Work Groups and Knowledge Sharing in a Global Organization

Work Groups and Knowledge Sharing

Service Improvement

- Gathered data from marketing employees in another division
- Held customer meeting to discuss ways to improve infrastructure

10 members (2 cities in China)
Project Mgt, Quality, Engineering
•Wireless Network Upgrade

Work Groups and Knowledge Sharing

Product Development

- Modified chip design borrowed from another organizational group
- Presented a technical paper on the results at company conference

9 members (US, Israel, Singapore)
CAD, Applications, Engineering
•Digital Signal Processing Device

Why create these work groups?

- Projects – require knowledge, skills, and abilities of members who are geographically dispersed and/or have functional expertise *(DeSanctis & Monge, 1999; Jarvenpaa & Leidner, 1999; Maznevski & Chudoba, 2000)*

  – Geographic dispersion: work force spread across manufacturing facilities, R&D labs, design centers, field offices, and headquarters

  – Cross-functionality: tasks demand specialized personnel for product specifications, service requirements, and customer needs

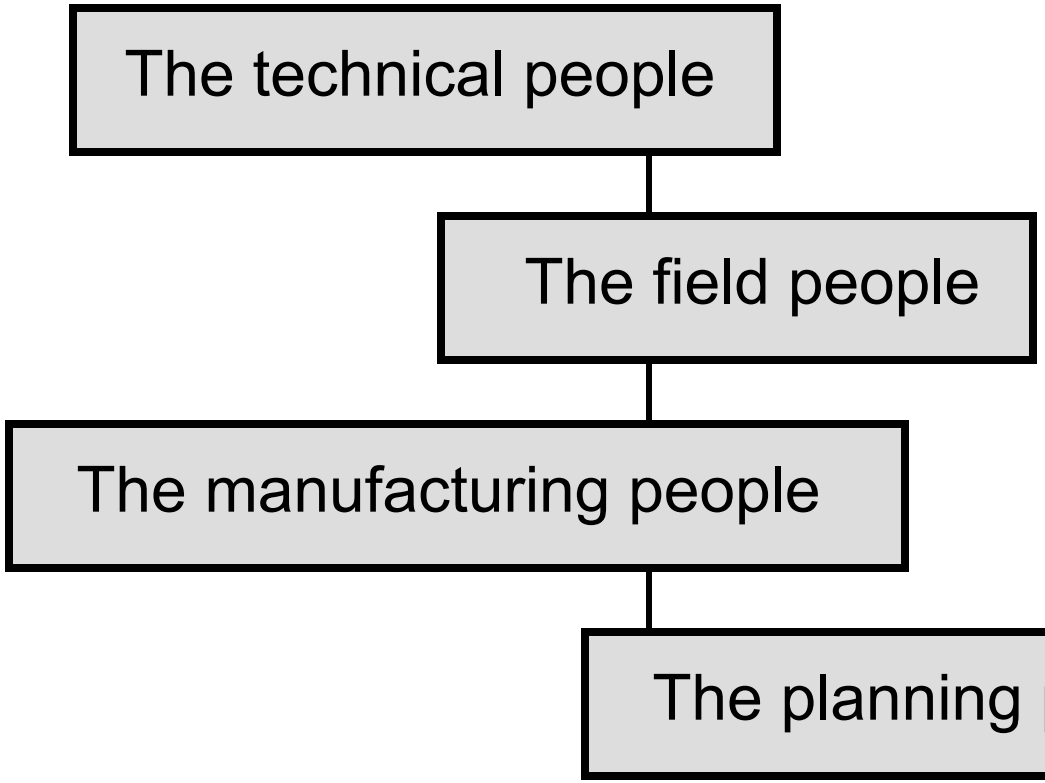
Costs of geographic dispersion

- Difficult to develop common understanding
- Trouble coordinating work at a distance

The Probability that two people will communicate as a function of the distance separating them (1-100 meters)
- Communication drops significantly after 100 feet (Allen, 1977)

