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Gift exchange, control, and cyberloafing: A real-effort experiment☆

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ABSTRACT

Cyberloafing – non-work related internet use – is a prominent problem in modern firms. While incomplete contracts typically rule out direct control of workers' effort, many employers hope to increase productivity through 'soft' control, by restricting the private use of internet at work. In a lab experiment with real effort, we investigate how the temptation of the internet and a manager's decision whether to restrict workers' access to it affect the morale of workers. When tempted by internet access, workers reciprocate fair wages less than without access. Nevertheless, a manager's decision to actively grant internet access might increase workers' effort: we find that highly reciprocal workers perceive the autonomy such a policy gives as a gift which they reciprocate with high effort despite the temptation of the internet. For less reciprocal workers the temptation aspect dominates and restricting internet access is better for the manager.

1. Introduction

Access to the internet distracts many people from their work, tempting them to read the news online, check on their social networks, or write private messages.[1] Such "cyberloafing" (Lim, 2002) is estimated to cost billions of dollars in lost productivity every year.[2] Consequently, many companies have strict policies about the private usage of the internet. Yet,

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[1] According to MyJobGroup.co.uk around 6 percent of the British workforce spent over an hour per day on social media while at work. The average employee accesses his e-mail around 50 times per day and visits more than 40 web sites a day according to data from over 40,000 users of the "RescueTime" program, which tracks how much time people spend with a certain application on their computer.

[2] Just search for keyword combinations like *productivity loss + facebook*. While most of these estimates are very crude, they do mirror companies' worries about their employees spending too much time online and being distracted by the Web.

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other companies deliberately abstain from having such rules.[3] This hints at that an internet policy may have advantages and disadvantages. While a restrictive policy removes a temptation that may distract employees from their work it does not ensure provision of effort. But it signals distrust by the employer, which may hurt employees' morale. So what is the right approach?

The aim of this paper is to investigate in a lab experiment how the temptation of the internet and the internet policy of a firm affect the morale of its workers. Importantly, the internet policy of a firm should not be seen in isolation from its wage policy.[4] Consequently, in our experiment, a manager and a worker interact in a gift exchange game where the manager chooses what wage to pay the worker matched with him (from a menu with three possible wage levels). The profit of the manager depends on his own effort and the effort of the worker minus the wage paid to the worker. Effort is measured by a real-effort task. Internet access offers a real-leisure alternative that is present in real life but absent in most lab experiments. Moreover, as Corgnet et al. (2015) show, such a real-leisure alternative allows to uncover subtle incentive effects in real-effort experiments.

To study how the temptation of the internet affects effort, our experiment has two treatments where access to the internet is exogenously determined. In the *NoInternet* treatment, workers (and managers) by default do not have access to the internet. In the *Internet* treatment, everyone has access by default. A third treatment makes the internet policy a choice variable of the manager. In the *Choice* treatment, managers decide whether or not to grant internet access to the worker (in addition to deciding the wage level). Managers always have internet access in this treatment. In all treatments, we additionally elicit measures for how reciprocal and trusting participants are using a trust game.

In his seminal paper, Akerlof (1982) argued that there is a positive relation between effort and wage levels because workers see a generous wage as a "gift" and they reciprocate by providing more than "normal" effort. This has been found to hold true in numerous lab experiments. Our *Internet* and *NoInternet* treatments allow us to study how such gift exchange is affected when workers are tempted by access to the internet.

We observe that workers provide little effort when the employer only offers a low wage – no matter whether the internet is on or off by default. Yet, when receiving a high wage it matters whether the internet is on or off. Workers with internet access are twice as likely to be inactive over a period than those without access and their effort tends to be lower (though the latter result is not significant). Intuitively, while workers want to reciprocate a generous wage by working hard, the temptation to surf the internet seems to be in conflict with this motive. In fact, workers who receive a high wage and are tempted by access to the internet put in no more effort on average than those workers who receive a low wage and have no access to the internet. This result is consistent with the interpretation that temptation can completely crowd out reciprocal motives. The effects are especially prevalent for workers with relatively low levels of reciprocity. The temptation to surf crowds out their (low level of) reciprocity, while more reciprocal workers are more immune against the temptation. Our findings on exogeneous internet access together with the findings of Corgnet et al. (2015) suggest that for weak incentives (low wage or low reciprocity in our study/team incentives in Corgnet et al.) or large incentives (individual piece rate in Corgnet et al. or for our managers), the effect of internet access is minimal because workers are either working very little anyway or have the right incentives to work as hard as possible.

Our *Choice* treatment allows us to investigate how a manager's policy on internet use affects a worker's motivation. Restricting access to the internet takes away the temptation and thereby should increase effort. But such a policy signals distrust by the manager and might crowd out the motivation of the worker to do a good job. A worker who perceives the policy of restricting internet access as excessive control will think of it as an unkind act of the manager and might reciprocate with lower effort. That is, there might be "hidden costs of control" (cf. Falk and Kosfeld, 2006). On the other hand, an active choice to allow internet access signals trust by the manager and it increases the responsibility of the worker, which both may enhance the worker's internal impulses toward loyalty or generosity (Charness, 2000; Charness et al., 2012).

We observe that workers who receive a high wage provide more effort when the internet is turned-on by the choice of the manager rather than on by default, and that this is driven by the high-reciprocity workers. As working conditions are otherwise equal in these two settings, this result indicates that a policy of actively allowing internet access is perceived by the workers as a kind act and that it triggers positive reciprocity. The corresponding effect when the internet is turned-off by the choice of the manager rather than off by default however is not significant.

When comparing efforts across the different policies of the manager in the *Choice* treatment (to allow or to deny internet access), not only the kindness effect plays a role, but also the commitment effect of removing a temptation (identified above). We observe that the two effects are of similar magnitude: average efforts do not differ significantly depending on whether the manager actively turns the internet on or off (for both low and high wages). That is, overall, we do not find "hidden costs of control".

[3] For example, at the UK Department for Work and Pensions the private use of social networks is forbidden (Halliday, 2013 in the Guardian). Their German counterpart in contrast sees no problem in their employees using social networks during work time as long as the employees meet their work obligations (SüddeutscheZeitung, 2013). Davenport (2011) points out that "Knowledge workers typically enjoy the free-access approach [...] This positive feeling is probably useful for retention and job engagement." But at the same time it must be "assumed that [employees] have the discipline to avoid wasting time surfing the Web [...]."

[4] For example, Holmstrom and Milgrom (1994) and Ichniowski and Shaw (2003) point out that incentives and freedom from direct control are complementary instruments.