

# SYNERGY EFFECTS IN WORK TEAMS

Literature  
Review

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## Keywords

Work team

Synergy

Positive and negative effects of synergy

Group phenomena

## JEL Classification

D23, L29, M12

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## Abstract

*Today's organization increasingly utilizes all kind of teams in order to surpass their competitors through flexibility, adaptability and innovation, features which are seen to characterize the teams. For this purpose, the concept of synergy in teams' activity is often mentioned as the prime reason for which collective work is considered to be superior to individual work. But what exactly does it mean? The present paper aims to shed some light on the concept of synergy in work teams and its positive effects, namely, the social consequences of collective work such as social compensation, social indispensability, social comparison, social identity, but also its negative effects, such as free-riding, social loafing and sucker effect. These are important group phenomena that managers should be aware of because they have a major impact on team performance, and consequently, on organization performance.*

## 1. Introduction

The overall picture provided by the literature shows a widespread use of teams in organizations at different levels and in different situations, which is supported and confirmed by extensive background research results. However, despite all the research and the omnipresence of the teams, yet there is a real uncertainty about the usefulness of work teams and the extent to which the costs of the teams exceed or not their benefits. This uncertainty brings into focus the issue of team dynamics and functioning since in the social context of teamwork, in terms of mutual influence of members, but also in terms of common tasks that requires cooperation, emerge group phenomena that have important consequences for team performance. These consequences represent synergy effects as far as they may result in different outcomes compared to what could have been achieved in the absence of social interactions between members.

In team research these phenomena are studied from the perspective of group increased or decreased efforts made by team members and are found in the literature under different names, depending on the positive or negative effect attributed to them and also depending on the desired outcome in terms of performance, productivity or motivation.

## 2. Positive synergy effects

Positive forms of synergy in teams are caused by individual behaviors that lead to extra efforts exerted for completion of the team task and, therefore, have a positive influence on the overall team performance.

Behaviors in the form of additional efforts of team members are considered to result in *process gains* (Hackman, 1983), *performance gains* (van Dick, Tissington & Hertel, 2009), *productivity gains* (Steiner, 1972 as cited in Cur eu, 2007), *motivational gains* (Hüffmeier & Hertel, 2011). The most studied effects of this kind are based on: social compensation,

social indispensability, social comparison and social identity.

### *Social compensation*

At times, low contributions of group members can be compensated for by other members, who are more capable and/or exert extra effort. (Wittchen, Schlereth & Hertel, 2011)

Social compensation effects have been demonstrated in a series of experiments. In their research using students, Williams & Karau showed that when expected performance from colleagues was quite poor (either due to low specific competence or low motivation), team members were willing to compensate the poor performance of the partner by increasing their own efforts, even when the “extra-performance” was not easily identified or recognized by others. The increased performance as a result of compensation effort was approximately 40% higher than that of team in which there were no control conditions. However, a prerequisite for this increase in motivation was that the team result was highly valued by team members who have made compensation efforts. When the team result was only moderately valued, no motivation gain occurred. (Williams & Karau, 1991)

### *Social indispensability*

The effect of social indispensability is another mechanism that can trigger motivation gains in groups and has been demonstrated in the case of disjunctive tasks, in which potential productivity of the group is equal to the productivity of its least capable member (in other words, group performance is determined by the lowest individual performance). (Steiner, 1972 as cited in Gockel, Kerr, Seok & Harris, 2008)

In accordance with the requirements of such a task the less capable member tends to work harder in group in comparison with the situation when working alone.

This tendency is called *Köhler effect* in honor of its discoverer Otto Köhler, who studied the performance of members of a

rowing club in Berlin since 1920s. An explanation for this effect is that the least capable member feels particularly indispensable. (Williams & Karau, 1991)

In the case of conjunctive tasks, the performance of the least capable member is more instrumental for the success of the group. In addition, the weakest member could be concerned about impressions and assessments of more capable members regarding to him or her. Thus, the increased effort of the weakest member of the group performing a conjunctive task should be particularly instrumental both for obtaining group results as well as for personal results.

