

# 17 Volunteer Organizations: Motivating with Awards

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## CHAPTER OUTLINE

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<b>17.1 INTRODUCTION</b> 276	<b>17.3.6 Business</b> 280
<b>17.2 ORGANIZATIONAL FORMS</b> 276	<b>17.3.7 The Voluntary and Humanitarian Sector</b> 280
17.2.1 For-Profit Firms 276	<b>17.3.8 Characteristics of Awards</b> 281
17.2.2 Voluntary Organizations 277	<b>17.3.9 Differences between Awards and Monetary Incentives</b> 281
17.2.3 Similarities 277	
<b>17.3 AWARDS AS MOTIVATION</b> 279	<b>17.4 CONDITIONS FOR SUCCESSFULLY GIVING AWARDS TO VOLUNTEERS</b> 282
17.3.1 Ubiquity of Awards 279	
17.3.2 State Orders 279	<b>17.5 EFFECTS OF AWARDS ON PERFORMANCE</b> 284
17.3.3 Arts and Media 279	
17.3.4 Sports 279	<b>17.6 SUMMARY</b> 285
17.3.5 Academia 280	

## LEARNING OUTCOMES

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**BY THE END OF THIS CHAPTER YOU SHOULD BE ABLE TO:**

1. Comprehend the nature, origins, and scope of awards.
2. Understand in what way and to what extent award recipients are motivated.
3. Identify why awards are of particular importance in volunteer organizations.

## 17.1 INTRODUCTION

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This chapter deals with a largely neglected issue in the social sciences. While awards exist in all forms of society, in all sectors and in all ages, economists and other social scientists have largely neglected to study them. Our contribution seeks to establish awards as a valuable additional incentive instrument for volunteers. Awards have distinctive features setting them apart from monetary or material rewards, on the one hand, and pure praise, on the other.

After distinguishing between motivational issues in for-profits compared to non-profits, we show that both forms of organization face similar challenges with respect to incentivizing workers (Section 17.2). We discuss the various areas in which awards have been used and consider their distinctive characteristics (Section 17.3). Section 17.4 analyses conditions for successfully bestowing awards. Section 17.5 discusses the empirical evidence available so far on the effects of awards on performance, and Section 17.6 presents the conclusion.

## 17.2 ORGANIZATIONAL FORMS

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### 17.2.1 *For-Profit Firms*

Voluntary organizations and for-profit firms are commonly conceived of as polar opposites along a continuum of organizational forms. Corporations hire and bind employees with a formal contract in which the tasks to be performed are exactly specified, and the compensation is precisely determined so that the value of the firm is maximized. Principal-Agent Theory (Holmström, 1979; Jensen & Meckling, 1976; Ross, 1973) acknowledges that it is rarely possible to fully specify the tasks expected from employees because it is in most cases impossible to fully anticipate the performance needed in the future. Moreover, it is often impossible to monitor to what extent employees fulfil the requirements. Based on these restrictions with respect to the formulation of employment contracts, it has been concluded that mechanisms have to be introduced that align the interests of the owners of the firm (the shareholders, as principals) with those of the employees (the agents).

Pay-for-performance has been suggested as an effective means for bringing the divergent interests of the two groups together. This idea rests on the fundamental micro-economic assumption that people are solely motivated by extrinsic incentives. Their behaviour is taken to be entirely determined by monetary considerations, i.e., the incentive provided by the wages to be received. If the contract is not well fulfilled, negative sanctions including dismissal or legal sanctions may be enforced.

Pay-for-performance has, however, led to severe negative consequences in the economy. It has been overlooked that some employees, in particular, managers, have to some extent been able to determine the criteria relevant to receive a bonus. They have also been able to manipulate the performance measurement so that they meet the criteria. As a result, the income of managers has virtually exploded, and the distribution of income has been strongly tilted in favour of high-income recipients (Bebchuk & Fried, 2009). The fact that in most Western countries the rich have

become much richer, while the incomes of the middle and lower classes have stagnated, has been the subject of much political and social concern (e.g. Piketty, 2014).

