

The Impact of Globally Distributed Virtual Organizing on the Flexibility of Software Development Project Teams

ABSTRACT

Firms are today exposed to hypercompetitive environments that are dynamic and rapidly changing. These environmental changes are swift and unforeseen, emphasizing the need to have stable and long-term, yet flexible and responsive process capabilities. This requirement necessitates designing newer organizational forms, creation of innovative solutions for problems, and increase in adaptive capabilities. Globally distributed virtual organization of work teams is one such form of organizing that is expected to endow firms with greater flexibility and responsiveness. It creates technology backed network resources of software development Experts, who themselves are heterogeneous and are not freely mobile, thus providing potential support for sustained competitive advantage.

Globally distributed virtual organization of project teams, where team members are distributed all over the world, while working towards achieving the same objective, is gaining popularity. It enables firms to move work to cost effective places. Global virtual teams enable better utilization of talent pool, flexibility to quickly form teams, and continuous product development by taking advantage of time zone differences. Despite widespread and growing prevalence of global virtual teams, there is little extant literature on the way these teams benefit from global distribution. As teams become more virtual, the coordination efforts between the team members also increase. The relationship between virtuality and team flexibility needs to be explored

further. The IT industry provides a suitable context for this study as global virtual teams are especially prevalent there.

Taking a resource-based view this work focuses on understanding the relationship between the organization of experts as global virtual team in software development project, and its impact on team's flexibility to respond to various environmental changes. The questions addressed are: "What is the relation of globally distributed virtual organizing with the flexibility of a software development project team?" and "How do different dimensions of such organizing affect different flexibility types?"

Data was collected through an online survey of members of Information Systems specific interest group of Project Management Institute, and past and current students of executive program for software professionals at IIM Bangalore. Arguing flexibility to be a formative construct, the data was analyzed using PLS. It was found that virtuality has a significant and positive impact on flexibility. Digging deeper we found that team dispersion and variety of practices have a positive impact on flexibility while workplace mobility has a negative influence on flexibility. Technology infrastructure availability and experience of the team are also found to be moderating some of these relationships.

The study validates and improves upon the measures of virtuality and flexibility. For practicing project managers and team leaders, it will help in better design of globally distributed project teams, their better management, and improved performance. At the end, the findings of this study argue for potential support of virtuality towards providing sustained competitive advantage.