Clustering Analysis of Networked Orgainzations

Hakki Eraslan
International Competitiveness Research Institute, Turkey

Melih Bulu
International Competitiveness Research Institute, Turkey

Metin Turkay
Koc University, Turkey

INTRODUCTION

The corporate environment of organizations in the 21st century are expected to be very demanding, flexible, and competition driven as discussed by Drucker (2001). The organizations will have a very hard time sustaining their competitive advantages under these conditions. Therefore, individual organizations must collaborate with other organizations for survival and sustainable success (Wilkinson, Mattsson, & Easton, 2000). This translates itself into network organizations that specialize in certain functions of business of activity. Network organizations are defined as a system established by individual organization with designed roles and responsibilities (Achrol, 1997). Network organizations are established by the need of organizations to interact with each other for the purpose of establishing links and improving performance and business processes of individual organizations.

An important advantage for the performance of network organizations is the clustering, which can be defined as a tightly interacting network of organizations including manufacturing companies and specialized suppliers, knowledge generating organizations including universities, research institutes, and engineering firms, service companies including consulting firms, and end customers that are integrated in a supply chain in a geographical region (Pyke, 2000; Roelandt & Hertog, 1998). This geographical concentration includes relevant industries and other organizations that are instrumental in competitiveness. The organizations in a cluster include companies that supply goods, equipment, services, and infrastructure. Clusters reach customers on the vertical axis and companies that share common inputs such as technology and expert labor on the horizontal axis.

This section describes network organization and clusters by highlighting the relationship between these two different types of organizations. It has long been recognized that a symbiotic relationship exists between the network organizations and clusters.

NETWORK ORGANIZATIONS

An organization can be defined as a structure formed by individual entities that come together to realize an overall, common goal or objective. The concept of organization occupies an important role in the history of mankind. Since an organization is required for realization of almost every activity or action, almost every entity is related to one or more organizations. That means, structure of an organization occurs as a result that two or more entities come together physically or mentally in order to realize same and similar goals. Corporations, companies, people etc., from distant past to nowadays, are managed in structure of organization appropriately. Therefore, many organizational models have evolved. Passing from hunter, collector, and nomad society to agricultural civilization is accepted as the first social change in the history of mankind. Along with industrial revolution, the system based on fabrics had been founded and this second fundamental social change leads to industrial societies. In the wave of this second change, mass production motivated organizations to form larger markets and larger and more bureaucratic organizations. Globalization is a transformational process not only in economic spheres but also in political, social, and cultural spheres. The important feature of process of globalization in real terms is expressed of losing importance of national borders or destruction of control on economy of nation-

states gradually. Furthermore, globalization, whether or not discussed as empiric reality or rhetoric myth, creates changes in whole world and continues to be a dominant concept in the 21st Century (Tapsell, 1999). Along with globalization, technological change has become the leading factor in society and labor markets. Political and cultural globalization affects countries and societies by means of communication tools and computer networks. The birth of information-based economy has already caused economic growth, national competitive power, and working organizations. In short, advances in science, transportation and communication technologies, and the process that is orientated by these advances have triggered globalization and the new world order (Selvarajah, 1998).

In this context, the business world has experienced serious social and economic changes. For example, production can be divided into pieces, these pieces can be made in different countries, the center of a company can be in different country, R&D, and marketing or financial functions can be made in different countries. Therefore, the forms of making business are to be reconsidered. The structure of organizations, the definition of markets, the concept of marketing, leadership approaches, and also the whole world should be perceived in new ways. Thus, organizations have conceived their structures in order to strengthen their competitive advantage in the global market. In terms of organizations, despite making productions or services by themselves, they have tried to find other organizations which are advantageous of production costs, quality, and productivity, and find where they are, which quality they possess, and how to arrange these organizations. In short, trends that have given birth to the process of globalization and are the dynamics of this process, have caused appearance of various transformation of social, political, economic, managerial, and organizational activities such as transitions from industrial society to information society, from labor-weighted technology to high technology, from national economy to global economy, from central governance to local management, from representative democracy to participatory democracy, and from hierarchical organizational structure to hierarchical organizational structure (Naisbitt & Aburdene, 1990). The process of globalization has made radical changes in organizational structures of foundations as changing previous social and economic models. In other words, globalization has been behind the transformation of structures of organizations (Gid-

dens, 2003). Pyramid organizational structures, which were used extensively before, have been replaced by newer and different organizational models. In other words, hierarchical organizational structures had been considered as efficient models for years, however, this could not have prevented from arising of new models, which is not having similar pyramid models.

In these new models, subjects such as vertical integration, synergy, scale economy, and hierarchical control centers are replaced by subjects such as providing outsourcing, minimizing of scale, profit centers, and networks. Due to the fact that large and bureaucratic organizations have desired to satisfy the needs of consumers and answer the various problems, in recent years, there are fundamental changes in traditional hierarchical structure of organizations (Cravens, Shipp, & Cravens, 1993). It can be said that after this changed structure, there have been post-bureaucratic organizational structures existed. Appearance of these new structures raised the process of computer-based technologies. In other words, there are close relationships between these new structures and computer-based technologies, especially information and communication technologies (Symon, 2000). Because of developments on scientific and technical information, and rapid expansion and developing power of information technologies, the rate of information in added value of foundations. Thus, existence of new models and dimensions in design of organizations is inevitable (Oliver & Porta, 2006; Stewart, 1997).

Because of rapid changes in informatics and communication technologies, relations of foundations have gained new dimensions. More intensively competitive environment than previous years and demands of global marketing of foundations forced firms to make various co-operations. One type of organization, that is to benefit from scale of sector more efficiently and to obtain competitive advantage, is the network organization. Hierarchical and bureaucratic organization structures, which aim high productivity with mass production and design themselves in terms of this system, have begun to be insufficient after 1980s due to changes that is brought by globalization. In this context, management and organization theorists, and foundation owners and managers focused on organization models that give importance to quality. Of course, network organizations can be considered as one of the most popular post modern structure of organizations. Today, network organizations are a new type of organization in structures of modern organizations.

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