## **17.2.2 Voluntary Organizations**

Individuals working voluntarily and without payment in an organization with a humanitarian or other social goal are usually not subject to formal enforcement mechanisms. Though it might be legally possible to hold volunteers accountable if they have signed a contract, volunteer organizations are most reluctant to apply negative sanctions as this is inconsistent with their goals. They are rightly concerned that if they use force, they will lose many, if not most of their volunteers. People's intent to engage in a social activity is predominantly based on intrinsic motivations. They are willing to work for free because they want to do something useful for society, in accordance with the values they hold dear. Volunteering also raises their self-esteem. Compared to these intrinsic motivations, extrinsic ones such as learning new tasks, gaining social esteem, or furthering a specific career orientation play a small role (see e.g., Oostlander et al., 2012, p. 26).

A major challenge for organizations working with volunteers is to uphold the retention rate over an extended period of time. Many volunteers commit themselves only for a rather short time. A survey among Swiss institutions reveals that 60% have been active between 0 and 5 years, and only 7% have been active for 15 years and longer. Moreover, they have spent relatively few hours as volunteers. 83% work between 0 and 5 hours per week, and only 3% work more than 10 hours (Oostlander et al., 2012, p. 9). In many organizations depending on voluntary work, it has become increasingly difficult to motivate volunteers to stay. Thus, for example, Wikipedia faces increasing difficulties in retaining editors. A study in 2009 found that 60% of registered editors never completed another edit after their first 24 hours (Panciera, Halfaker, & Terveen, 2009). The community of editors behind Wikipedia has been steadily shrinking after having reached a peak in 2007 (Halfaker, Geiger, Morgan, & Riedl, 2013).

## **17.2.3 Similarities**

The previous sections have argued that there are fundamental differences between for-profit-firms and voluntary organizations. However, on closer inspection, the differences are quite small, and in some respects even disappear. Organizations in both sectors have to motivate individuals to go beyond the call of duty.

It has increasingly been realized that corporations cannot easily motivate their employees by applying extrinsic incentives only. Intrinsic motivation – which is at the heart of voluntary organizations – plays a significant role also in firms working in a strict market environment. A firm's management has to rely on intrinsic motivation in areas where formal contracts and monitoring are difficult, impossible, or too costly to apply. There is extensive empirical evidence that one of the most important resources of firms, creativity, crucially depends on employees having an intrinsic interest in the work they do (Amabile, 1997). The literature on crowding-out effects has firmly established that monetary incentives as well as the threat of negative sanctions under

relevant conditions undermine intrinsic motivation (for psychological evidence, see Deci, Koestner, & Ryan, 1999); the concept was introduced into economics and management theory by Bénabou and Tirole (2003), Frey (1997), and Frey and Jegen (2001).

The fact that intrinsic motivation is relevant both for voluntary organizations and for-profit-firms moves them closer together. The psychological determinants of intrinsic motivation, in particular, self-determination and autonomy, become more important compared to extrinsic incentives such as performance pay, other types of bonuses, and negative sanctions in the form of threat of dismissal.

Both types of institutions have to take into consideration the following aspects related to the instruments used to reach their goals:

- *Monetary incentives play a limited role.* Neither of the two types of institution can reach their goals relying solely on such extrinsic incentives. This insight deviates fundamentally from standard economics claiming that it is always possible to induce people by money, the only condition being that the monetary incentive is high enough.
- *An attempt to substitute pay for intrinsic motivation backfires.* Indeed, the higher the monetary compensation is, the lower is intrinsic motivation, which is required for a creative organization and economy.
- *Intrinsic motivation can be maintained and raised by acknowledging that one of the most important, if not the most important, motivator for people is social recognition.* Income is, of course, also relevant; but it is subject to decreasing marginal returns. Once a reasonable income level has been reached, income loses its attraction compared to the need for appreciation. What is considered a 'reasonable' real disposable income depends on circumstances, such as family size. Even more important is the social environment, i.e., the personal comparisons undertaken with referent peers. People tend to compare themselves to individuals and families with a higher income level, which continually pushes up the income level taken to be acceptable. Extensive research on happiness suggests that increases in income have a rather short-lived effect on subjective well-being (see e.g., Easterlin, 2001; Frey, 2008; Frey & Stutzer, 2002a, 2002b; Layard, 2011).
- *Praise addresses people's desire for recognition,* provided it is honest. It has the disadvantage that its effect evaporates rather quickly and also praise may not be given too often.
- *Giving awards is an effective way to cater for people's desire to be appreciated.* Awards are always given in a public ceremony, which makes the act known to peers and family whose judgement is particularly valuable. Orders, crosses, medals, decorations, trophies, prizes, and other honours are designed to raise the intrinsic motivation of the recipients.

