

Target cost in Statoil projects: The effects of capital expenditure targets

Master thesis

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Abstract

This paper consists of an explorative investigation into the effects of the concept “target cost” in development projects executed by the Norwegian energy company Statoil ASA. Target cost is a financial target towards capital expenditure implemented in all major development projects in the researched company in order to increase performance and lower costs. An exploratory approach using a qualitative investigation based on interviews of six project directors examined this concept in detail. The aim of this research was to gain a deeper insight into the effects of having a financial target in the execution phase of offshore construction projects. Five objectives were formulated, consisting of; how target cost effects projects, why target cost motivates, when target cost is effective, who is effected, and finally if the target cost has an effect on reducing project expenditure. The interviews provided a wide range of results consistent with existing goal theory and associated literature. Some of the findings were however, not expected prior to the interviews.

Target cost was found to be associated with several positive effects identified through secondary research. In addition, unexpected findings such as the disciplining effect of target, the communicating effect and cultural effect were identified. A range of positive emotions towards target cost and target attainment were recognised, indicating high levels of intrinsic motivation as a reason why individuals’ behaviour may be effected. Increased focus on target cost by management, was suggested to increase perceived importance of target cost in the remaining project organisation. Findings also suggest that as a result of introducing beyond budgeting, a higher focus on cost and a discontent with overspending occurred. The findings indicate a shift from budget based comfort zones to beyond budgeting based stretch zones. Target cost efficacy was found to be effected by a range of situational factors. Some of the central findings suggest that culture is also a prerequisite for target effectiveness as well as an effect of the target. Other findings indicate development and control of uncertainties as important towards individuals’ perception of attainability of target cost. Inconsistent opinions regarding the level of difficulty towards achieving target cost were noted, suggesting target cost to be recognised as a difficult goal rather than a stretch target. Finally, there is a consistent belief among project directors that target cost reduces capital expenditure. Implementing findings from the previous objectives into Locke and Latham’s (2002) High Performance Cycle supports and reinforces the interviewees statements.

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1.1 Introduction

This paper will provide an exploratory investigation into the effect of a financial target on project capital expenditure. A case study on the concept termed “target cost” within the researched company will be performed in a project execution phase context, by conducting interviews of six project directors.

Telling individuals to “do their best” has shown to have little effect on motivation. Individuals have however, shown to perform better if they are asked to attain a specific goal which is neither too difficult nor too easy to achieve (Merchant & Van der Stede, 2007). The concept of goal setting theory has been a widely research subject formulated inductively over the last five decades. Goal setting theory is based on the premise that conscious goals effect action (Ryan, 1970; as cited in Locke & Latham, 2002).

One of the main conclusions of goal theory states that individuals perform higher when goals are present compared to when there are no goals. Also, findings suggest that individuals are motivated by specific and moderately difficult goals rather than unspecific easy goals (Locke and Latham 2002). There is a significant amount of recommendations within the literature to implement targets and goals in order to increase performance (Hope & Fraser, 2003b; Bogsnes, 2016).

Goals or targets may be set on any measure of the organisation in which management wishes to increase focus or performance. One widely used financial performance target is an organisations budget. According to Merchant and Van der Stede (2007), using the budget as a financial performance target may lead to a situation where organisations use the same figure for planning as well as for motivating purposes. For planning, budgets should be set as the most likely figure, while for targets, the probability should be more ambitious.

The traditional budget has been widely criticized for failing to provide its users with sufficient value (Player, 2003). One of the main complications with the budget is that it tries to simultaneously represent the allocated funds, the current cost status and a target, making the budget figure a sub optimal three-in-one representation of an organisations status. The budget as a target will therefor provide little motivation in terms of cost reduction performance. (Bogsnes, 2016).

The concept of the beyond budgeting arose in light of the multiple dysfunctional effects of the traditional budget. Beyond budgeting suggests a radical solution, where the budget is “unbundled” into three components serving different purposes; resource allocation, forecast, and targets.

One of the companies who decided to implement the beyond budgeting principles in the early 2000’s was the Norwegian energy company Statoil ASA. The implementation of the new management control system resulted in an increase in focus and attention to targets including the balanced scorecard.

A consequence to the increased focus on targets, led Statoil to implement a financial target on capital expenditure, called “target cost”. This target was introduced to all business units and projects with the aim of increasing performance towards cost reductions. For Statoil’s development projects the target cost figure is represented as a numerical figure or percentage of the project forecast.

This thesis will provide an explorative investigation into the effects of the concept “target cost” in a case-study consisting of development projects executed by Statoil ASA. An exploratory approach using a qualitative investigation based on interviews of six project directors will examine this concept based on five objectives contributing to the main research question. Secondary research will be performed and presented in the literature review chapter to establish a theoretical foundation in which the objectives later can be discussed in context with the primary research results.

The thesis will be limited to exploring target cost in the project execution phase (DG3-DG4) in major offshore construction and development projects. The concept of target cost used in this paper is not to be confused with two similar concepts also using the term “target cost”. These are the concepts of target cost engineering, implying product design towards a predefined cost per product. The second is target cost contracts, where a defined cost target is set as an incentive to lower contractor reimbursable costs.

1.2 Why research this topic?

There have been many studies on the effectiveness of goals and targets (Locke & Latham, 2002) and moderators effecting the success of goals and targets (Locke & Latham, 2006). Some studies have been performed towards commitment to budget goals (Chong & Chong,

2002), however, studies are limited in relation to exploring the effects of “target cost” as applied by Statoil in a beyond budgeting context. The focus and attention devoted to target cost within Statoil projects justifies an exploration into the effects of implementing such a target. Exploring target cost as a method for cost reduction will also be especially relevant in today’s oil and gas market where cost levels have the upmost attention.

1.3 Who will this research be valuable for?

This research will be valuable for organisations intending to implement targets on financial expenditure or targets in general. The research may also be valuable for organisations already applying targets, as the research will identify aspects entailing further exploration into how, why, who and when the target effects a project or organisation. In this way, further actions may be taken to enhance the positive effects of a target, or to mitigate the negative aspects.

1.4 Aim and objectives

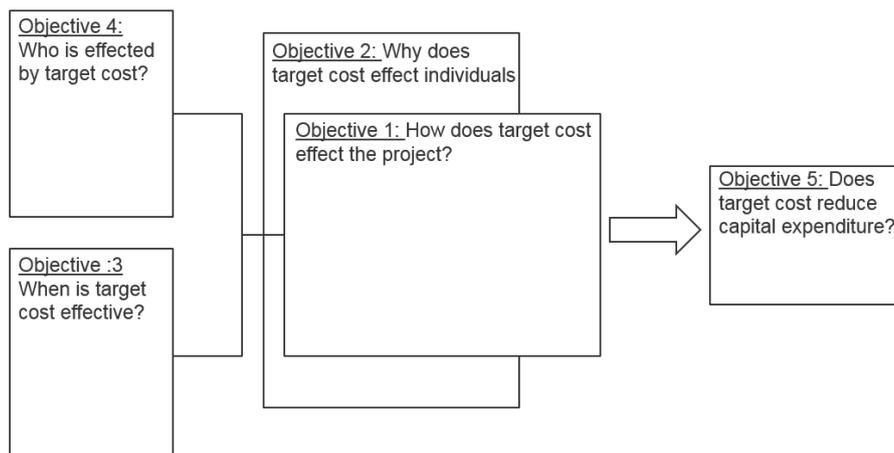
The aim of this research is to gain a deeper insight into the effects of having a financial stretch target in the execution phase of offshore construction project. To help answer the research question, five objectives have been established. The objectives are partly implemented from the 5W1H concept within investigative journalism, using how, why, when and who to help provide information towards the main research question. The objectives and corresponding aims are as follows:

- Objective 1: How does target cost effect a project?
 - Aim: To identify the consequences the concept of target cost will have on the project and the way the project team operate.
- Objective 2: Why does target cost effect the project?
 - Aim: To further investigate why target cost impacts project members behaviour as identified in objective 1.
- Objective 3 When is target cost effective
 - Aim: To identify situational factors that influence the efficacy of a target cost.
- Objective 4: Who is effected by target cost?
 - Aim: To identify who will be effected by a target cost.

- Objective 5: Does target cost reduce project CAPEX?
 - Aim: To investigate if target cost influences performance towards decreasing project capital expenditure.

The research objectives in this research is modelled into a theoretical framework (figure 1). The research framework will form the basis for discussion in chapter 5.