Currently, several studies have provided empirical evidence in line with this explanation, showing that, for example, increased motivation is significantly higher when the efforts of least capable member are highly indispensable (for example, in the case of the requirements of a conjunctive task) compared to the situation when they are not indispensable (for example, in the case of the requirements of an additive task). (Gockel et al., 2008)

Recent replications of this mechanism have revealed that the underlying psychological process is often based on feelings that the rest of the team highly depends on ones own personal contribution. In a series of experimental studies, team members showed increased performance levels of up to 50 percent during teamwork compared to working alone in order not to let their partners down. (Weber & Hertel, 2007)

Moreover, these additional efforts were correlated with increased enjoyment associated with the achievement of common task. It is obvious that such a motivation gain is stronger the more a person values the team and cares for its members. (van Dick et al., 2009)

#### *Social identity*

Team identity refers to individual perceptions that team members have in relation to the sense of unity and

membership in the group to which they belong.

Regarding the team social identity, Haslam suggests that an increase in group motivation gain occurs when social identity of the group members is dominant and the group norms require intense efforts. (Haslam, 2004 as cited in Gockel et al., 2008)

Social identity (or social identification) is relevant for group motivation due to depersonalization: when the individual identifies with the group, depersonalization occurs; the individual self is assimilated to a group specific prototype and the thoughts, feelings and behaviors specific to the group become thoughts, feelings and behaviors of individuals.

Thus, if the group prototype aims to achieve a certain level of performance, it becomes of the individual who is more motivated within a group than outside the group. Many lines of research show the importance of identification and group cohesion for motivating group members. (Karau & Williams, 1997)

Social identity theory has long argued that identification with a group is at the center of many important social behaviors.

In the current domain of group motivation, Haslam argues pertinently that there is only one way to achieve a high motivation in groups, namely, the enhancement of members' identification with the group. (Haslam, 2004 as cited in Gockel et al., 2008)

#### *Social comparison*

*Social comparison* may be approached at the individual level, on the one hand, and at the group level, on the other hand.

In work teams social comparison may increase team motivation in achieving high performance compared to individual work, although for a long term this increase may be accompanied by the risk of decrease in cohesion and trust.

However, particularly in the case of complex tasks requiring different expertise and complementary skills from the team

members, the presence and activity of experts stimulates others to overcome their limits of comfort and in the same time increase their ambition. Experts are models of professionalism to which the others have reference to and the experts determine the other team members to devote more effort to the team task.

On the other hand, it has been demonstrated empirically that members of a group increase their effort when competing with members of another group as compared to simple competition between individuals. This motivation gain during the competition between the groups seems to be due to various processes such as support from colleagues, members of the group, social identification and social responsibility towards the group. (Hüffmeier & Hertel, 2011)

### 3. Negative synergy effects

Over time there were identified and studied some group phenomena that led to decreased effort of team members exerted in achievement of team task. This decrease in team member efforts resulted in a decrease of team overall performance.

The behaviors that indicate diminishing efforts made by members in task achievement are referred to as *process losses* (Hackman, 1983), *productivity losses* (Steiner, 1972 as cited in Cur eu, 2007), *motivational losses* (Hüffmeier & Hertel, 2011; Lount & Phillips, 2007). The most intensively investigated phenomena of such kind are *free-riding effect*, *sucker effect* and *social loafing*.

#### *Free-riding effect*

Many studies on group performance and individual contributions make reference to the research of Maximilien Ringelmann, a French agricultural engineer. Ringelmann (1913), as cited in Karau & Williams (1993), found that having group members work together on a task (e.g., pulling a rope) actually results in significantly less effort than when individual members are acting alone. According to Ringelmann (1913), group

members tend to rely on their co-workers or co-members to furnish the desired effort required for a common task. (Karau & Williams, 1993)

The phenomenon of *free-riding* occurs because team members believe that their personal efforts are not actually necessary as far as the team will achieve its objectives relying on the work of other members. Such behavior is rational when team members' perception is correct and personal contribution is not really necessary. However, if this perception is incorrect, and their individual contribution is actually important, the phenomenon of *free-riding* is detrimental not only because is missing the effort of members that exhibit this phenomenon, but it also has negative effects on the motivation of other team members.

