Cornell University
ILR School

Cornell University ILR School

DigitalCommons@ILR

CAHRS ResearchLink

Center for Advanced Human Resource Studies
(CAHRS)

7-2012

Building Strong Social Connections Increases Innovation Capability

Center for Advanced Human Resource Studies, ILR School, Cornell University

Building Strong Social Connections Increases Innovation Capability

Abstract

For many years, we have been trying to understand why some work groups are more innovative than others even though they sit in the same departmental and corporate infrastructures as one another. Under-standing why some are more innovative is the key to unlocking the larger problem of increasing overall company innovativeness. The research in this study points to the underlying role of HR practices and the social capital of the working group as keys to increasing innovation capability.

Overall, a work unit's chance of success in creating innovation at a departmental level depends on:

- the ability of employees within the work group to effectively share knowledge with one another, which is dependent on knowing who knows what within the group and developing a high level of trust between group members;

- the ability of the team to get access to key knowledge from outside the members of the work group, providing the team with new thinking and novel information and preventing the group from being too mired in its own way of thinking (preventing the not-invented-here syndrome);

- access to tangible resources increases the effectiveness of access to knowledge by providing the group the financial, equipment, and physical resources necessary to further develop new ideas; and

- a set of social-capital-enhancing HR practices seems to be one key way to increase the social capital and social context of the work teams that are more consistently innovative – these practices create both the skill and the will in employees in the work group to develop and foster social capital.
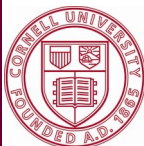
Comments
Recommended Citation

BUILDING STRONG SOCIAL CONNECTIONS INCREASES INNOVATION CAPABILITY

Key Findings

For many years, we have been trying to understand why some work groups are more innovative than others even though they sit in the same departmental and corporate infrastructures as one another. Understanding why some are more innovative is the key to unlocking the larger problem of increasing overall company innovativeness. The research in this study points to the underlying role of HR practices and the social capital of the working group as keys to increasing innovation capability.

Overall, a work unit's chance of success in creating innovation at a departmental level depends on:

- the ability of employees within the work group to effectively share knowledge with one another, which is dependent on knowing who knows what within the group and developing a high level of trust between group members;

- the ability of the team to get access to key knowledge from outside the members of the work group, providing the team with new thinking and novel information and preventing the group from being too mired in its own way of thinking (preventing the not-invented-here syndrome);

- access to tangible resources increases the effectiveness of access to knowledge by providing the group the financial, equipment, and physical resources necessary to further develop new ideas; and

- a set of social-capital-enhancing HR practices seems to be one key way to increase the social capital and social context of the work teams that are more consistently innovative – these practices create both the skill and the will in employees in the work group to develop and foster social capital.

Cornell University
ILR School
Center for Advanced Human Resource Studies

Advancing
THE WORLD OF work
ILR School

CAHRS
ResearchLink

Topic: How can an organization foster the development and continued renewal of its innovation capabilities?

- In what way does social capital affect departments' access to knowledge?

- In what way does social capital affect specific departments' access to tangible resources such as financing, equipment, research space?

- How do access to knowledge and access to tangible resources work together to impact the innovation capability of a work unit?

- Do differences in how the work unit is managed (i.e. differences in HR practices across the groups) impact the social capital and resulting access to knowledge and tangible resources of the group?

Takeaways

Research suggests that individual units within an organization are managed autonomously and develop their own internal collective identification (Schneider & Reichers, 1983), increasing the likelihood of barriers between those units that prevent them from sharing knowledge with one another (Tsai, 2002). Therefore, to improve our understanding of firm-level innovation capability, it is important to understand how to effectively increase the ability of individual units within an organization to innovate and continuously be developing new products, services or processes that lead to new opportunities for the organization as a whole. This study helps to identify a number of factors that foster innovation.

Knowing who knows what within the work unit. While most managers may think it is a given, one key difference between work units that are more innovative and those that are less innovative, is the depth to which employees within the work unit know who knows what and the willingness of the employees to share their individual knowledge with one another. Often employees are unwilling to share their knowledge with other members of the work group if they feel that their knowledge is a source of personal power, their personal performance and pay is tied to what they know as an individual, they are concerned that others in the group won't share information back with them, or they simply don't know the others in the group well enough to know who knows what. Differences in how the group has been selected, socialized, paid, and managed can lead to wide differences in their trust and understanding of the other employees in the work group.

