Jöran Beel

# **Project Team Rewards**
## Rewarding and Motivating your Project Team

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# About this Book

This book gives you a comprehensive introduction to rewards in general and project team rewards in particular. Motivation theories and their impact on designing an effective and efficient reward system are explained. Throughout the book six so-called 'reward questions' are considered that need to be answered for designing a reward system. These reward questions are: Rewarding or not rewarding? Whom to reward? What to reward? What kind of reward? How much reward? When to reward? In addition, impacts of variable factors that may influence the answers to the reward questions are identified and explained. Some of those factors are employee's age, the company's culture but also project characteristics such as the project's goal clarity, applied success criteria, project duration or member fluctuation.

After reading this book, you will not know the universally valid best reward practice that fits for every project team and every project. Such a best practice just does not exist in rewarding as also shown in the book. Instead, the book provides you with profound information that will help you developing your own good reward practice for your unique project and your unique project team. Finally, this will lead to higher project team members' motivation and therefore higher probability of project success.

Primarily, the book's target audience are project managers and line managers. Project managers shall be sensitised to the numerous aspects that need consideration for designing a reward system in general. Line managers shall be sensitised to the differences between line and project work and resulting differences in designing a reward system. In addition, this book is for interested students, professionals, and of course researchers in the field of (project team) rewards.

Please note, that this book originally was written as a Master's Thesis. Accordingly, you should not expect to read a 'normal' text book but a Master's Thesis. Please visit www.project-team-rewards.com for the author's contact details. Any comments on this book are most welcome.

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# About the Author

Jöran Beel is currently doing his PhD and works as a researcher for VLBA-Lab, a joint venture of SAP AG and Magdeburg University, Germany. He obtained an MSc in Business Information Systems at Magdeburg University, and an MSc in Project Management at Lancaster University Management School, UK. Jöran Beel has several years of work experience in project management. Among others he realised projects for Infineon Technologies, the German health insurance AOK, the International Organization for Standardization (ISO), and the ETH Zürich.

Jöran Beel published several research papers and his 2005 published book about Germany's new electronic passport 'ePass' became the standard reference on the highly discussed ePass in Germany. In 2003 Jöran Beel was invited by German's Federal Minister for Education and Research to present his research results in the field of telematics at the Hannover Messe. In addition, the quality of Jöran Beel's research has earned him awards from German's Chancellor Gerhard Schröder, the German Association of Electrical Engineers VDE, and others.

Further information about the author is available on his personal webpage www.beel.org.

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# Acknowledgement

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# 1. Introduction

Much has been written about rewarding line employees and much has been written about project management. However, a subject, which virtually nothing has been written about, is the question of how to reward project teams. This gap in the literature was uncovered by an initial literature review and was the stimulus for this thesis (Beel 2006).

The thesis' aim, therefore, was to close the identified gap by providing a holistic view on rewards for project teams. This was mainly accomplished by literature-based research. The current role and use of rewards for project teams in practice was the first area researched. Secondly, the differences between line work and project work and how this could affect the design of rewards was investigated. The analysis focused on the special characteristics that projects usually have such as limited duration and high uncertainty of goals and processes to reach the goals. Finally, twelve identified project characteristics were analysed regarding their effects on designing an effective reward system. The results were verified by additional analyses of case studies.

The thesis' target audience are project managers, human resource managers and line managers. The overall thesis' aim is to sensitise project managers to the complexity of rewards since project management literature paints a superficial and simplified picture of rewards. Human resource and line managers shall be sensitised to the special project characteristics that require consideration since these aspects are widely ignored in the general reward literature. This will help to increase project success and, finally, organisational success. However, this thesis is the first academic work dealing with rewards for project teams in detail[1]. It should be seen as the first step in closing the identified gap. The thesis provides ideas and possible answers, supported by research, but the thesis also gives space for further discussions and research.

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[1] To the best of the author's knowledge and research

The structure of this thesis is as follows. *Chapter 1* (p. i) is the introduction and provides an overview of the thesis. The research problem and three research questions are stated in *Chapter 2* (p. 3). *Chapter 3* (p. 5) is a literature review of general reward and project management literature. In the literature review, the formerly identified gap between those two literature types is investigated. In addition, different perspectives in the reward community are highlighted that are relevant for project team rewards and built the base for this thesis' research. *Chapter 4* (p. 37) discusses the research methods that were used to answer the research questions. In *Chapter 5 (*p. 43)*,* the literature-based research results, which form the answers to the research questions, are provided. *Chapter 6* (p. 59) presents the results from case study analyses that approve the results from the fifth chapter. Finally, *Chapter 7* (p. 63) presents a summary of this thesis.

# 2. Research Problem

A preliminary literature review for this thesis had revealed a gap between general reward literature and project management literature regarding the question of how to reward project teams (Beel 2006). The initial investigation of the literature had revealed that reward literature covers rewards in line management from many perspectives and in detail. In addition, rewards for special groups such as sales staff or (top) managers are considered in depth. On the other hand, project management literature focuses on many aspects in project management but covers rewards only superficially, if at all. The identified gap describes the fact that rewards for project teams are widely ignored from both types of literature.

The identification of the gap has lead to three research questions that were researched for this thesis in order to close the gap:

1. What is the current role and use of rewards in project teams? For the answer, see *5.1.Current Role and Use of Rewards in Project Teams* (p. 44).

2. To what extent could the development of a 'project team reward model' increase project team motivation and project success? For the answer, see *5.2. The Need for a Project Team Reward Model* (p. 46).

3. What could a 'project team reward model' look like? For the answer, see *5.3 Project Characteristics' Impact on the Reward Answers* (p. 50).

No distinction is made between human resource management, psychological and sociological literature. It is all combined under the term *reward literature*. This is sufficient since no relevant differences exist regarding the purpose of this thesis. Literature with a general project management focus is referred to as *project management literature*. If the term *literature* is used, both reward and project management literature is meant.

# 3. Literature Review

This literature review provides a thematically ordered and deep analysis of different topics that were considered important to understand the relationship between rewards and a project team's motivation. First, some basic information about rewards is provided and three different perspectives introduced that exist in the reward literature. These three perspectives are then discussed in detail in the second to fourth section. This includes an analysis of motivation theories that play an important role in rewarding employees. The fifth section covers different aspects of rewards in project management. Finally, a summary and evaluation is provided.

## 3.1. Reward Basics

| Table 1: Reward Aims |
|---|
| Reward people for the value they create (Armstrong & Murlis 2004) |
| Support the development of a performance culture (Armstrong & Murlis 2004) |
| Help to make people committed and engaged (Armstrong & Murlis 2004) |
| Quality improvement (Tinnirello 2001) |
| Time and cost reduction (Tinnirello 2001) |
| Improved morale (Tinnirello 2001) |
| Increase team-work (Tinnirello 2001) |
| Attract and retain high-quality people (Armstrong 2002) |
| Motivate people (Armstrong 2002) |
| Help to communicate the company's values, performance, standards and expectations (Armstrong 2002) |
| Increase job satisfaction (Armstrong 2002) |
| Encourage behaviour that contributes to the organisational objectives (Armstrong 2002) |
| Underpin organisational change programmes (Armstrong 2002) |
| Provide value for money (Armstrong 2002) |

Employees often receive rewards in addition to their base salary depending on their achieved results, performance, competence, or skill acquisition[2]. Rewards have many aims as illustrated in *Table 1*. Among others they shall reduce time, and cost and improve quality (Tinnirello 2001); they shall reward people for the value they created (Armstrong & Murlis 2004) and they shall help communicate the company's values and expectations (Armstrong 2002). Since rewards mean additional costs to the organisation, the overall aim is providing "value for money" and contributing to organisational success (Armstrong 2002:14). In the case of project management, it was concluded, rewards shall provide value for money to the project and contribute to project success.

Rewards cannot directly affect success. The direct affect of rewards is on employees' motivation. Various definitions of motivation exist. For this thesis, employees' motivation is seen as the employees' desire to work and perform well in order to contribute to organisational or project success[3]. Two types of motivation exist: Intrinsic and extrinsic motivation. Intrinsic motivation is "self-generated" and means employees are motivated to

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[2] Detailed numbers of how many employees get rewards vary. Some statistics state 11% (WERS in Wright 2004), some 43% (IPD in Wright 2004) and some 60.5% (The IRS Employment Review in Armstrong 2002)

[3] The definition is derived from Beardwell et al. (2004), Armstrong (2002), Torrington et al. (2002) and Robinson in Rehu et al. (2005a).

work because of the work (Armstrong 2002:56). Extrinsic motivation is generated by external stimulus such as rewards (Armstrong 2002).

**Figure 1: Rewards -> Motivation -> Performance -> Success**

Rewards ➡ Motivation ➡ Performance ➡ Success
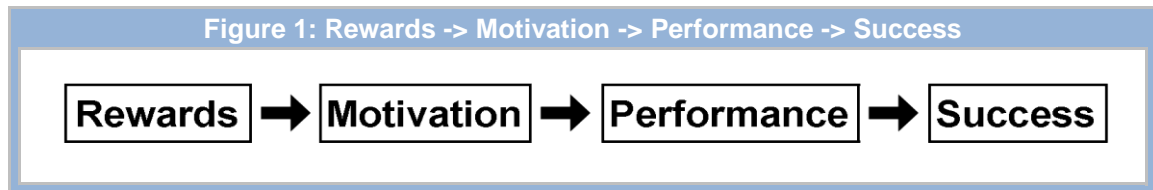
Employees' motivation directly affects their performance. The higher the employees' performance, the more likely is project or organisational success. This relationship is illustrated in *Figure 1* and is widely accepted in the literature (e.g. Arthur 2001, Armstrong & Murlis 2004, Wilson 2003, and Rosenbloom 2001). While it is widely accepted *that* these four factors are linked, debate exists over *how* they are linked. This is particularly true for the relationship between rewards and motivation.

| Figure 2: Three Perspectives on Rewards | | |
| --- | --- | --- |
| **Extreme Reward Opponents** | **Modest Reward Proponents** | **Extreme Reward Proponents** |
| Rewards are not effective under any circumstances | Rewards may be effective but depend on the circumstances | Rewards are effective whatever the circumstances are |

Three perspectives were identified in the literature about how rewards affect motivation and hence reward practice (see *Figure 2* for illustration). First, 'extreme' opponents of rewards argue that rewards negatively affect employees' motivation under any circumstances. Accordingly, the extreme reward opponents completely refuse the use of rewards. In contrast the 'extreme' proponents of rewards argue, rewards positively affect employees' motivation under any circumstances. Accordingly, they advocate the use of one universal reward style and propose a best practice approach. Finally, 'modest' reward proponents argue that the rewards' effect on employees' motivation may be both, positive or negative. The effect depends on some variable factors that lead to different "good practices" in rewarding but no "universally best practice" (Armstrong & Murlis 2004:xi).

For the thesis' research, it was of major importance to identify which perspective is correct. If rewards were not effective at all, there was no need to use rewards and hence there would have been no need for further research in that field. In contrast, if one universal reward strategy was always effective, no need had existed to analyse rewards for project teams. The right reward strategy for project teams would be the same as for any employee. Only if the modest reward proponents were right, rewards for project teams might differ from rewards for line employees.

| Table 2: Six Reward Questions and Possible Answers | |
| --- | --- |
| 1 | Reward Decision: Rewarding or Not Rewarding? |
| | Yes / No |
| 2 | Reward Target: Whom to Reward? |
| | a) Individuals / Group / Group and Individuals / Group and Top Performer |
| | b) Managers / White Collar Workers / Blue Collar Workers /… |
| 3 | Reward Objective: What to Reward? |
| | Results / Performance / Competence / Skills |
| 4 | Reward Type: What Kind of Reward? |
| | Incentives / Recognition |
| 5 | Reward Extend: How Much Rewards? |
| | 20% / 15% / 10% / … of the base salary |
| 6 | Reward Time: When and How Often to Reward? |
| | Once a year / Once a month / … |

Whether rewards are effective or not is only one question literature is concerned with. *Table* 2 lists five further questions and possible answers that are important to the reward proponents and that were identified from the literature review[4]. The six questions are referenced to as *reward questions* in this thesis. Possible answers are referred to as *reward answers*.

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[4] Some administrational aspects cannot be assigned to these six questions: for instance, the question of how to implement a reward system, how often to maintain it, or who within the organisation should finally have the reward power. However, these aspects are not relevant for the basic idea and understanding of rewards.

## 3.2. Perspective One: Extreme Reward Opponents

Extreme reward opponents such as Alfie Kohn (1991a+b, 1993a+b, 1998, 2002) refuse the use of rewards completely. Accordingly, they are only concerned with the first reward question. The remaining five reward questions are irrelevant to them since rewards should not be used at all. The opponents' main argument is that rewards do not motivate employees. The argument is based on a so-called "corruption effect" of extrinsic motivators such as rewards (Deci 1975 in Kunz & Pfaff 2002:276). The corruption effect describes that providing extrinsic motivators to employees automatically decreases their intrinsic motivation to work. The corruption effect is supposed to be that strong, that the overall motivation is lower as if no rewards were provided. Hence, employers should solely focus on increasing the employees' intrinsic motivation (Kohn 2002). This statement is supported by "two dozen studies" showing that people work better without rewards (Kohn 1993b:11).

**Figure 3: "Get the Bonus"**
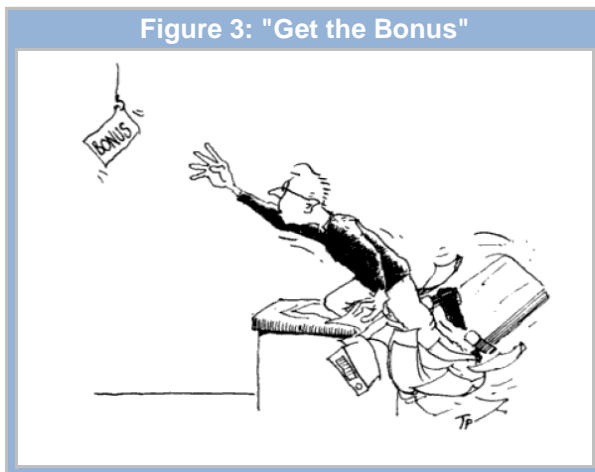


According to Sprenger (2002) people getting rewards, tend to focus only on getting the reward and not doing the task itself. This means, people will not ask themselves 'how can I do the task as good as possible?', they will ask 'how can I get the reward?'. In theory the answer to the latter question is 'by doing the task as good as possible'. In practice the answer is 'by giving my assessor the perception I did the task as good as possible' which finally often means, the task is not done as good as it could have been done. The picture was adopted from Sprenger (2002:95)

The opponents' argument is supported by Herzberg's two-factor theory (Herzberg 1968). Herzberg's two-factor theory states that money does not motivate employees but only satisfies them (see *Appendix IV: Herzberg's Two-Factor Theory*, p. 92, for more details). Consequently, employees are dissatisfied if they get low wages but still may have a high motivation to work if the intrinsic motivators such as responsibility or achievement are high. In contrast, employees are satisfied if wages are high but may be still not motivated to work if the intrinsic motivators are absent.

| Table 3: Reward Pros and Cons | |
|---|---|
| **Opponents** | **Proponents** |
| Rewards decrease intrinsic motivation and are therefore counterproductive ("corruption effect") | Corruption costs are a hypothetical concept and not proven by empirical research |
| | Rewards undermine intrinsic motivation only when rewards are applied to activities that people would engage in without rewards |
| Rewards decrease creativity | Rewards can create creativity if creativity is rewarded |
| Studies prove that rewards do not work (at least in the long term and also often in short term) | Research shows that reward systems can work and money does motivate (also in long-term) |
| People do not want incentives | People feel it is fair if they get more when they do more |
| Work Environment helps to satisfy needs | Money helps satisfying needs |
| Rewards may create winners but where winners are, loser exist, too | Positive performance feedback can counteract losing a reward |
| Rewards only motivate people to get the reward, not to do the work | Rewards make people do things that they wouldn't normaly do |
| Rewards make people take less risks and therefore prevent innovations | Incentives increase personal costs for risks and increase safety which may be beneficial |
| Rewards' positive effects are only very short term | Rewards are flexible |
| | Intrinsic motivation is difficult to change and therefore inflexible |
| Rewards only buy compliance but no real commitment | Rewards help to communicate the company's values, performance, standards, and expectations |
| Rewards ignore reasons are and function as a substitute for good leadership/management | Studies show that rewards have no negative effect on continuous motivation |
| Intrinsic rewards motivate much deeper and inherently | Rewards are immediate in impact |
| | Intrinsic motivation is difficult to create |
| | Intrinsic motivation can lead to unwanted actions |
| | Intrinsic motivation becomes less if the same activity is repeated several times |
| If at all, rewards can make people create more of something, but on the cost of quality | Rewards make people focusing on what is important (quality, time, safety, team work, skills acquisition) |
| Rewards make people feel controlled | Rewards create a sense of ownership |
| Rewards rupture relations | Money makes people feel they are valued |

Arguments from Kohn (1991a+b, 1993a+b, 1998, 2002), Baker et al (1988), Kunz & Pfaff (2002), Waite & Doe (2000), Leach (2002), Hope & Fraser (2003), Thamhain (2004), Banks (1997), Armstrong (2000, 2002), Kadefors (2004), Sprenger (2002), Burgess & Turner (2000), Filipczak (1993), Barkley & Saylor (2001), Naoum (2003), Drongelen & Fisscher (2003), Gale (2004), Poeten (2002), Appelbaum et al. (1999), Slavin (1991), Orr (2004), Bragg (2000), Langley (2005)

Some more arguments against rewards exist (see also *Table* 3). Sprenger (2002) argues rewards make people try to get the reward but not necessarily do the task (see *Figure 3*, p. 9, for illustration and explanation). Baker et al. (1988:597) emphasise that rewards are "too effective"; employees would only follow their job description but do nothing else if they get rewards (see also *Appendix VI: Example of Bad Reward Practice*, p. 94). Burgess & Turner (2000) state, rewards could only buy temporarily compliance but no real

commitment. Their research shows that real commitment can only exist if employees are intrinsically motivated.