At first sight, for-profit institutions seem to basically differ from volunteer institutions with respect to the incentive systems they use. We have shown that there are more similarities between them than one would expect. In particular, the central role of intrinsic motivation for performance and how it can be crowded out by external interventions makes it important to carefully search for alternatives to monetary incentives. The next sections deal more fully with awards as motivators and supporters of intrinsic motivation.

## 17.3 AWARDS AS MOTIVATION

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### 17.3.1 *Ubiquity of Awards*

Historically, the use of awards is intimately related to monarchic systems. However, even staunch republics have from early on relied on orders to reward merit. Up to this day awards have remained ubiquitous both in monarchies and in republics.

### 17.3.2 *State Orders*

The French Republic hands out the highly valued *Légion d'honneur*, which ranges from the *Chevalier* up to the *Grand Croix*. Napoléon Bonaparte founded it when he was First Consul, and later extended it when he became Emperor. The *Légion d'honneur* served as the model for many other modern orders of merit, which are often subdivided into similar classes.

Today, the best-known order probably is the Order of the Garter. It was founded in 1348 and is given as the British sovereign's personal gift. The United Kingdom has many other orders ceremonially bequeathed by the Queen. In most cases, however, it is the British government who decides who is honoured.

Not only monarchs and governments bestow awards. Non-profit organizations hand out a large number of honours, too. In the arts and media, sports, religion, the voluntary sector, and academia, awards are most prominent. More surprisingly, even the for-profit sector, which is supposedly only geared to increasing financial gain, sports an astonishing number and diversity of honours.

### 17.3.3 *Arts and Media*

The Academy Awards (the Oscars) and the prizes given at the film festivals in Cannes, Venice, Locarno, or Berlin, feature many different categories to recognize persons involved in the movie industry. The Emmy Awards honour outstanding achievement in television, and the Grammy Awards are given for artistic significance in the field of recording in the United States. There are several major literary prizes handed out in various countries around the globe, such as the Pulitzer Prize, the British Man Booker Prize or France's *Prix Goncourt*, and, of course, the Nobel Prize in Literature.

### 17.3.4 *Sports*

At regular intervals, the titles Olympic or World Champion, as well as national, regional, and city champions, are awarded. In chess, there are International Masters (IM) and Grand Masters (GM). Athletes get the honour of being elected Sports Personality of the Year and are admitted into one of the many halls of fame. In soccer, the FIFA accords Orders of Merit to honour particularly successful players. At world championships, not only is the winning team awarded a golden trophy; specific

players are also singled out for their special performance, being made Man of the Match or given the Golden Ball, Golden Boot, or Golden Glove (all of which are sponsored by private firms).

### **17.3.5 Academia**

Universities hand out the titles of honorary doctor or senator, and professional scientific associations award an enormous number of medals and prizes. The best known are certainly the Nobel Prizes and the Fields Medal in mathematics, the pinnacle of the academic honour system. Moreover, there is a complicated system of titles (not always connected to functions), such as that of lecturer, reader, assistant professor, associate professor (with and without tenure), full professor, named professor, university professor, distinguished professor, and senior professor.

Many prestigious fellowships exist in academies of science, some of which also allow for the use of post-nominal letters as they are known from state orders. Examples are Fellow of the Royal Society (FRS), founded in 1660, and Fellow of the American Academy of Arts and Sciences, founded in 1780. Finally, there is a flood of best paper awards handed out at conferences and by journals. Academia is, next to the military and the arts, one of the domains with most awards.