Figure 1: Research framework



1.5 Thesis structure

The main structure of this thesis will consist of the introduction chapter where the research question, aim and objectives are introduced. This is followed by a literature review (chapter 2) where target cost and other relevant concepts are defined. This chapter will thereafter present theory corresponding with the research objectives based on previous goal and target research. The purpose of this chapter is to establish a theoretical foundation in which the objectives can further be discussed in chapter 5. The methodology chapter (chapter 3) will introduce and justify the procedure and techniques applied to answer the research question. This chapter will conclude with an evaluation of the study's validity and reliability. Chapter 4 will present the results from the interview sessions organized in accordance to the research objectives. Chapter 5 will consist of a discussion of the results from the interviews and their relation to identified theory from the literature review chapter. A conclusion with recommendations for further research will be provided in chapter 6. The applied interview sheet and tabulated excel sheets used for content analysis of the results will be provided as appendices to this thesis.

2.Literature review

2.1 Introduction

The literature review will introduce the concept of target cost and provide an overview and evaluation of the relevant theories available within the field of goal setting. Firstly, the literature review will define and clarify the concept of target cost in relation to this thesis. This is followed by an introduction to goal theory and goal commitment. Thereafter, the main body of the literature review will be organized according to the main objectives of this thesis. Firstly, theory suggesting how a target might effect an organisation will be addressed, bringing in concepts from goal-setting theory and other relevant studies in relation to target and goal effects. The second objective aiming to identify why these effects occur will mostly revolve around motivational theory. Objective 3 and 4 identifying when target cost will be effective, and who will be effected will contain contributions from among others, Hollenbeck and Klein and their expectancy theory model of goal commitment (1987). The final objective which aims to identify whether a target may influence performance, will be discussed mainly in relation to Locke and Latham's (2002) High Performance Cycle. Thereafter, an introduction to the researched company, the balanced scorecard and the beyond budgeting principles implemented in the early 2000's will be provided. The literature review chapter is concluded with a further outline of target cost principles as applied by the research company.

2.2 Target cost

Target cost in Statoil is defined by internal guidelines as a target on capital expenditure where the purpose is to close the gap between what is expected and what is wanted. The target aims to create a drive for improvements and identify actions in order to reduce cost levels. According to Statoil guidelines, the target should be very ambitious, with a small probability of reaching the target. The guidelines do not express an exact probability of reaching the target cost, which suggests that target cost may be defined as either a difficult goal or a stretch target.

Stretch targets or stretch goals are difficult and almost unattainable targets suggesting an 0% chance of attainment based on current capabilities (Thompson, Hochwarter, & Mathys, 1997; Sitkin, See, Miller, Lawless, & Carton, 2011). Thompson et al. (1997) defines stretch targets as: *“objectives that force organisations to significantly alter processes in ways that may*

involve new paradigms of operations” (p. 48). Stretch targets are extremely difficult goals, which can only be reached by changing employee attitudes in order to incorporate a new paradigm of thinking (Thompson, 1992). Many organisations are currently implementing stretch targets to improve organisational performance even though they have limited information about their effects (Sitkin et al., 2011), are criticized for potentially being demotivational and lead to excessive risk taking (Markovitz, 2012).

In the field of goal theory, focus has been primarily on difficult goals. This is due to one of goal theory’s main findings, suggesting that difficult but realistic goals lead to increased performance rather than easy goals. In contrast to the seemingly impossible stretch targets, difficult goals will according to Locke and Latham (1990a), typically have a 10% probability of attainment.

Although goal theory implies that goals which are extremely difficult might be rejected by individuals, Thompson et al. (1997) suggests that factors such as empowerment, autonomy, structure and less bureaucracy within an organisation will allow stretch targets to be accepted in the same way difficult goals may be accepted.

The importance of a target on financial expenditure within the researched company is related to the concept of beyond budgeting. The traditional budget represents a specific and fixed target in which organisations are committed in achieving (Donlon, 2008). The budget, however, can also be argued to be a suboptimal construct, where one figure represents a number of different functions. The research company abandoned the budgeting process in the early 2000’s, leading to an “unbundling” of the budget figure into targets, forecasts and resource allocations. In short, the forecast indicates what something is believed to cost, while the target cost indicates the desired cost (Bogsnes, 2016). The beyond budgeting concept will be elaborated further in section 2.11 of the literature review chapter.

Due to the ambiguity of the term “goal” and “target” used within relevant literature, target and goal will be considered to be indifferent in terms of definition. As the difficulty of attaining target cost is unknown prior to this research, target cost cannot yet be defined as either a stretch target or a difficult goal. Given the similarity in traits between goals and stretch targets, the literature review section will include theory in relation to both concepts, clarifying distinctions where relevant. A clarification of attainability as suggested by interview participants will contribute to distinguish whether target cost should be considered a difficult goal or a stretch target under objective 3.

2.3 Goal theory

Goal theory also known as goal setting theory, was developed from the Wurzburg school on concepts of intention, task and mental set, with the work of Lewin among others on level of aspiration and work of Ryan (1970) on intentions (as cited in Locke & Latham, 1990b). Goal theory today is mainly based on the work of Edwin Locke (Mullins, 2002). The premise of goal theory is that people's goals or intentions are vital in determining behaviour. One of the main concepts of goal setting theory suggest that specific and ambitious goals lead to increased performance rather than unspecific and easy goals (Locke & Latham, 2002).

According to Locke and Latham (2002), goals will effect performance through four causal mechanisms. Firstly, goals will serve as a directive function by directing attention and effort towards goal relevant activities. Secondly, goals will provide an energizing function, suggesting that goal difficulty has a linear relation to performance. The higher the difficulty, the higher the performance. Thirdly, goals increase effort and persistence. Finally goals will lead to discovery of new knowledge, and the use of task relevant knowledge (Locke & Latham, 2002).

According to Locke (1968), the combination of goal difficulty and goal commitment will regulate the level of effort towards achieving a goal (Mullins, 2002). Locke and Latham (1990a) define goal commitment as "*one's determination to reach a goal*" (p. 125). Goal commitment must be distinguished from goal acceptance as accepting goals refers to the use of goals assigned by another person. Acceptance does not mean that an individual is psychologically bound to a goal (Hollenbeck & Klein, 1987; Locke, Latham, & Erez, 1988; as cited in Hollenbeck, Williams, & Klein, 1989).

In Hollenbeck and Klein's (1987) expectancy theory model of the antecedents and consequences of goal commitment (figure 2), a model of the commitment process has been developed to interpret past goal setting research in context of commitment as a moderating factor for goal effectiveness. The model shows personal and situational determinants effect on the two main components of expectancy theory; expectations of goal attainment and attractiveness of goal attainment. The antecedents of goal commitment in relation to this thesis' objectives will be discussed further in the following sections. The situational factors will be discussed under objective 3 "When does target cost effect the project?" apart from

separate effects in this section. Following the behavioural effects, an identification of the process effects of a target will be provided. The literature review related to objective 1 will be concluded by an overview of the negative aspects that might arise through implementing target cost.

Motivation

The theory regarding the effects of performance targets on motivation is complex (Hope & Player, 2012). Goal setting theory suggests difficult goals have an energizing function (Locke & Latham, 2002). Difficult goals are motivating as they require individuals to attain more in order to be satisfied compared to easy goals. Motivation generated by challenging and specific goals is argued to be the primary mechanism to increase performance towards tasks (Wood, 1990).

Effort and persistence

Goals have been found to effect effort and persistence. If individuals are allowed to regulate the time spent towards a specific goal, effort is expected to be prolonged. The trade-off between time and effort also suggests that individuals might work more intensely towards this goal if there is limited time available (Locke & Latham, 2002). Cyert and March (1963) suggest that the tangible performance outcomes are enhanced by stretch goals as gaps between aspiration and current performance elicit and guide effort and persistence (as cited in Sitkin et al., 2011).

Direct attention

According to Locke and Latham (2002), goals lead to a directive function both cognitively and behaviourally by focusing attention and effort towards goal relevant activities and away from goal irrelevant activities. Sitkin et al. (2011) adds that stretch goals force a substantial elevation in collective aspirations which lead to a shift in attention to possible new futures.

Stimulate new cost saving solutions and creativity

The fourth effect from Locke and Latham's goal setting theory suggests that goals increase the tendency to discover and use task relevant knowledge and strategies (Locke & Latham, 2002). This also corresponds with Drucker's idea of management by objectives, suggesting

that an effective way of promoting a continuous flow of ideas for improvement, is to challenge participants with “stretch targets”. This will create a creative tension between a desired situation and the current situation (Santos, Powell, & Torres Formoso, 2000). Hope and Player (2012) point out that CEO’s often complain that their organisation is not innovative enough. By implementing stretch goals, Hope suggest that the performance bar is raised above “business as usual”, and puts pressure on teams to find innovative ways to achieve the targets.

Group cohesion

A fifth behavioural effect not explicitly included in Locke and Latham’s (2002) four effects of goal setting, suggests that group cohesion can increase when implementing goals.