In summary, the extreme reward opponents criticise the whole concept of extrinsic motivation and accordingly, rewards. They propose to focus on intrinsic motivation since intrinsic motivation is stronger and deeper. The arguments are supported by empirical research and Herzberg's theory. On the first glance, the arguments sound plausible, and the research looks respectable. However, there is reasonable criticism on this perspective as shown later in *3.4 Perspective Three: Modest Reward Proponents* (p. 13).

## *3.3. Perspective Two: Extreme Reward Proponents*

Extreme reward proponents answer the first reward question positively, without any restrictions (e.g. Bragg 2000, Lewis 2000, and Knight 2002). Their arguments directly contradict the arguments of the reward opponents (see *Table* 3, p. 10). As a main justification for their perspective, extreme reward proponents quote expectancy and reinforcement theories and sometimes Taylorism. All three theories are motivation theories but in contrast to Herzberg's theory, these three theories strongly support the use of rewards (for details on motivation theories see *Table 5*, p. 15, and *Table 6*, p. 17).

The remaining five reward questions are answered differently by the extreme reward proponents. For instance, the reward target (*whom to reward?*): Shirani et al. (1998) recommend always rewarding the team and each team member gets a proportion of the reward[5]. Cox & Tippet (2003) suggest always rewarding the individuals in the team. Sheridan (1996) proposes always rewarding the team *and* the individuals. Finally, Appelbaum et al. (1999) propose rewarding always the team and the top performers. Contradicting statements like that exist for each of the remaining reward questions.

Extreme reward proponents provide little evidence for their statements. Often their articles are published in magazine-like publications rather than peer-reviewed journals and sometimes they do not even provide a literature list. This is true, for instance, for Bragg (2000:38) who claims "[r]ewarding people is not rocket science" and an easy thing to do. Even if the statements are based on studies, the authors generalise from one specific situation to all possible situations. This becomes clear since so many contradicting statements exist. Overall, the extreme reward proponents' position looks simplistic, superficially and little convincing.

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[5] If the reward is a monetary reward, the proportion may be the same absolute amount of money for all members or relative to their base salary (Shirani et al. 1998).

## 3.4. Perspective Three: Modest Reward Proponents

The modest reward proponents argue that no "universally best practice" in rewarding exists (Armstrong & Murlis 2004:xi). They hold the view that all of the reward answers may be valid options depending on the circumstances (e.g. Deeprose 1994, McKeown 2002, and Wilson 2003). In contrast to the other two perspectives, the modest reward proponents consider more aspects in their arguments. They take into account more motivation theories and further factors that the two extreme reward sides ignore. This section analyses the perspective of the modest reward proponents in detail. First, the factors that influence the reward answers are analysed. Second, further motivation theories are covered. Then the six reward questions and possible answers are discussed. Finally, an evaluation and summary for all three perspectives is provided.

### 3.4.1. Internal and External Reward Factors

| Table 4: Factors Influencing the Reward Answers | |
|---|---|
| **Internal** | **Individual Factors** such as age, race, gender, background, education, and personality (Mansfield & Odeh 1991) |
| | **Team Factors** such as team size, team composition and team's stage of development (Parast & Adams 2004) |
| | **Task/Job Factors** such as skill variety, task identity, task significance, task autonomy, and task feedback (Hackman & Oldham 1976) |
| | **Organisational Factors** such as organisational culture, industry, strategy, consistency in rewarding, public or private sector, size, age, and expanding or not (Parast & Adams 2004, Armstrong & Murlis 2004, and Jenkins in Wright 2004) |
| | **Available Tools** such as performance appraisals, 360° feedback and automatic surveillance systems (Wilson 2003 and Torrington et al. 2002) |
| **External** | **Global Factors** such as pressure for leaner productions, and world economy (Armstrong 2002) |
| | **National Factors** such as taxes, minimum wages, inflation rates, education and skill shortage, and national culture (Armstrong 2002 and Rehu et al. 2005a) |

The structure of the internal and external reward factors was inspired by Adair's model of 'Action Centred Leadership' (in Mullins 2006:311).

The modest reward proponents' argument is that some variable factors influence the decision which reward answer is suitable in a certain situation. For this thesis, the identified factors were classified as *internal reward factors* and *external reward factors* (see *Table 4* for a list). Internal reward factors are in the direct sphere of influence of the organisation or its employees. External reward factors are not in the direct sphere of influence of the organisation or its employees. From the literature review, the internal reward factors

could further be divided into five categories (see *Table 4*). The external reward factors were divided into two categories (see *Table 4*). Each of the categories contains a number of factors influencing the right choice of the reward answers. For instance, the employees' age is an internal individual reward factor. The age influences the reward target: Older people are less likely to like team rewards and hence should be rewarded individually (DeMatteo 1997). Further influences of the internal and external reward factors are covered in the next sections.

The list of internal and external reward factors is not complete. Although the modest reward proponents propose the existence of influencing factors, it appears as if no one ever has tried to gather a complete list. All reviewed literature only considers some of the factors. No reason could be identified for this. However, the fact that there are some factors influencing the reward answers is sufficient for this thesis. The view, that some reward factors influence the reward answers indicates that special project characteristics might also influence the reward answers.

### 3.4.2. Motivation Theories

During the 20th century, different motivation theories originated focusing on individual's motivation. The theories were mostly developed by psychologists and are of a general nature. They are usually not specifically designed for the "world of work" or even rewarding employees (Furnham 1997:248). Academics and managers just apply the theories to employees' motivation and development of reward systems. This may lead to different interpretations and different opinions on how rewards influence employees' motivation (Furnham 1997).

Herzberg's two-factor theory, Taylorism, expectancy theories and reinforcement theories were already mentioned in the previous sections. Herzberg's theory, Taylorism, and reinforcement theories have in common that they claim to be valid under any circumstances and ignore employees' individuality. The ignorance of the individuality of employees is criticised by the modest reward proponents. An extensive amount of literature exists, dealing with individuals' personalities and characteristics. It is widely accepted that individuals are distinguished by their perceptions, needs, and values

(Mansfield & Odeh 1991). These differences explain why different people behave differently in the same situation (Deci 1992 and Parkins 1996). Modest reward proponents argue these differences also influence employees' reward preferences. Many of the motivation theories support this argument (see *Table 5,* p. 15, and *Table 6,* p. 17, for a complete overview of all theories).

| Table 5: Motivation Theories I | | |
|---|---|---|
| **Theory** | **Summary** | **Source(s)** |
| Taylorism | Developed by Taylor in 1911. Employees are seen as rational "human men" who only care about money. The work itself is not important. Accordingly rewarding (and punishing) is the best an employer can do. The concept is criticised but still (successfully) applied on simple piecework jobs in development countries or in call centres. | Armstrong (2002) Beardwell et al. (2004) Taylor (1911) Wright (2004) |
| Hawthorne Studies | Developed by Mayo 1933. The theory focuses not only on the economic needs such as money but on social needs too. Work has to be interesting and attractive to get high employee motivation. | Beardwell et al. 2004 |
| Hierarchy of Needs | Developed by Maslow 1943. Humans have 5 basic needs classified into two categories. Psychological Needs, Safety Needs and Social Needs are the Deficiency Needs. Esteem Needs and Self Actualisation are the Growth Needs. These needs are hierarchically ordered and the lowest need has to be completely satisfied before the next higher one can be satisfied etc. Most of the needs can be but not have to be satisfied by money. | Armstrong (2002) Furnham (1997) Maslow (1943) |
| ERG | Developed by Alderfer 1972. Similar to Maslow's Theory. Humans want to satisfy their three needs Existence (similar to psychological and safety needs), Relatedness (similar to social needs) and Growth (similar to self-actualisation and growth needs).The three needs do not have to be satisfied in a specific order. | Armstrong (2002) Furnham (1997) |
| Needs and Presses | Developed by Murray 1938. Humans have 20 different needs. These needs can support each other or conflict. That means be satisfying one need (e.g. affiliation) a conflict arise with another need (e.g. domination). | Furnham (1997) |
| McClelland's Need Theory | Developed by McClelland 1975. Humans have the three needs Achievement, Affiliation, and Power. Different individuals have different levels of these needs. Related to rewards the implication is that different people probably need different rewards. | Armstrong (2002) Rad & Levin (2003) |
| Two-factor Theory | Developed by Herzberg 1968. Six factors can motivate employees: 1. Achievement 2. Recognition 3. Work Itself 4. Responsibility 5. Advancement and 7. Growth. On the other hand so called hygiene factors can only make people satisfied but not motivated. These factors are 1. Company Policy and Administration 2. Supervision 3. Relationship with supervisor, 4. Work Conditions 5. Salary 6. Relationship with peers 7. Personal Life 8. Relationship with subordinates 9 Status and 10. Job Security. The theory is often cited by reward opponents but highly criticised from reward proponents. | Armstrong (2002) Beardwell et al. (2004) Furnham (1997) Herzberg (1968) Wright (2004) |

For instance, value theories explain that people value different things with a different weight. Some people value money higher, some lower. Equity theory explains that people have different perceptions of fairness. Some employees might perceive it as fair if all employees doing the same job get the same salary. Others might perceive it as fair if the better performing employees receive a bonus. Need theories consider that people have different levels of needs and these needs require satisfaction. Consequently, money is more or less important, depending on how suitable money is for satisfying the currently unsatisfied need.

Overall, motivation theories are complementary rather than contradicting. Authors such as Porter & Lawler (1968), Katzell & Thompson (1990) and recently Locke & Latham (2004) integrated most of the existing theories into single models of motivation. These models are comprehensive and plausible (see *Appendix II: Integrated Model of Work Motivation*, p. 87, for an example). Nevertheless, the fact that different integrated models exist, all with slight variations, indicates that a holistic view on motivation is complicated.

The only theories not included in any of the three integrated models are Taylorism and Herzberg's two-factor theory. Taylorism is criticised by both, extreme reward opponents and modest reward proponents as much too simplistic since it considers money as the one and only thing that can motivate employees (e.g. Kohn 1993a, Sprenger 2002, Arthur 2001, and Wilson 2003). Herzberg's theory is strongly criticised by the reward proponents. They claim the theory's empirical evidence is weak and often even wrong (e.g. Furnham 1997 and Opsahl & Dunnette in Armstrong & Murlis 2004). In addition, the theory ignores individuals' personalities, needs, values, and feelings. Armstrong & Murlis (2004:63) conclude, "Herzberg's two factor model does not […] provide a reliable basis for developing pay policies". Due to time limitations, this thesis' research could not investigate the validity of the studies supporting Herzberg's theory. However, the fact that the extreme reward opponents consider only one motivation theory without justifying why the others are widely ignored let the opponents' argument seem weak.

| Table 6: Motivation Theories II | | |
|---|---|---|
| **Theory** | **Summary** | **Source(s)** |
| Theory X and Theory Y | Developed by McGregor in 1957. There are two kinds of humans: *Type X* dislikes work inherently and has to be forced to work. *Type Y* likes work and actively seeks responsibility if the work conditions are right. The theory implies that rewards are only appropriate for type X employees. | Beardwell et al. (2004) |
| Self Efficacy | Developed by Albert Bandura. Persons with high self-efficacy will believe that they are able to achieve a goal and a linked reward. In this case, their motivation will be high. | Armstrong & Murlis (2004) |
| Equity Theories | Different theories exist that are concerned with employee's perception of fairness. If employees feel treated fairly, their motivation is high. Their perception of fairness develops from comparisons with other employees and past situations and depends on employees' individuality. In addition, reactions to perceived unfairness depend on individuality. Adams developed in 1965 the concept of distributive and procedural justice. Procedural justice describes if employees believe that the procedures for distributing rewards are fair. Distributive justice describes if the distribution actually is fair. | Armstrong (2002) Beardwell et al. (2004) Furnham (1997) Wright (2004) |
| Expectancy Theory (VIE Theory) | Motivation is the product of three factors. 1. Valance describes the value to achieve a goal (e.g. value of the reward). 2. Instrumentality describes the belief that one's performance will be rewarded. 3. Expectancy describes the belief that one's action will result in the desired outcome. In addition, the individual's ability and role perception are important. This theory highly supports the use of rewards. The higher the reward, the higher the value (Valance), the higher the motivation (if the other two factors are high as well). | Armstrong (2002) Furnham (1997) Wright (2004) Porter & Lawler in Armstrong (2002) Guest in Armstrong (2002) |
| Reinforcement Theories | The theory basically states that people try to avoid unpleasant consequences (punishment / negative reinforcement) and seek pleasant consequences (rewards / positive consequences). Hence, incentives and disincentives are proper tools to motivate employees. | Furnham (1997) Armstrong & Murlis (2004) |
| Goal Setting Theory | Developed by Latham and Locke. Depending on the source either in 1968 (according to Wright 2004), in 1979 (according to Armstrong 2002) or 1984 (according to Beardwell et al. 2004). The theory states that setting goals increases performance. The goals have to be SMART (Specific, Measurable, Achievable, Relevant, Timely) and the more difficult a goal the higher the performance (as long as the goal is achievable). | Armstrong (2002) Beardwell et al. (2004) Wright (2004) |
| Value Theories | Several Theories exist. The most popular is by Locke 1976. People value certain things and try to get these things. The basic principle is similar to need theories but directly explains people's desire for money. Although people do not have a direct need for money, they value money. Money satisfies people's needs in the same way (person A can buy as much food as person B can buy for the same amount of money) but people value this satisfaction different. | Furnham (1997) |

The following sections investigate the modest reward proponents' view and analyse by what factors the reward answers are influenced.

## 3.4.3. Reward Decision

This section analyses the reward decision, respectively the question 'rewarding or not rewarding?'.

Gale (2004) highlights the importance of both organisational and individual culture (later in terms of personality) as important factors to decide if to reward employees. As a higher entrepreneurial culture is developed, the more likely rewards will be used, while a bureaucratic culture demands a fixed salary, without rewards. Slavin (1991) argues, that task characteristics need consideration. Rewards were only necessary and beneficial if skill variety, task identity, task significance, task autonomy, and task feedback are low and hence the job is not intrinsically motivating. He provides a plausible example:

> *"I don't know many students who would put away their Nintendo games to do complex math problems, to write reports on the economy of Brazil, to write essays comparing Shakespeare and Molière, or to learn to use the subjunctive case in French. Students will productively fool around with science equipment or learn from visits to museums, and there is no reason to reward such intrinsically motivating activities."* (Slavin 1991:90)

Available tools for assessing employees may influence the reward decision in combination with the task characteristics (Torrington et al. 2002). For instance, simple tasks are easier to assess (Torrington et al. 2002). Sometimes the assessment even can be done by automatic surveillance systems. In contrast, complex and difficult tasks need highly skilled assessors who know how do apply and perform tools such as 360° feedbacks (McKeown 2002). Hence, the more certain a 'good' assessment is, the more likely rewards should be used (Armstrong & Murlis 2004)[6].

These findings contradict the extreme perspectives who claim that always one answer exists. In addition, the reward proponents (both, the modest and the extreme ones) criticise the strong focus on intrinsic motivation of the reward opponents. Winter (in Poeten 2002)

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[6] Based on equity theory, a good assessment is an assessment that is perceived fair by all stakeholders.

emphasises intrinsic motivation can only develop if both, goals and processes to reach the goals can be determined by an individual itself. This often is not the case for employees. Another criticism is that intrinsic motivation is difficult to change and hence not flexible. This may cause problems and even lead to counter-productive behaviour of employees (see *Appendix V: Intrinsic Motivation: Negative Example*, p. 93, for an example). Finally, intrinsic motivation decreases over time, if an employee has to do the same tasks repeatedly (Appelbaum et al. 1999).

## 3.4.4.  Reward Objective

The second reward question is the question of 'whom to reward?'. The question leads to two sub-questions. First, 'what type of employee is suitable for rewards?' and second 'whom to reward in group-work?[7]'.

Usually reward literature focuses on employees in general (e.g. Hiam 1999, Arthur 2001, and Wilson 2003). This implies that all employees are suitable for rewards. Some authors such as Armstrong (2002) emphasise that certain types of employees need special consideration. For instance, sales staff and top managers are particularly predestined for rewards due to the nature of their job (Armstrong 2002). In addition, this kind of staff tends to have a high entrepreneurial personality (Armstrong 2002). Armstrong (2002) also mentions that project teams need special consideration. However, he does not cover project team rewards any deeper. This is exemplary for all reward literature. A few authors mention that project team rewards should get special consideration (e.g. Rosenbloom 2001, Bruce 2005, and Wingfield & Berry 2001). However, *none* of the reviewed authors actually does so. The reason can only be speculated. Maybe the authors do not feel comfortable in researching project team rewards because they have little knowledge about project management. Maybe they think project management authors have already covered

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[7] Related to this question is the question if to provide organisational rewards such as gain or profit sharing. This question is not covered in this thesis since these types of reward have no particular relevance to project teams.

the topic. Maybe they think the audience is too small to put any effort in researching project team rewards.

As shown in *Table 2* (p. 7), there are different options on whom to reward in teamwork. *Table* 7 (p. 21) shows advantages and disadvantages of rewarding the team or individuals. The list makes it clear that there are good arguments for both, rewarding teams and rewarding individuals. The decision of whom to reward in teamwork is mainly influenced by the team characteristics: team composition, team size, and the team's stage of development (Parast & Adams 2004). For instance, a team composed of individualists is not suitable for team rewards (DeMatteo 1997). Small teams are more suitable for team rewards than big teams because in small teams the team reward is easier to distribute (Harrison 2002). Different rewards to support the team development are required, depending on the development stage a team currently is in (forming, storming, norming, performing, adjourning) (Coil and Frohman 1994 in Armstrong 2000). In addition, team members' age and organisational culture are of significant relevance. DeMatteo (1997) found out that older employees are less likely to like team rewards than younger employees are. He assumes this is because older employees tend to be more change resistant. According to Gale (2004), an organisation with a friendly and cooperative culture should prefer team-based rewards. An aggressive and very competitive culture demands individual rewards.

