



Team incentives and leadership



Michalis Drouvelis^a, Daniele Nosenzo^{b,*}, Martin Sefton^b

^a Department of Economics, University of Birmingham, United Kingdom

^b School of Economics, University of Nottingham, United Kingdom

ARTICLE INFO

Article history:

Received 5 August 2016

Received in revised form 23 June 2017

Accepted 11 July 2017

Available online 13 July 2017

JEL codes:

C92

L22

M5

Keywords:

Team production

Leadership

Reward power

Delegation

Experiment

ABSTRACT

We study, experimentally, how two alternative incentive mechanisms affect team performance and how a team chooses between alternative mechanisms. We study a group incentive mechanism (team output is shared equally among team members) and a hierarchical mechanism (team output is allocated by a team leader). We find that output is higher when a leader has the power to allocate output, but this mechanism also generates large differences between earnings of leaders and other team members. When team members can choose how much of team output is to be shared equally and how much is to be allocated by a leader they tend to restrict the leader's power to distributing less than half of the pie.

© 2017 Published by Elsevier B.V.

1. Introduction

Many organizations are hierarchical in structure, where leaders have power over subordinates and can influence them, and hence organizational performance, in a variety of ways. Vast literatures in management and social psychology have studied various dimensions of leadership. Bass and Bass (2008) extensively survey the literatures on leadership and broadly classify theories of leadership as *informal* (dealing with the emergence of leaders who lack formal authority), *inspirational* (focusing on leaders' ideological or emotional appeals to followers' intrinsic motivation), or *instrumental* (focusing on outcome-directed leaders who have formal disciplining powers). Our paper contributes to the latter class of theories, in particular by examining the role of *contingent-positive reinforcement*, whereby a leader encourages compliance from subordinates by appealing to their self-interested response to material rewards. In fact, *reward power* is often recognized as a crucial dimension of leadership (see, e.g., French & Raven, 1959; Yukl, 1989) and is indeed a cardinal principle of the path-goal and operant conditioning approaches to leadership, that posit that whether a leader can successfully motivate followers depends on her ability to make rewards contingent on followers' performance (Jago, 1982). Relatedly, Hermalin (2013) surveys the leadership literature from an economic perspective and discusses various roles of leaders, one of which is to be responsible for monitoring and administering incentives within a group.

* Corresponding author.

E-mail address: daniele.nosenzo@nottingham.ac.uk (D. Nosenzo).

Although the use of rewards may successfully motivate subordinates, the availability of leadership reward power may introduce other sorts of incentive problems. Most obviously, opportunistic leaders may have an incentive to abuse their power and use group resources to advance their private interest. This threat of opportunism may have less force when the allocation of power is endogenous within the organization, e.g. when subordinates have a say on how much power is invested in the leader. In such cases, will leaders resist the temptation to abuse their power, and will subordinates be able to correctly anticipate the benefits, as well as potential perils, of leadership, and thus voluntarily grant power to the leader? This is an important question, especially because in some theories of leadership (e.g., Fiedler, 1967's contingency model of leadership) the effectiveness of a leader does not merely depend on her traits and behaviors, but also on the "favorableness of the leadership situation", including the availability of *position power*, i.e. the extent to which the leader is vested with authority to "... *direct, evaluate, reward and punish group members*" (Jago, 1982; p. 323).

In this paper we examine these issues using the methodology of experimental economics. Thus, we contribute to the existing management and social psychology literature, that have documented positive correlations between contingent-positive reinforcements and subordinates' performance (for reviews see, e.g., Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006; Podsakoff & Schriesheim, 1985), by designing tightly-controlled laboratory experiments that allow for causal inferences and where subjects' decisions are elicited in an incentive-compatible way.¹

Our experimental design begins with a 10-round repeated team production game where team members incur individual effort costs but share team output equally with all team members. Since the benefits of a team member's efforts are shared with the rest of the team this introduces an externality that will result in excessive shirking and welfare loss if decisions are guided by a comparison of private costs and benefits. Thus, our model of team production follows the tradition of using a Voluntary Contributions Mechanism (VCM) to capture the essence of the free-rider problem in teams (see Charness & Kuhn, 2011 for a review of this approach).² We observe substantial free-riding in this baseline treatment, in line with the large experimental literature on VCM games (see for example the recent review in Camerer & Weber, 2012).