According to Scott and Townsend (1994) team commitment and cohesion is likely to be stronger when there are higher goal levels (as cited in Santos et al., 2000). Hope and Player (2012) add that stretch goals increase team commitment to improvements and success if the goals are expressed in an inspiring way.

Target setting as a process to identify opportunities

Goals and targets will according to Galbraith (1973) imply an information processing challenge as organisations will need to gather new sources and types of information and also develop new information processing methods (as cited in Sitkin et al., 2011). Although linked to budget setting, the process of target cost setting and budget setting can be related. Chong and Chong (2002) suggests that participation in budget setting serves as a function for subordinates to gather and disseminate job relevant information. The process of target setting may encourage project members to examine and evaluate their specific cost centres in order to identify opportunities and areas in which potential to cut costs may lie.

Upwards communication and information sharing through target setting

In a budget setting context, Chong and Chong (2002) suggests that participation serves as a function to facilitate decision making by communicating and sharing information upwards in the organisation. As mentioned previously, the budget setting and target cost setting will entail a similar process, this may therefore also be valid when setting the target cost. By participating in target cost setting, project members may communicate and share private

information related to potential levels of cost reduction and opportunities. This information will then form the basis used by decision makers in producing the final target cost figure.

Increased risk taking

There is some empirical evidence suggesting that goals and targets do not only produce positive effects within organisations. Greve (1998) suggests that ambitious aspirations may lead to increased risk taking. If an organisation is performing below its desired aspirations, there might become an increase in risky organisational changes. Hope and Player (2012) suggest that targets cause people to focus primarily on meeting the numbers rather than adapting to emerging threats and opportunities. An additional threat suggests that people will pursue the target at any cost, impairing innovation and increasing the risk of unethical behaviour (Hope & Player, 2012).

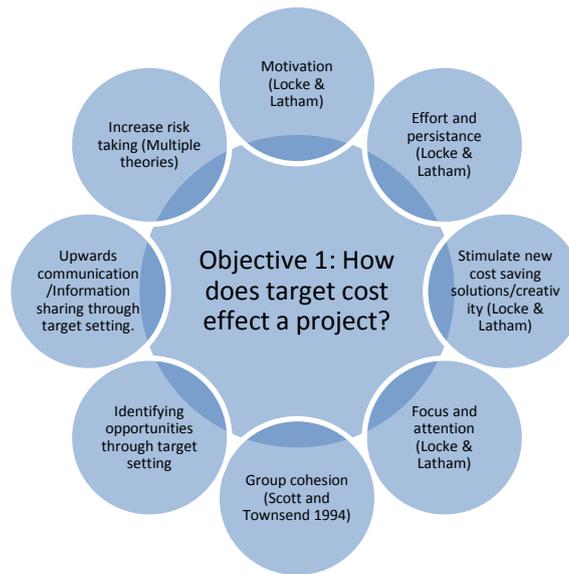
An example of unethical behaviour by linking organisational targets to personal incentives can be seen in the case of Shell and their stretch target to increase oil and gas reserves. In An audit in 2004, Shell was forced to cut their proved oil and gas reserves by 20%, consequently causing their share price to drop 10%. One theory emerging from this incident was that in the late 90's, management in Shell had been encouraged to aim for stretch targets towards increasing their oil and gas reserves. This stretch target was linked to incentive bonuses for the management, potentially motivating them to inflate their estimates of reserves (Taylor, 2006).

Targets might also lead to damaged relationships. Hope and Player (2012) provides an example of a purchasing manager with a cost reducing target. If this manager orders in bulk and pays the supplier late with no sense of accountability for poor quality, high cost of inventory, or supplier relations, this purchaser may have met his obligations by achieving the target. The results, however, will consist of a damaged relationship and an organisation worse off than to begin with.

Summary: Theory objective 1

The expected effects from a financial target identified from goal theory and other relevant literature are summarized in figure 3.

Figure 3: Theory objective 1: How does target cost effect a project?



2.5 Objective 2: Why does target cost effect the project?

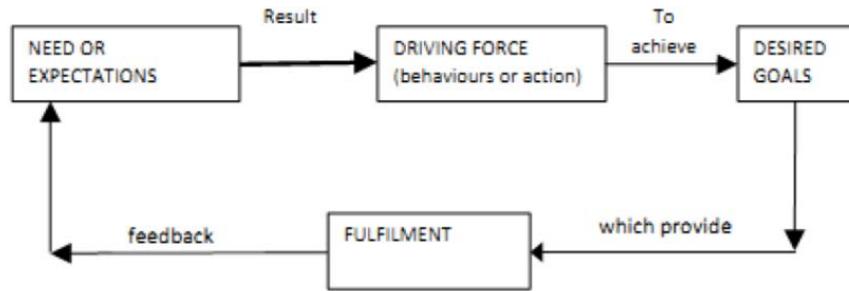
The previous section has provided an insight into the effects that might arise by having a goal or target towards cost expenditure within an organisation or project. The following section will attempt to highlight relevant theories explaining why the behavioural effects identified arise. Firstly, this section will highlight why targets may effect individual's behaviour by intrinsic and extrinsic motivation. This is followed by an introduction of the concept of a “stretch zone” and comfort zone” and its influence on motivation.

Although highly interrelated, the discussion in objective 2 will not go into detail regarding the personal traits and situational factors that might increase the efficiency of a target, as this will be discussed further under objective 3 and 4.

Motivation

Mitchell (1982) defines motivation as “*the degree to which an individual wants and chooses to engage in certain specific behaviours*” (as cited in Mullins, 2002, p. 418). The concept of motivation suggests that there is a driving force within individuals to achieve a goal in order to fulfil a need or expectation. Figure 4 shows the basic motivational model as developed by Kreitner (Kreitner, Kinicki, & Buelens, 1999; as cited in Mullins, 2002). The needs and expectations are discussed in terms of drivers for intrinsic and extrinsic motivation.

Figure 4: Basic motivational model (Kreitner et al., 1999; as cited in Mullins, 2002, p. 418)



Intrinsic motivation

According to Mullins (2002), intrinsic motivation is related to the psychological rewards such as using one's ability, sense of challenge and achievement, receiving appreciation and recognition. Intrinsic motivation is manifested in the enjoyment of and interest in an activity for its own sake (Ryan, 1992; Lepper, 1981; as cited in Elliot & Harackiewicz, 1996). Bloom and Colbert (2011) suggests that intrinsic motivation to perform well in tasks is also positively associated with job performance.

There is some disagreement between intrinsic motivational theorists on whether or not mastery goals (increasing skills) lead to higher levels of intrinsic motivation, while performance goals only lead to decreased intrinsic motivation (Deci & Ryan, 1991; Heyman & Dweck, 1992; Nicholls, 1989; as cited in Elliot & Harackiewicz, 1996). Mastery goals are perceived to increase intrinsic motivation by fostering perceptions of challenge, encouraging task involvement, generating excitement, and supporting self-determination. Performance goals are suggested to decrease intrinsic motivation due to perceptions of threat, disrupting task involvement, and creating anxiety and evaluative pressure (Elliot & Harackiewicz, 1996). The disrupting effect of performance goals on intrinsic motivation has, however been widely contested.

The approach-avoidance achievement goal framework suggest individuals will approach or avoid performance goals. Goals which are approachable (performance-approach goals) will share attributes with mastery goals. These attributes involve focus on attaining competence, which will result in a set of processes facilitating optimal task engagement and an increase in intrinsic motivation. This suggests that in both a performance-approach or mastery orientation, individuals may perceive the achievement setting as a challenge. This will in turn lead to processes facilitating intrinsic motivation, such as generating excitement,

concentration and task absorption, encourage affective and cognitive investment, and orientation towards the presence of success-relevant and mastery-relevant information (Elliot & Harackiewicz, 1996). In a performance-avoidance setting, individuals will be focused on avoiding incompetence, viewing the achievement setting as a threat, thus implying a low sense of intrinsic motivation.

According to Deci and Ryan (1985) tangible rewards along with threats, deadlines, directives, pressured evaluations and imposed goals may decrease intrinsic motivation as they lead to a perceived external locus of causality. In contrast to this, choice, acknowledgment of feelings, and opportunities for self-direction may enhance intrinsic motivation as it allows a greater sense of autonomy (as cited in Ryan & Deci, 2000).

Extrinsic motivation

Extrinsic motivation is based on tangible rewards such as salary, benefits, promotion, the work environment and the conditions of work. Such rewards are often determined at the organisational level and will most likely be beyond the control of individuals (Mullins, 2002).