Problematic with these findings is that they all are vague, and focus on one factor only. For instance, there are no exact numbers from which age on employees do not like group rewards and how strong their resistance is. It is also not clear whom to reward in a team consisting of young and old employees. In addition, it is not clear what to do if two factors are contradicting. For instance whom to reward in a team consisting of old employees in a cooperative organisational culture. There probably cannot be any exact numbers because the basic idea of the modest reward proponents is that all individuals are different and therefore have different preferences about rewards. However, this makes finding a specific reward answer difficult.

| Table 7: Team vs. Individual Rewards | |
|---|---|
| **Team Pros / Individual Cons** | **Team Cons / Individual Pros** |
| Team rewards reinforces team work and co-operation | Team rewards may create/increase inter-group rivalry |
| Team rewards increases performance of low performers | Team rewards may cause high performers to adopt to the medium performance of the team |
| Team rewards encourage multi-skilling and hence flexible teams | Team rewards reduces organisational flexibility because people in good teams (with high rewards) do not want to change the teams while others in lower performing teams want to change |
| Team rewards communicate that team work is important to the company | Team rewards compels individuals to conform to oppressive group norms |
| Team rewards communicate what the overall objectives are | Team rewards may diminish the self-worth of individuals which would reduce performance in the long term |
| Team rewards Increases overall performance (and compensates free rider effects) | Team rewards promotes peer pressure which results in performance decreases and tensions |
| Team rewards encourage groups to improve the work system | Team rewards may conflict with strong individualists and cause problems and low performance |
| Team rewards emphasises a flatter and process-based organisation | Team rewards require a lot of trust which might not exist in new or temporarily teams |
| Team rewards act as a lever for cultural change | Team reward decrease motivation and performance if not all team members are used to team work |
| Team rewards makes employees focused on wider organisation | Team rewards neglect the fact that eventually motivation comes from the individuals and eventually it is the individual who performs |
| Team rewards encourage communication and information sharing | Distributing a team reward may cause feelings of unfairness |
| Team rewards require less time to give and less effort to measure performance then measuring all individuals' performance | Team rewards may increase social loafing and the free-rider effect |
| Team rewards may support the stages of team development (forming, storming, norming, performing, adjourning) | |

From Armstrong (2000+2002), Gibson & Cohen (2003), Wright (2004), Hertel et al. (2004), Torrington et al. 2002, Appelbaum et al. (1999), Hoffman & Rogelberg (1998), Hope & Fraser (2003), Parast & Adams (2004), Tuckman (in Huczynski & Buchanan 2001), Huczynski & Buchanan (2001), Mullins (2006), Ringelmann (in Furnham 1997)

## 3.4.5. Reward Target

Four main objectives exist that can be rewarded (Armstrong 2002). These are employees' results, performance, competence, and skills. The discussion about the reward target focuses on the influence of the task characteristics.

Results-based rewards mean payment by piecework. It is widely accepted by the modest reward proponents that payment by results can work for very simple and quantity focused jobs such as answering phones calls in call centres (e.g. Miller 1991, Ellemers et al. 2004, and Rosenbloom 2001).

Performance-based rewards are the most common type of rewards (IRS Employment Review 2001 in Armstrong 2002). Usually, certain objectives are agreed between employees and their superior and later the employees are assessed (Wilson 2003). Depending on the assessment, the employees get a reward, often in the form of a cash bonus. Performance-based rewards need good benchmarks that the actual performance can be measured against. Otherwise, employees will feel assessed unfairly (Wilson 2003).

Competence-based rewards focus on "the ability to perform" (Armstrong 2002:231). Competence is only measurable in qualitative terms and usually "hangs on the back of an existing [performance-based reward] system" (Sparrow 1996 in Armstrong 2002:297). The advantage is that long-term employee development is supported. On the other hand it is cost intensive and a danger exists that value for money is low (Arthur 2001). It is more suitable for quality focused work where the way something is done should be rewarded rather the results or actual performance. That means even if employees do not reach a goal or perform not as well as originally assumed they might still be rewarded if the assessment reveals that they brought out the best of the job.

Skill-based rewards support the development of skills. It makes sense when companies want flexible employees (Gibson & Cohen 2003). The use of skill-based rewards supports the long-term development of the employees and can be cost intensive. Skill-based rewards are suitable for qualitative jobs and are the contrast to result-based rewards.

## 3.4.6. Reward Type

The term *reward* functions as an "umbrella" (Filipczak 1993:20) for *incentives* and *recognition*. *Figure 4* (next page) provides a comparison between recognition and incentives and *Table 8* (next page) some examples. Incentives tend to be financial rewards given for reaching an agreed objective. Their purpose is to motivate employees

(Armstrong & Murlis 2004). Recognition tends to be a non-financial reward or financial reward with a rather symbolic character. It is given to employees spontaneously and the purpose is to appreciate the work that employees' did in the past. The exact distinction is often difficult (Filipczak 1993). Incentives become recognition in the moment they are given. Recognition may become motivational if employees expect to get the recognition.

**Figure 4: Recognition vs. Incentives**

| Recognition | | Incentive |
|---|---|---|
| Intangible | ⟷ | Tangible |
| Non-Financial | ⟷ | Financial |
| Low Cash Value | ⟷ | High Cash Value |
| Appreciative | ⟷ | Motivational |
| Spontaneous | ⟷ | Agreed |
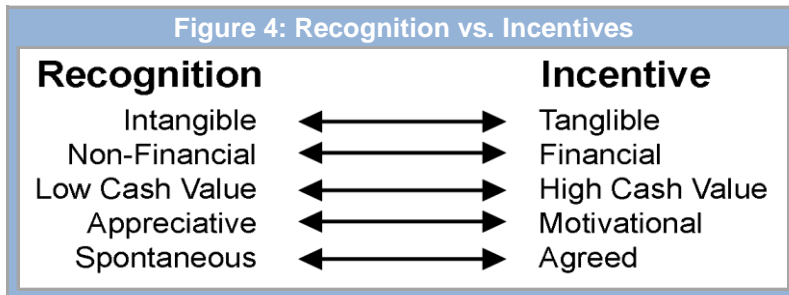
It is possible and often recommendable to give both, recognition and incentives to employees (Rosenbloom 2001). For instance, one major incentive could be promised for meeting an overall objective. Additional recognition could be given for meeting sub-goals and as impulses to keep the employees going.

**Table 8: Incentives and Recognition (Exmpl.)**

| Recognition | Incentives |
|---|---|
| Extra Holidays | Merit Pay Increase |
| Gifts (Dinners, Journeys, T-Shirts, etc.) | Profit Sharing |
| Verbal appreciation (in public or private) | Shares |
| Written appreciation (letter of commendation; company's newsletter, certificate) | Cash Bonus |

What exactly to give to the employees mainly depends on the employees' individual preferences (Rehu 2005a & 2005b). While many factors such as age or nationality influence the employees' preferences, gender has no impact according to Wolff et al. (2006). The strong influence of the individual preferences illustrates a dilemma in rewarding groups. If differences exist between the reward preferences of the employees, then it has to be compromised about the reward system. For some employees it might be the most motivating incentive to get a weekend trip to Paris with the entire team. Other team members might see it as disincentive to spend a weekend with the team. Again, the modest reward proponents cannot provide clear instructions on how to deal with this situation.

## 3.4.7. Reward Extent

The question of 'how much reward' in the sense of 'how much of the final salary should be variable?' is only relevant for incentives since recognition can be effective even with a very small cash-value (see previous section). Reward proponents agree that if an incentive should act as motivator it has to be significant (e.g. Armstrong 2000, Tinnirello 2001, and Harvard 2000). This can be explained by the expectancy theory, which states that an incentive has to be valuable enough to justify the effort (see *Table 5*, p. 15). In practice, rewards often are 2 or 3% of the base salary (Torrington et al. 2002). Torrington et al. (2002) state this is too little to motivate and too expensive for recognition. According to research, incentives need to be at least 5 to 7% of the yearly salary to be effective (Torrington et al. 2002). Lawler (in Armstrong 2000) suggests even 10 to 15% for excellent work. Aguanno (2003) adds that too small incentives do not motivate and might even be insulting. He continuous that too large rewards create jealousy and make receivers think they are better than they actually are.



Figure 5: Reward Utility vs. Quantity
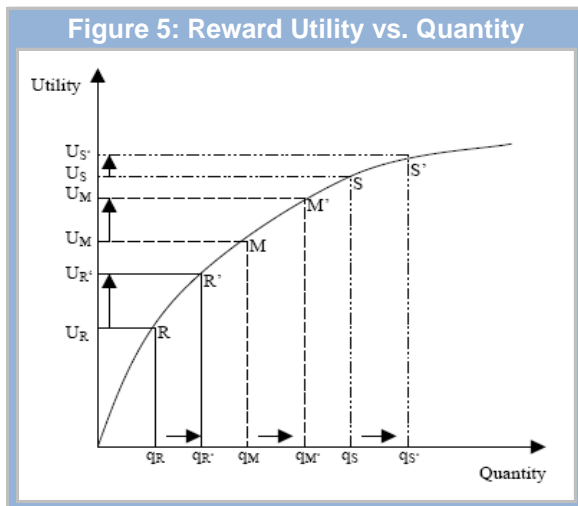
Adopted from Rehu et al. (2005a)

In general, a higher incentive leads to higher extrinsic motivation (Deci et al. 1974). Rehu et al. (2005a) agree but emphasise that the motivational increase becomes less with increasing rewards (see *Figure 5* for illustration and for an example *Appendix VII: Example of Reward Utility vs. Reward Quantity,* p. 95). They conclude a mix of different rewards may be more attractive than one big reward with the same total value.

If group rewards are given, it has to be asked how much of the rewards each member gets. According to Armstrong (2002), it is most common to give all members the same proportion. Alternatively, each member could get the same in terms of percentage of the base salary. Cox & Tippett (2003) suggests that team members should decide how to

divide team rewards. Aguanno (2003:23) quotes Gandz who introduced the "$POVM" rule which is related to equity theories and the perceived fairness of reward distribution:

> "[T]hose who got ONE dollar less than someone else are likely to be 'pissed off' by the fact that they got a dollar less, and those who got one dollar more are likely to be annoyed by the fact that they ONLY got one dollar more! It's how that that MARGINAL dollar is perceived that makes the difference. So [...] forget trying to make small dollar differences in rewards"

### 3.4.8. Reward Time

Gibson & Cohen (2003:123) emphasise that rewards should be given in a "timely fashion". Orr (2004) clarifies this statement by saying rewards should be given directly after a goal was reached. In normal line work, goals are agreed and assessed usually once a year. Accordingly, incentives are given once a year (Torrington et al. 2002). In contrast, recognition might be given more frequently to employees (Garg & Rastogi 2006). This reminds employees of the overall goal (and incentive) and brings positive change into employees' daily routine.

In general, reward literature does not focus very much on the question when and how often to reward. Few statements and no research evidence could be found on the exact impact of rewarding time and frequency on motivation. Nevertheless, there are differences and some types of employees are likely to get rewards more often. For instance, sales staff often gets rewards once a month (Cacioppe 1999). The reasons for this are their job characteristics and the available measurement tools. Since sales numbers can easily be measured, sales staff usually gets rewards once a month (Arthur 2001). Other tasks might be more difficult to measure and hence need more complex assessment methods such as 360° appraisals. In that case, superiors, subordinates, peers and the employee him/herself evaluate the performance. This takes considerably more time than an automatic surveillance system. Hence, rewards that require a time consuming assessment should be provided less frequently (e.g. once a year) than rewards that require a non-time consuming assessments (e.g. once a month). Hence, the less time consuming an assessment, the more often rewards may be provided.

## 3.4.9. Summary and Evaluation of the Third Perspective

The modest reward proponents engage deeply with the six reward questions and propose that all reward answers may be valid answers, depending on the variable reward factors. Their perspective is supported by empirical research and most motivation theories. They do not and cannot provide definite instructions how to answer the reward questions in a certain situation. Too many factors influence the reward answers. In addition, debates exist within the community what exactly the influencing reward factors are and when to choose which reward answer. Wright (2004) investigated many studies about performance related rewards. The studies provided contradicting results, which lead to contradicting arguments about the use of performance related rewards (see *Table 9*).

| Table 9: Performance Related Rewards (Pros and Cons) ||
| Pros | Cons |
| --- | --- |
| Motivates staff by providing a direct incentive | Demotivates staff and undermines morale |
| Rewards employees fairly and equitably | Relies on subjective and arbitrary measures |
| Provides a tangible means for recognising achievement | Contaminates the development aspects of appraisal |
| Delivers a strong message about performance imperative of the organisation | Used to reward favourites |
| Improves goal setting | Undermines performance if unattainable targets are set |
| Focuses employees on improvement and innovation | Devise and undermines co-operation with management |
| Rewards those who contribute most to the organisation | Does little to improve organisational efficiency |
| Bolsters commitment and loyalty | Raises expectations of constant pay-out |
| Helps retain valuable staff | Encourages employees to focus on short-term quantifiable results |
| Facilitates change in the organisation | May result in mismatch between individual and organisational performance |
| Helps identify poor performance | Undermines performance if unattainable targets are set |
| Can be self-financing | Little scope for meaningful awards in periods of low inflation |
|  | Relies to heavily on ill-equipped line managers |
|  | May prove discriminatory |
|  | Poor value for money |

Adopted from Performance Pay Guide 2002 in Wright (2004:120)

For this thesis, it was important to determine that one perspective exists (the perspective of the modest reward proponents) where different answers may be valid options. It was further of major importance to know if this perspective was the right one. The literature

review indicates it is. In contrast to the modest reward proponents, the extreme positions only consider a few motivation theories. They ignore the other theories that do not fit into their arguments and provide no justification for the ignorance. The modest reward proponents consider most of the motivation theories and justify the ignorance of Taylorism and Herzberg's two-factor theory. They provide a plausible and holistic perspective on rewards, supported by empirical research. This perspective is even not completely contradicting to the extreme positions since it includes them. The modest perspective acknowledges, that situations may exist in which rewards are not suitable. Furthermore, there exists evidence for both, situations in which rewards increased motivation and situations in which rewards did not increase motivation. Accordingly, something *must* exist which is responsible for the differences. Only the modest reward proponents' perspective can explain these differences. It was therefore concluded that the perspective of the modest reward proponents is the most suitable for explaining rewards.

## 3.5. Rewards in Project Management

In the previous section, it was concluded that the reward answers depend on the internal and external reward factors. This was important since it builds the base for assuming that rewards for project teams may differ from rewards for line teams. So far, the literature review has not mentioned project team rewards. Although reward literature sometimes mentions that rewarding project teams differs from rewarding line teams (e.g. Armstrong & Murlis 2004), the differences are not covered in detail.

This section discusses project management literature. During the review process, it was noticed by the author that different disciplines of project management are looking at rewards. Accordingly, this section first reviews general project management literature about rewarding team members. Second, literature about incentive contracting is reviewed. It follows a review of rewards in change management. Finally, it is reviewed in how far rewarding is considered as a project success factor.

### 3.5.1. Rewarding Project Team Members

The project management methodologies *Prince 2* (CCTA 1999), *APM Body of Knowledge* (APM 2000)[8], *V-Modell XT*[9] (BRD 2004) and The *Guide to the Project Management Body of Knowledge* (PMBOK) (PMI 2004) were reviewed according to their coverage of project team rewards. Despite the PMBOK, none of the methodologies considers rewards and motivation. *Prince 2* states that these topics "are well covered by existing and proven methods" without mentioning which ones these are (CCTA 1999:23). The other two methods provide no justification for leaving these topics out. Only the PMBOK is aware of the importance of rewarding project teams. It suggests creating a reward plan as part of the staff management plan (PMI 2004). It gives confusingly

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[8] A more recent version of the *APM Body of Knowledge* was published in January 2006. This version could not be researched because it was not available to the author. It might be that the new version includes rewards.

[9] The *V-Modell-XT* is a German project management methodology for IT projects. It was originally designed in 1986 and is compulsory for governmental IT projects but now is also used in the private sector.

information if behaviour and/or performance should be rewarded[10]. It states, "only desirable behaviour should be rewarded" (PMI 2004:214), and then recommends rewarding "based on the team's performance" (PMI 2004:218). Detailed information about rewarding projects teams and possible difficulties is missing.

| Table 10: Project Management Literature, Categorised | | | | | |
|---|---|---|---|---|---|
| | | Reward Target (Whom to reward?) | | | | |
| | | Team | Individual | Team & Individual | "It Depends" | No clear differentiation |
| **General Attitude** | **Throughout positive** | Kendrick (2004); Orr (2004) | Frigenti et al. (2002); Phillips et al. (2002) | Barkley & Saylor (2001); Cappels (2004); Crawford (2002) | -- | Anderson et al. (2004); Frame (2002 & 2003); Thomsett (2002); Tinnirello (1999); Wysocki (2003) |
| | **Bascially positive** | Heerkens (2002); Kerzner (2004) | -- | Aguanno (2003); Burnett (1998); Gibson & Cohen (2003); Gray & Larson (2002); Levine (2002); Rad & Levine (2003); Tinnirello (2001) | -- | APM (2002); Dobson (2003); Kerzner (2001a & 2003a): Newell & Grashina (2004) |
| | **Throughout negative** | Baker & Baker (2000 & 2003); Leach (2002) | | | | |
| | **No significant coverage of project team rewards** | Berkun (2005); Bower et al. (2002); Bradbary & Garrett (2005); Branconi & Loch (2004); Burgess & Turner (2000); Charvat (2003); Cooper at al. (2005); Dodin & Elimam (2001); Dunn (2001); Gale (2004); Gällstedt (2003); GPM (2005); Harbi (1998); Harvard (2000); Howes (2001); Kadefors (2003); Keegan & Hartog (2004); Kerzner (2001b); Mansfield & Odeh (1991); Martin & Tate (2001); Naoum (2003); Ng et al. (2004); Parker & Skitmore (2005); Schulte (2004); Schwindt (2005); Tampoe & Thurloway (1993); Teo et al. (2005); Thamhain (2004); Turner & Müller (2003); Turner & Simister (2001); Wysocki (2004) | | | | |

This table categorises 61 project management papers and textbooks. The literature is categorised according to its general attitude towards rewards and its answer to the reward target question (whom to reward).