Costs of cross-functionality

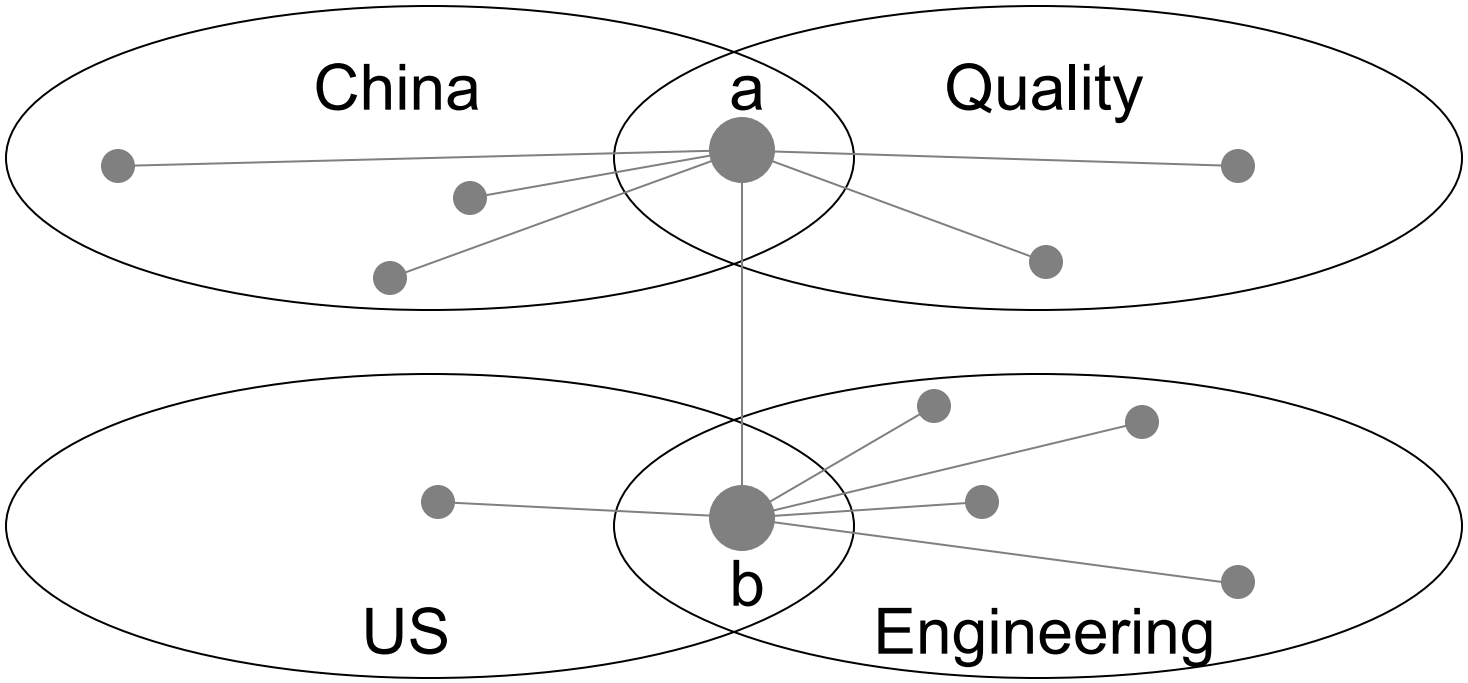
- Problems reconciling dissimilar points of view
- Challenging to integrate different ideas



"Thought-worlds" can inhibit product innovation (Dougherty, 1992)

Benefits of social networks

- External task communication / knowledge sharing
  (Tushman & Katz, 1980; Ancona & Caldwell, 1992, Hansen, 1999)
- Tap unique, non-redundant sources of knowledge
  (Burt, 1992; Granovetter, 1973; Lin, 2001)



Propositions

- (1) – the relationship between external knowledge sharing and performance will be stronger when work groups are dispersed
- (2) – the relationship between external knowledge sharing and performance will be stronger when work groups are cross-functional

