

RESEARCH BRIEFS

COLLABORATION IN GEOGRAPHICALLY DISPERSED TEAMS: WHAT KIND OF “DISTANCE” MATTERS MOST?

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RESEARCH QUESTIONS

In today's increasingly global economy, many companies continue to grow their operations around the world as they seek to enter and learn from foreign markets. Likewise, the market for talent is also increasingly global. Consequently, many firms have workforces that are geographically dispersed, creating a variety of management challenges. For example, consider a software development team with members scattered across several countries. How can the company help ensure that this dispersed team, which may communicate virtually on a day-to-day basis, collaborate effectively to create an outstanding new product?

Answering this fundamental question must start with an understanding of the factors that can impede or enhance collaboration in dispersed team environments. One such factor that has been studied extensively is actual physical distance. In brief, the thinking has been that the greater the miles (and time zones) separating team members, the more difficult it will be for them to “jell” as a group and collaborate effectively. Indeed, there are plenty of examples of managers who go to great lengths (and great expense) to co-locate team members and avoid great physical distances for exactly this reason.

But some scholars argue that managers should focus less on actual distances between team members and instead focus more on how they *perceive* “distance.” Psychologists, for instance, contend that employees may interpret actual distance through the lens of their cultural values, background, and life experiences. In other words, team members who are dispersed geographically may make a psychological judgment about the nature and meaning of the “distance” that separates them. Moreover, some researchers suggest that the mixed picture to

date about the impact of actual distance on the collaboration found in virtual, dispersed teams reflects an overreliance on measuring distance objectively instead of subjectively. Put simply, it's impossible to conclude at this point that actual distance really is a major obstacle to communication and collaboration in dispersed virtual teams.

Fortunately, a recent study by Frank Siebdrat and Martin Hoegl (Ludwig-Maximilians-Universität München) and Holger Ernst (Otto Beisheim School of Management) sheds new light on this subject by directly comparing the impact of actual and subjective distance on collaboration in dispersed software development teams. Siebdrat and his colleagues focused on three sets of core questions. First, to what degree are subjective judgments about distance driven by objective distance among dispersed team members (e.g., number of time zones separating them, the time required to travel between sites where team members are located, and actual distance from team leadership)? Second, are there team attributes that shape perceptions of subjective distance? And finally, to what extent do objective and subjective distance diverge in their impact on team member collaboration?

In addressing these questions, Siebdrat and his colleagues hoped to reconcile conflicting research findings and related paradoxes (e.g., that some team members who are physically close to each other can sometimes feel more “distant” from each other than team members who are physically separated by great distances). Specifically, they modeled subjective distance in terms of team members' shared assessment of the “distance” between members. Granted, actual distance may impact subjective distance. Indeed, that relationship may be particularly strong if team members are all at different physical

locations (versus having at least some team members co-located). But Siebdrat and his colleagues also proposed that the level of national diversity across team members should be associated with perceived subjective distance. Such diversity, they suggest, may tap divergent cultural frames of reference about the appropriateness or meaning of certain attitudes and behavior, which in turn could make it more difficult for dispersed team members to collaborate effectively.

STUDY DESIGN AND METHODOLOGY

Study data came from a sample of 161 software development teams in five different software firms. These teams had all finished their development projects within 12 months of the study. An Internet survey was used to collect responses from nearly 700 team members (at least three members were included from each team, including the team leader). Team members represented 38 nationalities and were based in 21 different nations. Pre-tests and back translation procedures were used to ensure survey language equivalency.

All subjective measures treated the team as the unit of analysis (i.e., respondents were asked to assess the team as a whole). To assess objective distance the authors created a geographic dispersion index. Likewise, the authors created a national diversity index for each team based on the dispersion of nationalities across team members (the descriptive/demographic data used for these indices were provided by team leaders). Subjective distance was measured using a scale that tapped a variety of assessments (e.g., the perceived ease or difficulty that the team had in communicating virtually and getting together face-to-face over the life of their project). A team collaboration scale was used to assess how well team members communicated, coordinated their work, and offered mutual support for one another. Several successful statistical steps were taken to justify the aggregation of these individual assessments to a team-level treatment and to verify that a two-dimensional measurement structure existed for objective and subjective distance. Finally, Siebdrat and his colleagues included a variety of control variables in their analyses (e.g., team size, project length, gender diversity) that prior studies suggest might contribute to subjective perceptions of distance.