193 Ives Hall

Ithaca, NY 14853

607-255-9358

www.ilr.cornell.edu/cahrs

cahrs@cornell.edu

CAHRS
ResearchLink

Takeaways

Gain access to knowledge from outside the work unit. Access to knowledge from outside the work unit increases the ability of the group to generate new ideas, think in new ways, and prevent the innovation blocks that come from approaching problems in the same old way. While bringing together a great team can have immediate impact on creativity, the longer the work unit stays together is directly correlated to diminishing returns on creativity and innovation unless the group continues to bring in new knowledge and new ways of thinking based on their access to employees in other parts of the organization and key constituencies outside of the organization. Access to new knowledge refreshes the groups stock of knowledge and fosters new idea combinations and debate that sparks innovativeness.

Knowledge is only as good as the tangible resources of the group. The research findings suggest the simultaneous importance of adequacy in work units' access to both tangible and intangible resources for innovation. The positive relationship between access to knowledge and innovation capability became stronger when access to tangible resources was high, which suggests that tangible resources may help to foster an experimental atmosphere within work units and provide them the ability to put their new knowledge to work more productively.

A closer examination of the interaction suggests that when access to knowledge is low, work units with limited access to tangible resources were more innovative than were work units with abundant access to tangible resources. In other words, it appears that access to tangible resources may be detrimental to innovation capability in work units when knowledge accessibility is low. It is likely that these units may simply be rehashing the old ways of doing thing and wasting the tangible resources that they have accessed.

HR can drive innovation by connecting people and fostering social capital. Surprisingly, there is a great deal of variability of how science and engineering work units are managed even within the same organization. It is likely that as work units form or are brought in through acquisitions, they have leaders and HR managers that make different choices on how to implement corporate HR and management policies and over time develop their own structure, process, and culture for how to manage the unit. Importantly, differences in how to think about bringing in new employees to the work unit and how to train, pay, and manage the performance of these employees can lead to large differences in the social capital and resulting access to knowledge and tangible resources of the group. Leaders looking to increase the innovativeness of their work unit should look to social capital enhancing HR practices (see Appendix on page 8 for specific practices) to help foster innovation capability.

CAHRS
ResearchLink

Data and Empirical Findings

Data was collected from employees and managers in the science and engineering division of a hydroelectric power organization specializing in the design and rehabilitation of infrastructure for energy generation and support. Matched data was analyzed from 72 of the 113 work units, with a mean within-work unit employee response rate of 48%. The work units were distributed across a relatively wide geographic area and employees in work units were often distributed across both corporate offices and field locations. While the corporate HR team had created consistent policies for staffing, training, leadership development, performance management, pay, and benefits, there was rather large variability in how work units within the larger company implemented and carried out the social capital enhancing HR practices that were measured in the study. In their study, the researchers predicted that work units' access to knowledge would mediate the positive relationship between SCE HR practices and innovation capability (see Figure 1).

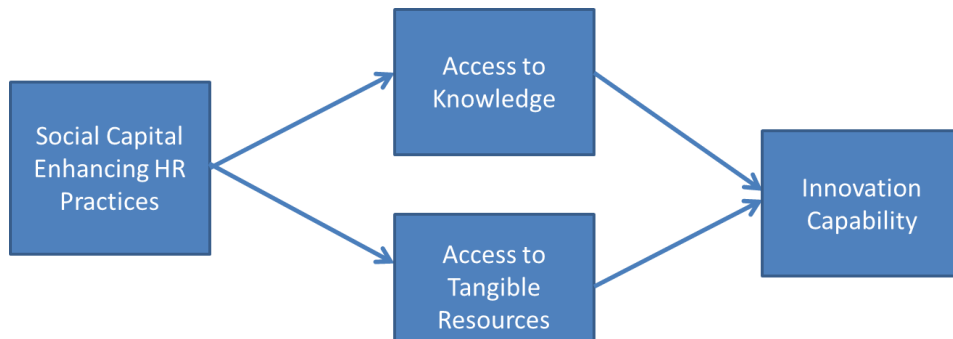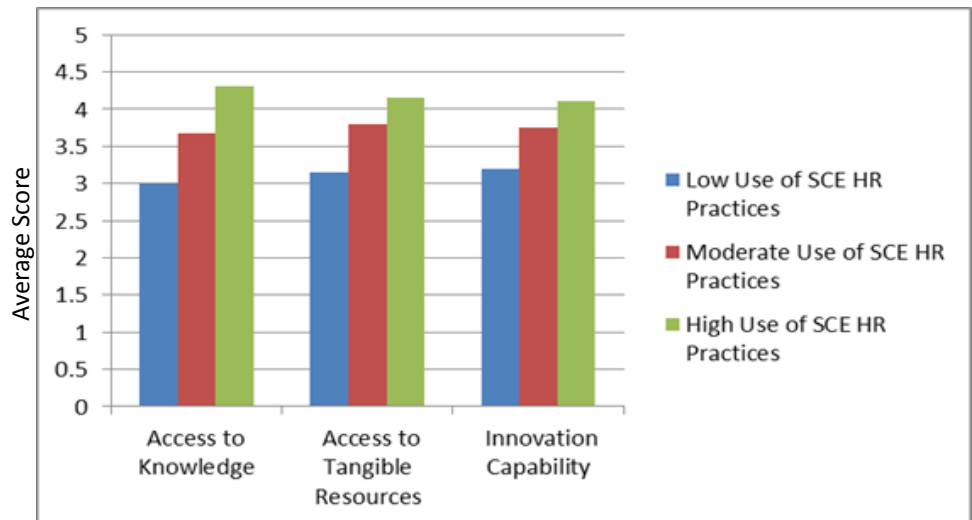## Figure 1: Research Model