### **17.3.6 Business**

Titles are very important, even if they are at times little related to functions, such as vice-president, senior vice-president, or first senior vice-president. The number of titles of Chief Officers has virtually exploded. There is a CEO (Chief Executive Officer), a COO (Chief Operating Officer), a CFO (Chief Financial Officer), and many other variants. Firms also commend their own employees for being Salesman of the Week or Employee of the Month. The media actively engage in this activity, for instance, by regularly choosing the Manager of the Month, of the Year, or even of the Century. In a somewhat similar manner, non-profit organizations devoted to business issues equally make an effort to yield influence by bestowing awards. The World Economic Forum, for example, appoints young people it considers to be representative of contemporary leadership to its club of Young Global Leaders.

### **17.3.7 The Voluntary and Humanitarian Sector**

Non-profit organizations bequeath many different awards; indeed it is often their main way of expressing recognition and gratitude to their workers. The International Committee of the Red Cross, for instance, bestows the Florence Nightingale Medal on nurses for 'exceptional courage and devotion'. At a more local level, voluntary organizations such as the fire fighters recognize their members' courage and engagement with many different forms of honours, which are mostly based on tenure or courageous deeds in the face of danger. Volunteer fire departments are the prevalent organizational form in which awards play a major role. These awards are given by non-state entities such as the Austrian Federal Fire Service Association, which

has eight different awards, including a Grand Cross of Merit and a Ring of Honour. Finally, award schemes are also used in service clubs such as the Rotary or the Lions, which constitute yet another form of organization active in the humanitarian sector.

This section has illustrated the ubiquity of awards in history as well as in today's world, including in domains that at a first glance seem to be solely governed by money.

### 17.3.8 Characteristics of Awards

Awards create social value with regard to two different aspects:

- Awards provide *hedonic benefits* to the winners who feel recognized and honoured. Awards raise a person's subjective well-being. This positive effect extends not only to individual winners but also to members of organizations and inhabitants of cities receiving awards. But awards may also produce negative external effects on the people who had hoped to win an award but failed to do so. In this case, awards can reduce satisfaction.
- Awards can be used for instrumental purposes. The givers are able to raise the *performance of their organization* by inducing the necessary changes in the behaviour of employees trying to win the award. Persons not winning an expected award may hope to get the award in the future and therefore put in the effort desired by the giver. Moreover, the award may reinforce important norms, such as helpfulness, and signal what kind of behaviour is deemed honourable. Thus, even persons who do not win an award may be positively influenced in their behaviour and follow the role models created with the award. However, awards may also backfire when disgruntled non-recipients reduce their work effort, or even resort to sabotage.

### 17.3.9 Differences between Awards and Monetary Incentives

Prizes, or awards, have distinctive advantages over monetary compensation in several respects:

- *Awards are always given in public and often attract media attention.* They have greater visibility than bonuses and other monetary rewards. In most corporations employees are prohibited from revealing their incomes and the bonuses they have received. Recognizing a person is better accomplished by handing out awards than by transferring money to a bank account.
- *Awards can be bequeathed for broad achievements and the performance they honour need only be vaguely specified.* In contrast, pay-for-performance requires that performance can be defined *ex ante* and measured *ex post*.
- *Awards strengthen employees' commitment to the organization honouring them.* The intrinsic motivation to perform well and in the interest of the employer is strengthened. In contrast, when an attempt is made to measure performance by pay, this intrinsic work motivation may well be crowded out. All that

matters is to reach the criteria in order to get the bonus promised, while the content of work becomes secondary.

- *Awards establish a bond of loyalty between the givers and recipients.* This element of trust refers to both sides. In market settings, there is no such requirement of loyalty.
- *Awards can be used to structure and shape a field.* In the reasons given for bequeathing an award, as well as in the ceremony accompanying the award's conferral, the givers communicate what is important to them, what should be achieved, and how this should be done.
- *Awards are a low cost way to honour persons as well as organizations.* The costs most often consist only of a piece of ribbon given at an award ceremony.
- *Awards are not subject to taxation.* In contrast, monetary bonuses and other material rewards, including fringe benefits (e.g., expensive company cars or luxurious apartments), are taxed.
- *Bequeathing awards provides private benefits to the decision-makers in the award giving institutions.* The media and the social attention gained raise their status in society, making them important people. In the case of famous recipients, award givers may share in their glory.