Goal commitment is strengthened by monetary incentives provided people value money, the reward is high enough, and that the goals are not perceived as unattainable (Locke & Latham, 1990a). Hope and Player (2012) warns, however, that if there are incentives tied to targets, managers might become resistant towards stretching too far. This might result in an incremental target based on a minimal change from the previous year. Those who pursue goals for extrinsic reasons have been found to have a slightly lower performance compared to those who have goals rooted in personal interest (Koestner, Lekes, Powers, & Chicoine, 2002). Bogsnes (2016) suggests kicking out the individual bonuses which are tied up to targets, as they only contribute when motivation is already low. In complex tasks, purpose, belonging, mastery and autonomy drive motivation, not individual bonuses (Bogsnes, 2016). Tully (1994) adds that setting targets will relate to managers forces of pride and peer pressure, resulting in companies using stretch targets rarely having to rely on bonuses or other incentives as key to their programs.

Comfort zones

In relation to the beyond budgeting principles, Bourmistrov and Kaarbøe (2013) suggests that stretch targets are necessary to avoid so called comfort zones. A comfort zone is a facet of the

traditional budget, where decision makers might fall into a mental state of comfort and security. This comfort zone might also cause managers to be less likely to use their abilities to think as entrepreneurs who explore, manage and minimize organisational risk (Giraud, Langevin, & Mendoza, 2008; as cited in Bourmistrov & Kaarbøe, 2013).

The implementation of beyond budgeting principles will according to Bourmistrov and Kaarbøe (2013) change the structure and information flow in an organisation. Separating target, forecast and resource allocation from the budget, and implementing principles such as more relative, directional and stretched targets will in turn result in decision makers entering a stretch zone. The stretch zone will allow decision makers to experience a new mental state where a different type of behaviour can be expected. Such behaviour will suggest an increase in proactiveness, prudence, and increased strategic thinking. In addition, the move into the stretch zone might also change the supply and demand for information within an organisation.

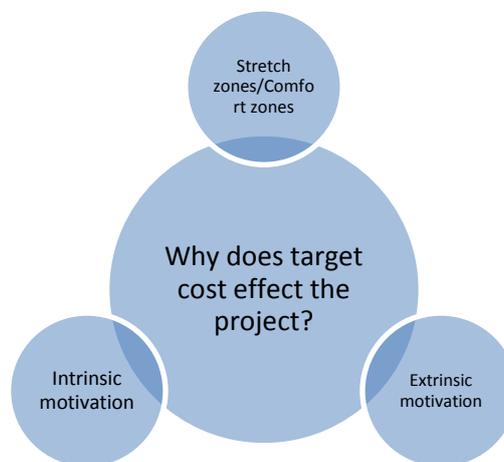
Why the implementation of the beyond budgeting principles might influence the transition from comfort to stretch may be explained in terms of organisational sociology and psychology literature. According to White (2009), two different types of combinations of mindsets and behaviours within of a comfort zone exists (as cited in Bourmistrov & Kaarbøe, 2013). The first suggests a decision maker having a positive assessment of his or her work situation based on an anxiety-neutral mindset due to repetitive and risk-free tasks. These tasks require a limited amount of previously learned behaviour and a steady level of performance (Kahn, 1990; White, 2009; as cited in Bourmistrov & Kaarbøe, 2013). The second set of combinations within the comfort zone suggest a decision maker appraising positively continuous challenges and diversity of tasks faced. The stretch zone can be conceptualized as a transition between the latter type of comfort zones, suggesting that the decision maker will be put in a situation where they must change their mindset and experiment with new behaviour (White, 2009; as cited in Bourmistrov & Kaarbøe, 2013). The stretch zone will also force decision makers into situations where they must acquire new skills or knowledge to meet their goals (Kahn, 1990; as cited in Bourmistrov & Kaarbøe, 2013).

The principles and implementation of beyond budgeting will be discussed further in section 2.11 in this chapter.

Summary: Theory objective 2

The identified theory related to objective 2 is summarized in the below figure. Why target cost causes behavioural changes in terms of motivation will according to a literature review be due to intrinsic or extrinsic motivation. Based in the expected outcomes in objective 1, a larger degree of behavioural traits related to intrinsic motivation is expected. Target cost is also expected to create a stretch zone, which was absent prior to the implementation of the beyond budgeting concept.

Figure 5: Theory objective 2: Why does target cost effect the project?



2.6 Objective 3: When is target cost effective?

This section of the literature review chapter will outline theory in relation to situational and goal traits which will according to identified theory, moderate the effectiveness of the target in terms of performance.

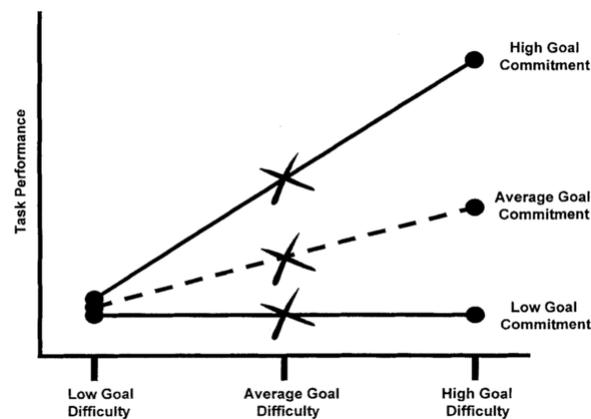
When the target has the correct degree of difficulty

One of the major findings arising from goal setting theory suggests that difficult goals lead to higher performance in contrast to easy goals. (Locke, Shaw, Saari, & Latham, 1981).

According to Locke and Latham (2006) harder goals are more motivating as they require individuals to attain more in order to be satisfied compared to easy goals. This is however,

based on the assumption that there is commitment towards these goals (Hollenbeck, Klein, O'leary, & Wright, 1989). According to Locke et al. (1988), goal commitment will be highest when people believe their goals are attainable rather than unattainable. Locke and Latham (1990a), suggest that difficult goals have typically a 10% probability of attainment. Figure 6 illustrates the relationship between goal difficulty, goal commitment and corresponding performance.

Figure 6: Conceptual interactive relationship between goal difficulty and goal commitment (Klein, Wesson, Hollenbeck, & Alge, 1999, p. 886)



In contrast to the suggested attainability of difficult goals, stretch targets are considered to be less attainable. According to Thompson et al. (1997) stretch targets should be virtually unattainable in order to allow individuals to stretch their abilities, and for the organisation to change their business processes. The difference in attainability between difficult goals and stretch targets suggest that Locke's goal setting theory will be invalid for stretch targets, as these targets are extremely difficult by default (as cited in Thompson et al., 1997). Why stretch targets do not apply to Locke's theory is according to Thompson et al. (1997) due to bureaucratic immunity and structural accommodation. Bureaucratic immunity is when teams are held responsible only to top management, and removed from the bureaucratic processes within an organisation. This will reduce the fear of failure and enhances exploration of creative approaches. Structural accommodation suggests that teams or individuals have unlimited access to information and the power to make changes in organisational procedures. Sitkin et al. (2011) suggests two situational factors that must be present in order for seemingly impossible goals to be effective. These are mentioned later in this chapter.

Explicitness of target

According to (Locke & Latham, 2002) clear and specific goals will have a positive effect on performance compared to vague and non-specific goals. Salancik (1977) describes vague goals as having innumerable outcomes (as cited in Hollenbeck & Klein, 1987). Therefore, doing ones best, will have less value than a specific outcome within a specific time period. As this thesis explores target cost within projects in execution phase, the goal will be highly explicit, as target cost is both quantifiable and expected within a given timeframe.

When there is a culture for targets

Thompson et al. (1997) suggests that stretching targets is not enough to guarantee success. When implementing stretch targets, an organisation also needs to change the work environment and organisational culture. Schein (1992) defines culture within an organisation as the shared assumptions, beliefs and values of the members (as cited in Yukl, 2013). This culture may be reflected on an organisations goals, functions and procedures (Furnham & Gunter, 1993; as cited in Cooper, 2000). According to Thompson, consideration must be made to obtain a culture that supports and encourages working towards a stretch target. By ensuring a climate for targets, and providing management support, individuals or teams will be able to accept a target (Thompson et al., 1997).

Dynamic targets

According to Bogsnes (2016) targets should not be set in stone. As there is much subjectivity in measuring performance towards targets, there is also subjectivity in the setting of targets. Therefore, it might not be possible to say what is good performance in the future, as subjectivity does not become objective because the target is set (Bogsnes, 2016). Lyne (1995) argues that unfair or irrelevant targets on budgets may demotivate individuals. To retain motivation, Becker and Green (1962) suggests that targets on budgets must be revised following a comparison of the target and actual performance. Such target adjustments should be made upwards if performance is meeting or in excess of target, or downwards if there is an underperformance (Becker & Green, 1962; as cited in Reid, 2002).