Table 1

As predicted, the results in Table 1, opposite, show that low use of social capital enhancing HR practices was correlated to low access to knowledge, tangible resources and innovation capability. On the other hand, when work units implemented more social capital enhancing HR practices, they had higher access to knowledge, tangible resources and innovation capability. Thus, there is some strong evidence that there is a positive relationship between how a work unit is managed and the potential innovativeness of the work unit.

As predicted, the results also provided support for the interaction of access to knowledge and tangible resources. As shown in Table 2 on page 6, the data shows that resource-rich work units stand to achieve greater improvements in their innovation capability as their access to knowledge increases than do their resource-poor counterparts.   Specifically, groups with high access to knowledge and tangible resources were rated as 17% more innovative than groups high in knowledge access but low on access to tangible resources. Thus, one conclusion of the study findings is that access to knowledge alone is not enough; groups also need access to tangible resources to reach the highest levels of innovative capability.

Surprisingly, the findings also suggest that groups are least innovative when they have high access to tangible resources but are low on access to knowledge. Specifically, groups with high access to tangible resources but low access to knowledge were rated as half as innovative as those with high access to both. Further, work units high only on access to knowledge were seen as nearly 60% higher on innovative capability than those that were high on only access to tangible resources. In other words, it appears that access to tangible resources may be *detrimental* to innovation capability in work units when knowledge accessibility is low. One possible explanation is that when access to tangible resources promotes experimentation in the absence of adequate knowledge, wasteful experimentation may result due to a lack of grounding for the new ideas which are tested or implemented to the ultimate detriment of a work unit's innovation capability. This result would suggest the importance of simultaneous access to tangible and intangible resources for innovative outcomes—and thus of a management approach that supports both effectively (see Figure 1, opposite).

CAHRS

ResearchLink

Table 2: Impact on Innovation
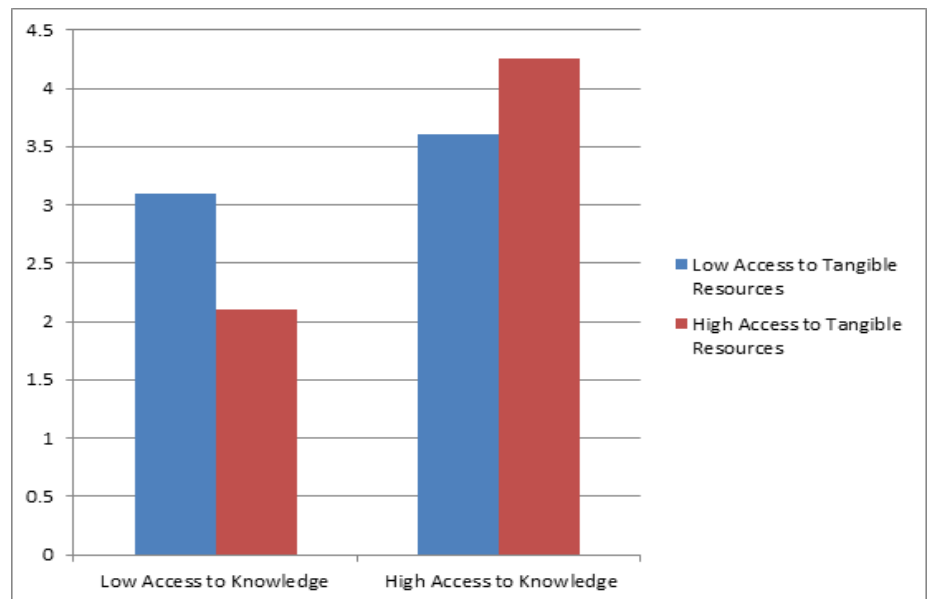
Conclusion

No doubt, there is an increasing importance in today's organizations to focus on innovation to achieve success. At the same time, the trend to structure employees in various types of collectives (i.e. work units) suggests the need to focus on them separately from the company as a whole.

