations suggest that when it is cheaper to conduct transactions within the boundaries of an organization, the organization will grow. Conversely, when it is cheaper to transact externally with independent entities in the open market, organizations remain small or shrink. Therefore, current governance theories focus primarily on examining internal organizational dynamics (e.g., the resource-based view of the firm), the creation of alliances between firms (e.g., research on when to merge, acquire or create alliances), and industry structure (e.g., Porter's five forces) to improve a firm's competitive advantage.

For any governance form to emerge and thrive it must address the problems of adapting, coordinating, and safeguarding exchanges more efficiently than other forms of governance under certain exchange conditions (Williamson, 1994). For instance, demand uncertainty makes vertical integration risky, and drives the need for adaptation. Customized, or asset-specific exchanges create dependencies between entities, requiring high levels of coordination and rigid safeguards to protect against miscommunication and/or opportunism. Task complexity refers to the number of specialized inputs needed to create a product or service, and heightens the need for coordination. These exchange conditions make it untenable to use either markets or hierarchies as governance forms. The need for adaptation is best handled through markets, and inhibits the use of hierarchies. On the other hand, market mechanisms are not efficient for coordinating and safeguarding complex tasks that are customized.

The combination of these specific exchange conditions requires a more flexible form of governance that more closely resembles networks than hierarchies, where clusters of firms or specialist units coordinate interactions through relationships rather than chains of commands or contracts (Miles & Snow, 1986). Interorganizational networks provide an alternative between either relying on the open market or vertical integration