Slack resources and recent performance

Sitkin et al.'s (2011) findings in relation to hard to achieve stretch targets, indicate that there are complex yet predictable organisational effects that will be negative except for under

certain situational conditions. Firstly, according to Sitkin et al. (2011), stretch goals have a higher effect on performance within high performing organisations with slack than in low performing organisations without slack. Slack resources such as the availability of funds, people and time serves as a practical role in identifying opportunities and finding and cultivating internal capabilities in order to reach a target. Secondly, organisations with high success and strong recent performance are suggested to be better situated to use stretch goals to achieve facilitative effects on both learning and performance outcomes. This is because strong recent performers are less likely to perceive an immediate threat, thus being more open to new ideas and mindful in scanning and processing new information which foster learning. Interestingly, Sitkin et al.'s (2011) research concludes that stretch goals are most attractive for organisations that can least afford the risks associated with the targets.

Goal conflict

Locke and Latham (2002) warns that organisational goals and an individual's goals sometimes might come in conflict with each other. Goal conflict undermines performance of an organisation if for example a manager is awarded more for the performance for the people they lead, than for the performance for the organisation overall. Bogsnes (2016) found that actions can be triggered by both risk and targets. In ambition to action (Statoil ASA's balanced scorecard), targets as well as risks may lead to overlaps between two types of actions.

Other situational factors

Other situational factors from Hollenbeck and Klein's (1987) expectancy theory model (figure 2) which have not already been mentioned, will consist of factors influencing attractiveness of goal attainment and factors influencing expectancy of goal attainment.

According Salancik (1977), publicness will influence the attractiveness of goal attainment as goals known to others are more difficult to abandon than goals known only to one self. Abandoning a publicly known goal will be unattractive as it will make individuals seem inconsistent (as cited in Hollenbeck & Klein, 1987). Competition may also increase the attractiveness of goal attainment by generating pressure that may increase the desire to reach a goal beyond that which would be the case if competition was absent (Hollenbeck & Klein, 1987). Other factors influencing attractiveness consist of explicitness mentioned earlier in

this section, reward structures which has been mentioned under objective 2, and volition which will be mentioned under objective 4.

Situational factors on expectancy of goal attainment will according to Hollenbeck and Klein (1987) consist of four factors. Firstly, social influence will effect individuals as commitment will likely be higher when others around him or her have similar goals (Bandura & Walters, 1977; as cited in Hollenbeck & Klein, 1987). The task complexity of a goal will influence individual's commitment as complicated tasks may require a disproportionate level of effort towards task performance (Earley, 1985; as cited in Hollenbeck & Klein, 1987). Constraints on performance and level of external influences will lower an individual's commitment to a goal, as failure to achieve a goal may be a result of factors beyond one's control (Peters & O'Connor, 1980; as cited in Hollenbeck & Klein, 1987). Finally, supervisor supportiveness may according to Latham and Saari (1979) effect commitment to goals due to goal's being perceived as fairer and more realistic (as cited in Hollenbeck & Klein, 1987).

Summary: Theory objective 3

The identified theory towards objective 3 is applied in figure 7. Goal traits such as difficulty and explicitness of target are expected to effect when a target cost will be effective. Also, a pre-existing culture within an organisation will impact the effectiveness of target cost. A degree of re-adjustment of target is suggested to increase the motivational effect while organisational slack and recent performance is argued to be a prerequisite for target acceptance. When there are conflicting goals, target cost may result in being less effective than intended. Other factors identified from literature are assumed to be peripheral in regards to objective 3, and therefore not expected to be identified through the interviews.

Figure 7: Theory objective 3: When is target cost effective?



2.7 Objective 4: Who is effected by target cost?

The following section will discuss theory related to objective 4, exploring who will be effected by goals or stretch targets in an organisation.

Firstly, an outline of the personal factors of internal locus of control and need for achievement upon goal commitment will be given. Thereafter a summary of volition and how self-set goals may increase commitment to goals will be provided. This is followed by a summary of other personal factors from Hollenbeck and Klein's (1987) expectancy theory model. Finally, an outline of theory will be given suggesting where commitment towards goals will be highest in an organisation and whether this will be the same source of performance.

Although there are a number of personal traits mentioned in Hollenbeck and Klein (1987) expectancy theory model which relate to commitment of goals in general, Internal locus of control, the need for achievement and volition will be of main attention within this section. This is due to Hollenbeck, et al.'s (1989) empirical examination of antecedents for goal commitment, highlighting these factors as being to a higher degree related to commitment to difficult goals than goals in general.

Internal locus of control.

According to Yukl (2013), Individuals with an internal locus of control orientation believe that events in their environment are determined by their own actions rather than uncontrollable forces or chance. This will lead individuals to take more responsibility of their actions and the performance of their organisation. Other traits according to Yukl (2013) suggest that individuals with internal locus of control are more likely to proactively plan how to accomplish objectives, solve problems, influence others and be more innovative and willing to learn. For individuals with high levels of internal locus of control, goal attainment towards difficult goals will be more likely to be perceived as within control (Hollenbeck & Klein, 1987). As internal locus of control suggests a higher level of goal commitment, an external orientation will on the other hand suggest a perceived inability to effect their environment. This in turn will lead to lower goal commitment (Hollenbeck & Klein, 1987).

Those who have a need for achievement

Jackson (1974) defines individuals with a high need for achievement (nAch) as those who "*maintain high standards*" and "*aspire to accomplish difficult tasks*" (as cited in Phillips & Gully, 1997, p. 793). The need for achievement is positively related to choice of difficult goals under self-set conditions or by assigned goals. This indicates that the need for achievement is related to commitment to difficult goals (Hollenbeck, et al., 1989). According to Locke and Latham (1990b), individuals with high goals are not satisfied until they reach their goals, or get as close as possible to achieving them.

Those who have participated in target setting (volition)

Volition implies the degree an individual is free to engage in a behaviour. Actions under ones free will has a stronger implication for self-consistency and is therefore more psychologically binding. Self-set goals and the involvement of individuals in goal-setting therefore implies a higher degree of volition, and thus a higher degree of commitment to difficult goals (Hollenbeck, et al., 1989). In a budgeting context, Merchant (1981) suggests that the act of involving employees in a budgeting process helps serve as a function to accept and commit to budget goals. This is supported by Hope and Player (2012) who also warns about imposing or even negotiating targets, as few people become committed to someone else's target. Deci and Ryan (1997) states that goals or targets assigned by others may represent external directives or extrinsic impositions on task engagement that might evoke perceptions of autonomy and

self-determination. The benefits of involving employees in the target setting process can be related to Norton, Mochon, and Ariely (2012), and their so-called IKEA-effect. This behavioural theory suggests that one assigns a higher degree of perceived value towards an object one has made by one self. Participation therefore suggests that a higher degree of psychological attachment will be present. Studies are however, not congruent on this theory, as there is also evidence that assigning goals to individuals produce the same amount of commitment and performance as goals set in participation with, or by the individuals themselves (Latham & Lee, 1986; Locke & Latham, 1990a; as cited in Locke & Latham, 1990b).

Other personal factors

Other personal traits that are identified through Hollenbeck and Klein's (1987) expectancy model of antecedents and consequences of goal commitment suggest seven additional traits. The following four personal traits influence the attractiveness of goal attainment. Firstly, high levels of endurance imply that individuals will be less likely to abandon difficult goals. Type A personality suggests that higher standards of performance is set. When faced with difficult goals, type A individuals will rather increase effort than abandon goals. A high degree of organisational commitment will likely correspond to a high degree of goal commitment. Job involvement corresponds with commitment to challenging goals when individuals identify with the job itself. This factor can be reinforced by Koestner et al. (2002) who suggests goals rooted in personal interest and values have a slightly larger effect on performance compared to goals pursued for external reasons. In addition to locus of control mentioned previously, the following three personal traits influence the expectancy of goal attainment: Individuals with ability, or self-efficacy, will be more likely to achieve difficult goals, and therefore have a higher commitment to these goals. Past success and high self-esteem are associated with high probability of achieving difficult goals and high goal commitment (Hollenbeck & Klein, 1987).

Who is committed towards the target?

Commitment to targets will first and foremost be influenced by the formal ownership of the target in question. This is reinforced by Hope and Player (2012) stating that commitment towards targets cascades down the organisation hierarchy. In addition, personal traits relating to high levels of goal commitment towards difficult goals are congruent with traits of leadership. For example, Mullins (2002) suggests managers have a higher degree of need for

achievement. Internal locus of control is positively associated with managerial effectiveness (Yukl, 2013). Other traits such as endurance, job involvement, high self-efficiency and self-esteem also represents typical leadership traits (Yukl, 2013; Mullins, 2002)

Who performs towards achieving the target

Performance towards difficult goals are expected to be mediated by goal commitment (Hollenbeck & Klein, 1987). This suggests that individuals with leadership traits and individuals with management positions, also will be the group performing towards the target. However, as individuals within organisations have different roles and perform different tasks, influence on cost reducing measures will also be governed by roles. Individuals in engineering roles will for example be able to influence cost early in an execution phase rather than individuals working with commissioning later in the execution phase.