General project management literature widely ignores rewards and is disappointing considering the depth and complexity of the reward literature. *Table 10* lists 61 researched textbooks and papers categorised according to its attitude towards rewards. The review

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[10] In the project management literature, authors usually call competence-based rewards behaviour-based rewards.

revealed that project team rewards are not covered in detail and often ignored completely in the project management literature. Almost none of the authors considered motivation theories and none considered factors influencing the reward answers. They all provide their opinion as granted. It was already shown in the previous section that this 'extreme' position is not suitable. In addition, most statements are of general nature such as "Teamwork should be cultivated by rewarding people" (Cappels 2004:24). Detailed information is missing. That is not surprising, because the authors seldom dedicate more than one or two paragraphs to project team rewards. Accordingly, there is not much space for explaining different answers and factors influencing these answers.

## 3.5.2. Incentive Contracting

Since general project management literature is not satisfying regarding project team rewards, related disciplines were investigated such as incentive contracting. In project management, incentive contracting is common and has been used for decades (Herten & Peeters 1986). In incentive contracting, positive (or negative) incentives are agreed upon for succeeding (or failing) to deliver a project according to specified objectives (Turner & Simister 2001). Usually these objectives are time, cost, and/or quality (Branconi & Loch 2004). In construction projects, safety might be an additional objective (Bubshait 2003). Depending on the incentive, the project's focus lies on the corresponding objectives which means that a time incentive usually leads to a faster delivery (Shr & Chen 2003). On the other hand, quality might suffer from time incentives (Herten & Peeters 1986).

Incentive contracting differs from rewarding employees in one matter significantly. Rewarding employees is about positive reinforcement and increasing performance. It is about how to get the best out of the employees. Incentive contracting is all about the distribution of risks (Ward et al. 1991). It is about consequences if the employees' performance was not good enough or if other circumstances lead to project failure. Therefore, incentive contracting tends to focus on penalties instead of positive reinforcement (Bubshait 2003). Nevertheless, it indicates that in project management, incentives for project teams could be linked to the common objectives time, cost, and quality.

### 3.5.3. Rewarding in Change Management

Every project brings a certain level of change to at least some of its stakeholders (Jaafari 2003). In contrast to the other project management literature, change management literature does consider rewards, particularly in relation with change resistance. Employee's resistance towards change is "natural" and part of every change process (Zaltman & Duncan 1977 in Bovey 2001:534).

| Table 11: Reasons for Change Resistance |
| --- |
| Change threatens the status quo |
| Change increases fear of real or imagined consequences |
| Change may threaten the way of how people make sense of the world |
| Change prompts people for self justification |
| Change brings people into a defence position |
| People may have resentments towards those leading the change |
| People may have doubts about their ability to perform |
| Change threatens the actual security feeling |
| Change may impact the current social relations |
| Personal costs for change might be very high |
| Cannibalisation costs might be high |
| Interests between management (who want the change) and employees might be different |

Adopted from Ford et al. (2002) and Val & Fuentes (2003)

To overcome change resistance, incentives are sometimes used (Singh & Shoura 2006). One might argue that overcoming change resistance with incentives ignores the reasons (Kohn 1993a). Generally, this is true and most authors agree that in change management the most important things are "feelings of inclusion and empowerment, and providing clear communication" (Michelman 2004:3). Anyway, whatever a change manager does, resistors always exist (Michelman 2004), and they might have good reasons (see *Table 11*). People affected by change often ask, "What is in for me?" and as *Table 11* shows, it might be that there is not very much (Michelman 2004:3). In those cases, when change brings real disadvantages, change management authors recommend the use of incentives in order to reinforce the change (e.g. Harvard 2003, Hiatt & Creasey 2003 and Singh & Shoura 2006).

The consideration of change brings a new aspect to rewarding employees that is usually not covered by reward literature. On first glance, the level of change could appear as another variable factor influencing the design of a reward system.

### *3.5.4.* **Rewarding as Project Success Factor**

*Figure 1* (p. 7) illustrates that reward literature considers employees' motivation and rewards as one factor influencing organisational success. Accordingly, it could be assumed that project team members' motivation and hence rewards are considered by project management literature as one influencing factor of project success. This is not the case.

No reviewed literature dealing with project success does consider rewards or team members' motivation as a success factor. Fortune & White (2006) analysed 63 papers and identified 27 critical success factors (for a list see *Appendix VIII: Critical Project Success Factors*, p. 96). None of the factors are related to team members' motivation or rewards. Interestingly, "skilled/suitably/qualified/sufficient staff" is identified as a success factor (Fortune & White 2006:55). In reward literature, it is widely recognised that even the highest skilled employees are inefficient if they are not motivated to use their skills (e.g. Armstrong 2002, Locke & Latham 2004, and Wilson 2003). Apparently, this is ignored in the project management literature. Another identified success factor is "Good performance by suppliers/contractors/consultants" (Fortune & White 2006:55). Surprisingly, team members' performance is not mentioned. In contrast, reward literature does recognise employees' performance as an important requirement for organisational success (see *Figure 1,* p. 7).

Bearing in mind that project management literature does not consider rewards or even employees' motivation as critical success factors it is not surprising that rewards are only covered superficially by the project management literature. However, there is little reason to assume that rewards and motivation are not critical for success in project management while they are for line work.

### *3.5.5.* **Summary and Evaluation of Rewards in Project Management**

Project management literature covers rewards only superficially, if at all. Rewards and employees' motivation are even not considered as critical success factors. The project management authors that do cover rewards mostly provide arguments similar to those of

the extreme reward proponents (see *3.3 Perspective Two: Extreme Reward Proponents*, p. 12). The statements are of general nature and evidence is mostly missing. Only the project management sub-disciplines incentive contracting and change management do consider rewards. However, in the best case the use of rewards in incentive contracting and change management can give *some* ideas how to reward project teams. It seems unlikely that there are no additional factors influencing the design of reward system in project management.

For instance, the PMI (2004) defines a project as "a temporary endeavor undertaken to create a unique product, service, or result". Lewis (2002) cites J. M. Juran who sees a project as "a problem scheduled for solution". Berkun (2005) adds that projects are usually undertaken for a certain client and highlights that projects are always done by project teams, not by individuals. Kerzner (2001a) points out that project teams are usually multi-functional and may be from different departments. In contrast to departments or line teams, project teams may not appear on organisational charts (Kerzner 2004).

These special characteristics affect some of the internal reward factors and it seems likely that they change the answer to the reward questions. For instance, projects usually provide a very clear goal. Considering the Goal Setting Theory (see *Table 5*, p. 15), this may increase intrinsic motivation and rewards might become less important or even unnecessary. On the other hand, projects are of a limited duration. Even reward opponents acknowledge that rewards may work in the short term (Kohn 1993a). Consequently, the use of rewards might be more advisable in projects than in long-term operational business.

The role of a project in the organisational context might affect the answer, whom to reward. The PMI (2004:28) identifies three different project structures: functional structure, matrix structure, and "projectized" respectively pure project structure. Depending on the structure, the way a project is done differs (see *Figure 6*, next page*)*. In a functional project team, where people never have worked together before and probably never will work together again, trust probably is rather low. In this case, team members should maybe receive rewards individually and not as a team. On the other hand, a seasoned and high performing project team consisting of highly skilled and excellent team workers is probably better motivated by team rewards.

| Organization Structure / Project Characteristics | Functional | Matrix | | | Projectized |
| --- | --- | --- | --- | --- | --- |
| | | **Weak Matrix** | **Balanced Matrix** | **Strong Matrix** | |
| Project Manager's Authority | Little or None | Limited | Low to Moderate | Moderate to High | High to Almost Total |
| Resource Availability | Little or None | Limited | Low to Moderate | Moderate to High | High to Almost Total |
| Who controls the project budget | Functional Manager | Functional Manager | Mixed | Project Manager | Project Manager |
| Project Manager's Role | Part-time | Part-time | Full-time | Full-time | Full-time |
| Project Management Administrative Staff | Part-time | Part-time | Part-time | Full-time | Full-time |

Figure 6: The Project in the Organisational Context

Adopted from PMI (2004:28)

Due to the special project characteristics, several project management tools have developed over the last decades. Earned Value, Critical Chain, Critical Path, PERT, Gantt charts, and Work Breakdown Structures are probably the most popular tools used in project management. It seems likely that at least some of these tools would influence the design of a project reward system. For instance, Earned Value would change the way performance is measured. That would change the perception of fairness and that would result in a change of motivation, positive or negative.

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## 3.6. Summary and Evaluation

Six reward questions were identified by the literature review. These reward questions are:

1. *Rewarding or not rewarding?*

2. *Whom to reward?*

3. *What to reward?*

4. *What kind of reward?*

5. *How much reward?*

6. *When to reward?*

In the literature, three perspectives exist how to answer the questions. One perspective claims, that rewards are ineffective under any circumstances. Therefore, only the first question needs an answer and the answer is not to reward. The second perspective contrasts the first perspective. It argues rewards are always effective and there exists one best practice approach of how to reward employees whatever the circumstances are. These two perspectives were classified as two 'extremes' since they both claim to be absolute. The third perspective proposes a 'moderate' approach. The argument of the third perspective advocates that certain variable factors influence the right reward answers. These factors were classified as internal and external reward factors in this thesis. It was shown that the two extreme perspectives only provide an incomplete picture of rewards and cannot explain all incidents in the reward practice. Only the modest perspective provides a holistic view on rewards. It can be used to explain all occurring incidents in the reward practice. Therefore, it was concluded that the third perspective is the most valid approach for rewarding employees.

Two basic assumptions were made before starting this thesis. First, rewards may be effective[11] and second, rewards for project teams need to differ from rewards for line employees to be as effective as possible[12]. The moderate perspective that was identified supports these assumptions. Since project work differs from line work to some extent, it seems likely that at least some reward factors differ and therefore so should the reward answers. Surprisingly, both project management and reward literature do not cover project team rewards in detail. This gap has already been noticed in an initial literature review (Beel 2006) and was confirmed by this investigation of the literature. Accordingly, further research was necessary to close the gap and identify possible impacts of the project's characteristics on the reward answers.

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[11] If rewards could not be effective, there would be no need to use rewards and hence no need to do research in that field.

[12] Otherwise, existing knowledge from rewarding line teams could directly be applied to rewarding project teams.

# 4. Research Design

A gap exist between reward literature and project management literature what has led to three research questions that were subject of this thesis' research (see also *2. Research* Problem, p. 3):

1. *What is the current role and use of rewards in project teams?*

2. *To what extent could the development of a 'project team reward model' increase project team motivation and project success?*

3. *What could a 'project team reward model' look like?*

The research questions' answers are provided in the next chapter (see *5. Results,* p. 43). This chapter describes and analyses the applied research methodologies that were used, namely literature-based research and analysis of existing case studies.

The research process can be divided into three main stages. During the first stage, different ideas for the thesis were collected. After some basic research, rewards for project teams seemed to be the most attractive topic to the author because it was a new field where little was written about. The second stage, which lasted 24 days, delineates the creation of a thesis proposal (Beel 2006). The proposal's main aim was to provide a first overview of the research topic and develop the research questions. The third stage describes the following 3 and half months. During that time the main research was performed and the thesis written. During the second and third stage, the author of the thesis had frequent contact with his academic tutors who provided advice on the research process, about every one or two weeks. The research itself was performed solely by the author of the thesis.

The research in the third stage was performed in several steps. First, the utilised sources (see *Table 12*, p. 39, for a list) were checked for general literature about rewards, project management and rewards in project management. The search concentrated on a few keywords: project management, project teams, rewards, incentives, recognition. Combinations such as 'project team rewards' and variations such as 'rewarding' or

'reward' instead of 'rewards' also were considered. Wherever possible, wildcards and logical operators were used for the search[13]. The author then selected documents that seemed relevant to him either by the title or after reading the abstract. In addition, project management literature and reward literature were selected from the library by skimming through the literature's table of content. The found literature then was analysed, notes were taken, and first ideas were captured. Then, additional research was performed, searching more specifically on certain topics. Again, notes were taken and ideas captured. In a third round, more research was performed to support or reject the ideas that had been built. Finally, the thesis was written. Overall, 522 documents were researched to answer the research questions[14]. From these, 208 are directly referenced in this thesis (see *8. Literature*, p. 65)[15].

This thesis' research was mainly based on academic literature such as academic books and journal articles. Occasionally magazine articles, professional books, and websites were considered. A search for relevant newspaper articles in the database *Factiva* brought no relevant results. The focus was on academic literature because this type of literature provides the most reliable data (Stewart & Kamins 1993). Within the academic literature, no distinction was made between different journals or publishers. They all were initially considered as long as the articles or books provided new ideas or perspectives that were considered relevant to the research. An evaluation of the literature's quality was performed later.

The author has tried to receive literature from as many sources as possible to receive an objective and extensive impression of the relevant topics (see *Table 12*, next page, for a list). Nevertheless, all of the listed sources are subject to some limitations. Libraries and (electronic) databases provide only a small selection of the existing literature. Ultimately,

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[13] Most databases allow search-terms such as "project* AND team* AND reward*" which would find a document with the title "Managing Projects: Rewards for Project Teams".

[14] 522 is the number of documents that have been stored on the author's computer or have been loaned or copied from libraries. All documents were at least partly reviewed.
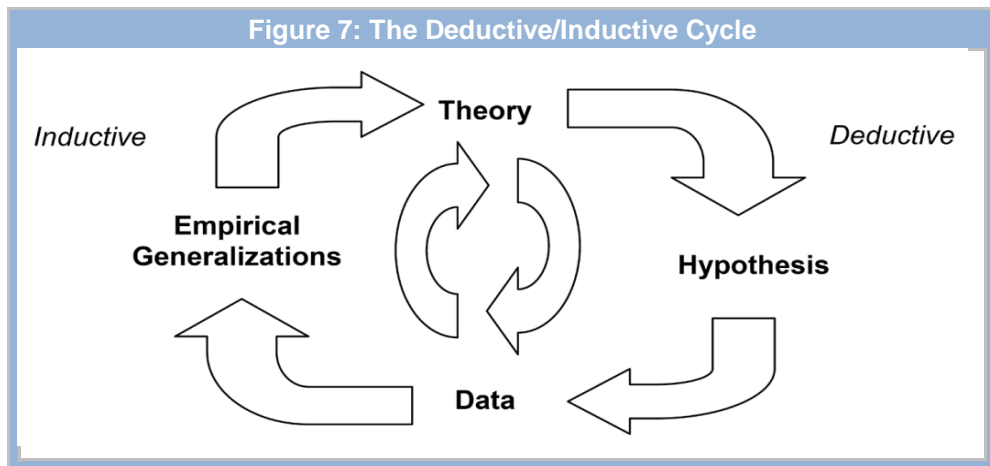
[15] Thirty-two of the 208 documents are not in direct relation to the research questions' answers but to other sections such as the *research design* section.

people decide which literature is offered by the libraries or databases. Accordingly, certain literature advocating a preferred school of thought might be available while another is not. Search engines can only provide access to literature that is published on the web. Depending on the search algorithm, certain types of literature are presented in a more favourable way. Nevertheless, due to the variety of sources it seems likely that all relevant perspectives were considered and the research provides sufficient validity.

| Table 12: Sources of Literature | |
|---|---|
| **Source** | **Remark** |
| Electronic Databases | Electronic Databases were available via Lancaster University. Further databases could be accessed via Macquarie University Sydney where the author had studied two years ago and still has an online account. Management as well as psychological and sociological databases were considered for the research. |
| Libraries | Libraries at Lancaster University and Otto-von-Guericke University in Germany were used where the author is enrolled as a student. |
| Google Books | Google Books (http://books.google.com) has been used. It offers a full text search in many books and some of these books can be viewed online. |
| Scholarly Search Engines | Scholarly Search Engines were used that offer a full text search in academic articles. Namely, Google Scholar (http://scholar.google.com), CiteSeer (http://citeseer.ist.psu.edu/cs) and Scirus (http://scirus.com) were used. |
| Normal Search Engines | Normal Search Engines were used to search public documents accessible via the internet. Namely, Google.com, Ask.com, and MSN.com were used. |
| Direct Author Contact | Direct Author Contact was tried to establish if documents were not available via one of the other sources. For instance, Alfie Kohn, Robert Filipczak, Birgitta Wolff, and Olaf Fisscher have successfully been contacted by email while other authors did not respond. In addition, further people, personally known to the author and with professional relevance to the topic, have been asked for literature recommendations. If available, authors website's were considered as well. |

*Figure 7* (p. 40) shows the typical research cycle consisting of deductive and inductive research. Inductive research describes the process of empirical generalisation: from specific observations, general conclusions are drawn (Handy 2006). Deductive research describes logical reasoning based on premises that were previously proven by inductive research. The new ideas that result from deductive research then can be approved by inductive research and so on. The deductive/inductive research cycle is closely related with the philosophy of post-positivism and constructivism that state, "all measurement is fallible" (Trochim 2006:2). This is in contrast to positivism which was particularly popular in the mid of the 20th century and holds the idea that anything could be exactly measured

respectively and that those things that could not be measure had little or no relevance (Trochim 2006). Today, positivism is seen by most academics as "arrogant [and] irrelevant because its results [do] not address the real world of decision making" (deMarrais & Lapan 2004:189).

**Figure 7: The Deductive/Inductive Cycle**

Inductive

Theory

Deductive

Empirical
Generalizations

Hypothesis

Data

Adopted from Handy (2006:1)

This thesis' research is deductive research and follows the post-positivism approach. Based on evidence from the literature, new ideas are created. These ideas are of general nature and allow in a broad way to predict project members' motivation and performance more specifically than it was possible before. Due to time restrictions, no inductive research could be performed to prove the ideas. Only the case study analysis gives first but limited evidence for the validity of the thesis' results.