The reasons given indicate that awards have indeed quite different characteristics from monetary incentives. If wisely used, awards can motivate persons to perform well in tasks which are difficult, or even impossible, to address by offering money. This applies in particular to organizations based on voluntary work for which awards in many respects are almost ideal. However, as is the case with all instruments designed to motivate, it is crucial to apply them in an appropriate way.

## 17.4 CONDITIONS FOR SUCCESSFULLY GIVING AWARDS TO VOLUNTEERS

Awards need to be applied in a careful way to raise the motivation of volunteers. Wrongly and carelessly applied, they may even backfire, undermining the intrinsic motivation of the persons engaging in voluntary work.

There are six important considerations to be observed.

1. Awards are a suitable motivator when the tasks to be fulfilled cannot be exactly defined and much must be left to the volunteers themselves. A pertinent example is care for the elderly and sick, whose needs greatly differ from each other, not least due to idiosyncratic personality traits. The volunteer in charge must be given sufficient discretion to help in an appropriate way. Bureaucratic rules are inimical to the task. Awards are also suitable when the goals of an organization are inconsistent with the use of money. Most people would, for instance, consider it as immoral if priests were paid a bonus for each person becoming a member of their church. Similarly, most patients would find it inadmissible if their



physician performed an operation on them solely because of the income increase achieved.

2. The award giver must make a great effort to recognize the specific motivation and contribution of an awardee. This requires a good knowledge of the persons singled out to receive an award; it does not suffice to speak about the work performed in general terms.
3. Awards are usually given to individual persons; in rare cases also to teams and organizations as a whole (Frey & Gallus, 2015). Other persons in the same work group, or performing similar tasks elsewhere, may get angry if they do not also receive an award. One might expect that the non-winners would create an atmosphere of dissatisfaction in a work group or even the organization as a whole, reducing the quality of performance, and in the extreme case, leading to sabotage. In order to minimize such results, the award giver can make it clear that the person awarded stands for a whole team, and that he or she represents the other members. Such procedures may even lead others to be proud about the award conferral. Our research suggests that such feelings of jealousy do not usually occur, and that handing out awards to particular people rarely leads to negative reactions (Neckermann, Cueni, & Frey, 2014; Neckermann & Frey, 2013).
4. Awards must be kept scarce. If they are handed out in great numbers, they are no longer taken seriously by both recipients and the public. This is easier said than done. The leaders of an organization have an incentive to hand out awards because it is a low cost way to motivate people. The constitution of many orders therefore limits the number of recipients, but in actual fact these limitations are rarely observed. The Legion d'honneur provides an example. There are not supposed to be more than 1,250 Commandeurs and 250 Grands officiers. In actual fact, however, in 2010, there were 3,009 Commandeurs and 314 Grands officiers.
5. Awards are most effective if they come as a surprise. This is at least partly the case when the award giver has discretionary power over whom to honour. In contrast, other awards come as a normal addition to the monetary compensation (for the distinction between discretionary and confirmatory awards, see Gallus & Frey, 2017). British diplomats in important positions can safely expect to receive an order, normally the Order of St. Michael and St. George, going with the attribute Sir or Dame. Purely confirmatory awards have a weaker effect on motivation than discretionary awards.
6. The award givers must make an effort not to give awards to persons undeserving of this honour. Two cases can be distinguished. Either the persons awarded behaved badly in the past, or they may do so in the future. Other award recipients may be ashamed of being associated with such people and might send back their own award. To honour such undeserving people strongly reduces the reputation of the award and of the award giver.

The conditions for awards to be successful are quite stringent. The requirements present a challenge to the managers of all organizations, and in particular to the leaders of voluntary organizations.

## 17.5 EFFECTS OF AWARDS ON PERFORMANCE

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Many observers, most prominently academic economists committed to standard neo-classical economics (Mankiw, 2015; Mas-Colell, Whinston, & Green, 1995), would doubt whether awards have any effect on subsequent performance. They are at best ready to accept that the recipients of awards experience joy, but would affirm that the effect on performance is negligible and transient. Recent research on the effects of awards in a few cases supports this notion, but in many other cases it has been shown that awards do indeed raise performance over an extended period of time.

