Role of Communication Networks in Network Organizations: A Case of Global Consultancy Firms

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Networks are emerging as more suitable organizational forms to meet challenges of the 21st century. Success in such fiercely competitive world demands speedy and cost-effective exchange of vast amount of information. This exchange is possible through modern communication networks. Characteristics and types of network organisations and communication network are discussed. The role of communication networks in network organisations is examined through a case study of global consulting firms. The findings confirm the important role played by communication networks in network organisations. However, evaluating effectiveness of communication networks in success of network organisations requires considerable further research.

Introduction

In response to increasing competitive pressures, organisations around the world are reformulating from centrally coordinated hierarchies toward a variety of flat flexible structures. These structures - cluster of firms / business / specialist units / professionals coordinated by market mechanisms instead of chain of commands - more closely resemble networks rather than a traditional pyramids. Hence, they are often referred to as "Network Organisations", and are considered more versatile than other forms to meet demands of today’s fast changing world. Communication network is a driver of this organisational change and can also be a key success factor for network organisations.

Understanding of the need, form, advantages and drawbacks of this promising network organisation form and the role of fast developing communication network technologies for network organisations appears to be inadequate in India. An effort is made to understand above mentioned aspects of network organisations and communication networks by taking a case study of select network organisations. Findings of the case study are presented and implications are drawn for use of communication networks in network organisations. The specific objectives of this research are:

- To assess if consulting organisations are more towards network-type? if yes, which type?
- To understand the role communication networks play in such organisations.
- To assess if there is any evidence of effective use of communication networks and performance of network organisations.
- To draw implications for use of communication networks in other network organisations.

Network Organizations

Some background to origin, evolution, and types of network organisations may be useful to appreciate the concept. Network organisation in some form might have existed centuries earlier. For instance, the Japanese keiretsu and their predecessor zaibatsu systems can be considered a network organisation form. At a time, keiretsu members owned 78 per cent of the shares listed on the Tokyo stock exchange. Similar forms have existed in Europe and other parts of the world. Miles and Snow have traced the movement toward network form in the US in 1980s. The network form has evolved from three other broad forms of organisations; the functional organisations which appeared in the late nineteenth century and flourished in early twentieth century, the divisionalised form which spread in the late 1940s and 1950s, and the matrix form of 1960s and 1970s.

Network organisation is different from other organisational forms in following respects:
Use of collective assets of several firms located at various points along the value chain rather than holding all in-house.
- More reliance on cooperative market mechanisms than administrative processes to manage resource flows.
- Proactive role among participants through voluntary efforts to impart the final product or service rather than simply fulfill contractual obligations.
- An organisational collective based on cooperation similar in part to the Japanese "keiretsu".

Origin and spread of network forms was facilitated by limitations of above organisational forms, yet the network forms do attempt to combine positive aspects of other forms. It allows for the dispersion of activities and decision making and closer integration across borders. It is considered an emerging solution to overcome limitations of old system of vertical integration and subcontracting. It is hoped that this flexible, borderless organisational form will give competitive edge to organisations which deploy it effectively.

There are many types of network organisations. Ramu has classified networks into following categories based on their evolution:

- Internal networks – e.g., profit centres, strategic business units, etc.
- Vertical networks – similar to Japanese keiretsu.
- Others – horizontal and diagonal networks.

Some large organizations might have experimented with more than one type of network form mentioned above at different times, and some time more than one type may exist in parallel. However, most organizations in specific industries often structure by a specific organizational form. Increasing number of industries such as computers, semiconductors, and automobile are adopting elements of keiretsu. Biotechnology, new materials technology and information technology (IT) are the sectors where strategic alliances are very popular. Among IT, microelectronics, telecommunications, and software are the segments quickly adopting elements of network organisation. Often being providers of key components for communication networks such as internet, companies in these sectors are well aware about the potential of communication networks technology. A brief overview of communication network technology is described subsequently.

