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The role of status and leadership style in sales contests: A natural field experiment

Willem Verbeke^{a,1}, Richard P. Bagozzi^{b,2}, Frank D. Belschak^{c,*}^a School of Economics, Erasmus University Rotterdam, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands^b Ross School of Business, University of Michigan, 701 Tappan Street, Ann Arbor, MI 48109-1234, USA^c Amsterdam Business School, University of Amsterdam, Section of HRM-OB, Plantage Muidergracht 12, 1018 TV Amsterdam, The Netherlands

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ABSTRACT

This paper addresses the question whether status alone, as compared to a combined financial/status incentive, is strong enough to motivate team members taking part in a retail sales contest to sell more goods to customers. Using a two-phase natural field experiment, we studied the impact of a sales contest on actual sales growth in 102 discount stores. The first experimental phase included a financial/status reward and status-only condition; the second experimental phase included financial/status reward, status-only, and control conditions. Compared to the control condition, the status-only condition had a significant effect on sales volume. Store managers' leadership style, however, was found to have a moderating effect. Greater sales growth resulted in the financial/status reward condition when store managers had a transformational leadership style.

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1. Introduction

Organizations need to motivate their employees to interact with customers, explore their needs, and sell solutions that fit these needs. In general, incentives and managers' leadership behavior can motivate employees to engage in such interactions with customers (e.g., Jaworski & Kohli, 1993). In this regard, researchers have proposed to bring competition inside the firm and let salespeople compete against each other by introducing sales contests (e.g., Kalra & Shi, 2001; Lim, Ahearne, & Ham, 2009). Yet, such contests need to be designed well to avoid undesirable side effects such as unethical sales behavior (e.g., Hampton, 1970; Li & Murphy, 2012). From a theoretical point of view, more recently sales contests have been investigated from a tournament theory perspective which argues that status in combination with a monetary incentive built into winning a contest (financial/status reward) has a great impact on participants' work efforts and sales performance (e.g., Lazear, 1997, p. 225). Others argue that, as it is the preference for status that drives performance (Heffetz & Frank, 2009), the financial reward component of sales contests might not be needed; status-seeking in and by itself might motivate salespeople to work harder as long as they attain status from gaining a specific position in a sales contest (hence called status-only reward). In this paper we

investigate the effect of both a financial/status and a status reward promise during a team-level sales contest. Contests can be considered as specific situations that affect team-based performance (De Matteo, Eby, & Sundstrom, 1998); yet, studies that explore the effects of different rewards during a contest at the team level (team contest) are scarce.

In cooperation with the top management of a retail chain, the authors of this paper organized a large-scale field experiment to investigate this issue. As store managers display different leadership styles, we also studied how the leadership style of the store managers affected the incentives – store sales growth relationship, with the focus specifically on transformational and transactional leadership styles. Hypotheses were tested in the 102 retailing shops participating in this natural field experiment covering a total of 35 weeks, using weekly objective sales data.

2. Literature review: sales contests

Sales contests are (short-term) management tools to motivate salespeople to engage in extra efforts beyond the performance generated by their regular compensation schemes (Churchill, Ford, Walker, Johnston, & Tanner, 2000; Kalra & Shi, 2001; Murphy & Dacin, 1998). Compared to other employee compensation plans sales contests are different because in contests the reward is based on an employee's performance relative to others rather than on an employee's absolute output (Kalra & Shi, 2001). While in practice sales contests are frequently used in special incentive programs (the percentage of firms who use sales contests varies in different studies between 60 and 91%; Murphy & Sohi, 1995),

* Corresponding author. Tel.: +31 20 525 4027

E-mail addresses: verbeke@ese.eur.nl (W. Verbeke), bagozzi@umich.edu (R.P. Bagozzi), F.D.Belschak@uva.nl (F.D. Belschak).

¹ Tel.: +31 10 408 1308; fax: +31 10 408 9169.² Tel.: +1 734 647 6435; fax: +1 734 936 8715.

theoretically sales contests are under-researched (see Kalra & Shi, 2001). However, Murphy and Dacin (1998) offer a model of salespersons' response to sales contests that distinguishes a number of contest design elements. They argue that in particular the goals (outcome versus process based), the competitive format (individual versus team), the number of winners, the awards used (money versus material goods versus non-material goods such as recognition), and the duration of the contest are important elements that allow one to distinguish sales contests from each other and lead to differential outcomes in terms of a salesperson's response (see also Murphy, Dacin, & Ford, 2004). Similar distinctions between different elements of reward systems can also be found in the organizational behavior literature. For instance, Bartol and Locke (2000) identify several factors of organizational reward systems that influence employees' motivation to perform the targeted behaviors. These factors include, among others, the perceived fairness of the rewards, the targets given to employees, or the quality of the performance evaluation. Specifically for sales contests, more recently scholars have explored the optimal number of winners and the optimal prize allocation theoretically (Kalra & Shi, 2001) and empirically (Lim et al., 2009). Regarding the role of awards, several studies have mentioned the importance of non-monetary incentives such as recognition in sales contests in comparison to monetary or other material incentives (e.g., Moncrief, Hart, & Robertson, 1988; Murphy & Sohi, 1995) or have explored salespeople preferences for different types of (material) awards (Murphy et al., 2004). To our knowledge, there is however no systematic empirical test of the effects of recognition-based versus financial reward/recognition-based contests. In what follows we therefore focus on the role of monetary and non-monetary awards in sales contests and test their effects on sales teams' performance in a field experiment.