Summary: Theory objective 4

The theory derived from a review of the literature regarding who will be effected by a financial target is placed in figure 8. Theory suggests that individuals with a need for achievement will be more likely to be committed to difficult goals. Also, individuals with an internal locus of control orientation will believe goal attainment of difficult goals will be perceived as within control. Within an organisation, commitment towards goals is expected to be highest amongst managers and individuals with leadership traits. Therefore, commitment towards targets will be expected to be highest at the top of an organisational hierarchy. Performance towards a goal is linked with goal commitment. Therefore, individuals identified as to have high levels of commitment, will also be individuals performing towards a target.

Figure 8: Theory objective 4: Who is effected by target cost?



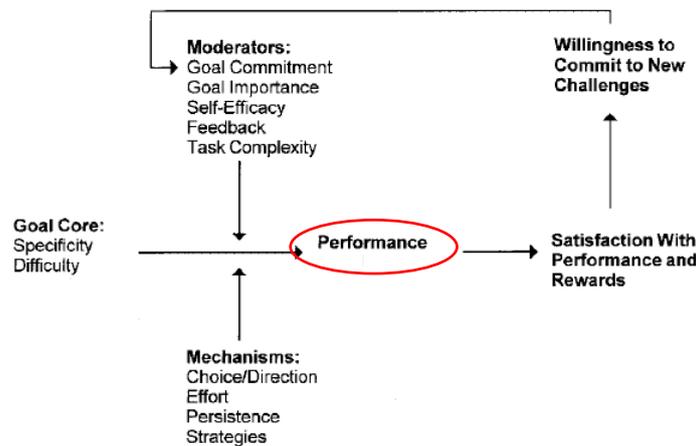
2.8 Objective 5: Does target cost reduce capital expenditure?

This section of the literature review chapter will provide a summary of theory regarding objective 5 of this thesis, which is to explore the performance aspect of target cost. Stretch goals are often encouraged by managers to increase performance, however, there is relatively limited research exploring effects of stretch goals on performance (Gary, Yang, Yetton, & Sterman, 2017). Although some findings suggest stretch targets lead to favourable results (Thompson et al., 1997), most research is related to general specific goals, which are generally recognized to have a positive effect on performance (Locke & Latham, 2002). Sitkin et al. (2011) argues that the performance aspect of stretch targets may be overrated, as evidence based on actual examples are from organisations with a high degree of slack resources and strong recent performance.

In Locke and Latham's (2002) High Performance Cycle (figure 9), the theories of goal setting in relation to performance are drawn together to illustrate the relationships of the elements of goal setting theory. As identified and discussed in objective 1, causal mechanisms will effect performance towards a difficult goal. These are moderated by goal commitment as a vital prerequisite for performance, as no commitment towards a goal will produce no additional effort (Hollenbeck & Klein, 1987). Locke and Latham (2002) highlight goal importance, self-efficiency, feedback and task complexity as important elements of goal commitment. These situational and personal factors were discussed as part of Hollenbeck and Klein's

(1987) expectancy theory model. Goal commitment has been found to moderate performance only when commitment is attached to difficult goals (Hollenbeck, Klein, et al., 1989). Similarly, the specificity of goals will also effect performance (Locke & Latham, 1990b). The result of high performance towards a goal will create rewards, extrinsic or intrinsic in terms of positive emotions, such as performance satisfaction. This will in turn increase goal commitment as individuals are willing to commit to new challenges.

Figure 9: The High Performance Cycle (Locke & Latham, 2002, p. 714)



2.9 Research company background

Statoil ASA is a Norwegian multinational oil and gas company listed on the Norwegian and US stock exchange. The Norwegian government is the main shareholder with a 67% ownership. Statoil is the second largest supplier of natural gas to the European market, and a major supplier of crude oil. Recently, Statoil have also ventured into new energy segments, such as wind and solar power. The company has approximately 23.000 employees, with its headquarters in Stavanger, Norway. The current CEO Eldar Sætre, has been employed in Statoil since 1980 holding a number of managerial positions before succeeding Helge Lund as CEO in 2014. (Statoil, 2018)

Statoil was founded in 1972 originally under the name “Det norske statsoljeselskap AS”. This was a direct result of the Norwegian government wanting to participate in the emerging oil industry off the coast of western Norway. The emerging oil industry was kickstarted a few years earlier when in 1969, Philips petroleum discovered large reserves off the Norwegian

coast. After two years the first production started in the North Sea. The newly founded government owned oil company had as its purpose to secure as much income as possible from the oil industry on the NCS (Norwegian continental shelf) and channel the earnings into the Norwegian society. The separation of the political, financial and managerial roles of the Norwegian government in the oil and gas industry was emphasized. The state-owned oil company was established as a state-owned corporation, meaning the management was now held accountable to a board. The board was appointed by the general meeting which consisted of the minister of industry. The separate roles of the Norwegian government were, and still is different compared to other oil producing countries in the Middle East and Latin America. (Ryggvik, 2015)

In the early establishing years in the 1970's, Statoil was considered a very privileged company, spending shareholder capital years before generating income, and receiving ownership of pipelines and promising oilfields in the North Sea. In 1974 the Statfjord field was discovered by French Mobil. This turned out to be the largest field discovered at that time. As Statoil was state owned, the Norwegian government delegated 50% ownership of the field to Statoil. Production started on the Statfjord field in 1979. In 1987 Statoil succeeded Mobil as operator on the Statfjord field. This was considered as a milestone for Statoil, as the company gradually grew to become the largest operator in the North Sea. In the 1990's Statoil's went into alliance with BP, increasing their international competitiveness. Statoil was fully owned by the Norwegian government up until 2001, when the company was partially privatized. Today, state ownership consists of 67%.

In 2007 Statoil merged with Norsk Hydro, their largest competitor on the NCS at that time. The new company, named StatoilHydro, now had operatorship of 70% of the NCS. The merged companies did not however receive any sudden impact in increasing competitiveness internationally as desired. In 2009 StatoilHydro ASA changed its name back to Statoil ASA. A few years later, Statoil sold the last of its shares in their service station operations (Statoil fuel and retail) (Ryggvik, 2015).

Statoil ASA is today represented in 36 countries around the world. Some of Statoil's main international activities involve operations in offshore clusters in Brazil, Angola, Tanzania, East Coast Canada and the US Gulf of Mexico. Statoil also have a diverse portfolio of onshore shale resources in North America. The company has ambitions of moving into new

energy segments, and is increasing its portfolio in new renewable energy opportunities in several international wind farm projects (Statoil, 2018).

Statoil's international activities are handled alongside a robust portfolio on the NCS, where Statoil is responsible for approximately 70% all oil and gas production. In addition, large fields such as Johan Sverdrup, Martin Linge, Johan Castberg are currently under development (Statoil, 2018).

In March 2018, the Statoil board of directors agreed to re-name the company to Equinor ASA. The final approval of the name change will take place in May 2018.

2.10 The balanced scorecard

In 1997, Statoil adopted the balanced scorecard in order to help execute the company's growth strategies (Johnson, 2008). The balanced scorecard is a strategy performance tool, which provides executives with a framework which translates strategic objectives into a coherent set of performance measures (Kaplan & Norton, 1995)

The introduction of the balanced scorecard program in Statoil did not become as successful as anticipated in the late 90's. The reason for this was due to the inability to sufficiently link the balanced scorecard to other business processes. Also, the traditional budget was restricting the process, and the BSC was not supported by current information systems. The balanced scorecard program was weakened up until year 2000.

Acknowledging that there was potential in the balanced scorecard, a management information system was developed (MIS). This interface permitted tracking and reporting of performance data. The key performance indicators from Statoil's past balanced score cards were reorganized, data input standardized, and made reliable and user friendly. Statoil adopted the MIS for all business units in 2003 and named the revives score card program "Ambition to Action".

When Statoil adopted beyond budgeting, removing the traditional budgeting process, Ambition to action (A2A) went from being a reporting document to an active tool. According to Statoil CFO Eldar Sætre, scorecard implementations fail, as they have to compete with the budget as a management tool. A2A is today an integral part of Statoil's performance and

strategy management process, including target setting, strategic planning and evaluation and reward (Bogsnes, 2016; Johnson, 2008).