This study provides preliminary evidence for the effectiveness of a specific set of SCE HR practices in supporting a work context conducive to the emergence of innovation capability in work units. In particular, employment of SCE HR practices leads to work units' access to both knowledge and tangible resources.

Moreover, work units' *simultaneous* access to both these types of resources creates the most favorable conditions for innovation to occur. Not only can practitioners use HR practices to shape the social contexts in their organizations (Collins & Smith, 2006), but these contexts – and their consequences – are likely to exhibit meaningful success at the work unit level. By developing a system of SCE HR practices, the benefits associated with feelings of familiarity and collectiveness among employees within a work unit can be enhanced— a key step in increasing innovation in a company—unit by unit.

193 Ives Hall

Ithaca, NY 14853

607-255-9358

www.ilr.cornell.edu/cahrs

cahrs@cornell.edu

CAHRS
ResearchLink

Paving the Way for Future Research

This paper suggests several important areas for future research:

- First, it would be valuable to study the role of the social capital-based mechanisms (i.e., work units' social climates and external ties) by which we have argued SCE HR practices are likely to operate in this model.

- Second, it would be useful to look at how the effects of SCE HR practices may differ depending on organizational culture, managers' leadership styles and behaviors, or structural characteristics of an organization.

- Third, an examination of how the social capital approach blends and interacts with other management approaches (e.g., human capital, motivation) would help broaden the implications of this study's findings.

- Finally, it would be valuable to examine how innovation capability relates to long-term organization-level financial and renewal-based performance outcomes.

Researchers

This study was conducted by:

Christopher J. Collins,

Associate Professor and Director, CAHRS

Cornell University, ILR School

Rebecca Kehoe

Assistant Professor of Human Resource Management

School of Management and Labor Relations

Rutgers University

193 Ives Hall

Ithaca, NY 14853

607-255-9358

www.ilr.cornell.edu/cahrs

cahrs@cornell.edu

CAHRS
ResearchLink

Appendix: HR Practices Supporting Social Capital

HR Practices supporting team environment

Frequent team meetings are held with all members of the group.

We regularly hold group-wide meetings to share information about progress with the project.

We sponsor events for employees in this group to get together outside of work to get to know one another better.

Bonuses are closely linked to the performance of the group rather than individual performance.

When hiring people, we focus on finding individuals with the personality to fit with other members of this group.

We use an official mentoring system for the development of employees in this group.

This group frequently sponsors events to celebrate business successes of the team.

HR Practices for building connections to other work groups

Employees in this work group have been primarily hired from other work units in the firm.

Employees in this work group frequently schedule meetings with employees from other work groups to exchange information about current projects.

Employees in this work unit frequently participate in company-wide social events to get to know employees from other departments.

Employees in this group have received training to develop personal relationships with other employees in the firm.

Employees in this group are evaluated on their ability to develop relationships with employees across different areas of the firm.

Employees in this group are provided financial incentives for developing job-related personal relationships with other employees in the firm.

Employees in this work group frequently look to update higher level managers on the progress of the group's project.

HR Practices for building ties to key outside contacts

Employees in this work group exchange ideas on strategies for developing personal relationships with key people external to the company.

Employees in this group are evaluated on their ability to develop relationships with key people external to the firm.

We provide extensive reimbursement for attending conferences and seminars.

We provide extensive reimbursement for continuing university education.

We reimburse employees for association memberships.

193 Ives Hall

Ithaca, NY 14853

607-255-9358

www.ilr.cornell.edu/cahrs

cahrs@cornell.edu

References

Batt, R. 2002. Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal,* 45: 587-597.

Collins, C. J., & Clark, K. D. 2003. Strategic human resource practices, top management team
social networks, and firm performance: The role of human resource practices in creating
organizational competitive advantage. *Academy of Management Journal,* 46: 740–751.

Collins, C. J., & Smith, K. G. 2006. Knowledge exchange and combination: The role of human resource practices in the performance of high-technology firms. *Academy of Management Journal,* 49: 544-560.

De Dreu, C. K., & West, M. A. 2001. Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology,* 86: 1191-1201.

Kehoe R. R., & Collins C.J. 2008. Exploration and exploitation business strategies and the contingent fit of alternative HR systems. *Research in Personnel and Human Resources Management,* 27: 149-176.

MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. 2000. Equivalence of the mediation, confounding, and suppression effect. *Prevention Science,* 1: 173–181.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. 2007. Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research,* 42: 185-227.

Schneider, B., & Reichers, A. E. 1983. On the etiology of climates. *Personnel Psychology,* 36: 19-39.

Tsai, W. 2002. Social structure of "coopetition" within a multiunit organization: Coordination, competition, and intraorganizational knowledge sharing. *Organization Science,* 13: 179.