A study by Malmendier and Tate (2009), for instance, reaches the unexpected result that CEOs who are made ‘Best Managers’ or receive other coveted titles by the business press thereafter exert less effort for their firm. They start spending their time on image boosting activities such as writing books, while still demanding higher compensation. The awards apparently interfere with the principal–agent relationship and are shown to harm the respective firms’ performance (see also Wade, Porac, Pollock, & Graffin, 2006).

In our own research on awards in academia, however, we find positive effects on the desired performance dimensions. The American Economic Association regularly honours ‘that American economist under the age of forty who is judged to have made the most significant contribution to economic thought and knowledge’ with the prestigious John Bates Clark Medal. The medal was awarded biannually from 1947 to 2009 and annually ever since. A considerable number of its winners have subsequently been awarded the Nobel Prize (12 out of 37). Using the synthetic control method to construct a control group, we find that five years after award receipt, medallists have published 13% more quality weighted publications compared to the counterfactual scenario of no award receipt. By then, the number of citations to papers they had published before the award has increased by 50% compared to the counterfactual (Chan, Frey, Gallus, & Torgler, 2014). Our analysis of the much-appreciated Fellowship of the Econometric Society yields similar results. We see considerably higher productivity (proxied by weighted publications) and attention (citations) for the award recipients’ work (for a contrasting result focusing on a special case, see Borjas & Doran, 2013).

Other studies of ours more directly consider the motivational effects of awards on performance, ruling out the possibility that award recipients’ performance is simply increased by external factors (e.g., more and better co-authors; in line with Merton’s (1968) Matthew Effect). Neckermann, Cueni, and Frey (2014) studied an award given to employees in a call centre for their social activities, such as helping a colleague. This award, accompanied by a sum of \$150, is found to increase performance also on core duties, which is not included in the award conditions.

One of the few studies analysing the causal effects of awards on motivation in the voluntary sector looks at purely symbolic awards given to Wikipedia editors (Gallus, 2016). The study focuses on the declining newcomer retention rates and asks whether awards can be usefully applied to help ease this problem. The author implemented an award scheme with reputable Wikipedia editors. Each month, 150 newcomers were given the symbolic award (i.e., it was posted on their talk page) and their names were included on the monthly list of award winners displayed on the official award page. The field experiment shows that such awards, with no material or career-related

benefit, have a substantive and statistically highly significant effect on performance. The award increased the volunteer retention rate by no less than 25% in the following month. It also raised its recipients' willingness to engage in behind-the-scenes community work, such as discussing content. Overall, these results show that awards can play an important role in settings where material incentives are of no avail.

## 17.6 SUMMARY

Voluntary organizations either cannot or do not want to force workers to continue working for them. Under these conditions other instruments beyond money or binding contracts must be sought to bind volunteers to an organization and keep their motivation high. We have argued that awards have many features that help in reaching that goal. Awards are quite distinct from praise and from monetary incentives and are particularly suited to organizations relying on volunteers. We have emphasized that there are stringent requirements to meet so that awards motivate volunteers to perform. Raising volunteers' intrinsic motivation by honouring them with awards is no easy task. The six conditions for awards to be successful present a challenge to the leaders of voluntary organizations; but it should be a welcome challenge in view of the great opportunities that award conferrals offer.

## REVIEW QUESTIONS

1. What are the major differences between monetary incentives and awards?
2. In what way can awards be used in the for-profit sector?
3. What are the major advantages of using awards in the voluntary sector?
4. What is the overall outcome of the existing empirical literature on the effects of awards on performance?

## REFERENCES

- Amabile, T. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review*, 40, 39–58.
- Bebchuk, L. A., & Fried, J. M. (2009). *Pay without performance: The unfulfilled promise of executive compensation*. Cambridge, MA: Harvard University Press.
- Bénabou, R., & Tirole, J. (2003). Intrinsic and extrinsic motivation. *Review of Economic Studies*, 70, 489–520.
- Borjas, G. J., & Doran, K. B. (2013). Prizes and productivity: how winning the Fields Medal affects scientific output. NBER Working Paper No. 19445. DOI: 10.3386/w19445
- Chan, H. F., Frey, B. S., Gallus, J., & Torgler, B. (2014). Academic honors and performance. *Labour Economics*, 31, 188–204.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125, 627–668.
- Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *Economic Journal*, 111, 465–484.