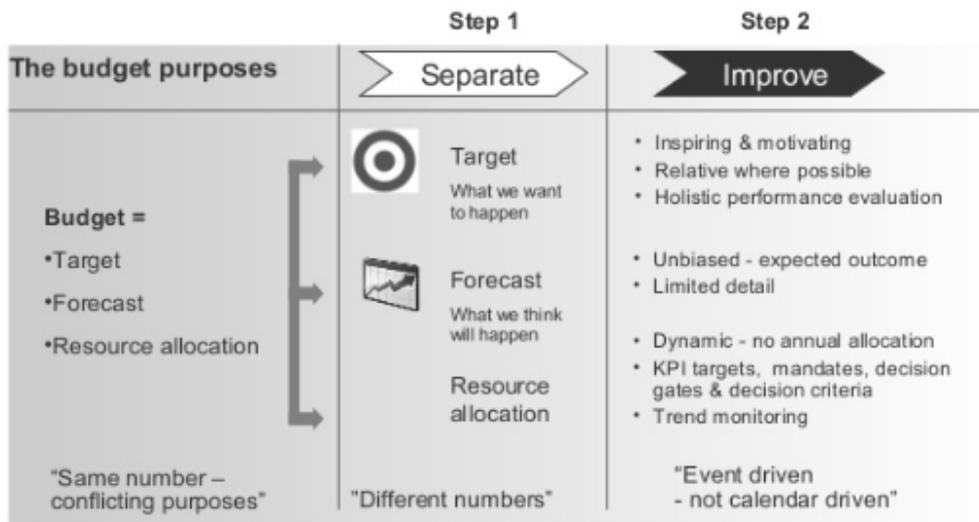
2.11 Beyond budgeting

Statoil's introduction of the beyond budgeting process in 2004 addressed a number of limitations associated with the traditional budgeting concept. The beyond budgeting movement started in the mid-1990's with the Beyond budgeting roundtable, founded by Jeremy Hope and Robin Fraser (Bogsnes, 2010). This was a response to the growing dissatisfaction towards the traditional budget and the budgeting process.

According to (Hope & Fraser, 2003a) the traditional budget is an awkward, time consuming and expensive process, which on average has been found to take four to five months to complete. The budget is also criticized for being outdated in the current competitive business environment and to no longer provide value for executives and operating managers. The annually set budget restricts companies' ability to respond to changing environments and to make fast and effective decisions due to centralized command and control (Bogsnes, 2009). Libby and Lindsay (2010) argue that in addition to contributing to a less flexible organisation unable to seize opportunities, the budget will be disconnected from the organisations strategy. As budgets tend to reflect the past, rather than future ambitions, budgets will also provide little value as targets or motivational tools (Johnson, 2008). According to Donlon (2008), budgets are suboptimal, political and a negotiated compromise, that puts a "ceiling" as well as a "floor" on performance. Finally, Hope and Fraser (2003a) argue that traditional budgeting may lead to "gaming the numbers". This suggests that rewards tied to performance towards budgets might lead managers taking whatever actions they feel warranted to reach their numbers (Player, 2003).

According to Bogsnes (2016), the different conflicting purposes of the budget should be separated into three "different numbers" serving separate functions. These separate numbers should consist of targets, rolling forecasts and resource allocations. Figure 10 illustrates the concept of unbundling the budget.

Figure 10: Unbundling the budget (Bogsnes, 2016, p. 141)



Bogsnes (2016) suggests that resource allocation should be deployed dynamically based on strategic importance, and not due to annually set budgets. The forecast should be dynamic and not based on calendar limitations. By implementing dynamic forecasting, issues that arise might be detected early enough in order to react and re-adjust. Finally target needs to be separated from the budget, allowing for a more ambitious, relative and directional goals. An example of the separation of a project budget into three numbers is provided by Bogsnes (2016, p180):

1. The forecast (i.e. 1.000.) will be the expected cost estimate.
2. The target cost (i.e. 900.) will be the ambitious cost the project aims for.
3. The resource allocation (i.e. 1.100) will be the given mandate to spend.

Research into the limitations of the budget has led to an understanding that the budget is only a part of a larger systemic problem. The solution cannot only be found in new tools and processes, but must also be solved by implementing a set of leadership principles. These fundamental beyond budgeting principles consist of six leadership principles and six process principles (Bogsnes, 2016). The beyond budgeting principles have been attached as Appendix 1 in this thesis.

Although (Player, 2003) claims that 80-90% of companies find their planning and budgeting processes dissatisfying, Libby and Lindsay (2010) found organisations are devoted to retaining and improving their budgeting process. According to Horngren, Stratton, Sutton,

and Teall (2004), criticism towards the traditional budget is based on the way the budget is used, not the budget itself, adding that academics exaggerate “current worst practices” of the budget (as cited in Libby & Lindsay, 2010).

2.12 Target cost in Statoil

The following section will provide a summary of the definitions, processes and related to target cost as communicated internally within Statoil based on governing documents, working requirements and guidelines.

The Statoil Book, which is the governing document reflecting values and objectives in Statoil, defines the difference between target cost and expected cost as: “*A target is what we want to happen; A forecast is what we expect to happen*”. According to Statoil’s guideline for cost management, target cost should be established to create drive for improvements and identification of actions to close the gap between targets and expected. The guideline advises all projects to use target cost in development projects.

Target setting

Statoil’s guideline for project execution states that target cost should be very ambitious with a small probability of reaching the target. According to the guideline each project should at DG2 and DG3 recommend a target based on a cost risk analysis and an assessment of identified opportunities, internal and external benchmarks and business case maturity and complexity. The final decision of how ambitious the target is set is made by management, although it is not stated how ambitious this target should be.

Reporting of target cost.

According to Statoil internal guidelines, target cost should be reported for all Statoil projects in execution phase. As project follow-up is forward-looking and action orientated, focus should be on gaps between the forecast and the targets, as well as the development of the underlying risks. If there are positive gaps, risks jeopardizing this forecast must be identified, if there are negative gaps, actions should be identified and implemented to get back on track.

Reporting of cost development towards the established target cost should be an integrated part of the internal project reporting and form a basis for performance measurement and assessment. Target cost should be included in decision memos and distributed to different sub-projects in the business case through the project assignment (PAS).

Adjusting target cost.

According to Statoil guidelines, target cost should normally be unchanged during the execution phase of the project. The target may however be revised during a bi-yearly baseline update. This is provided the gaps towards target cost has become so significant that it will have an adverse effect on performance, or if the target has been achieved. A potential revision of the target cost must be lifted to the same management level as for the business case decision gate approval.

Target cost in early phase

Target cost in execution phase is significantly different in traits and function compared to target cost in early phase (DG0-DG2). At DG1 target cost for upstream projects (exploration and production projects) should be relative indicators for example break even target price and CAPEX/bbl. For downstream projects (processing, marketing and distribution) similar relative targets should be used.

This thesis is as stated in the introduction chapter only concerned with target cost in execution phase (DG3-DG4). The description of target cost in early phase is intended for information purposes only.

3. Methodology

3.1 Introduction

This methodology chapter will discuss the chosen research design applied in this thesis. Firstly, the research design will provide a general plan of the method for answering the research question. Thereafter, the adopted research philosophy and approach will be discussed. This is followed by a description of the research strategy and data collection methods applied with its corresponding limitations. Thereafter an introduction to the participants will be given with an overview of the interview plan and execution. The chapter is concluded with a discussion of the reliability and validity of the chosen methods applied in this research.

The methodology chapter will not provide an overview or evaluation of all the available research strategies and data collection methods, however, it will provide an explanation and justification of the strategies and methods chosen for the research in this thesis.

3.2 Research design

As this research's aim is to explore the effects of a financial target rather than provide final and conclusive answers, this thesis will adopt an exploratory approach. An exploratory study will help increase the understanding of a problem at various detail where there has been limited research conducted previously. Exploratory research most often consists of unstructured interviews (Saunders, Lewis, & Thornhill, 2000). This is also the chosen data collection method in this study, where six project directors will be interviewed in order to investigate the effects of target cost in Statoil development projects.

The following sections stating research philosophy, approach, strategy and data collection methods will provide a further overview and justification of the chosen research design.

3.3 Research philosophy and approach

The research philosophy is the assumptions in the way information about a phenomenon is collected, analysed, and used (Bajpai, 2011). These assumptions go on to underpin the research strategy and corresponding research methods as part of the strategy (Saunders, Lewis, & Thornhill, 2011). There are two main classifications of research philosophies; Positivism and Interpretivism. Positivism suggests that reality is objectively given, and can be

described by measurable properties which are independent of the researcher and the applied instrument (Myers, 2013). In contrast, interpretivism assumes that access to reality will only be allowed through social constructions such as language, consciousness, shared meanings and instruments (Myers, 2013).