More recent theoretical analyses of sales contests have particularly drawn on tournament theory (e.g., Garrett & Gopalakrishna, 2010; Kalra & Shi, 2001; Lim et al., 2009). Tournament theory has its origins in (labor) economics and was introduced about 30 years ago (Lazear & Rosen, 1981) to describe behaviors in case of reward structures based on relative ranking rather than absolute outcome levels. It has been applied successfully in a number of different disciplines and has proven its usefulness in explaining compensation structures in competitions and contests (see Connelly, Tihanyi, Crook, & Gangloff, 2014). In line with these analyses we discuss sales contests (structural competitions, e.g., Brown, Cron, & Slocum, 1998, or forced rankings, e.g., Krakel, 2008) from the perspective of tournament theory (e.g., Hart, Moncrief, & Parasuraman, 1989; Kalra & Shi, 2001; Lazear, 1997; Lazear & Rosen, 1981) and of status theory (Heffetz & Frank, 2009) as a further development of tournament theory. We deal with the essentials of these theories first. It should be noted that tournament and status theory refer to the effects of a contest on participants' behavior *during* the contest rather than the effects of the outcome of the contest (e.g., ranking) on future behavior. For the latter question a rich literature in organizational behavior/ psychology is available (e.g., Kluger & DeNisi, 1996).

2.1. Tournament theory

Tournament theory posits that the total prize money, usually distributed among a small number of winning slots, is fixed in advance and is independent of past performance. The relative performance or ranking of the outcomes rather than absolute performance determines the winners; in other words, only the best performers win a prize (positional outcome) no matter how good (or bad) those lower in ranking perform. When a firm puts on a tournament (e.g., a sales contest), players in a sense have to run a 'rat race.' Fundamental in tournament theory is the requisite that participants choose (deliberate reasoning) to participate and put extra effort in the contest depending on the prize structure. First, employees evaluate whether the extra effort needed to attain prize money (or a winning slot) is worth it despite the apparent

uncertainties; that is, only a few people can win a scarce prize, and it will take sustained, continual effort to beat others similarly motivated to win the competition. Second, differences in prize structure matter a great deal: for instance, the spread—size differences between the winning prizes—stimulates employees to devote greater attention to the contest (Lazear, 1997, p. 226), but fewer winning slots (e.g., including those that always will win) are known to lower employee motivation (e.g., Lim et al., 2009). Tournament theory also perceives other factors to be included in the utility curve. Participants might regret losing rank or value, and thus avoid being placed in a losing position by their competitors (Krakel, 2008). Similarly, contestants might seek to improve status, which comes with their ranking in the firm, and will thus participate in the contest (Ederer & Pataconi, 2010; Oxoby, 2002). Hence we consider tournaments as combined financial/status reward systems. In general tournaments have been shown to outperform other incentive systems when contestants operate under similar conditions; tournaments filter out common shocks in performance by eliminating the impact of uncertainties common to all contestants (e.g., weather or business cycles) (Green & Stokey, 1983; Lazear & Rosen, 1981). Finally, specific risk factors press for a level playing field in tournaments. For example, contestants might engage in sabotage to obtain higher ranking (e.g., Lazear, 1997), and contestant heterogeneity can be demotivating (e.g., if contestants expect that the few winning spots will be personally out of reach, they might give up competing). Level playing fields also ensure that participants perceive the goal of winning the contest to be difficult, yet achievable, thus leading to high goal acceptance and high work efforts (goal-setting theory; e.g., Locke & Latham, 1990).

Tournament theory finds support in various settings, such as executive pay (Becker & Huselid, 1992; Eriksson, 1999). As long as the contest creates an environment in which people find the prizes or awards (financial and status) worth striving for in a sales contest (despite the intense competition), they will devote their own time and trouble and invest effort, which in turn benefits the firm.

2.2. Status theory

Status theory has its main roots in evolutionary anthropology (Barkow, 1975) and biology (Cheney & Seyfarth, 2007), and has been applied in economics (e.g., Heffetz & Frank, 2009), as well as psychology (Huberman, Loch, & Öncülür, 2004). Status theory emphasizes that people's desire for status in a group (e.g., an organization) emerges due to the hard-wired mental processes, involving hormonal processes as well as implicit cognitions (specifically, identities or self-referential cognitions), which emerge when people appraise how their own status compares to that of significant others (e.g., Heffetz & Frank, 2009). Status implies negative externalities: an increase in someone's relative status implies a decrease in the relative status of someone else. Position has a substantial effect on the hormonal processes of both losers and complementary winners. In the case of lost ranking, the person becomes aware of a negative or socially undesirable identity, which evokes feelings of low self-esteem and stimulates the production of cortisol that normally comes with social anxiety (e.g., Dickerson, Gruenewald, & Kemeny, 2004). Validation of a positive, socially desirable identity stimulates the production of testosterone, which makes people more assertive and competitive in a group and blunts them from negative social emotions (e.g., Carney & Mason, 2010). A person who achieves high status (e.g., a high ranking in a sales contest) validates positive stereotypical identities (e.g., 'I'm smarter than others') and suppresses negative ones (e.g., 'I'm less intelligent than others'); this self-enhancing process boosts self-esteem (Lamont & Molnar, 2002). Anything, whether essential or secondary to the job, might threaten or boost people's ranking (status) concerns and trigger positional "treadmill behaviors" (Huberman et al., 2004) or status games (Heffetz & Frank, 2009). Essential here is the idea that these hard-wired biological processes that accompany status gains evoke striving for status. This has led researchers

to argue that striving for status is an end in itself (e.g., Heffetz & Frank, 2009; Huberman et al., 2004). As it is 'built into' humans, managers may use this mechanism to steer status-striving.