The analysis of existing case studies was problematic. As found out by the literature review, project team rewards are not well covered in literature. Therefore, it was not surprising, that case study authors did not investigate project team rewards intensively. 52 case studies were found that initially seemed to be relevant for this thesis. Actually, six case studies could be used for this thesis. Only one case study explicitly was created to analyse project team rewards. Therefore, the case study analysis has only limited validity in verifying the literature-based research results.

Instead of performing qualitative secondary research, a mixture of qualitative and quantitative primary research could have been an alternative to answer the research questions. For instance, the first research question could have been answered by conducting a survey. The second research question could have been answered by conducting experiments or maybe in-depth interviews with project managers and project members. The third question could have been answered again by in-depth interviews or observing different project teams in action. However, several reasons let the decision for secondary research seem reasonable. First, from the moment on, the research questions were stated and approved by the academic tutors of this thesis, three and a half months were left to conduct the research. This might have been enough time to conduct and evaluate a survey *or* in depth-interviews *or* experiments but probably not several of them, which would have been necessary to answer all research questions reliably. Secondly, good knowledge of secondary data tends to increase the efficiency of primary research (Stewart & Kamins 1993). This means, by doing the research based on literature, a solid and holistic fundament is provided for further primary research. If no intensive literature research had been done, probably the answers to the research questions would have been less general and holistic.

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# 5. Results

By literature-based research, the three research questions stated in *2. Research Problem* (p. 3) were answered. The results are presented in this chapter. An additional validation of the results by case study analyses was performed and the results of that analysis presented in the next chapter (see *6 .Verification of the Results / Case Studies Analysis*, p. 59).

## 5.1. Current Role and Use of Rewards in Project Teams

This section answers research question one: '*What is the current role and use of rewards in project teams?*'

Research uncovered that rewards are actually used in project management. The *Deutsche Gesellschaft für Projektmanagement e.V. (*German Society for Project Management) found out that around 26% of project members get rewards (GPM 2005). The study is based on the society's members and is not representative for all project teams. Still, it proves that project teams are rewarded in at least some organisations. In addition, several case studies were analysed that prove that rewards are actually used in some organisations (see *6. Verification of the Results / Case Studies Analysis,* p. 59). A few workshops offering information about rewarding project teams also exist (e.g. BIA 2006, CETPA 2006, and EOGOGICS 2006). Hence, it seems certain that some project teams get rewards, although the exact number is unknown.

The literature research has uncovered that the perceived role of rewards in project management does not differ significantly from rewards in line management. Project managers, wanting to reward their team, have two types of academic sources they can get information about rewards from: project management literature and reward literature. As found out, three perspectives exist in the reward literature. In project management literature, predominantly the perspective of the extreme reward proponents or a very superficial view of the modest reward proponents is advocated. In any case, special project characteristics are not considered, except that milestones and the project's end are potential points in time to reward the team. Also further literature-research has found no evidence that project managers do consciously consider a project's characteristics as influencing factors for answering the reward questions. Therefore, it seems reasonable to conclude that the current role of rewards for project teams is similar to the role of rewards for line employees.

Figure 8: The Reward House - A General Reward Model

**External Reward Factors**
National Culture; Minimum Wages, Inflation Rates, Education and Skill
Shortage; Social and Political Trends; Taxes

**Internal Reward Factors**
Individual Factors; Team Factors; Organisational Factors;
Task Factors; Time Factors; Tools

| **Reward Target** Whom to Reward? | **Reward Objective** What to Reward? | **Reward Type** What Kind of Reward? | **Reward Extent** How Much Reward? | **Reward Time** When to Reward? |

**Reward Decision**
Rewarding or not Rewarding?

**Motivation Theories**

For an enlargement see Appendix I

To explain the current role of rewards for line employees and consequently for project teams, a general reward model was created by the author (see *Figure 8*). The model is called *The Reward House*. It is of general nature and represents the perspective of the modest reward proponents. The Reward House illustrates the findings of the literature review. It represents the organisation with its reward system (the six reward questions that need to be answered) and dynamic characteristics (the internal reward factors) that influence the design of the reward system. The Reward House is surrounded by an external environment (the external reward factors) which again influences the reward system. The fundament, which The Reward House in general and the reward system in particular is build upon, is represented by motivation theories. The motivation theories explain the influence of the internal and external reward factors on the reward answers. The reward decision is drawn under the remaining five reward questions because of its special importance: if the motivation theories and internal and external reward factors suggest not rewarding, the other reward questions become obsolete.

## 5.2. The Need for a Project Team Reward Model

This section answers research question two: '*To what extent could the development of a project team reward model increase project team motivation and project success?*'

The previous section has introduced The Reward House, a general model to explain employee rewards. To identify the need for a special project team reward model it had to be investigated to what extent project work differs from line work. It seems plausible that the more different line and project work are, the greater the need for a special project team reward model. If project work was very similar to line work, no need for an extra project team reward model would exist. Therefore, the research for answering the second research question focused on the identification of special project characteristics and the question if from these characteristics a need for a project team reward model could be derived. For simplification reasons, project management tools are seen as project characteristics. This is not strictly true since project management tools are just a result from the project characteristics (Andersen 2004). However, for the research it was relevant to investigate the differences between project and line work. How these differences are exactly classified was seen as less important.

Many differences between line and project work are stressed in the literature. Projects, which aim for effectiveness instead of efficiency (Westerveld 2003), tend to attract less qualified people (Kerzner 2001a), and team members' loyalty often is weaker towards project managers than towards line managers (Frigenti & Comninos 2002). In addition projects have an "ad-hoc nature" (Duffy & Thomas 1989:101), are more schedule intensive (Lewis 2002) and more "people-centred" (Baguley in Gray 2001:105). *Table 13* and *Table 14* (p. 47 & p. 49) list twelve unique project characteristics plus additional project management tools that were identified from the research. Most of the project characteristics could be assigned to the already existing categories of the internal reward factors.

Five of the twelve project characteristics could be classified as task-related factors. They directly describe the project, respectively the '*what* and *how* to do?'. Three

characteristics could be classified as organisation-related factors. They describe the project in the organisational context. Finally, four characteristics could be classified as time-related factors. They take into account that a project is a "temporary endeavor" (PMI 2004:5) and therefore realisation of projects differ in comparison to line work. The project management tools can be assigned to the tool-related internal reward factors.

| Table 13: Project Characteristics I | |
|---|---|
| **Characteristic** | **Remark** |
| **Degree of Outcome Clarity (What to do)** | Project's activities "fall outside the scope of normal operations" (Hallows 1998:14) and are unique undertakings (PMI 2004). No project exactly uses the same processes as a project before (Müller & Turner 2003). Consequently, there is some uncertainty in each project. This uncertainty has two dimensions (Obeng in APM 2002): The degree of uncertainty of the goal (what to do) and the degree of uncertainty in the process of how to reach this goal. Hence, due to the project's uniqueness, projects work tends to be more uncertain than line work. |
| **Degree of Process Clarity (How to do it)** | |
| **Degree of Risk Impact** | A project involves risks (Hallows 1998). The degree of a risk's impact means how damaging the consequences are if a risk occurs. The amount and probability of risks correlates with the goal and process clarity. Line work also includes risks but due to the project's uniqueness, risks tend to occur more often and are higher in impact. |
| **Degree of Change** | Projects bring change to a company and the project's stakeholders (Shenar et al. 2001). In addition, a project itself can mean change for the project members (Hiatt & Creasey 2003). The degree of change varies and is a project characteristic (Blake in Dvir et al. 1998). Line work usually does not bring any relevant change to the company (Partington 1996). The degree of change is not necessarily the same for all project members. |
| **Degree of Complexity** | Project's have a certain level of complexity (Bu-Bushait 1998). The complexity is the sum of most of the other characteristics. The more goals, the more processes, the more risks, the more change, the longer the duration, the bigger the size and the more success factors, the higher the complexity (Berkun 2000, Bu-Bushait 1998, Hallows 1998, Kerzner 2001a, Lewis 2002). |
| **Organisational Structure** | An organisation, using projects, can be structured in three ways (PMI 2004 and Goebli and Larson in Gray et al. 1990). First, as a function. Second as a matrix, thirdly as a pure project team organisation. Each of the structures has advantages and disadvantages that are displayed in Figure 6. The structure has wide impacts on the project manager's authority, team members' loyalty, and the way the project can be performed. |
| **Degree of Relevance** | Different projects have different relevance to the organisation (Hallows 1998). Some may affect only small parts of the organisations or in a little significant way; others might affect big parts of the organisation or in a very significant way. |
| **Existence and Weight of Success Criteria** | Projects usually have exactly defined success criteria such as meeting time, cost, and quality (Robins 1993). The weight of these criteria may differ (Wit 1988). The success criteria all focus on delivering the project's objective. Effectiveness is more important than efficiency (Westerveld 2003). In contrast, line work usually has a certain objective and tries to reach this repetitively as efficient as possible (Westerveld 2003). |

The first five characteristics in the table are grouped under **Task-Related** and the last three under **Organisation-Related**.

It is arguable if the classification of the project characteristics is exactly right. For instance, one could argue that the project characteristic 'degree of change' is rather an organisation-related factor than a task-related one because the degree of change depends on the status quo of the organisation. However, this was not relevant to this thesis' research. Important was that all the project characteristics could be assigned to the existing reward factors (task related factors and organisation related factors) and *time* was identified as a new category. In addition, it was important to realise that none of the project characteristics was assigned to individual or team factors. The project management tools consequently were assigned to the tool-related internal reward factors.

The research gave no reason to assume that the special project characteristics are the only factors influencing the reward answers for project teams. Overall project and line work share many characteristics. Above all, both are performed by individuals (PMI 2004). The individuals themselves will not inherently change because they participate in a project or line work. Accordingly, the individual reward factors identified before are still valid for determining project team rewards. Furthermore, project teams are just one type of a team. Hence, no reason exists why the identified general team factors such as size, composition, and stage of development should not be valid for project teams. The same is true for the previously identified task-related and organisation-related internal reward factors. For instance, no reasons exist why task variety or taxes on rewards should not affect project team rewards while they do affect rewards for line employees.

Since the previously identified reward factors are still influencing the reward answers and the newly identified project characteristics can be assigned to some of the internal reward factor categories, it was concluded that no need for a project team reward model exists. The Reward House is sufficient to explain the basic concept of rewards in both, line and project work. What was needed is a slight modification of The Reward House to consider the time aspects in project work. This has already been done by adding 'time' as another internal reward factor to *The Reward House* (p.44). The modification does not affect the model's validity for rewarding line employees. In line work, these factors just do not exist (or have not been considered yet) and hence have no impact on the reward answers.

Although, no project team reward model was needed, a detailed analysis in how far the reward answers are influenced by the project characteristics seemed necessary. As long as the impact of the project characteristics is not clear, it seems likely that a reward system for project teams cannot be as effective as it could be. Hence, project team motivation cannot be optimal and project success become less likely.

| Table 14: Project Characteristics II | | |
|---|---|---|
| | **Characteristic** | **Remark** |
| **Time-Related** | **Project Stages** | The PMI (2004) divides projects into *Initial*, *Intermediate* and *Final* Stages. During these stages, completely different types of work are done and different people may be involved (Munns & Bjeirmi 1996). This is different to line work where work is repeated all the time. |
| | **Member Fluctuation** | Since during the different project stages different tasks have to be done, different people often do these tasks. These people only join temporarily the project and leave as soon as they finished their task(s). |
| | **Duration** | A is project is only of limited duration and has a start and end point in time (PMI 2004). This is completely different to permanent line work. The purpose of line work is to sustain business continuingly; the purpose of a project is to "terminate" after delivering the objective (PMI 2004:7). This is the reason why projects do not appear on organisational charts (Kerzner 2004). |
| | **Degree of Urgency** | Project's have different degrees of urgency (Westerveld 2003). Some are more urgent, some less. The more urgent a project the higher the time pressure during the project and the earlier the starting point (Frame 2002). |
| **Tools** | **Work Breakdown Structure** | A Work Breakdown Structure divides the project's main deliverable into several sublevels whereas the lowest level usually contains all activities that are necessary to deliver the main deliverable. |
| | **Gantt Chart** | A Gantt Chart contains all the project's activities and displays them graphically as bar chart on a calendar/time line. It is used to schedule the activities and control if the project is on time. |
| | **Network Diagram** | A Network Diagram focuses on the dependency of the single activities. It displays which activities have to be completed before the next one can start. The Network Diagram may contain the critical path. |
| | **Earned Value** | Earned Value is a method to control the progress of a project. |
| | **Milestones** | Milestones indicate points in time where a relevant amount of work should be completed. |
| | **Critical Path** | The Critical Path shows those activities that are critical for the project. A delay of one of the activities will result in a delay of the project. |
| | **Project Management Software** | Special project management software exists that may support project managers with their daily work. |

## 5.3. Project Characteristics' Impact on the Reward Answers

This section answers research question three: '*What could a project team reward model look like?*'

In the previous section, it was shown that no need for a project team reward model exists because the general Reward House can be used to for project team rewards, too. Only *time* as an additional internal reward factor had to be added to the model. Accordingly, no attempts were made to create a special project team reward model to answer the third research question. Instead, it was researched how the project characteristics could influence the reward answers.

### 5.3.1. Impact of Uniqueness / Outcome and Process Clarity

**Figure 9: Project Uncertainty**
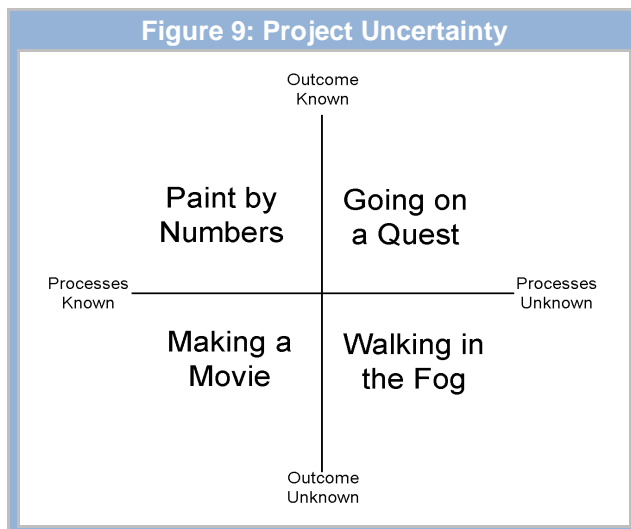


Adopted from Obeng in APM (2002): Projects are classified by the (un)certainty of the outcome and processes. Projects with a known outcome and known processes of how to reach the outcome are called 'Paint by Numbers'. Projects with a known outcome but unknown processes of how to reach the outcome are called 'Going on a Quest'. Projects with both, unknown outcome and processes are called 'Walking in the Fog'. Finally, projects with known processes but unknown outcome are called 'Making a Movie'.

Projects are unique undertakings (PMI 2004). The uniqueness of projects differs and may be distinguished by the level of outcome and process clarity (see *Figure 9*). The outcome clarity describes to which extent is known *what* the project's outcome should be. The process clarity describes to which extent is known *how* to achieve the desired outcome. For rewarding project teams, the project's uniqueness has wide implications.

Due to the uniqueness, there exist no exact benchmark, that results or

performance could be measured against[16]. A benchmark could only be based on estimates and these estimates were less reliable the higher the uniqueness. Furthermore, a high uncertainty means many risks (Andersen 2004). This means, under high uncertainty and with many risks, it is difficult to agree in the beginning of a project what performance or results can be expected from the members and what results or performance are above average and should be rewarded. If it was tried, it seems likely that some stakeholders would feel treated unfairly because the actual team's performance and results would strongly differ from the agreed ones. Hence, motivation would decrease according to equity theories. Therefore, performance or result-based rewards seem not appropriate if a project's uniqueness is high. Competence or skill-based rewards seem more appropriate in that case. If the uniqueness is low, performance rewards seem appropriate. Since result based rewards solely focus on quantity, this type of reward is not suitable for projects. In addition, a high uncertainty means, there is no clear line of sight between the rewards and the team member's actual contribution. According to expectancy theory, the team members' expectancy and instrumentality is low in that case. Therefore, rewards agreed in advance (incentives) make little sense and focusing on recognition is more appropriate.

## 5.3.2. Impact of Risks

In incentive contracting the risks' amount, probability, and impact are major factors influencing the design of the contract since the main purpose of incentive contracting is transferring the risks (see *3.5.2. Incentive Contracting*, p. 30). In rewarding employees, transferring the risks is not the aim. The aim is to increase employees' performance as far as possible. It has to be kept in mind that usually employees are employed and not self-employed because they tend to wanting decrease risks (Wilson 2003). Therefore, it seems plausible that the impact of a risk should not be considered. The amount and probability of risks are indirectly considered by considering the outcome and process clarity (see previously section).

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[16] In line work, it may be easy to relate rewards to past performance or performance of peers ("you will get a 10% bonus if you sell 10% more cars than last year or your colleague this year"). In projects, this kind of benchmark does not exist.

### 5.3.3. Impact of Change

Projects bring change. Usually literature deals with change that projects bring to other people (Turner & Müller 2003). For rewarding, it has to be considered that projects also bring change to the team members. The change for the team members can be positive or negative. Particularly in functional or matrix organisations, people only work temporarily on a project. In those cases, a project may mean additional work or leaving a liked work environment. On the other hand, the change could be perceived as welcome variation to the daily routine.

According to expectancy theory, the value of a goal is one of three factors influencing the motivation. If the inherent value of the goal, respectively the change, is negative to a team member, then motivation becomes negative. A reward could help to increase the value of the change and hence increase motivation. In contrast, there seems to be less reason to reward the change if the change is already perceived as positive by the team members. The argument is also supported by equity theory. Employees compare their current and future situation with two benchmarks: first, with their situation in the past and second with the past and current situation of their peers. If they feel, their actual or future situation will be worse than the benchmark they will feel treated unfairly. Rewards could help to equilibrate the perception.