Communication Networks

Communication networks are making steady inroads in industry and are changing the business system and processes. They are key components of Electronic Commerce (EC) and Electronic Data Interchange (EDI) that aim to replace slower tedious paper trail. They have profound implications for competitiveness at all levels. Progressive countries and industries are learning to reap advantage of harmonized procedures, standards, and practices of EC. For instance, the United Nations has established a global electronic trading network, and the US government has attempted to introduce EC in procurement in key departments. Recognizing the importance of the communication networks, the Ministry of Commerce, Government of India, National Association of Software & Service Companies (NASSCOM), etc., have taken steps for coordinated EDI implementation. Similarly efforts are being made to create a sound National Information Infrastructure in India. Such infrastructure provides the backbone for communication networks of organizations.

The term communication networks is used in very generic sense in this research. Basically, communication networks are hardware and software elements that facilitates communication. The communication may be in the form of voice, text, files, data or video. The hardware components may span from a local area network (LAN) to wide area network (WAN), internet, intranets, and extranets. Currently very few organizations have the latest configurations such as intranets and extranets. However, LANs, WANs, and internet usage is quite common in globally competitive firms. An attempt is made in this research to understand the role such communication networks play in functioning and success of network organisations.

Role of Communication Networks in Network Organisations

Communication networks can play a crucial role as an enabler for success of network organisations. In comparison to other organisation forms, network organisation has certain characteristics, which makes it more open to communication networks. These include:

- Distributed operations and decision making.
- Limitations on movement of people, e.g., software professionals, yet the need for international sourcing to have competitive edge.
• The open, non-hierarchical and participation encouraging structure of network organisations requires free flow of information. This requires effective communication network to facilitate info access.
• As a low-cost alternative structure for achieving global excellence, the geographically distributed partners are linked through communication network.

Case Study

An effort has been made to ascertain the extent to which global consultancy firms have adopted elements of network organizations and the role communication networks play in such firms. There are several reasons to select global consultancy firms:

• Firstly, consultancy firms have evolved to adopt elements of network organizations such as flat flexible structure and heavy info-orientation. In fact, information is the key ingredient of their business. And information is the matter which can flow easily across borders than other goods.
• Global consultancy firms have operations across continents. For instance, Price Waterhouse had a global network of 56,000 professionals in 420 offices in 119 countries in 1997. KPMG is a worldwide organisation comprising some 110 auditing and consulting firms in 140 countries. It employs more than 85,000 people, making it one of the biggest organisations in its industry. McKinsey calls itself a multinational network of equal partners and associates. Comparative details of select global consultancy firms are given in Table 1.

• Being consultancy firms, these are often at the forefronts of new ideas and can assess their utility. Aware of positive impacts of any new ways of doing business, including network organisation, consultancy firms can quickly adapt positive elements in their own operations. For instance, IT consulting firms are often at the forefront in IT use.

Researching communication networks without using them does not make much sense. Hence, it was decided to use communication network as a main vehicle for this research. The communication network of the Indian Institute of Technology, Delhi provided the facilities for the research in the form of internet and e-mail access. The research methodology consisted of internet search and visits to web sites of select global consulting firms. This search provided preliminary data for selection of firms for case study. The companies having more sophisticated site containing required information were contacted to obtain detailed information. Ultimately search was narrowed down to a single global consulting firm for a detailed case study.

Tata Consultancy Services

Tata Consultancy Services (TCS) is a resourceful global consultancy firm established in 1968, with information technology and business consulting being its core competence. Considered to be the largest independent IT consulting organization in Asia, it is part of 130 yr old conglomerate, the TATA Group with a turnover of more than US $9 billion.

The firm has invested heavily in communication networks and other IT infrastructure. With 54 offices globally and a consulting experience in over 50 countries, and over 70 high speed satellite communication links, TCS creates a 24h trans-global work environment. TCS also uses conferencing facilities extensively to have round-the-clock monitoring of Productivity, Accessibility and most importantly – Reliability.