Yet, status contests may also create negative consequences for an organization. As status-seeking creates status games and thus produces 'winners' and 'losers', negative stereotyping may cause ostracism and treating colleagues as objects. Moreover, participants of a sales contest are involved in a constant competition for position that might deplete their resources and hamper productive behavior (Huberman et al., 2004; Haslam, 2004), as well as lead to problematic selling behaviors during customer interactions (e.g., 'hard selling'; Murphy, 2004). Neckermann and Kosfeld (2008) found that tournament awards without material value could positively impact employee performance. Simply providing people with information on their relative performance has been found to positively affect their output (Blanes, Vidal, & Nossol, 2009). Huberman et al. (2004) also found that, in a laboratory experiment, people are willing to exchange money for short-lived increases in status without future benefits.

2.3. Summary of tournament theory and status theory

In sum, both tournament theory and status theory aim to explain why employees engage in a rat-race-like environment and show positional treadmill-like behavior in sales contests, and in this sense they are quite similar. Both tournament theory and status theory argue that contests are forced rankings or distributions (e.g., Krakel, 2008). According to tournament theory, the main difference is that prize structure matters a great deal because people make deliberate choices: participants in contests decide to put in more or less extra work to beat competitors (colleagues) and gain financial/ status rewards and maximize their utility (Lazear, 1997). According to status theory, rewards, once visible in the organization, will affect status concerns and trigger hard-wired (hormonal) processes that affect emotional/cognitive processes. In addition, people's identities are affected by status or rank ('I am a loser' or 'I'm a winner'). This motivates people to engage in positional treadmill-like behaviors to avoid loss of self-esteem or social anxiety in the event of losing. The experiment described below builds on this basic theme.

3. The retail context: store teams and store managers

We studied the effects of retail sales contests in a context where employees work together in stores grouped in pools of five employees to battle out the competition. The store managers share the tournament prize with their teams. The focus of this study is thus on sales contests between sales teams rather than between individual salespeople. Even though some studies have investigated the effects of group incentives in a sales setting (e.g., Lim & Chen, 2014), a group perspective has been largely neglected in the literature on sales contests (for an exception see Pujol & Tanner, 2010, who have investigated the impact of team versus individual competition in a scenario experiment). The tournament theory and status theory described above on the individual level is now applied to the team level.

3.1. Tournament theory in a team setting

Literature on team work indicates that team-based rewards in general have a large effect on the motivation and performance of team members (e.g., Chen & Kanfer, 2006; De Matteo et al., 1998). Chen and Kanfer (2006) propose a multi-level model of work motivation in which they argue that ambient stimuli (i.e., stimuli that pervade the team as a whole such as team-based rewards) affect team-level actions and reactions. Team-based rewards influence motivation and effort either directly on the team level (e.g., by encouraging within-team cooperation) or indirectly via the individual level by encouraging greater effort on the part of each individual team member (e.g., Shamir,

1990). De Matteo et al. (1998) further argue that team-based rewards may also foster a focus on one's team performance thus creating pressure on team members to perform better. Also, Pujol and Tanner (2010) note that a sales contest using a group format is able to reduce the negative effects of individual format contests on customer orientation and 'hard selling' behaviors.

As teams are heterogeneous (e.g., differing in level of ambition), goal-interdependent (team-based rewards), and small in size (team members see and interact with each other on a regular basis), more ambitious colleagues will likely undertake communication and coordination efforts to encourage other team members to work harder, particularly so in a tournament situation in which several teams are competing with each other for a reward (e.g. De Matteo et al., 1998, Sutter & Strassmair, 2009). Here, employees, rather than the store manager, per se, undertake corrective action; they correct colleagues engaging in derogatory talk or free-riding behavior for example (Bornstein, Gneezy, & Nagel, 2002). Also, the increased communication under tournament conditions is likely to increase team members' awareness of expected performance standards in the team. Such potential for self-evaluation of one's own performance has been shown to reduce freeriding behavior in teams (e.g., Szymanski & Harkins, 1987). The external 'threat' to the group in a tournament situation (inter-group competition) has been found to increase group cohesiveness and morale (Julian & Perry, 1967). In short, tournament theory has largely focused on the role of team spirit boosting and the positive effects of sales contests.

3.2. Status theory in a team setting

Status theory applied to teams focuses on the automatic, implicit cognitive/ emotional mechanisms that are triggered once a group (team) competes with other groups. This tends to happen independent of the prize structure: "What seemed to matter was not doing well as such, but doing better than the other group" (Haslam, 2004, p. 19). People tend to categorize themselves and others as belonging to different social groups, thus distinguishing between in-groups (to which they identify as being a member) and out-groups (to which they do not identify as being a member of). The social identity derived from group membership is part of their self-concept, and belonging to an attractive or successful social group enhances a person's self-esteem (Tajfel, 1974). Competition between teams reinforces such in-group versus out-group dynamics and affects the way in which persons define and construe their identities (e.g., Friedkin & Simpson, 1985). A competing team stimulates group members to define themselves in terms of 'us' (rather than 'me') and raises the question whether 'we' as a group (in-group) are superior or inferior compared to another group ('them', out-group) on a specific dimension (in our case ranking in the sales contest). When the team performs better than other teams, feelings of superiority towards the out-group arise. Once an out-group is determined, people tend to denigrate it, referring to negative stereotypes and at the same time regard their own in-group in more positive terms (Tajfel, 1974). To the extent that people define themselves in terms of 'us and them,' they will be more willing to invest effort into their team and to defend the status of their group if it is threatened. This quest for positive distinctiveness means "that people's sense of who they are is defined in terms of 'we' rather than 'I', they want to see 'us' as different to, and better than, 'them' in order to feel good about who and what they are" (Haslam, 2004, p. 21). Team-based competitions may therefore provoke intensive battles, and group members may continue fighting down to the wire so to speak.