The degree of change also affects the reward type. Since rewards should help to overcome change resistors, it seems plausible that rewards should be agreed in advance. Hence, the higher the negative change the more incentives seem to be appropriate instead of recognition.

### 5.3.4. Impact of Complexity

No indications could be found that a project's complexity might affect the reward answers.

### 5.3.5. Impact of Organisational Structure

As project management tools, the organisational structure is not a real project characteristic. However, the organisational structure seems to have a major impact on rewarding project teams. Team members from projects performed in a matrix structure, usually work parallel in the project team and in their normal job. In a functional structure, employees even do not have contact with the project manager and other project members but get all their instructions from the line manager. In those cases, employees' first priority usually is their normal job because the project outcome has little impact on their career (Tinnirello 2001). It is in the interest of those who benefit from a successful project that the team members see their project work at least as important as their line work. If line work seems more attractive than project work, rewards could help to balance the employees' preferences. This is explained by expectancy theory. Without rewards, the line work's valance often is bigger than the valance provided by the project work. A reward changes the valance.

In projects performed in a functional structure the project members do not really work in a project team but individually. In those situations a group identity and trust, which are the essential requirements for team rewards (Armstrong 2000), cannot be built. Accordingly, a focus on individual rewards seems to be appropriate in a functional structure. In contrast, in pure project structures team members should be used to team work and probably have already worked together. In that case, group identity may build quickly or already exists. In such a situation, group rewards are preferable towards individual rewards. Projects in a matrix structure are 'in-between' the two extremes. In that case, a general tendency about the influence on the reward answers could not be found.

### 5.3.6. Impact of the Project's Relevance

It might be argued that if a project has a high relevance, a reward system becomes even more important to deliver this project as good as possible. However, every executed project eventually must have at least *some* relevance to the organisation. Otherwise, it

would not be executed. In any case, there is no reason to waste resources. Therefore, the project's relevance seems to have no impact on the reward answers.

### 5.3.7. Impact of Success Criteria

An analysis of the projects success criteria's impact on the reward answers was difficult because no agreement exists what reliable success criteria for projects are (see *Appendix IX: What are Success Criteria?*, p. 98). Depending on the criteria, the impact on the reward answers may vary. For instance, time and cost are quite objective and quantitative measures. As long as the time and cost goals are seen as realistic, performance or maybe even result-based rewards might be appropriate. Since time and cost can clearly be measured, also incentives could be agreed. In contrast, client's satisfaction, or project's quality are more subjective. Here, maybe competence rewards are more appropriate. In addition, the weight of the success criteria needs consideration. If the reward focus is solely on time and cost, quality likely will suffer because there is no (economic) reason for team members to focus on it.

### 5.3.8. Impact of Project Stages

In line management, employees usually are rewarded on a monthly or yearly basis. The project's stages provide a 'natural' point in time to assess and reward the project team. However, since the end of every project stage usually is considered as a milestone, more details are covered in *5.3.12. Impact of Project* Management Tools (p. 56).

### 5.3.9. Impact of Member Fluctuation

The research indicates that the higher the member fluctuation, the more likely individual rewards should be used. The lower the fluctuation, the more likely group rewards are preferable. One basic requirement for group rewards is trust between the members and a group identity (Armstrong 2000). If member fluctuation is high, building trust and a group identity seems difficult. In addition, if many different members work on a project and those members spend a different amount of time on the project, distributing a group reward equally might become difficult. In those cases, focusing on individual

rewards seems to be more appropriate. Another option might be to give group rewards to subgroups that consist of people who contributed approximately the same to the project.

If member fluctuation is high, agreeing incentives also seems difficult. If group incentives were agreed (which is not recommendable according to the previous paragraph) it would be difficult to distribute the incentive between the members fairly. If individual incentives were agreed, many assessments would need to be done which would cost time and resources. Furthermore, it seems likely that at least some members would feel treated unfairly if many different individual agreements exist. Therefore, recognition seems more appropriate if member fluctuation is high. Recognition usually has no high-cash value and feelings of unfairness are less likely (Arthur 2001).

### 5.3.10. *Impact of Project Duration*

Incentives need to be around 10 or 15% of the base salary to be motivating (Lawler in Armstrong 2000). Usually this percentage is related to the employees' yearly salary. In a short-term project, of maybe 3 months, a 15% incentive of the yearly salary would be quite high and expensive in relative terms. A 15% incentive based on a 3-months salary might be too low in absolute terms to motivate an employee. This becomes even more significant if employees are joining the project only for a few days or weeks[17]. Hence, the longer a project, the more the focus should be on incentives to motivate team members. The shorter a project, the more the focus should be on recognition.

The project's end represents a possibility to assess the team members and provide rewards. It seems preferable to provide incentives at the project's end, because the motivational effect of incentives quickly vanishes as soon as the incentive is provided (Miller 1991). That means project members will be motivated to get the incentive during the project but they will not be motivated after the project because they got the incentive.

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[17] Example: If an employee with a yearly salary of £36.000 joins a project team for two weeks, a 12.5% incentive equals £173. If this was enough to motivate this employee is debatable. In contrast, if this employee would join the team for one year, the reward would be £4500. Although the reward is eventually the same in relative terms, the later one would be more motivating (Armstrong 2000).

In long-term projects, it might be appropriate to give incentives in-between (for instance, once a year as it is done in line management) because otherwise the incentive will be 'out of sight' in the beginning of the project.

Furthermore, a project's duration may affect the reward target. In a short-term project (if the members have not worked together before), there might not be enough time to build high trust between the group members. Accordingly, individual rewards seem to be more appropriate. In long-term projects, there is enough time to support the building of trust and a group identity. Hence, group rewards seem more appropriate. If team members already know each other and are used to working with each other (e.g. in pure project organisations) the project's duration probably becomes irrelevant for determining if to reward the group or individuals.

## 5.3.11. Impact of Project Urgency

When a project is urgent, it might be argued that not enough time exists to create a reward system. However, this argument is misleading. If it is accepted that rewards are beneficial and may increase performance, then with a high urgency there is no reason not to use rewards in order to increase overall performance and decrease delivery time. Similarly, if urgency is low there is no reason to 'waste' a possible performance increase.

The urgency may have an effect on the reward objective. Developing skills takes time. Accordingly, rewarding skills only makes sense if the project's urgency is low and the employees have enough time to acquire the skills before the skills are needed. If urgency is high and required skills are not available, it probably makes more sense to 'buy' the skills externally.

## 5.3.12. Impact of Project Management Tools

It was not possible to determine possible impacts from most of the project management tools on the reward answers, for two reasons. First, many tools exist and even an analysis only of the most important ones (see *Table 14*, p. 49) would have not been possible in the limited time the author had for this thesis. Secondly, and more importantly, most of the

project management tools are controversially discussed in the project management communities. Tools such as earned value are used for performance measurement. It seems clear that changing tools for performance measurement will change the employees' perception on the assessment's fairness. In addition, work breakdown structures point out all the work that has to be done and people are assigned to each activity. Therefore, in theory it could be easily assessed if everyone did what he/she should have done. However, in practice there is much discussion about these tools and their effectiveness (e.g. Turner 2000 vs. Lamers (2002) on work breakdown structures; Brandon 1998 vs. Kim & Ballard 2002 on earned value). Therefore, analysing the tools' impact on the reward answers seems difficult as long as project managers even do not agree about the advantages and disadvantages of the tools themselves. Only the impact of milestones seems quite clear.

Milestones are an almost obvious possibility to reward the team. Every project has several milestones when some significant amount of the total project work should be completed. This could be at the end of a project stage or when delivering a sub-deliverable. Since milestones occur comparatively often in a project (every few months or even weeks), it seems appropriate to use mainly recognition when milestones are reached. Incentives need to be generous to have an effect (see previous section). Hence, the reward system would be quite expensive if generous incentives were given for each milestone. In addition, group rather than individual rewards seem appropriate for reaching a milestone. Otherwise, detailed and time-consuming individual assessments have to be done for each milestone.

## 5.3.13. Summary

No project team reward model was provided as a result to research question three. Instead, the previously identified project characteristics were researched regarding possible impacts on the reward answers. It was shown that the project characteristics actually may have an impact on the reward questions. However, the results presented in this section leave space for further research since they do not yet provide a complete view on project team rewards. Particularly the weight and interrelationship of the project characteristics has not been researched yet. For instance, a project could be long term,

which suggests using group rewards. On the other hand, the team might be composed of individualists, which indicates using individual rewards. In that situation, it is not clear how to design a reward system for the project team.

Furthermore, some statements are vague, for instance 'the longer a project, the more the focus should be on incentives'. It stays unclear what exactly 'long' means. It could mean six months, one year, or five years. However, statements that are more concrete were not possible since the literature-based research depended on existing data and no existing research covered those questions in detail. Here, certainly further research is needed to concretise the results.

What was completely neglected in this thesis was the effect of project team rewards on the project manager and vice versa. Just as an initial thought, it might be that the power to provide rewards will increase the project managers' motivation. On the other hand, project managers could see rewarding as an extra burden because they need to spend additional time to assess the team members. The reward power also might entice project managers to misuse their power. For a project manager who does not work permanently with a team, there is little reason to focus on the employees' capability after the project's end. With high incentives, project managers could 'motivate' employees to work for a short time (e.g. for the project's duration) more than 100%. After the projects' end, members will then be tired and either the next project or the employees' line work would suffer. In addition it was not researched how to reward project managers. As a first thought it seems likely that if rewards for project teams differ from rewards for line employees, that rewards for project managers should differ in comparison to line managers' rewards.

Also not considered in the research was the Critical Chain. The Critical Chain is a complete new approach to project management, introduced by Goldratt (1997). Due to its uniqueness and time limitations, this thesis could not investigate how the application of the critical chain would influence designing a reward system. On the first glance, it seems that individual rewards would not be suitable at all since the entire concept of the Critical Chain is based on effective group work and co-operation.

# 6. Verification of the Results / Case Studies Analysis

The findings from the previous sections were based upon literature research. So far, any further evidence for the findings was missing. Fifty-two case studies were analysed for this thesis (for a list of the case studies see *Appendix X: List of Reviewed Case Studies*, p. 99). The purpose was to find some initial evidence for the thesis' findings. The case studies analysis' results are provided in this section.

The fifty-two case studies were found via the sources used for this thesis (see *4. Research Design*, p. 37) and all include some occurrences of the words *team*, *group*, *reward(s)*, *project management*, *incentive(s),* and/or *recognition*. However, only six of the case studies have some relevance to project team rewards and even their relevance is limited. Only one case study from Parker et al. (2000) was explicitly analysing project team rewards. The fact that most case studies do not consider project team rewards does not necessarily mean that the project teams were not rewarded. It may mean that the authors just did not consider the rewards as important. This would support the earlier finding that literature widely ignores the project characteristics' impact on the reward answers. For instance, Swink et al. (1996) mention in one of their case studies that a project team got rewards:

> *"[The project manager] went well beyond these requirements by initiating its own regularly scheduled meetings and design reviews and by issuing team-based incentives"* (Swink et al. 1996:235)

Further information is missing. Swink et al. describe neither what types of incentives were provided, nor any other details, nor what the affect on the project team's motivation was. With this limited information, it was difficult to draw any conclusions or verifying this thesis' theories. However, a few case studies provided more information.

Kerzner (2004) analysed two cases where introducing rewards for project managers brought damage to the companies[18]. The companies both were weak matrix organisations[19]. In the two cases, rewards were introduced for project managers but not for line managers. From then on the relationship between line managers and project managers started to worsen. This was noticeable because the line managers released significantly less resources for the project work than before. The effect can be explained by the findings of this thesis. The question if to reward depends among other factors on the external reward situation respectively the organisational structure. If the external project environment (in this case the departments with their line managers) do not get rewards, rewards for project work create a disequilibria. Hence, line managers feel treated unfairly (see equity motivation theory). Cooper (2000) described a case with a contrary situation: line work was rewarded, project work not. The effect was similar. Employees put their effort into the line work and neglect their project work.

Parker et al. (2000) analysed the company 'Great Plains Software' according to its use of rewards. The reward practice described in that case can be seen as excellent[20]. The company has a projectized structure and performs projects usually in small teams with about fifteen team members. Fluctuation of team members is low, and they often know each other well. In addition, they are all used to teamwork. According to this thesis' findings, group rewards were suitable in that situation. Actually, the company is mainly using group rewards[21]. The project's duration is usually between six and nine months and two types of rewards are used. First, a financial incentive is given if the team meets the

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[18] In the described case, project managers have been rewarded. Although this thesis focuses on project team rewards, it seems likely that a reward for the team members would have had a similar effect.

[19] For an explanation of organisation structures see *Figure 6* (p. 30)

[20] According to Parker et al. (2000), the company has won several awards for motivating and retaining employees as well as for excellent customer satisfaction. The turnover rate is 3.5% while the industry average is around 20%. Sadly, no numbers about profitability of the company were provided. Therefore, it is only known that the company has an excellent work environment and customer satisfaction but not on what costs.

[21] In addition, the top 10% performers get additional rewards. However, this does not depend on the project characteristics. Rewarding individuals in groups generally tend to prevent the negative effects of group rewards such as social loafing (compare Table 7, p. 19).

final deadline and the product has the agreed quality and functionality. The quality is measured by customer satisfaction surveys and calls to the customer support lines. Second, recognition in form of celebrations is provided if the team hit a major milestone (usually four or five during a project). This practice again correlates with the thesis' findings. Since the projects' duration is rather short, only one incentive should be provided at the project's end. Recognition should be given during the project several times. Also linking the rewards to performance (time and quality) seems to be fine since the uniqueness of the projects is rather low. The project teams mostly develop new versions of software instead of completely new products. In this case, estimates probably can be made with an acceptable accuracy, which supports the use of performance rewards.

Kunda & Brooks (2000) describe a project where programmers had to develop a new software and were paid by output/results, namely by lines of code. As a result, programmers wrote unnecessarily complex and big programs with low quality because they focused only on the lines of code. As described in *5.3.1. Impact of Uniqueness / Outcome and* Process Clarity (p. 50), result based rewards are seldom a good idea in project work because of the project's uniqueness. The case supports this statement; finally, the project failed.

Singh & Shoura (2006) analysed a change project in an engineering company. For this project it was important that several engineers worked together that had never worked together before. In addition, they were individualists, not used to teamwork. In this situation, the thesis findings would suggest individual rewards to increase the engineers' motivation and accept the change. Actually, no rewards at all were provided to the engineers and the project became a failure. The case studies authors likewise recommended the use of incentives to support the change process (Singh & Shoura 2006).

Overall, the case studies fit well with the thesis' findings and provide first evidence. The different cases indicate that one of the thesis' main findings is true: depending on the project characteristics, a successful reward system will differ. Furthermore, the cases provide initial evidence for the validity of the results from *5.3 Project Characteristics' Impact on the Reward* Answers (p. 50). However, not for all of the thesis' findings,

suitable case studies could be found. In addition, the analysed cases only provide a very small selection of situations where project team rewards were used. Further research seems necessary.

# 7. Conclusion

The introduction of this thesis started by stating, that virtually nothing is written about rewarding project teams. This situation has changed at least a little through this thesis. The research for this thesis created new findings about rewards in general and rewards for project management in particular. These findings are summarised in the following paragraphs.

It was found that all literature dealing with rewards was trying to answer at least one of six so-called *reward questions*:

1. Reward Decision: *Rewarding or not rewarding?*
2. Reward Target: *Whom to reward?*
3. Reward Objective: *What to reward?*
4. Reward Type: *What kind of reward?*
5. Reward Extent: *How much reward?*
6. Reward Time: *When to reward?*

Three different perspectives of how to answer these questions were identified and analysed. The first perspective claims that rewards cannot work. The advocates of that perspective therefore only answer the first question, negatively. The second perspective is exactly contradicting by claiming rewarding employees is easy and always improves their motivation. The advocates of the second perspective propose that one right answer exists to each of the six reward questions. The third perspective is arguing that variable factors such as employees' individuality or task characteristics determine the right answers. Hence, different good practices in rewarding may exist but no "universally best practice" (Armstrong & Murlis 2004:xi). It was shown that the third perspective provides the most holistic and reliable view on rewards and therefore was preferable to the other two perspectives.

Based on the third perspective a general reward model was created, called *The Reward House* (p. 44). The Reward House represents the idea of some variable factors, whose influence on the reward answers is strongly based on motivation theories. It was shown that The Reward House was not only able to explain rewarding employees in general but also could be used for designing project team rewards. The idea of variable factors influencing the reward answers (the answers to the reward questions), led to research to what extent project characteristics present even such variable factors and what their impact on the reward answers could be. Eventually, several project characteristics were identified that possibly could influence the reward answers. The possible influences were then investigated and the impact of twelve project characteristics presented. For instance, it was found that the degree of a project's uniqueness has a major influence on the question of 'what to reward'. The higher the uniqueness, the more difficult a benchmark can be created that performance or results could be measured against. Therefore, in the case of high project uniqueness, competence or skills should be rewarded.

The thesis' results contribute to a better understanding of rewards for project teams. Nevertheless, there are some limitations and space for further research. The results were based upon literature research and hence are theory-based. There is no 'real', empirical, evidence that the results are right. The additional case study analysis may give some evidence but of limited extent and not for all results. In addition, the weight and interaction of the reward factors is not researched yet. This is not only true for the project related reward factors but for all reward factors. For instance, young employees, used to teamwork, familiar with each other, working with few team members on a long-term project with low member fluctuation would be most suitable for group rewards according to existing research and the findings of this thesis. In contrast, old employees, not used to teamwork, not familiar with each other, working with many team members on a short-term project with high member fluctuation would be most suitable for individual rewards. However, it cannot be said how to reward young and old employees, not used to teamwork but familiar with each other, working with a few team members on a short term-project with medium member fluctuation. Here, further research is necessary.