KEY FINDINGS

Hierarchical multiple regression was the primary analysis tool used to test Siebdrat and his colleagues' predictions. The results showed that the

only significant predictor of subjective distance (after accounting for all control variables) was the level of national diversity among members of a team. The more nationally diverse the team, the more likely team members were to subjectively experience "distance" within the team. Interestingly, the results showed that various measures of actual, objective distance had little or, at best, a marginal impact on subjective distance. This suggests that subjective distance assessments are not merely psychological reinterpretations of objective distance, but something quite different.

A similarly clear pattern emerged when Siebdrat and his colleagues pitted subjective and objective measures of distance against each other as potential predictors of team collaboration. They found that objective distance assessments were basically unrelated to levels of team collaboration. On the other hand, there was a significant negative relationship between perceptions of subjective distance and team collaboration. Put simply, the greater the perceived distance, the less likely team members were to feel that the team collaborated well in their various dispersed environments. This pattern held up regardless of whether Siebdrat and his colleagues examined these relations among team leaders, team members, or the team as a whole.

To explore other explanations for their findings, Siebdrat and his colleagues conducted supplementary analyses using some alternative cultural distance assessment indices. Their results suggested that cultural value differences per se may not be the driving mechanism behind the impact of national diversity on dispersed teams. Instead, nationality differences may trigger in-group vs. out-group assessments that may be driven by stereotypes or limited information. Again, the impact of such categorization dynamics on subjective assessments of distance may still be negative in terms of team collaboration on dispersed teams, particularly if they rely on virtual interaction much of the time. It's just that clashing cultural values or beliefs per se may not be as strong of a driver as categorization effects (i.e., some team members "are not like me") that play into or heighten stereotypes about other nationalities.

CONCLUSION AND IMPLICATIONS

This study makes a number of contributions. First, it suggests that subjective distance assessments have little to do with actual distances between team members. It might be more accurate to say that subjective assessments of distance on geographically dispersed teams seem to reflect complex social constructions of reality that may have more to do with the level of national heterogeneity

on the team than anything else. For instance, a team consisting of several members from the same nationality who are nevertheless scattered around the world may feel “closer” than a team with members who are relatively close physically but where greater nationality dispersion exists. National diversity may reflect differences in cultural values that could act to drive wedges between members or create fault lines as the group interacts. Such culturally driven “social constructions” of distance may also have a greater potential to shape team functioning and collaboration than literal distances between team members. Once again, these potential explanations will need to be teased out in future research.

Second, Siebdrat and his colleagues have shown us that researchers need to avoid relying on “objective” measures of distance when assessing the functioning of geographically dispersed teams. Instead, figuring out the antecedents and consequences of subjective distance seems to be a much more fruitful path for achieving a greater understanding of why “distance” matters when it comes to team effectiveness and team dynamics.

Lastly, this study underscores that managers should not immediately jump to the conclusion that if team members are scattered around the world their ability to collaborate effectively is automatically compromised. Moreover, despite the fact that national diversity is associated with greater feelings of subjective distance among team members, managers also need to grasp that such diversity can ultimately lead to better solutions and

decision making. As such, managers may want to work harder to break down in-group/out-group stereotypes and reduce potential group polarization while also trying to create a team vision and strengthen team identity. Some of this can be facilitated by focused efforts to encourage a sustained level of interaction among the group—both virtually and face-to-face (e.g., with short trips that bring team members together in a central location). Greater interaction, with appropriate guidance, can both mitigate the downsides of national diversity while enhancing problem solving in the dispersed teams that are increasingly common in today’s global corporations.

Looking forward to future studies, and noting the limitations of their own research, Siebdrat and his colleagues suggested a number of interesting extensions. Specifically, they recommended that researchers adopt longitudinal designs, pursue replication efforts outside of the software industry, and develop more direct and sophisticated measures of subjective distance for use with dispersed teams.

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SOURCE

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