3.3. Summary of tournament theory and status theory in a team setting

A conclusion that can be drawn from both tournament and status theory is that the financial/status condition in our experiment (tournament theory) and the status-only condition (status theory) both should

have a large impact on team motivation. Teams under both conditions should outperform control group teams, who do not participate in a sales contest. In the financial/status reward condition, as long as team members find the value of a prize worth the team effort required to win the prize, and as long as they realize that other teams threaten their prize slot, they should be motivated to undertake team effort. In the status condition, as long as the contest lasts and other teams threaten group status, prevailing status-striving and identity dynamics will evoke team spirit in terms of team members' willingness to go to bat for each other so to speak (Loch, Galunic, & Schneider, 2006). We therefore test the following hypotheses about each condition vis-à-vis control conditions:

H1a. Compared to a control condition, teams in the financial/status reward condition will generate significantly higher sales growth.

H1b. Compared to a control condition, teams in the status-only condition will generate significantly higher sales growth.

As shown above, tournament and status theory propose different mechanisms through which sales contests can be linked to participants' motivation and performance. However, one might argue that the motivational (and related performance) gains of a combined financial/status condition might be higher than the ones of a status-only condition. Psychological need theories argue that people are motivated by different needs such as power, status, or recognition but also lower-order needs such as safety. In line with this argument, extant studies on salespersons' preferences regarding the prizes offered in a sales contest show that salespeople's preferences for various types of prizes differ greatly. In particular, some salespeople emphasize the importance of honor and recognition while others prefer a monetary prize component (e.g., Murphy & Dacin, 1998; Murphy et al., 2004). In this respect, expectancy theory notes that people's motivation (and subsequent performance) increases as they are offered rewards that they value highly (e.g., van Eerde & Thierry, 1996). Providing a combined financial/status prize seems likely to better satisfy the different needs of participants in a sales contest than providing only a status prize (which might disappoint, for example, participants with a higher preference for a financial prize) thus leading to higher motivation and sales performance. We therefore hypothesize:

H2. Compared to a status-only condition, teams in the financial/status reward condition will generate significantly higher sales growth.

4. Leadership

In our experiment, store managers were present on the work floor interacting with customers and collaborating with employees. Leadership styles of managers have been shown to affect team performance (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Stewart, 2006). In particular, transactional and transformational leadership styles are closely linked to employee motivation and performance (e.g., Bass, 1985, 1999) and are key leadership behaviors (e.g., Waldman, Ramirez, House, & Puranam, 2001). Please note that these two leadership styles are not mutually exclusive, and the same leader can show both types of leadership behavior.

Transactional leadership seeks to clarify expectations and offer praise when goals are achieved. This style focuses on scrutinizing deviations from assigned goals, and attends to free-riding and mistakes made by employees (Bass, 1985). By setting clear goals, in combination with providing recognition once these goals are achieved, transactional leadership behavior increases the chances that teams and members will attain expected levels of performance. Transactional leadership creates productive work environments in which subordinates comply with the leader's demands in exchange for rewards, or

the avoidance of disciplinary action (Bass, 1999; MacKenzie, Podsakoff, & Rich, 2001).

Transformational leadership emphasizes changes in the self-concepts of agents, rather than accentuating the exchange relationship, per se. Transformational leadership encourages employees to focus on something bigger than self-interest and stimulate group identity: such leader behavior fosters the identification of group members with the mission and goals of the organization or a sub-group therein by connecting the employee's self-concept to the collective mission (e.g., Akerlof & Kranton, 2005; Shamir, House, & Arthur, 1993). The employee's feelings of involvement and commitment to the group increase with transformational leadership experience, and, consequently, group performance is enhanced (e.g., Dionne, Yammarino, Atwater, & Spangler, 2004; Walumbwa, Avolio, & Zhu, 2008). Leaders showing transformational leadership behavior often act as role models (e.g., by showing employees how to interact with customers) and offer intellectual stimulation (e.g., by suggesting that salespeople approach a customer interaction in a new way), all of which stimulate team members to emulate these practices and create more effective teams. Finally, transformational leadership increases group self-efficacy by expressing high expectations and confidence in the group's ability to meet these expectations (e.g., Shamir et al., 1993). Increased self-efficacy, in turn, is a strong source of motivation and generally translates into increased effort and performance (e.g., Bandura, 1986).

While transformational leadership behaviors can be distinguished from transactional leadership behaviors, both leadership styles can exist independently of each other, and the best leaders have often been argued to display *both* leadership styles (e.g., Bass & Avolio, 1993). We expect though that transformational rather than transactional leadership behaviors will moderate the effects of sales contests. Transformational leadership accentuates team values, that is, what is important to getting the group to thrive. During a sales contest the in-group identity ("we can be better than they are") becomes focal in order to avoid being compared unfavorably and put down by out-groups. Transformational leadership stresses positive identity and the team mission, and to the extent that leaders showing such behavior provide a positive example for team members (Avolio, 1999; Avolio, Bass, & Jung, 1999), they attain a buy-in with the group. Consequently, transformational leadership comes with reduced leader–employee distance and can motivate the group accordingly (Cole, Bruch, & Shamir, 2009; Shamir, 1995). For transactional leadership, the opposite tends to happen: to the extent that leaders showing transactional leadership behavior focus on a person's deviations from performance goals, attend to mistakes, and practice management-by-exception, they may create leader–employee gaps and fail to offer much in the way of emotional support or a guiding vision to followers which may be needed in a team contest to stimulate cooperation and team effort (Bass, 1985). Transactional leadership behaviors stimulate fewer group effects and outcomes (e.g., group commitment and identification; cf. Shamir et al., 1993; Walumbwa et al., 2008).

We therefore expect that transformational leadership behavior will be beneficial in team-based sales contests, under both financial/status and status conditions, while transactional leadership behavior will not. That is, sales growth will increase for teams, under both financial/status and status conditions, the greater the transformational leadership (Fig. 1).