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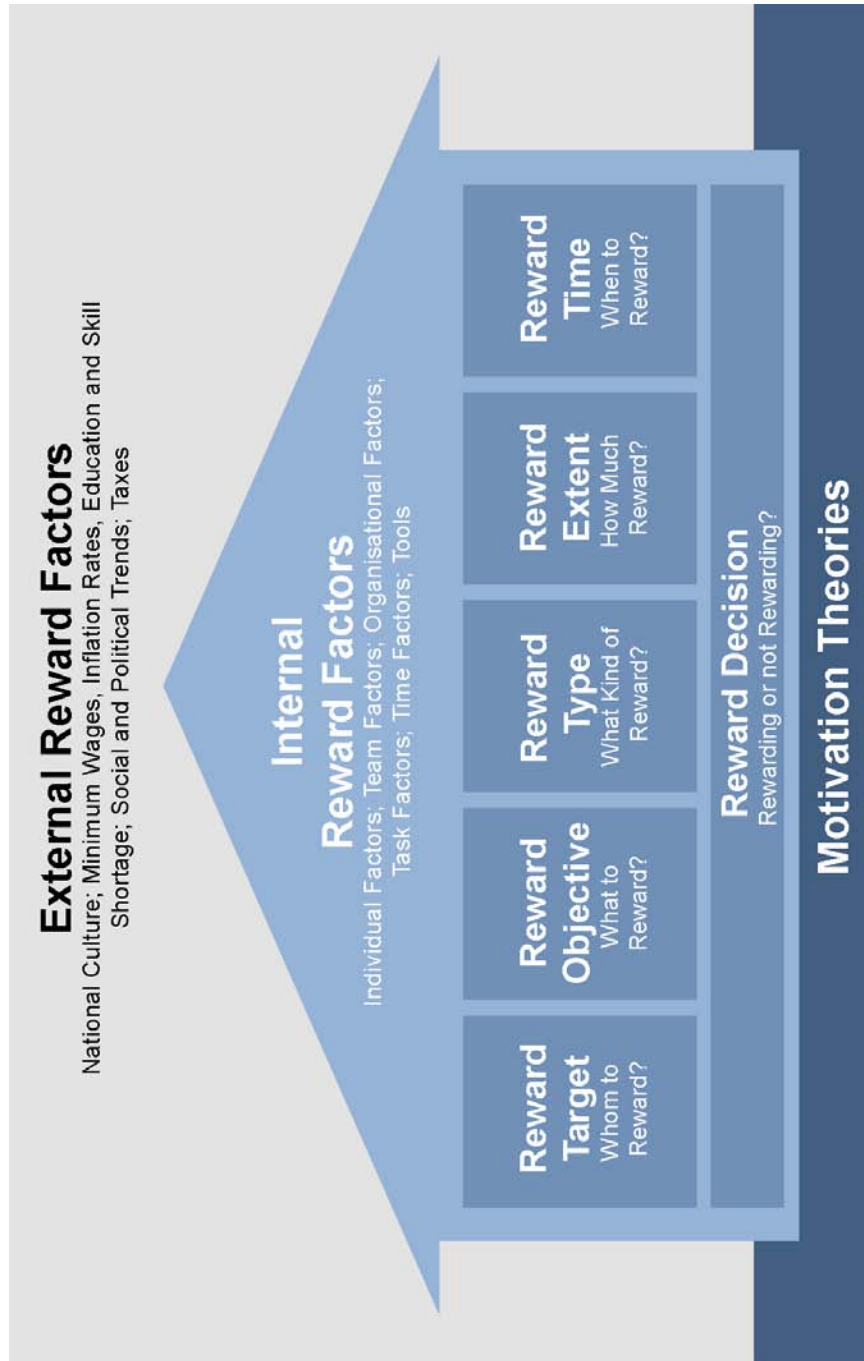
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# 9. Appendices

## *Appendix I: The Reward House (Enlarged)*

## *Appendix II: Integrated Model of Work Motivation*

The "integrated model of work motivation" by Locke & Latham (2004:390) integrates the common motivation theories in one model. This model illustrated that rewards (in the model called incentives) are only one of many factors influencing the employees' motivation. Summarised the model states that:

- People have needs that they want to satisfy (Need Theories). As long as a need is unsatisfied, it motivates people to do what is necessary to satisfy the need. There is no need for money but money may help to satisfy needs. Accordingly, rewards may make sense if the individual has an unsatisfied need that can be satisfied by this reward (e.g. money).

- The satisfaction of needs is valued differently by different people (Value Theories). Subsequently, it depends on the individual how strong rewards are valued and to what extent rewards make sense.

- SMART Goals (*S*pecific, *M*easurable, *A*chievable, *R*elevant, *T*imely) increase the motivation of people to achieve these goals and hence overall performance (for an example see *Appendix III: Goal Theory*, p. 91). The theory does not make any specific statements about rewards. It could be argued that if performance is increased just by goal setting, rewards are not necessary. On the other hand Armstrong (2002:68) argues that the Goal theory "provides the rationale for performance management" and the basis for rewards.

- The higher a person's belief to be able to achieve a goal, the higher the value of the expected outcome, and the clearer the relationship between the outcome and the person's action, the higher the motivation (Expectancy and Self Efficacy Theory). These theories strongly support the use of rewards.

- The fairer employees' feel treated the higher their motivation (Equity Theory). This theory cannot be used for a clear statement about rewards. Employees might feel it was fair if they get more if they perform better. They also might

feel it was fair if they get a fixed wage. Eventually it has to be considered that employees tend to be more risk averse than self-employed people and therefore might not propose the use of rewards and particularly incentives (Langley 2005). In practice, it is often difficult to create a fair reward system, since people's perception of fairness differs very strongly and people tend to overestimate their own performance (Armstrong 2000).

- People learn from the past and adjust their actions according to their experience. They try to get benefits and avoid punishment (Taylorism and Reinforcement Theory). These theories strongly support the use of rewards.

The overall motivation is affected by the work environment and job characteristics. A high job satisfaction leads to high motivation and performance.

(see next page for the model)
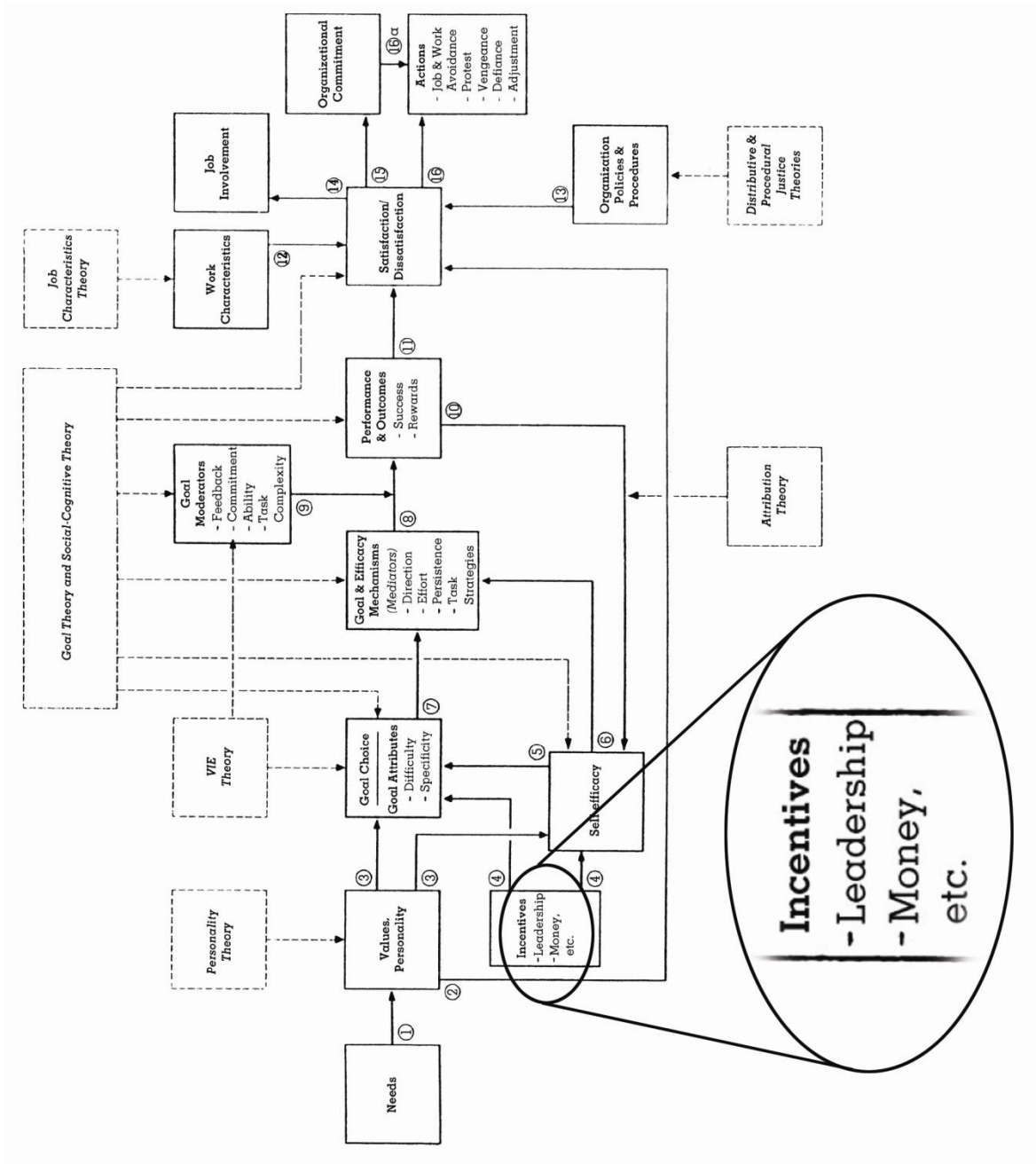
## Additional notes by Locke & Latham (2004:391)

1. Needs to values. This is the least empirically researched of the causal connections. Although motivation must start with needs, that is, the objective requirements of the organism's survival and well-being, how work values grow out of needs has not been studied. Although Maslow was partly correct in claiming that people value what they need, there are numerous exceptions to this claim. These exceptions, of course, are one of the reasons why we need both a science of mental health and a code of ethics.

2. Values and personality to satisfaction. This pertains to the relation of self-esteem and neuroticism to job perceptions and job satisfaction.

3. Values and personality to goals and self-efficacy. Values and personality affect goals and self-efficacy and their effects on performance are mediated by goals and efficacy.

4. Incentives to goals and self-efficacy. Like personality, incentives affect goals and self-efficacy which in turn mediate the effects of incentives.

5. Self-efficacy to goals. Efficacy affects goal choice and especially goal difficulty.

6. and 7. Self-efficacy and goals to mechanisms. Goals and efficacy affect performance through their effects on direction, effort, persistence, and task strategies or tactics.

8. Goals, that is, goal mechanisms, to performance. Goals, especially goal difficulty, affect performance and performance, depending on the organization's policies, affects rewards.

9. Goal moderators. Goal effects are enhanced by feedback, commitment, ability, and (low) task complexity.

10. Performance to efficacy. Performance, including the attributions one makes for performance, affects self-efficacy.

11. Performance to satisfaction. Success and rewards produce satisfaction.

12. Work characteristics to satisfaction. Mental challenge and related job attributes enhance satisfaction.

13. Organizational policies to satisfaction. The perceived fairness of the organization's policies, procedural justice, and the perceived fairness of the results of these policies, distributive justice, affect satisfaction.

14. Satisfaction to involvement. Job satisfaction enhances job involvement.

15. Satisfaction to organizational commitment. Satisfaction enhances organizational commitment.

16. and 16a. Satisfaction and commitment to action. Satisfaction and commitment, along with other factors, affect action, especially approach and avoidance of the job or work. Several limitations of this model should be noted:

- To limit cognitive-perceptual overload some causal arrows are omitted. For example, self-efficacy affects commitment and presumably choices among action alternatives in the face of dissatisfaction. Personality and values can also affect action taken in response to job dissatisfaction. Perceived injustice undoubtedly affects goal commitment.

- The various theories, aside from goal theory, are not fully elaborated. For example, there are many complexities involved in procedural justice and a number of competing sub-theories.

- Recursive effects are not shown, except in the case of self-efficacy to performance. In the real world, almost any output can become an input over time. The model is static, not dynamic. Mone (1994) has done dynamic analyses of the goal-efficacy-performance relationship and found the basic static model to hold.

- Ability, knowledge and skill are critical to performance but, with one exception, are not shown in the motivation model. Self-efficacy, of course, reflects how people assess their skills and abilities.

- The model focuses on conscious motivation and omits the sub-conscious, except insofar as it is acknowledged as being involved in emotions.

- The model does not include theories with dubious or highly limited support (e.g., Maslow, Deci).

## *Appendix III: Goal Theory Illustration*

An important factor in goal theory is that the goal is difficult but achievable. Furnham (1997) provides as example a car salesperson. If this person were told to sell two cars a month he/she certainly would reach the goal and probably even sell a little bit more. Nevertheless, there was not much incentive to sell more because two was the goal. A good goal might be 12 cars. This would be difficult but achievable. Maybe the salesperson would even not achieve this goal every month and sometimes only sell 10 cars. Nevertheless, the overall performance would be much higher as if the goal was selling two cars. Of course, a goal of, for instance, 60 cars would not be achievable and would decrease the motivation.

## *Appendix IV: Herzberg's Two-Factor Theory*

Herzberg's theory proposes that for employees' (dis)satisfaction, different factors are responsible for that employees' motivation. So-called 'hygiene factors' causes (dis)satisfaction if they are (un)fulfilled (see above picture for a list). However, as soon as a certain level of fulfilment is reached, a further increase will not further motivate employees. The motivation factors may cause a high motivation but even if they are not fulfilled, they will not cause dissatisfaction. In other words, employees can be either dissatisfied and not motivated *or* dissatisfied and motivated *or* satisfied but not motivated *or* satisfied and motivated. Rewards, in particular money, are only responsible for the level of satisfaction and hence cannot motivate.
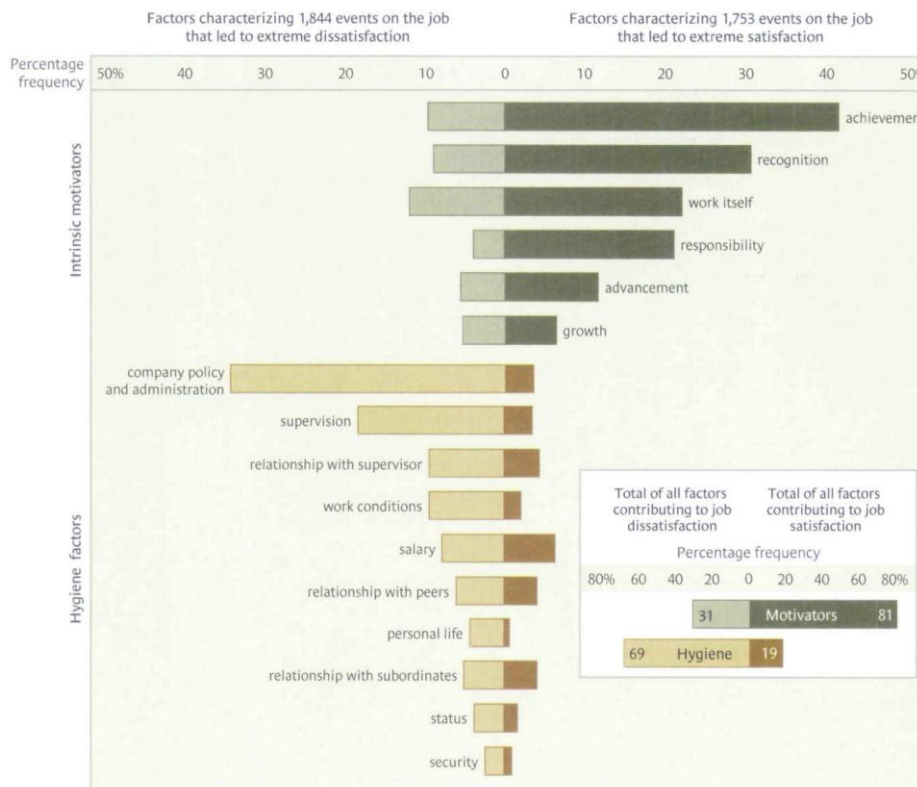


Picture adopted from Herzberg (2003)

## *Appendix V: Intrinsic Motivation: Negative Example*

Winter and Frey & Osterloh (in Poeten 2002) state that intrinsic motivation does not only have positive effects. Particularly if employees are intrinsically motivated to work and the organisation changes its goals and culture, the intrinsic motivation of the employees will not change that quickly. The differences between the organisation and the employees' value may then cause serious problems. For instance, an individual advocating the use of wind power probably will be a beneficial employee for a company producing wind turbines. However, if the company's top management decides to expand and to produce solar panels, the employee's intrinsic motivation to work might decrease because the employee might have the opinion that solar panels are not efficient. In case, the company decides to invest in nuclear power it might be even possible that the employee sabotages the new project.

## *Appendix VI: Example of Bad Reward Practice*

These two counter-productive examples of rewards were copied from Filipczak (1993:21).

Their incentive program measured and rewarded employees who answered the phones in three rings or fewer. And that's exactly what the company got: People would pick up the phone after three rings, greet the caller and then set the phone down. As the old saying goes, be careful what you ask for; you just might get it.

A more costly example of an incentive plan gone awry made news last summer when Sears Auto Centers in California were nailed for making unnecessary repairs on customers' cars. The reward system in question based both pay and incentives on the number of parts service managers sold. The service managers allegedly pressured mechanics to install unneeded parts, and the company was charged with defrauding its customers by California investigators. Sears' final settlement reportedly was in the neighborhood of $15 million.