Next, we ask whether installing a leader who allocates rewards to team members improves team performance. To do this we conduct treatments that complement and extend the recent experimental work on leadership with distributive power by van der Heijden, Potters, and Sefton (2009) and Stoddard, Walker, and Williams (2014). In these treatments all team output accrues to a leader, who can decide how to distribute it after observing individual team members' efforts. Importantly, any output not allocated to other team members is retained by the leader. In this setting, a leader might induce efficient team production by compensating team members appropriately for the costs they incur from their productive efforts, and furthermore she has an incentive to do so as efficient team production will increase her residual claim. However, leaders also have an incentive to appropriate all the team output for themselves. In theory, assuming standard selfish preferences, a leader will keep all team output and, in anticipation of this, team members supply minimum effort. In contrast to this theoretical prediction, but in line with previous experimental work, in our experiment we find that installing a leader does indeed promote effort and increase efficiency. Leaders use simple strategies that reward workers who supply high effort and withhold rewards from shirkers. This in turn encourages effort and results in substantial increases in team production and earnings.

Successful leadership may be more challenging when, as in many natural settings, workers vary in their productivity. Indeed, related experiments have shown that asymmetries between workers reduce the effectiveness of other forms of leader power (Levati, Sutter, & van der Heijden, 2007). In our context, what constitutes "compensating team members appropriately" may be less straightforward if productivities vary among workers. Should compensation reflect the costs that a worker incurs from her efforts, or the output that she produces? If workers are concerned about equity and fairness, and if there are competing notions of fairness, it may be particularly difficult to provide the correct incentives. Thus, we also ran treatments with heterogeneous worker productivities. Again, we find low effort in the absence of a leader and substantially higher effort and efficiency with a leader. Thus, just as in the case of homogeneous teams, with heterogeneous teams we find that installing a leader with power to distribute the proceeds of team production is successful in promoting efficiency.

However, in both homogeneous and heterogeneous teams, we also find that the gains of leadership are distributed asymmetrically within a team: leaders reap most of the gains, but team members are no better off with than without a leader. This raises the question whether team members would actually *prefer* to install a leader if they could choose to do so.³

This question cannot be addressed in our initial treatments because a feature of these treatments is that the institutional setting – either a group incentive scheme or a leader reward scheme – is exogenously imposed on a team as part of our experimental design. Therefore, we designed further treatments to examine the endogenous emergence of the leadership institution. In these treatments we ask whether in our setting team members will voluntarily cede reward power to a leader, and whether this affects the leader's performance in terms of encouraging team production. To do this, we allowed team

¹ A word of caution about external validity is necessary. In order to observe behavior in a controlled environment we use abstract settings that remove many of the complexities present in the field. Moreover, in natural organizations individuals self-select into leadership positions, a feature that is absent in our study. Thus, caution should be exercised in extrapolating insights from our lab setting to naturally-occurring environments.

² See also Guillen, Merrett, and Slonim (2014) for a discussion of the close relation between team production and VCM games. Bartling, von Siemens, and von Siemens (2010) provide a behavioral foundation for the use of the equal sharing rule in team production settings.

³ This is a key question also in the social psychology and management literatures, which have studied extensively the conditions under which group members prefer to appoint a leader to solve the free-rider problem, see, e.g., Messick and Brewer (1983), Samuelson (1991), van Vugt and De Cremer (1999).

Download English Version:

<https://daneshyari.com/en/article/5034735>

Download Persian Version:

<https://daneshyari.com/article/5034735>

[Daneshyari.com](https://daneshyari.com)