H3a. Transformational leadership behavior moderates the relationship between the experimental conditions and sales growth. More specifically, greater sales growth will occur in the financial/status condition versus the control condition, the greater the transformational leadership behavior.

H3b. Transformational leadership behavior moderates the relationship between the experimental conditions and sales growth. More specifically, greater sales growth will occur in the status-only condition

Summary of the research model

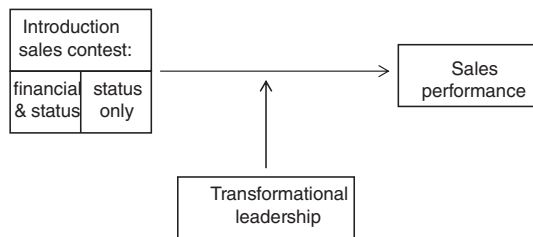


Fig. 1. Summary of the research model.

versus the control condition, the greater the transformational leadership behavior.

Fig. 1 summarizes our research model.

5. Method

5.1. Setting and procedure

The field experiment was conducted in a European discount retailer that sells clothing, including sports and casual apparel, as well as shoes for men, women, and children. The retail chain consists of 128 stores. The company provided weekly sales data from each store, which were presented in indexes to avoid leaks of any confidential information. The average number of employees per store was 12 ($SD = 2$). Store personnel consisted of cashiers and service/sales staff. Personnel with the same function were characterized by pooled task interdependence, whereas personnel with different functions (i.e. cashiers and service staff) were characterized by sequential task interdependence (see De Matteo et al., 1998; Saavedra, Early, & Van Dyne, 1993). Also, store staff salary covered a variable pay component, which was based on team performance, to facilitate cooperation between store personnel, as well as group performance.

Our study was a natural field experiment. The subjects engaged in tasks they would naturally undertake, unaware that they were taking part in an experiment. This setup was chosen to avoid the Hawthorne effect where participants in a control group work harder than normal to show their worth upon coming to learn that they are involved in an experiment (Levitt & List, 2009). All details of the experiment specifics were communicated to the stores through the headquarters' usual channels, and the participation of the researchers was never mentioned. That is, neither store personnel nor their managers knew that an experiment was being conducted, and all participants received exactly the same information. The study covered a period of 35 weeks, in which two experimental manipulations took place, each lasting six weeks (weeks 3–8 and weeks 30–35) with a break of about 20 weeks between experimental manipulations. In the first two weeks, surveys with the leadership style questions were collected from the participating stores.

In the first experimental period, 65 stores were assigned to a sales contest with a monetary prize for both the winner and runner-up of each team (financial/status reward condition), while 60 stores competed in a sales contest where only status was offered. Assignment of stores to one of the two conditions was random. Three stores were closed during the first round of the experiment; thus 125 stores finally participated in phase 1. In phase 1, we chose to investigate the impact of a financial incentive, and therefore let the conditions differ only with respect to a monetary reward being involved or not. As the management of the company allowed us to conduct a second experiment, we added a control condition (no sales contest). Due to the inclusion of weekly fixed effects in our panel estimations, the identification of the treatment effect of the status treatment relies on the addition of the control group during the second experiment. Here, the stores were not fully

randomly divided over the three conditions, because management imposed the requirement that all 60 stores in the status-only condition in phase 1 had to be assigned to the financial/status reward condition in phase 2. Stores from the financial/status condition in phase 1 were randomly split amongst the status-only condition (30 stores) and the control condition (35 stores) in phase 2.

Research shows that a level playing field is important in tournaments, as heterogeneity distorts the incentives and can harm morale (Lazear & Rosen, 1981). Hence, we organized sales competitions for groups of five stores. Sales growth figures in the weeks before the sales contests were used to create a level playing field. Also, only stores that were not in close spatial proximity of each other, and stores not in the same network of people were combined in a group, in order to reduce the chance of participating stores sabotaging each other's work.

5.2. Reward structure

We chose to reward stores that won either first or second place (i.e., two winners in each group of five stores) in the financial/status and status-only reward conditions, as the literature suggests that it is advantageous to include more than one prize (e.g., Kalra & Shi, 2001; Murphy et al., 2004). Also, Chonko, Tanner, and Weeks (1992) report strong preferences of salespeople for pay raises as rewards, and Murphy et al. (2004) found in their survey among 796 salespeople a strong preference for cash rewards during sales contests. We therefore decided to offer cash as the award type in our contest. More specifically, the first prize in the financial/status reward condition included an announcement of the winners and a financial reward per employee corresponding to 5% of the employee's monthly income. The second prize was public announcement and half of the financial reward of the first prize. The choice for a moderate prize spread (i.e., prize differences between winner, runner-up, and other participants were noticeable but not high compared to participants' monthly salary) was based on empirical evidence suggesting that too high a prize spread is often perceived as inequitable by participants thus leading to envy and sabotaging of fellow contestants by 'losers' of the contest and to feelings of compassion, guilt, and related motivational losses by 'winners' (Grund & Sliwka, 2005; Harbring & Irlenbusch, 2011). A dislike of highly inequitable payoff distributions has been confirmed in several studies (see Fehr & Schmidt, 2000, for an overview), and the management of the firm had asked us to design the experiment in a way as to minimize the risk of negative effects of the sales contest on participants. The status-only condition comprised only the announcement of the winners to employees, which made team members aware of winners (and losers).