## *Appendix VII: Example of Reward Utility vs. Reward Quantity*
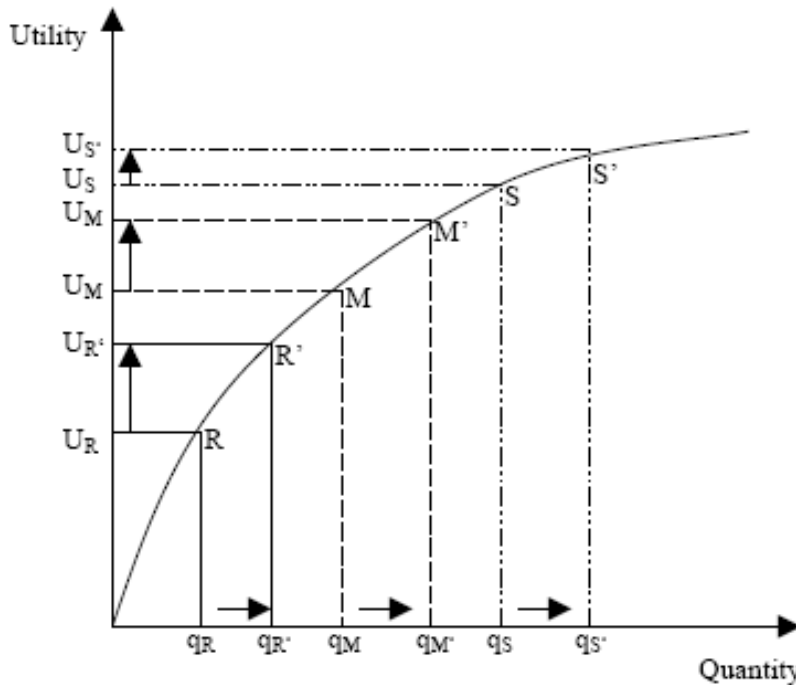


Rehu et al. (2005) explain in their paper that the more reward a person gets, the higher the utility of the reward for the person and the higher the motivation to get the reward. On the other hand doubling the reward (e.g. doubling the money) does not double the motivation. The additional utility becomes less, the higher the reward gets. Rehu et al. (2005) provide an example. Employees in Germany get comparatively more holidays than US employees therefore their value of additional holidays is consequently less.

## *Appendix VIII: Critical Project Success Factors*

From 63 papers, Fortune & White (2006) identified 27 factors that are critical for project success. Team members' motivation or rewarding team members is not identified as any of the success factors.

Table 1
Critical success factors identified across 63 publications

| Critical factor | Literature | Count of citations |
|---|---|---|
| Support from senior management | Avots [5]❸; Cleland and King [6]❸; Morris [7]❷; Pinto and Slevin [8]❶; Morris and Hough [9]❷; Stoddart-Stones [10]❸; Magal et al. [11]❶; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Cash and Fox [14]❸; Yap et al. [15]❶; Pollalis and Frieze [16]❶; Tennant [4]❸; Selin and Selin [17]❶; Martinez [18]❸; The Standish Group [19]❶; Couillard [20]❶; Wastell and Newman [21]❷; Tan [22]❶; Munns and Bjeirmi [23]❷; Belassi and Tukel [24]❶; KPMG [25]❶; McCormack [3]❷; McGolpin and Ward [26]❷; Dvir et al. [27]❶; Kasser and Williams [28]❶; Jang and Lee [29]❶; Whittaker [30]❶; Turner [31]❸; Weir [32]❸; Taylor [33]❶; Thite [34]❶; Poon and Wagner [35]❶; Cooke-Davies [36]❸; Andersen et al. [37]❶; Caldeira and Ward [38]❶; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 39 |
| Clear realistic objectives | Baker et al. [42]❶; Morris [7]❷; Hughes [43]❸; Pinto and Slevin [8]❶; Pinto and Mantel [12]❶; Tennant [4]❸; Selin and Selin [17]❶; Harding [44]❸; Couillard [20]❶; Yeo [45]❷; Wateridge [46]❶; The Standish Group [19]❶; Beare [47]❷; Tan [22]❶; Munns and Bjeirmi [23]❷; Spinelli [48]❸; Cicmil [49]❷; Dvir et al. [27]❶; Glass [50]❸; Kasser and Williams [28]❶; Jang and Lee [29]❶; Clarke [51]❶; Weir [32]❸; Taylor [33]❶; Thite [34]❶; Poon and Wagner [35]❶; Anderson et al. [37]❶; Caldeira and Ward [38]❶; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 31 |
| Strong/detailed plan kept up to date | Avots [5]❸; Baker et al. [42]❶; Cleland and King [6]❸; Morris [7]❷; Morris and Hough [9]❷; Pinto and Mantel [12]❶; Pollalis and Frieze [16]❶; Martinez [18]❸; Wateridge [46]❶; Couillard [20]❶; Smart [52]❶; Williams [53]❶; Belassi and Tukel [24]❶; KPMG [25]❶; Spinelli [48]❸; McCormack [3]❷; McGolpin and Ward [26]❷; Dvir et al. [27]❶; Kasser and Williams [28]❶; Glass [50]❸; Whittaker [30]❶; Clarke [51]❶; Turner [31]❸; Taylor [33]❶; Andersen et al. [37]❶; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 29 |
| Good communication/ feedback | Avots [5]❸; Cleland and King [6]❸; Morris [7]❷; Hughes [43]❸; Pinto and Slevin [8]❶; Curtis et al. [54]❶; Magal et al. [11]❶; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Cash and Fox [14]❸; Pollalis and Frieze [16]❶; Wateridge [46]❶; Couillard [20]❶; Tan [22]❶; Gowan and Mathieu [55]❷; Hilderbrand [56]❸; Spinelli [48]❸; Dvir et al. [27]❶; Kasser and Williams [28]❶; Clarke [51]❶; Turner [31]❸; Thite [34]❶; Cooke-Davies [36]❸; Andersen et al. [37]❶; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 27 |
| User/client involvement | Morris [7]❷; Pinto and Slevin [8]❶; Curtis et al. [54]❶; Magal et al. [11]❶; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Yap et al. [15]❶; Pollalis and Frieze [16]❶; Wateridge [46]❶; Smart [52]❶; Beare [47]❷; Wastell and Newman [21]❷; Belassi and Tukel [24]❶; Munns and Bjeirmi [23]❷; Cicmil [49]❷; Spinelli [48]❸; McCormack [3]❷; Dvir et al. [27]❶; Jang and Lee [29]❶; Turner [31]❸; Caldeira and Ward [38]❶; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 24 |
| Skilled/suitably qualified/ sufficient staff/team | Baker et al. [42]❶; Morris [7]❷; Pinto and Slevin [8]❶; Curtis et al. [54]❶; Magal et al. [11]❶; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Cash and Fox [14]❸; Pollalis and Frieze [16]❶; Tennant [4]❸; Martinez [18]❸; Willcocks and Griffiths [57]❷; The Standish Group [19]❶; Dvir et al. [27]❶; Glass [50]❸; Jang and Lee [29]❶; Weir [32]❸; Poon and Wagner [35]❶; Caldeira and Ward [38]❶; Westerveld [40]❷ | 20 |
| Effective change management | Avots [5]❸; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Cash and Fox [14]❸; Pollalis and Frieze [16]❶; Martinez [18]❸; Willcocks and Griffiths [57]❷; Smart [52]❶; Cicmil [49]❷; Hougham [58]❸; McGolpin and Ward [26]❷; Dvir et al. [27]❶; Weir [32]❸; Taylor [33]❶; Thite [34]❶; Poon and Wagner [35]❶; Cooke-Davies [36]❸; Yeo [39]❶ | 19 |
| Competent project manager | Avots [5]❸; Baker et al. [42]❶; Morris [7]❷; Pinto and Slevin [8]❶; Pollalis and Frieze [16]❶; Martinez [18]❸; Cannon [59]❶; Couillard [20]❶; Pinto and Kharbanda [60]❷; Belassi and Tukel [24]❶; Munns and Bjeirmi [23]❷; Spinelli [48]❸; Dvir et al. [27]❶; Glass [50]❸; Weir [32]❸; Taylor [33]❶; Andersen et al. [37]❶; Westerveld [40]❷; Turner [41]❸ | 19 |
| Strong business case/ sound basis for project | Avots [5]❸; Pollalis and Frieze [16]❶; Smart [52]❶; Pinto and Kharbanda [60]❷; Munns and Bjeirmi [23]❷; KPMG [25]❶; McGolpin and Ward [26]❷; Dvir et al. [27]❶; Whittaker [30]❶; Poon and Wagner [35]❶; Cooke-Davies [36]❸; Andersen et al. [37]❶; Caldeira and Ward [38]❶; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 16 |
| Sufficient/well allocated resources | Morris [7]❷; Pinto and Slevin [8]❶; Morris and Hough [9]❷; Yap et al. [15]❶; Pollalis and Frieze [16]❶; Tennant [4]❸; McCormack [3]❷; The Standish Group [19]❶; Belassi and Tukel [24]❶; Gowan and Mathieu [55]❷; Dvir et al. [27]❶; Kasser and Williams [28]❶; Turner [31]❸; Caldeira and Ward [38]❶; Westerveld [40]❷; Turner [41]❸ | 16 |
| Good leadership | Morris and Hough [9]❷; Cash and Fox [14]❸; Pollalis and Frieze [16]❶; Tennant [4]❸; Martinez [18]❸; Smart [52]❶; Gowan and Mathieu [55]❷; Pinto and Kharbanda [60]❷; Dvir et al. [27]❶; Turner [31]❸; Thite [34]❶; Andersen et al. [37]❶; Caldeira and Ward [38]❶; Westerveld [40]❷; Turner [41]❸ | 15 |
| Proven/familiar technology | Morris [7]❷; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Pollalis and Frieze [16]❶; Cannon [59]❶; Williams [53]❶; Yeo [45]❷; Tan [22]❶; KPMG [25]❶; Dvir et al. [27]❶; Glass [50]❸; Poon and Wagner [35]❶; Caldeira and Ward [38]❶; Yeo [39]❶ | 14 |
| Realistic schedule | Cleland and King [6]❸; Morris [7]❷; Morris and Hough [9]❷; Pinto and Mantel [12]❶; McComb and Smith [13]❸; Tennant [4]❸; Selin and Selin [17]❶; Dvir et al. [27]❶; Glass [50]❸; Kasser and Williams [28]❶; Weir [32]❸; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 14 |

Table 1 (*continued*)

| Critical factor | Literature | Count of citations |
|---|---|---|
| Risks addressed/assessed/ managed | Morris and Hough [9]❷; Selin and Selin [17]❶; Smart [52]❶; Beare [47]❷; Williams [53]❸; KPMG [25]❶; Baldry [61]❸; Dvir et al. [27]❶; Whittaker [30]❶; Weir [32]❸; Cooke-Davies [36]❷; Yeo [39]❶; Westerveld [40]❷ | 13 |
| Project sponsor/champion | Morris [7]❷; Morris and Hough [9]❷; Cash and Fox [14]❸; Yap et al. [15]❶; Martinez [18]❷; McGolpin and Ward [26]❷; Jang and Lee [29]❷; Baldry [61]❸; Thite [34]❶; Poon and Wagner [35]❶; Caldeira and Ward [38]❷; Yeo [39]❶ | 12 |
| Effective monitoring/control | McComb and Smith [13]❷; Cash and Fox [14]❸; Pollalis and Frieze [16]❶; Selin and Selin [17]❶; Cicmil [49]❸; Dvir et al. [27]❶; Weir [32]❸; Thite [34]❶; Poon and Wagner [35]❶; Cooke-Davies [36]❷; Westerveld [40]❷; Turner [41]❸ | 12 |
| Adequate budget | Baker et al. [42]❶; Cleland and King [6]❸; Morris and Hough [9]❷; Dvir et al. [27]❶; McComb and Smith [13]❷; Pollalis and Frieze [16]❶; Tennant [4]❸; Glass [50]❸; Caldeira and Ward, [38]❷; Westerveld [40]❷; Turner [41]❸ | 11 |
| Organisational adaptation/ culture/structure | Pollalis and Frieze [16]❶; Cannon [59]❷; Willcocks and Griffiths [57]❷; Martinez [18]❷; Couillard [20]❶; Hougham [58]❷; Gowan and Mathieu [55]❷; Taylor [33]❶; Thite [34]❶; Cooke-Davies [36]❷ | 10 |
| Good performance by suppliers/ contractors/consultants | Morris and Hough [9]❷; Pollalis and Frieze [16]❶; McCormack [3]❸; KPMG [25]❶; Glass [50]❸; Jang and Lee [29]❷; Caldeira and Ward [38]❷; Yeo [39]❶; Westerveld [40]❷; Turner [41]❸ | 10 |
| Planned close down/review/ acceptance of possible failure | Avots [5]❷; Cleland and King [6]❸; Sauer [62]❷; Beare [47]❷; Pinto and Kharbanda [60]❷; Munns and Bjeirmi [23]❸; McCormack [3]❸ McGolpin and Ward [26]❷; Dvir et al. [27]❶ | 9 |
| Training provision | Magal et al. [11]❶; Yap et al. [15]❶; Pinto and Kharbanda [63]❶; Pinto and Kharbanda [60]❷; McCormack [3]❸; Dvir et al. [27]❶; Caldeira and Ward [38]❷ | 7 |
| Political stability | Morris and Hough [9]❷; Pollalis and Frieze [16]❶; Tennant [4]❸; Sauer [62]❷; Yeo [45]❷; Pinto and Kharbanda [60]❷ | 6 |
| Correct choice/past experience of project management methodology/tools | Hughes [43]❸; Munns and Bjeirmi [23]❸; Dvir et al. [27]❶; Glass [50]❸; Jang and Lee [29]❷; Turner [41]❸ | 6 |
| Environmental influences | Morris [7]❷; Cleland and King [6]❸; Archibald [65]❸; Pinto and Kharbanda [60]❷; Caldeira and Ward [38]❷; Westerveld [40]❷ | 6 |
| Past experience (learning from) | Yap et al. [15]❶; Dvir et al. [27]❶; Jordan et al. [64]❷; Sauer [62]❷; Cooke-Davies [36]❷ | 5 |
| Project size (large)/level of complexity (high)/number of people involved (too many)/ duration (over 3 years) | Hughes [43]❸; Selin and Selin [17]❶; Cannon [59]❷; Cooke-Davies [36]❷ | 4 |
| Different viewpoints (appreciating) | Curtis et al. [54]❶; Pinto and Kharbanda [63]❶; Turner [41]❸ | 3 |

❶ = Empirical-data mainly obtained from survey(s).
❷ = Empirical-data mainly obtained from case studies(s).
❸ = Theoretical – but data often based on work of others.

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## *Appendix IX: What are Success Criteria?*

Different opinions exist about what the critical success criteria are in project management. Some authors see project success as delivering the project on time, cost, and quality (e.g. Robins 1993). Research shows that these criteria are by far the most common ones used in practice (White & Fortune 2002). However, during the last few years authors have started to criticise this approach. Atkinson (1999:337) describes time and cost estimates as "two best guesses" and quality as a "phenomena". Instead of focusing on time, cost, and quality, the focus should lie on stakeholder satisfaction (Ling 2004). Shenar et al. (2001) advocates perceived project value and Hartman & Ashrafi (2003) achieved project value for the organisation. Since it is not quite clear what success is, it is difficult to determine what factors lead to success, and in how far rewards are important for project success.

## *Appendix X: List of Reviewed Case Studies*

For the case study analysis (see *6.  Verification of the Results / Case Studies Analysis*, p. 59), 51 case studies from 28 authors were reviewed. The documents the cases were found in are listed in *Table 15*.

| Table 15: Reviewed Case Studies | |
|---|---|
| **Title** | **Author(s)** |
| Internal Communication issues in an IT engineering department | Appelbaum et al. (2004) |
| The rise and fall of Supernet: a case study of technology transfer policy for smaller firms | Bessant (1999) |
| Information Technology Development Creativity: A Case Study Of Attempted Radical Change | Cooper (2000) |
| Case Study: Care Canada's Grassroots Driven Knowledge-Management Strategy | Daly (2006) |
| A Case study of Zuquala Steel Rolling Mill | Degnitu  (2000) |
| Impact of employee, management, and process issues on constructability implementation | Eldin (1999) |
| The reward effect: a case study of failing to manage knowledge | Gal (2004) |
| Deviations, Ambiguity and Uncertainty in a Project-Intensive Organization | Hällgren & Olsson (2005) |
| Considering value during early project development: a product case study | Hamilton (2002) |
| Project Management Case Studies | Kerzner (2003b) |
| Assessing organisational obstacles to component-based development: a case study approach | Kunda & Brooks (2000) |
| Simple Services, Inc.: A Project Management Case Study | Liao (1999) |
| Software developer perceptions about software project failure: a case study | Linberg (1999) |
| The CeMENT project: a case study in change management | Macfarlande et al. (2002) |
| Developing managerial skills in IT organizations – a case study based on action learning | Mathiassen et al. (1999) |
| Successful implementation of ERP projects: Evidence from two case studies | Motwani et al. (2002) |
| Rewarding Teams: Lessons from the Trenches | Parker et al. (2000) |
| Trust in inter-organizational exchanges: a case study in business to business electronic commerce | Ratnasingam (2005) |
| Improving project processes: best practice case study | Sarshar & Amaratunga (2004) |
| Real Web Project Management: Case Studies and Best Practices from the Trenches | Shelford & Remillard (2003) |
| A life cycle evaluation of change in an engineering organization: A case study | Singh & Shoura (2006) |
| Case Study: Changing the Culture to Foster Team Work | Sirota (2004) |
| Team-based strategy at Varian Australia: a case study | Sohal et al. (2003) |
| The Management of Change for Information Systems Evaluation Practice: Experience from a Case Study | Sreafeimidis & Smithson (1996) |
| Customizing Concurrent Engineering Processes: Five Case Studies | Swink et al. (1996) |
| Stand und Trend des Projektmanagements in Deutschland | Volkswagen (2003) |
| The positive use of power on a major construction project | Walker & Newcombe (2000) |
| How to Ensure Quality and Cut Costs with Cultural Institution Value Methodology | Witschey & Wulff (1998) |

Intentionally left blank