The firm is networked for many critical inputs...
through strategic alliances. On the one side it has strategic alliances with more than 20 leading IT firms such as Microsoft and IBM. On the other, TCS supports university research to encourage a synergistic relationship between industry and academia. It has university alliance with seven leading institutes such as the Indian Institute of Science, Bangalore and universities abroad.

The firm has been growing at about 35 per cent each year for last four years. This growth can be partly attributed to commitment to technology, and heavy investment in research and development, (R&D) training and continuing education. Over 300 person-years and 8 per cent of annual revenue are spent on these to keep consultants at the cutting edge of technology. The firm has its own Research Development and Design Centre. Most of these centres, Competence Centres, global network of offices and functions are well-connected by sophisticated communication networks.

Salient Findings

The findings support some perceptions about network organisations, yet differ on the other fronts. Review of the literature and internet searches indicate that network organisation is emerging as a popular organizational form to thrive in today's competitive world. However, network organisations are often referred to by related names such as alliances, joint ventures, partnerships and virtual organizations. The clarity on differences among these forms is still evolving. Key findings of the research are presented here:

- Global consultancy firms are a good example of network organizations. Each one has offices or have executed projects in more than 50 countries. The nature of their projects demands formation of flexible network organization for the duration of the projects to meet the needs of their clients in best possible manner. Decision making is decentralized and local operations have considerable freedom. However, none of the organizations evaluated in this research satisfied all attributes of network organisations discussed above.

- Global consulting firms appear to rely on many types of networks. Partnerships in different countries under same name may be considered franchises, a kind of vertical network. At the same time, horizontal network form such alliances, and interdisciplinary diagonal networks are also very popular. Some firms have close working relationships and alliances with hardware vendors, software vendors, and other best of breed solutions vendors.

- In terms of communication networks, all the firms researched appear to have sophisticated communication networks. Although implementation of the recent concepts of extranet and intranets may be rare, most have sophisticated LAN and access to resources at their head office through internet.

- Sophistication of web sites in terms of content, search capabilities, etc. can be considered as a good indicator of communication network infrastructure of the firm. TCS has very user-friendly and content-rich web site. This correlates well with sophistication of their communication network as discussed in the case study above. Communication network of some other well known global consultancy firms listed in Table 1 appear to be less sophisticated as reflected in their relatively simple web sites.

- Effective deployment of communication networks technologies may be a factor in comparatively rapid growth of TCS (refer to percentage change column in Table 1). Although small by revenue when compared to other global firms, the firm has a noteworthy track record. The firm is globally competitive and more than 80 per cent of her revenues are from international projects.

- TCS was highlighted as a competitive success story in software by Porter et al. TCS's emphasis on strategic alliances, investments in new hardware and software, investment in telecom facilities and network relations with other TATA companies were some of the key factors considered responsible for her success.

Discussion

- Review of literature and informal discussions with persons working in global consulting firms indicate that communication networks play a vital role in operations of the firms. Some firms have gone for electronics libraries, databases containing useful information about their past projects, approaches and methodologies, all these accessible by communication networks.

- Planning, implementing, and upgrading such communication networks requires enormous amount of financial and other resources. If adequate care is not taken, the investment can result into considerable wastage.
• Sophisticated communication networks is not a must for all organizations. The organizations considering use of communication networks must carefully evaluate their communication needs and explore alternative network configurations.

Conclusions

The findings confirm network-type organizational form of global consulting firms. Communication networks are backbone of these organizations. IT-focused firms are far ahead of other form of network organisation in use of communication network for competitive advantage. It is difficult to find positive correlation between effective use of the communication network and organizational performance because of limited scope of the research. Network organisational form is not panacea for all ills of traditional organization forms and may fail if issues of cooperation, ownership, responsibilities, and control are not attended to properly. Further research is required to understand utility of communication network in network organisations in other industries.

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References

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