5.3. Measures

The leadership-style questionnaire was administered to managers about two weeks before the start of the first round of the experiment. Each manager received a personal letter inviting them to participate in an online questionnaire, which supposedly would be used as input for a company training program in the near future. Of the 128 store managers, 115 (90% response rate) completed the questionnaire (of which 59 were in the financial/status reward treatment and 56 in the status treatment). In the period between both waves, 13 managers either left the company or became part-time managers, which resulted in 102 useable observations for the second wave (of which 49 were in the financial/status reward treatment, 25 in the status treatment, and the remaining 28 in the control group). In the questionnaire (adopted from De Hoogh, Den Hartog, & Koopman, 2004), six Likert items (1 = disagree to 7 = agree) were included to assess transactional leadership ($\alpha = .69$) (e.g., "I make certain that my employees work according to what we agree upon"), and for transformational leadership, 11 items ($\alpha = .82$) (e.g., "I stimulate my employees so that they develop their talents to the fullest"). This measure has been validated and used in

Table 1
Correlation matrix of different variables in phases 1 and 2.

	1	2	3	4	5	6	7
<i>Phase 1</i>							
(1) Sales growth	1						
(2) Service 1	-0.04	1					
(3) Financial/status	0.08	-0.13	1				
(4) New concept	0.13	-0.06	-0.05	1			
(5) Transformational	-0.03	-0.09	-0.01	-0.09	1		
(6) Transactional	0.02	-0.02	0.00	-0.15	0.57	1	
<i>Phase 2</i>							
(1) Sales growth	1						
(2) Service 2	0.01	1					
(3) Financial/status	0.01	-0.04	1				
(4) Status condition	0.02	0.00	-0.55	1			
(5) New concept	0.03	-0.07	0.15	-0.10	1		
(6) Transformational	0.01	0.06	-0.04	0.03	-0.11	1	
(7) Transactional	0.00	0.13	-0.02	0.08	-0.09	0.62	1

several leadership studies carried out in the European country in question in the past (e.g., De Hoogh & Den Hartog, 2009; De Hoogh, Den Hartog, & Koopman, 2005). Table 1 provides the correlations between the measures of our constructs of interest.

To test the proposed factor structure, as well as convergent and discriminant validity of the above measures of transformational leadership and transactional leadership, we used confirmatory factor analysis (CFA). The goodness-of-fit of the models was assessed with chi-square tests, the normed chi-square (i.e., chi-square/df ratio) (NC); the root mean square error of approximation (RMSEA), and the standardized root mean square residual (RMR). Results of the CFA show satisfactory fit for the two-factor structure ($\chi^2(118) = 197.52 (p < .01)$, NC < 2, RMSEA = .08, RMR = .08). The inter-correlation between the two leadership styles was .62 ($p < .01$).

During the study, a few stores were renovated to update their appearance, but they sold the same products. To control for this, we introduced a dummy variable in the analyses, called 'new concept', from the moment the renovated store reopened again. Finally, sales growth was provided as weekly sales growth of a store compared to the same week a year earlier.

Table 2
Panel estimation of treatment effects on sales growth.

Independent variables	Dependent variable: Sales growth			
	(1)		(2)	
<i>Phase 1: Base category = status condition</i>				
Financial/status reward condition	0.995	(0.986)	1.138	(1.118)
Transactional manager × financial/status reward condition			-2.750	(1.798)
Transactional manager × experimental round 1			2.423*	(1.311)
Transformational manager × Financial/status reward condition			0.271	(1.634)
Transformational manager × experimental round 1			-1.109	(1.344)
<i>Phase 2: Base category = control group</i>				
Financial/status reward condition	4.796	(3.133)	2.844	(2.859)
Status condition	6.902**	(3.494)	4.370	(3.115)
Transactional manager × financial/status reward condition			-8.959*	(5.127)
Transactional manager × status condition			1.103	(4.986)
Transactional manager × experimental round 2			0.957	(4.526)
Transformational manager × Financial/status reward condition			14.051***	(4.374)
Transformational manager × status condition			5.135	(5.146)
Transformational manager × experimental round 2			-4.787	(3.550)
Renovated store	8.315**	(3.554)	7.494*	(4.021)
R ²	0.693		0.705	
Log likelihood	-44,292.3		-36,031.4	

* p < .10.
** p < .05.
*** p < .01. Standard errors in parentheses.

6. Results

The treatment effects on sales growth were estimated using weekly data on the stores, by performing OLS (ordinary least squares) panel estimates, that included week-fixed and store-fixed effects. The week-fixed effects proved to be especially important, since sales growth is highly volatile from week to week; for example, weather conditions and nation-wide promotion campaigns by the company had a strong influence on sales. Store-fixed effects were included to control for unobservable store characteristics. Further, as mentioned, we used a dummy that equals 1 for renovated stores from the moment they were opened again. The different experimental treatments were similarly included as dummy variables (phase 1: financial/status condition: 1 = financial/status prize, 0 = status-only prize; phase 2: financial/status condition: 1 = financial/status prize, 0 = control condition; status condition: 1 = status-only prize, 0 = control condition).

The panel estimates of the average treatment effects on sales growth are given in Table 2. Column 1 shows that only the status conditions had positive and significant effects on sales growth, thus H1b is supported while H1a is not. This can be read from the estimates in the second experiment, which compare the treatments to the control group. There is no significant difference between the two treatment effects on sales growth, thus H2 is not substantiated. First, the coefficient of the financial/status reward treatment in the phase 1 is insignificant, which is the estimated effect compared to the status condition. Also, the treatment effects in the second phase do not differ significantly from each other, as revealed by a Wald test performed on the equality of both coefficients ($p = .32$). Our experimental setup does not allow us to identify carry-over effects from the first experiment to the second, because the assignment in the latter was not entirely random (see Section 5.1). Asymmetry in the treatment effect going from the financial/status reward condition to the status condition or vice versa can therefore not be assessed. This may be, however, a relatively small concern as there is an intermission of 20 weeks between both phases of the experiment.