#### *Sucker effect*

The *sucker effect* describes an individual's response to the observation that the other team members seem to manifest the phenomenon of *free-riding*. Consequently, the individual will reduce his or her effort because he or she does not want to be exploited. (van Dick et al., 2009) In other words, the *sucker effect* occurs when people perceive that they are doing more than their fair share of the group's work; one way to reduce the injustice of such a situation is to reduce their own level of effort.

It has been demonstrated empirically that the sucker effect occurs toward outgroup teammates (not toward ingroup teammates) and is more pronounced in individuals high in equity sensitivity than in individuals low in equity sensitivity. (Hütter & Diehl, 2011)

#### *Social loafing*

The phenomenon which mostly drew scholars' attention is *social loafing*. This is a phenomenon where workers exhibit a decrease in individual effort when performing in groups as compared to when they perform independently.

This problem occurs because team members believe that the effort involved

and their contributions to collective work can not be identified. Also, this decrease is in addition to losses attributable to faulty coordination of group efforts. (Latané et al., 1979)

Research shows that the effects of this phenomenon are quite robust and lead to teams' underperformance, which translates into substantial decrease in productivity. (West et al., 2004)

Even though in the literature *free-riding* and *social loafing* phenomena is hard to distinguish, the key difference between them is that in the first case the individual has little or no contribution to task achievement because its contribution is not essential for success, while in the second case, the individual reduces his or her effort compared to the level that he or she could reach, knowing that it would be impossible for an outside observer to evaluate this reduction. (Kishore, 2006)

#### 4. Discussion

In social psychology group phenomena focuses mainly on the motivations underpinning the manifestation of certain individual behaviors in the context of the group. From a management perspective, especially important are the consequences of these phenomena on the performance achieved at team level, and primarily the decrease or increase in individual performance in the case of complex tasks that require the contribution of all team members.

The leaders and managers from organizations that decide to use work teams in order to gain benefit from their advantages (flexibility, adaptability, creativity, innovation) must consider the likelihood of such phenomena to occur and must seek to encourage behaviors that can lead to positive synergy effects and prevent behaviors indicate negative synergy effects.

Thus, they could promote a strong identification with the group as well as loyalty to the organization and to the values and goals which they pursue by

showing specific transformational leadership behaviors. (Liu & Phillips, 2011)

Furthermore, specific transformational leadership behaviors, such as idealized influence and inspirational motivation (Strang, 2005) will determine as well the increased manifestation of social indispensability and social compensation whereas the group well-being is placed above the personal interest of any member.

In addition, the presence of experts in work teams can trigger additional efforts from the other team members if and insofar as it generates a constructive competitive climate.

On the other hand, managers should differentiate between the negative consequences of *free-riding* and *social loafing* phenomena because avoiding them require different measures: in the case of *free-riding* effect is crucial to underline the importance of each individual effort to team success, and in the case of *social loafing*, each individual contribution must be observed and appraised in order to stimulate team members to do their best. In doing so, managers will also prevent the manifestation of *sucker effect*, and on the whole, they will reduce potential process losses due to these negative group phenomena.

The existence of conditions required for positive synergy effects can lead to the reduction of the negative synergy effects, but that does not mean they can not co-exist, and the overall result can be a synergy neutral or a mediocre performance.

Therefore, in order to intensify the positive synergy effects, managers must look for specific ways to reduce the negative synergy effects, primarily through a clear and well founded reward system, either competitive or collaborative depending on the nature of common task that must be carried out and the workload involved.

## 5. Conclusions

Work teams are suitable when organizations have to cope with complex or very large projects that no individual and no function can lead effectively. Teams may also be appropriate if the expected value of a collective decision or a group result exceeds the cost of using teams. (Trent, 2003)

To the extent that individual behaviors showing process losses, respectively negative synergistic effects, represent the additional cost of using teams, the higher expected value from the joint effort of the team members consist of behaviors denoting process gains, respectively positive synergy effects. Thus, team effectiveness can be assessed in terms of frequency of individual behaviors denoting process gains and behaviors that show process losses and the positive difference between them is reflected in the increasing of team performance.

Thus, to achieve the expected synergy effects, managers should ensure first of all that the task appointed to the team is sufficiently complex to be adequate for joint effort, but at the same time can be observed and rewarded the contribution of each member whereas in the current economic environment highly motivated and successful teams are the landmarks for successful organizations.

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