Field Study

- Research site – Fortune 500 telecommunications company, 100,000+ employees, global operations
- Data sources – 20 group interviews, 182 group leader surveys, 957 group member surveys (73% response rate), and performance ratings
- Project types – product development, service improvement, process management, manufacturing operations

Work Groups

- Geographic dispersion
  Mean (SD) = 3.42 (1.13)
  Range (1.00-6.47)

- Cross-functionality
  Mean (SD) = 0.90 (0.47)
  Range (0.00-1.89)

1 - immediately next to
2 - same hallway
3 - different hallway
4 - different floor
5 - different building
6 - different city/state
7 - different country

* Engineering
* Manufacturing
* Quality
* IT
* Marketing
* HR
* Finance

Knowledge Sharing

Step 1: Face-to-face interviews (20 work groups)

– tacit/codified, stand-alone/dependent, examples

Step 2: Five categories (1:never – 5:a lot)

– (a) general overviews, (b) specific requirements, (c) analytical techniques, (d) progress reports, and (e) project results

Step 3: Aggregation

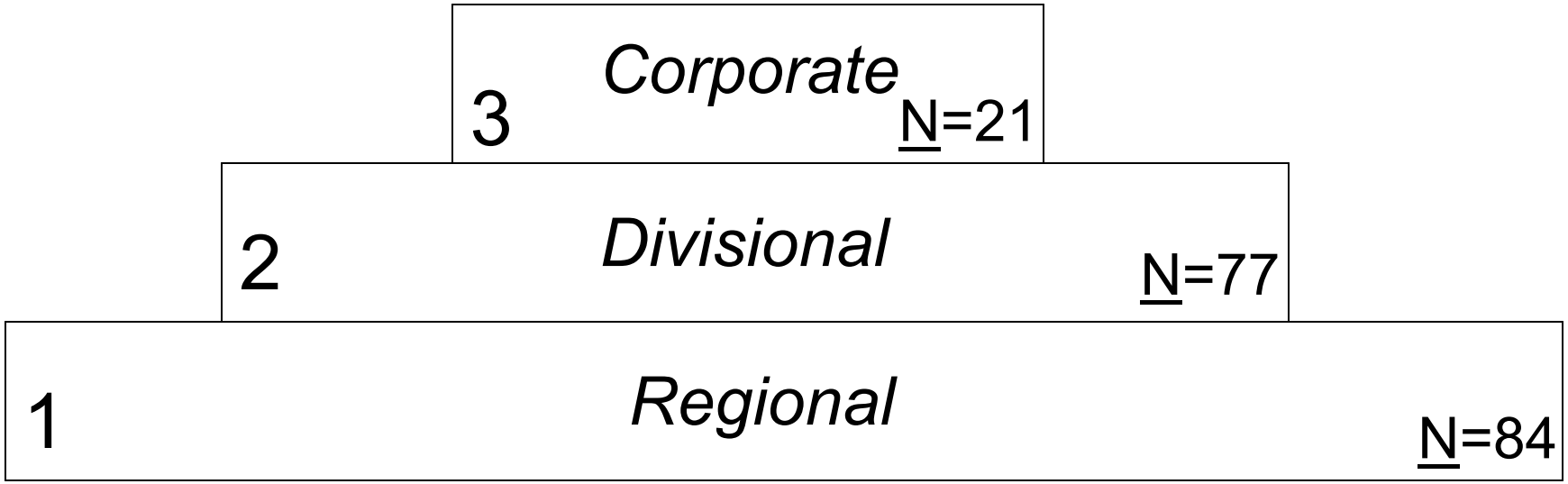
– Intragroup: Mean (SD) = 3.90 (.39)

– External: Mean (SD) = 2.38 (.58)