As stated in H3a and H3b both treatment effects (financial/status and status) are hypothesized to be affected by the leadership style of the store manager. Column 2 of Table 2 explores these interactions: we added interaction terms of both transactional leadership and transformational leadership with the treatment dummies to the previous

Differences in sales growth between financial/status and no-contestcondition

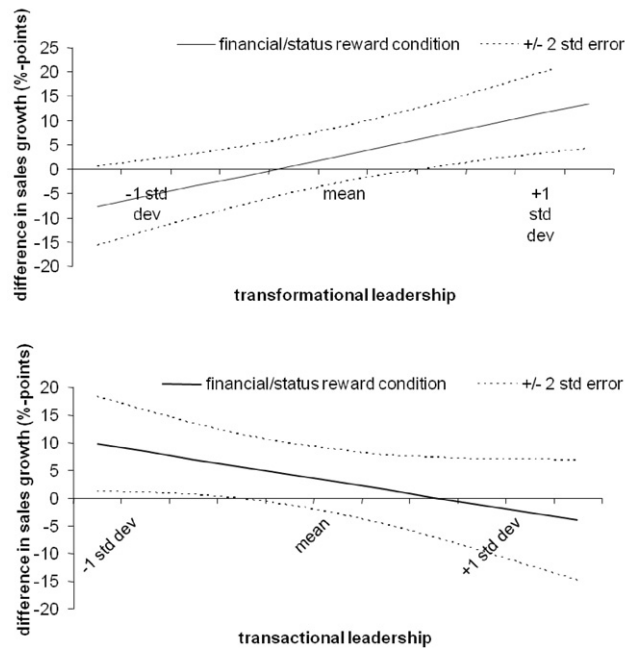


Fig. 2. Differences in sales growth between financial/status and no-contest condition.

specification. Our empirical model cannot identify the baseline effect of the leadership styles as their effects are captured by the store-fixed effects. Note that we allowed the leadership styles to have an effect on sales growth in the experimental periods so as to avoid bias in the interaction terms. We did not expect any effects of leadership styles on sales growth during the experimental periods. There is no reason why leadership style would affect sales growth differently during the experimental period compared to the regular periods because these effects are already taken up by the store-fixed effects.

When we focus on the bottom part of column 2 in Table 2, the average treatment effects become somewhat weaker and appear to lose significance. The lack of significance means that the treatment effect was insignificant for a store that had an average store manager. The interaction effects of transformational and transactional leadership with both treatments can be read in column 2 of Table 2. There is a significant interaction between transformational leadership and the financial/status reward condition. The moderating effect is highly significant and of substantial size. There is no relationship between transformational leadership and the status condition. A Wald test reveals no significant differences in the effect of transformational leadership between the two treatments ($p = .21$). The top part of column 2 in Table 2 tells a similar story: there are no differences between the two treatments, nor does the effect of transformational leadership differ across the treatments. The top part of Figure 2 depicts treatment effects in the second experiment (differences in sales growth of the financial/status condition compared to the no-sales-contest condition) for different levels of transformational leadership. The effectiveness of the financial/status treatment in promoting sales growth depends heavily on the extent to which the store manager displays a transformational leadership style. Transactional leadership, on the other hand, has a marginal negative effect on sales growth ($p < .10$), but only for the financial/status reward condition. The bottom part of Figure 2 illustrates the treatment effects for different levels of transactional leadership compared to the no-contest condition.

7. Discussion

In this study we conducted a natural field experiment to test whether financial/status rewards in a sales contest stimulate sales

performance more or less than status-only rewards. Compared to correlation studies, experiments allow for testing causal hypotheses (e.g., Levitt & List, 2009). In theory, sales contests motivate participants to outperform their competitors on criteria set by the firm. The lack of financial rewards and status, which would occur if another team outperformed them (financial/status condition—tournament theory) or the possible threat of being outperformed, which might derogate the good name of the team (status condition—status theory) motivates team members to increase their team efforts, which leads to sales growth over and above that achieved through normal management practices.

The experiment provides evidence that non-monetary rewards, specifically attaining status (which is evoked by hard-wired in-group/out-group dynamics triggered by the sales contest), might be an important motivator in (team) sales contests. Interestingly, financial/status rewards did not generate additional positive effects on sales over and above the one created only by status concerns; that is, sales growth was similarly increased when only non-monetary motivators were offered. Status concerns in a group or team by themselves seem to serve as a powerful motivator, creating heightened excitement and effort, bringing the best out of team members (Loch, Yaziji, & Langen, 2001; Loch et al., 2006). To the best of our knowledge, this study is the first to show such status effects for teams. While earlier (survey-based) research by Murphy et al. (2004) found that financial rewards (by individuals) were generally preferred over other prizes in sales contests, the results of our experiment appear to indicate that status has sufficient motivational potential to boost sales growth, and additional financial rewards may not (always) be needed (e.g., Loch et al., 2001).

Next, we found a significant effect of the status-only versus control condition in phase 2 while the effect of the financial/status versus control condition was not significant. Adding a financial prize component to the non-monetary (status-only) prize might have triggered a suppression effect in the sense that the status component was devalued by the financial component. Such a detrimental effect of the financial prize component on the effect of the status component is similar to the detrimental effect that external rewards have been argued to exhibit on intrinsic motivation (e.g., Deci & Ryan, 1985; Frey & Oberholzer-Gee, 1997). Because financial rewards provide a strong justification for behavior, participants may discount the role of other, non-material rewards such as status in the presence of a financial reward (cf. overjustification effect: Lepper, Greene, & Nisbett, 1973; Tang & Hall, 1995). As a consequence, motivational and performance effects of an additional financial prize component may reduce the effects of the status component therefore not resulting in overall increases in motivation or performance. Future research should further test such a potential suppression effect of a financial prize component on the effects of a status prize component.