- Frey, B. S. (1997). *Not just for the money: An economic theory of personal motivation*. Cheltenham: Edward Elgar Publishing.
- Frey, B. S. (2008). *Happiness: A revolution in economics*. Cambridge, MA: MIT Press.
- Frey, B. S., & Gallus, J. (2015). Awards as non-monetary incentives. *Evidence-based HRM*, 4(1), 81–90.
- Frey, B. S., & Jegen, R. (2001). Motivation crowding theory. *Journal of Economic Surveys*, 15, 589–611.
- Frey, B. S. & Stutzer, A. (2002a). *Happiness and economics: How the economy and institutions affect human well-being*. Princeton, NJ: Princeton University Press.
- Frey, B. S. & Stutzer, A. (2002b). What can economists learn from happiness research? *Journal of Economic Literature*, 40, 402–435.
- Gallus, J. (2016). Fostering public good contributions with symbolic awards: A large-scale natural field experiment at Wikipedia. *Management Science*, Article in Advance. <http://dx.doi.org/10.1287/mnsc.2016.2540>
- Gallus, J. & Frey, B. S. (2017). Awards as Strategic Signals. *Journal of Management Inquiry*, 26(1), 76–85.
- Halfaker, A., Geiger, R. S., Morgan, J. T., & Riedl, J. (2013). The rise and decline of an open collaboration system: How Wikipedia's reaction to popularity is causing its decline. *American Behavioral Scientist*, 20, 1–25.
- Holmström, B. (1979). Moral hazard and observability. *Bell Journal of Economics*, 10, 74–91.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305–360.
- Layard, R. (2011). *Happiness: Lessons from a new science* (2nd ed.). New York: Penguin.
- Malmendier, U., & Tate, G. (2009). Superstar CEOs. *Quarterly Journal of Economics*, 124, 1593–1638.
- Mankiw, G. N. (2015). *Principles of microeconomics* (7th ed.). Stamford, CT: Cengage Learning.
- Mas-Colell, A., Whinston, M. D. & Green, J. R. (1985). *Microeconomic theory*. Oxford: Oxford University Press.
- Merton, R. K. (1968). The Matthew effect in science. *Science*, 159, 56–63.
- Neckermann, S., Cueni, R., & Frey, B. S. (2014). Awards at work. *Labour Economics*, 31, 205–217.
- Neckermann, S., & Frey, B. S. (2013). And the winner is...? The motivating power of employee awards. *Journal of Socio-Economics*, 46, 66–77.
- Oostlander, J, van Schie, S., Ott, N., Güntert, S. T., & Wehner, T. (2012). Bericht zur Studie „Freiwillig 2011“. Mimeo, Zentrum für Organisations- und Arbeitswissenschaften, ETH-Zurich, 3 December.
- Panciera, K., Halfaker, A., & Terveen, L. (2009). Wikipedians are born, not made: A study of power editors on Wikipedia. *Proceedings of GROUP 2009*, 51–60. DOI: 10.1145/1531674.1531682
- Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.
- Ross, S. A. (1973). The economic theory of agency: The principal's problem. *American Economic Review*, 63, 134–139.
- Wade, J. B., Porac, J. F., Pollock, T., & Graffin, S. D. (2006). The burden of celebrity: The impact of CEO certification contests on CEO pay and performance. *Academy of Management Journal*, 49, 643–660.

## FURTHER READING

- Anheier, H. K. (2000). *Managing non-profit organisations: Towards a new approach*. London: Centre for Civil Society, London School of Economics and Political Science.
- Brennan, G., & Pettit, P. (2004). *The economy of esteem: An essay on civil and political society*. Oxford: Oxford University Press.
- Frey, B. S. (2005). Knight fever: towards an economics of awards. CESifo Working Paper No. 1468. <http://www.iew.uzh.ch/wp/iewwp239.pdf>.
- Frey, B. S., & Gallus, J. (2017). *Honours versus Money: The Economics of Awards*. Oxford: Oxford University Press.
- Powell, W. W., & Steinberg, R. (Eds.). (2006). *The nonprofit sector: A research handbook*. New Haven, CT: Yale University Press.