

Exploring the future of work: The effects of distributed work on social capital and innovation

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Final project report

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Project Overview

This project set out to investigate the effects of web-based and distributed working practices on team effectiveness. We anticipated that distributed working would reduce social capital, and therefore team performance. 20 interviews have been carried out with a range of practitioners, working across a spectrum of distributed working practices. At one extreme, we interviewed a manager in a small company working in an entirely remote (home based) setting with a globally dispersed team of developers. At the less extreme end, we interviewed people in large companies work from home up to 1 day a week. This range of participants has provided sufficient context to develop some initial findings around the effects of distributed working. As expected, remote working appears to reduce social capital through the loss of face to face contact. However, firms benefit from having access to a global talent pool, and individuals benefit from working free from the distractions of the office. Remote working is less suitable for major innovation and for innovation relating to physical objects, which are both thought to require personal contact. The impact of technology is extremely interesting, and web-based tools have the potential to enhance collaboration and offset the loss of face to face contact. The impact of working practices (work processes, meeting structure, team structure, task definition) appears to be critical.

We are developing the outcome of this pilot project in two directions. One will focus on the effects of distributed working on social capital and innovation, for a management studies audience. The second will focus on the sociology of work, discussing the role of technology as a non-human actor in distributed work practices. The results discussed here focus on social capital.

Research Questions

We investigated the effects of three dimensions of social capital (Nahapiet & Ghoshal 1998) on remote working by asking the following three questions:

1. Does remote working influence the *structural* dimension of social capital?
2. Does remote working influence the *cognitive* dimension of social capital?
3. Does remote working influence the *relational* dimension of social capital?

Findings

The *structural* dimension of social capital refers to the overall pattern of connections – who you reach and how you reach them. *Recruitment and talent* is a key element that distributed working enables, and is one of the primary motivators for developing a distributed workforce. *Personal contacts* are important, but personal social networks extend beyond the employer. *Meetings and planning* were key mechanisms for keeping projects on track and for keeping people informed, and meeting structure is particularly important in a

distributed setting. *Distributed-ness* is a key structural issue that impacts the amount of communication that is possible within a regular work pattern, and requires additional effort to overcome especially in terms of time zones. *Contact methods* (Skype, Hangouts, Webex, slack, etc) have a major impact on the nature and effectiveness of communication.

The *relational* dimension of social capital refers to assets created and leveraged through relationships such as trust, norms, obligations and expectations. *Work pattern expectations* that arise from the distributed working pattern are a critical component of how work is changing, and how the balance between work and non-work time is becoming blurred. This effect is increased where there are time zone differences. *Trust* is essential in a distributed setting, and the methods for trusting work colleagues within formal relationships are primarily based on the delivery of good work. *Social niceties* are significantly reduced by a lack of face-to-face contact, and whilst the performance impact of this was not apparent to our participants it did form the basis for social discussion and personal relationships. Social ties then influence commitment. The relational component we identified as *performance and innovation* related to the nature of daily workplace relationships. Working from home was thought to reduce performance through a lack of immediate and direct support. The ability to get unscheduled tasks done quickly is reduced. However, we also found that immediate and direct support is in fact more available through the effective use of web-based tools such as Skype and Slack. Because these tools can be used in the workplace and at home, the impact of colocation is mixed, and is related to project coordination mechanisms.

The *cognitive* dimension of social capital refers to those resources providing shared representations, interpretations, and systems of meaning: shared language, codes and narratives. This includes the critical aspect of *communication*, which is also closely related to *skills*. *Skills* is a critical feature that is highly relevant to the topic of distributed working, in particular because the learning time requirement for fully engaging in technical projects will significantly reduce employer preferences for short-term employment. Cognitive social capital refers to the ability to communicate. This requires both the embodied knowledge (or skill) and the ability to communicate about it. Both are required in order to participate in the multidisciplinary interactions and negotiations that occur during the development of a complex system. The requirement for specific working knowledge about a system also extends to specific working knowledge about how organisations (particularly large ones) function. This issue alone may provide enough friction to limit the short-term recruitment of personnel involved in technical innovation projects to a minimum period of 6 months.

Project Outcomes and Impact Review

The anticipated future impact of this project will occur through a research grant application, conference and journal publications, and executive briefings to business school partners. Impact has already been made through government interaction on our Digital Day and direct company feedback to Capital One.

Research grant application: A 3-page draft version of our research grant application is included as an appendix to this report. This grant will potentially bring significant income to the University, and give a greater potential for future impact on policy and practice.

Conference papers accepted: Two conference papers have been accepted for publication. One paper will be presented at WORK17 Turku, 16-18 August 2017: "Distributed work practices: technology as a non-human actor in a virtual network". A second paper was peer reviewed and accepted for publication at the 2017 BAM conference in September, but this conference cannot be attended due to a clash with paternity leave.

Journal articles in progress: Two journal articles are being prepared for publication based on the outputs of this project. They will be submitted by the end of 2017. One paper, extending the WORK17 paper will be led by Rebecca Taylor and will be submitted to New Technology Work & Employment (3* ABS). A second paper extending the BAM paper will be led by David Baxter and will be submitted to European Management Review (3* ABS).

Digital Economy Day: We have been invited to participate in a 1-day seminar on the Digital Economy in October 2017, which is being organised by Professor Daniel Muijs.

Government interaction: Our project formed part of the discussion in the Digital Day on the 6th July organised by the Public Policy Unit, and was presented during Breakout Session 2: Digital Skills. Government representatives from a number of departments were in attendance, and engaged in the discussion about the impact of distributed working patterns on training and skills provision.

Executive Learning Partnership: We have planned to deliver a research briefing describing the outcomes of this project to the Business School Executive Learning Partnership in September 2017. 20 executives are expected to attend.

Direct company impact: Capital One participated in this research, and we conducted 8 of the 20 interviews with their staff. A company focused feedback session was delivered to the project participants in collaboration with their innovation unit on the 6th April 2017, at their UK head office. They proposed changes to their internal working practices as a result of this project. The company has expressed an interest in participating with the research grant bid.

Project Budget: spent £2236 of £6555 allocated

The Budget specified for this project was £6,555 (Subproject code 516655106)

Conference, Chatham House Future of Work, 23rd June 2017: £612

Travel to research sites: £89.46+£4.29+£4 = £97.75

Conference, WORK17 Turku: £164.4+£197.5+£311.37 = £673.27

Interview transcription: £953.86

TOTAL: £2,336.88

The deadline for spending the funds by the 31st July has meant that some travel and subsistence costs for the Turku conference will fall outside of this deadline. We have also cancelled an executive learning feedback event that fell outside the project timeline.

Next steps

The draft version of the grant application will be shared with an internal mentor for review and refinement. We will continue work on the grant application with a view to submitting it to the internal peer review process by mid-December.