Another key finding was the moderating effect of team leaders' behavior on the relationship between the tournament conditions and team performance: store managers' transformational leadership behavior enhanced performance; transactional leadership behavior led to a decline in performance (although only at the .10 significance level). Interestingly, these effects were only found in the financial/status rewards condition. A potential explanation for the increased importance of leadership might be that financial incentives are tangible (allowing people to attain something they desire such as clothes, gifts) and exert more pressure on the team and might thus require a specific leadership style from the manager to attain. We attributed the positive effect of transformational leadership behavior to the fact that such leader behavior emphasizes group identity (e.g., 'us against them') that encourages team members to support each other and cooperate resulting in higher team performance (Chen et al., 2007; Shamir et al., 1993). This study shows that companies should assume a holistic perspective as leadership and incentive systems form configurations that can lead to differential outcomes (see Chen et al., 2007; Vorhies & Morgan, 2003).

The presentation of our research findings to the management of the retail chain has resulted in two changes to date. First, consistent with insights in marketing arguing that rewards and leadership are key drivers that stimulate an organization to adopt a marketing orientation (Jaworski & Kohli, 1993), the firm reiterated its commitment to continue running sales tournaments. This commitment is all the more impressive because of ongoing negative publicity in the press against bonus systems in the country in question. Second, management has introduced dedicated leadership courses to train store managers in transformational leadership behavior.

Opponents of sales contests argue that too much internal competition between employees might lead to sabotaging of each other's efforts and performance, and hence the performance of the firm (e.g., Harbring, Irlenbusch, Kräkel, & Selten, 2007; Lazear, 1997). Similarly, competition between teams might stimulate between-team conflict, and consequences of between-team conflict should be carefully considered before implementing a competition between teams (Tajfel, 1974). Between-team conflict is particularly detrimental to organizations when teams are interdependent and thus need to cooperate to meet their goals. In our experiment, between-team interdependence of participating retail stores was low. Nevertheless, negative between-team behaviors such as sabotage would seem to be an issue especially in firms where employees are in spatial proximity or have contact with the same people in each other's social networks. In our study, teams were formed by groups of five retailers, and competing stores were located in different cities. This reduced the opportunity for sabotage and illustrates one possible advantage of team sales contests versus sales contests on the individual person level in firms.

A second concern is that sales contests might provoke salespersons to exert pressure on customers (e.g., Kalra, Shi, & Srinivasan, 2003; Murphy, 2004). In our experiment, the firm used 'mystery shoppers' during both experimental phases to report on these and related problems (Finn, 2001). Both financial reward/status and status-only conditions achieved similar levels of customer service. In neither the financial/status reward condition nor the status-only condition did stores earn significantly different service scores based on input from the mystery shopper program as compared to stores in the control condition.

8. Boundary conditions and future research

As with most studies, this study suffers from a number of limitations that should be acknowledged. It should be noted that we manipulated only one factor of sales contests, that is, the type of reward provided to winners. Researchers on organizational reward systems in general (e.g., Bartol & Locke, 2000; Lawler, 2000) and on sales contests in particular (e.g., Murphy & Dacin, 1998) have mentioned several additional factors that also influence participants' reactions to a sales contest. These additional factors (such as the actual amount of the financial reward component or the perceived fairness of the reward allocation process) might not only directly affect participants' behaviors but might also moderate the relationship between the reward offered and contest participants' behaviors (see e.g. Delfgaww, Dur, Sol, & Verbeke, 2013, for the moderating effect of gender). For instance, in agreement with the management of the participating firm, we decided to use a specific prize-spread as financial rewards. A different prize-spread (e.g., larger) might have led to different motivational effects potentially resulting in differences between the financial/status reward and the status-only reward conditions. Irlenbusch and Ruchala (2008), for example, suggest that the size of a bonus should be more substantial when it is added to an existing compensation system. Also, as the spread between prizes becomes wider, the moderating effects of leadership might get stronger. These questions should be tested in an experimental design that includes varying prize spreads. Findings of our field experiment should also be interpreted in the context of all contest and context elements. For instance, work in the participating stores

was characterized by pooled and sequential task interdependence. Other types of task interdependence might affect (further strengthen) the effects of a sales contest.

Second, we depended on self-ratings of leaders' behaviors. Self-ratings might not be the best way to gauge a manager's leadership style however (see Waldman et al., 2001). In the future both employees and managers should therefore rate leadership style, or managers should be observed, and their leadership style should be measured on the basis of behavioral indicators. Such an approach to measuring leadership styles might also address the issue of the relatively low reliability of the transactional leadership style.

Third, our field experiment took place in a relatively limited time frame. It is unknown whether the positive effects of sales contests (with and without financial rewards) would be sustained over longer periods of time (e.g., Lim et al., 2009). However, prolonged sales contests might provoke frustration and discourage teams because of their potential loss of position (negative externality) and the never-ending treadmill-like behaviors that competitions stimulate. In the long run, this might lead to decreased motivation and turnover. Also, some individuals are likely to be less competitive, while others might be overly competitive, which could lead to friction within teams (e.g., Brown et al., 1998).

Finally, we investigated the effects of the introduction of a contest (and the anticipation of potentially winning or losing the contest) on the performance of the participating teams up to the end of the experiment. However, the results of the contest (actual ranking) might also affect participants' future motivation and performance. In particular the psychological literature on feedback interventions (e.g., Kluger & DeNisi, 1996) provides further details on the contingencies and mechanisms governing how information on one's performance might influence subsequent motivation and performance. The relationship between performance feedback and future motivation is complex and should be also considered when planning the implementation of a contest. Clearly more (especially field) experimental research is needed to better understand (team) sales contests and their underlying mechanisms. We believe our study establishes a sound foundation for accounting for the effects of sales contests in team settings and how transformational leadership enhances these effects.

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