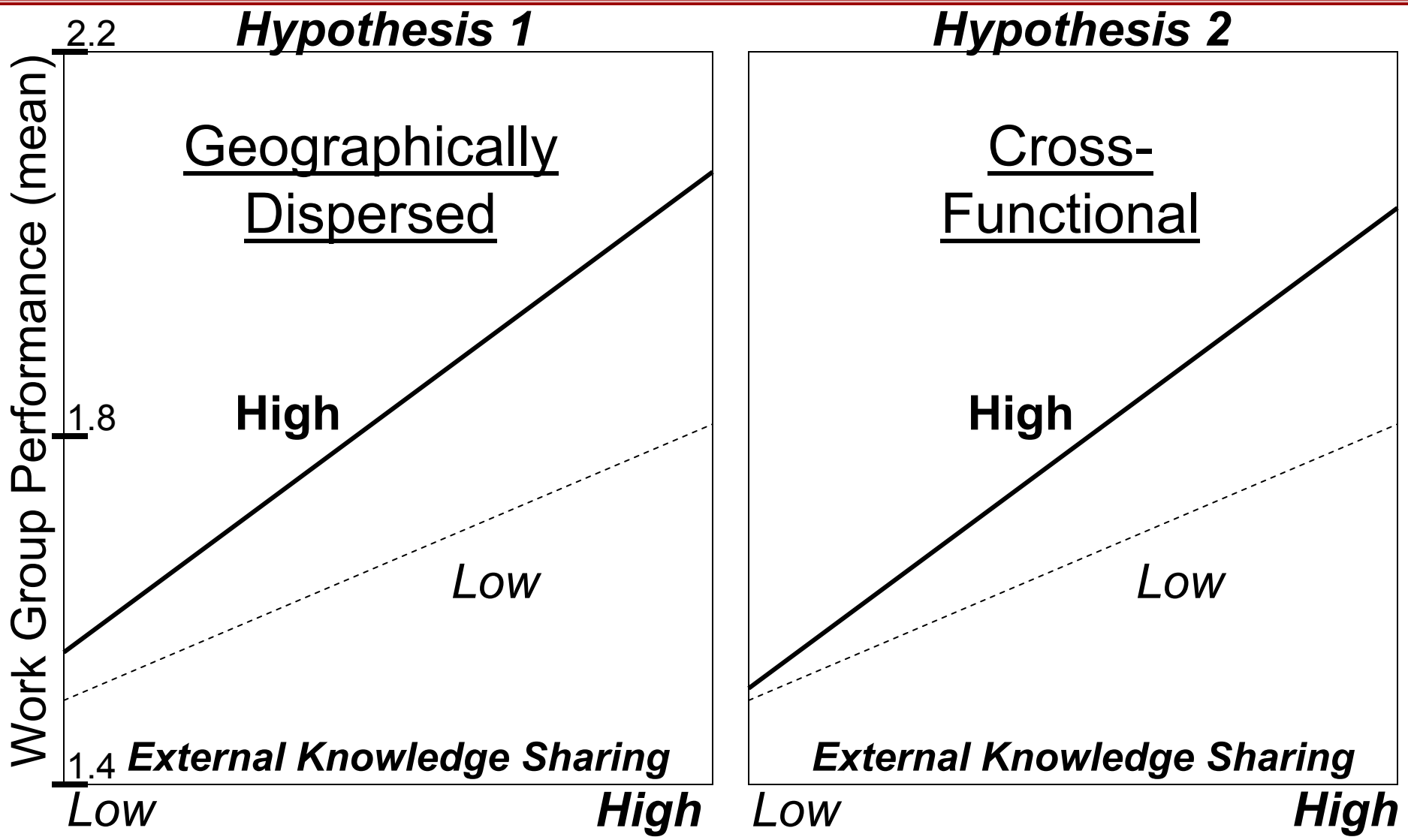
Performance

- 182 work groups rated in competition on dimensions of teamwork, problem selection, appropriateness of method, innovativeness, quality of results, and clarity of presentation

Mean (SD) = 1.65 (0.68)



Results


Hypothesis 1
Hypothesis 2
2.2
1.8
1.4
Work Group Performance (mean)
Geographically Dispersed
Cross-Functional
High
Low
External Knowledge Sharing
Low
High

Summary

- Dispersed, cross-functional work groups are increasingly common in global organizations
- There are coordination costs for dispersion and cross-functionality in work groups
- However, work groups can benefit when members share knowledge externally