To investigate the effects of a target cost in Statoil, an interpretivist research philosophy will be applied. This philosophy will correspond with this thesis aim which is to gain a deeper insight into the effects of having a financial target in the execution phase of offshore construction projects. Interpretivism is a subjectivist philosophy, which emphasizes the distinctions between individuals and physical phenomena as individuals create meanings. These meanings can be studied to develop new understanding of organisational realities. The interpretivist philosophy suggests a qualitative rather than quantitative approach to data collection, involving interviews and observations (Saunders et al., 2000). The methodological choice and data collection methods will be discussed in the following sections.

In order to answer the research question, this thesis will adopt an inductive research approach, implying a more open-ended and exploratory research where the main purpose is theory building. This is in contrast to a deductive approach, where reasoning is narrower and more constrained, and where the purpose is to test or confirm an hypothesis (Myers, 2013). By choosing an inductive approach, a conceptual framework of the effects of target cost can be created. Although deductive approaches are closer to positivism and Inductive closer to interpretivism, Saunders et al. (2000) suggests that these links are potentially misleading and of no real practical value.

3.4 Methodological choice and research strategy

As the previous section regarding approach has already implied, this thesis will apply a qualitative method towards the research objectives. Qualitative research can be defined as empirical research where the data is not in the form of numbers (Punch, 2013). According to Myers (2013), qualitative research allows the researcher to see and understand the context within which decisions and actions take place. Human actions and decisions can often only be understood in context, and it is the context that helps explain these actions. The only way to understand these contexts is by talking to people (Myers, 2013). As exploratory research generates qualitative information, the interpretation of such information will be subject to bias (Saunders et al., 2000).

According to Saunders et al. (2011), The choice of research strategy should be based on the ability to answer the research question and objectives, the extent of existing knowledge, the available time and resources, as well as the philosophical underpinnings. This thesis will apply a case study strategy towards exploring the effects of a target cost. The case study strategy will be appropriate towards answering the thesis objectives, as the strategy has considerable abilities to provide answers to the questions “Why?”, “What?” and “How?” (Saunders et al., 2011).

As indicated by the title of this thesis, the research will consist of a single case study, namely target cost in Statoil. Although Yin (2003) argues that multiple case studies may be preferable to a single case, a single case study may be justifiable in this thesis for the following reasons; A: Organisations presently applying the concept of target cost in a beyond budgeting context is limited. B: Statoil is by far the largest company in Norway executing some of the largest construction projects in the country.

3.5 Data collection method

The research strategy presented in the previous section clarifies the need for a qualitative research method in order to sufficiently answer the research question and corresponding objectives. Some of the most common data collection methods for quantitative research within case studies comprises of document analysis, interviews, observations and exit interviews (Myers, 2013; Saunders et al., 2011).

To answer the research question and objectives in this thesis, semi-structured interviews will be used as the primary data collection method. Semi structured interviews will allow a two-way communication where the interviewer follows a pre-defined set of questions or themes. The flexibility of semi-structured interviews will allow the interviewer to add additional questions or probe for additional information depending on the flow and content of the conversation (Saunders et al., 2011). Semi structured interviews are most suited in explaining relationships between two variables as it allows for discussion and flow of conversation (Saunders et al., 2000). The main reason for implementing qualitative interviews in this study is because of its advantage of probing for underlying values, beliefs and assumptions (Yauch & Steudel, 2003). The limitations of this the method, however, suggest interviews might be subject to interviewer bias and misinterpretation of questions and answers (Saunders et al., 2000).

Secondary data collection was performed prior to the execution of the primary research, and has been presented in the literature review section of this thesis. Conducting a literature review has allowed the formulation of the research objectives and corresponding interview questions. Although this is an advantage, there are also limitations regarding conducting secondary research prior to primary research. This will be further discussed in section 3.12.

3.6 Time scale

The interviews were planned to be conducted on a cross sectional time scale within two weeks of January 2018. Due to participants schedule changes, some interviews were postponed to the first week of February 2018.

3.7 Interview participants

The interview objects consist of six project directors in Statoil department for Projects Research and development (PRD). The participants were selected with advice given by a company representative. The criteria for selection of participants was based on experience with large development projects in Statoil. All participants are Norwegian males between the age of 45-60. The criterion for selection resulted in a homogeneous sampling of participants in regard to demography. Although this was not intentional, the samples do to a degree reflect the general population within the confined demographic with the criteria selected.

In agreement with the thesis supervisor, 6-4 participants were considered necessary to provide a detailed insight towards the research objectives. According to Johannessen, Christoffersen, and Tufte (2011), a saturation point exists when performing interviews as to how many additional interviews will lead to new information being obtained. In this thesis six participants were considered an adequate scope in order reach this saturation point. Of the six potential participants contacted through an e-mail-based request, six accepted the invitation to participate in the study.

A brief introduction to the participants will be given below:

- **Terje Masdal:** Project director Oseberg Vestflanken project. 20 years of tenure in Statoil. Previously project manager positions in Gudrun and Gina Krog Facilities.
- **Kjetel Digre:** Project director for Johan Sverdrup project. Previously project director for the Gjøa project. 25 years of tenure in Statoil. (Resigned in April 2018).
- **Knut Gjertsen:** Project director Johan Castberg project. Previously project manager for Morvin/Trestakk. 20 years of tenure in Statoil.
- **Vidar Martin Birkeland:** Project manager Martin Linge facilities. Previously project director Gina Krog. 18 years of tenure in Statoil/Hydro.
- **Morten Ruth:** Project Director MAG (Mariner, Aasta Hansten, Gina Krog projects) 35 years of tenure in Statoil.
- **Bjarne Bakken:** Project director of Snorre Expansion project. Previously asset owner responsible, and leader for early phase and concept development in Statoil. 31 years tenure in Statoil.

3.8 Interview plan

The duration of each interview session was planned to last approximately 30 minutes. This duration was considered ambitious towards completing the full set of questions within the interview plan, however, awareness of this time limitation would allow for the interviewer to manage time spent on answers by providing subtle direction. The short interview duration was planned to increase the probability for subjects to accept participation in the study. The interviews were planned to take place in Stavanger and Oslo.

3.9 Interview execution

Prior to initiating the semi-structured interview, all participants were given a brief introduction to aim and objectives of the research. The participants were also informed about the interview structure and the nature of semi-structured interviewing. The participants were also asked for permission to make a digital recording of the interview, to which all six participants gave consent. The interviews were completed within the time frame of 25 to 45 minutes. Of the six interviews conducted, schedule changes resulted in four interviews being held Stavanger, one in Oslo, and one conducted using video conferencing.

3.10 Interview questions

The set of questions developed for the semi structured interviews were developed in correspondence with one or several of the thesis five objectives. The aim of the questions was to stimulate a discussion in where the objectives could be explored. As the interviews were semi structured, a degree of flexibility could be applied during the sessions, allowing additional questions to probe for further information or to re-focus the discussion towards the original question. The research questions with corresponding objectives are attached as appendix 2 in this thesis. For the sake of better flow during the interviews, the questions were re-arranged for the interviews. The question sheet used during the interviews can be found in appendix 3.

3.11 Data analysis

The data analysis process of this thesis will consist of three steps. Firstly, the recordings from each interview will be transcribed in order to allow a detailed examination of the given responses. The second step involves a content analysis of the results, where relevant answers will be categorized into common themes based on research objectives and findings from secondary research. In this step, an excel spreadsheet will be applied for each research objective in order to tabulate the data. The third and final step of the data analysis process will where possible, link the findings within the primary data with the secondary data identified from the literature review chapter where possible. This stage will be presented in the discussion chapter of this thesis.

In the research results and the corresponding discussion chapter, all participants have been anonymized by replacing participants names with the letters A to F. The delegation sequence of these letters has been randomized to provide further anonymity.

3.12 Reliability and validity of research design

According to Saunders et al. (2011), emphasis on reliability and validity of a research design is crucial to reduce the possibility of obtaining wrong results or answers within a study.

Reliability in qualitative research is concerned whether an alternative researcher will reveal similar information by using the same theory and methods (Yin, 2003). Robson (2002) suggest four main threats to reliability (as cited in Saunders et al., 2011):

Firstly, participant error may occur as interviewees may misunderstand questions or provide responses based on newly inflicted incidents affecting attitudes or moods.

Secondly, participant bias might base their responses on what they assume their managers want them to say. In this thesis, there might be a risk of participants basing their answers on how target cost is supposed to work and effect projects, rather than how it actually works. Johannessen et al. (2011), suggests that influential individuals tend to be more concerned with how they and their organisation/project are perceived. To decrease participant bias in this thesis, interview participants have been anonymised in order to increase the reliability of results.

The third threat to reliability as suggested by Robson (2002), consists of observer error. This implies that interviewers might have different ways of asking questions in order to elicit answers. Adding a degree of structure to the interview schedule will mitigate this threat.

Finally, observer bias might lead to imposition of personal beliefs and frame of reference by the interviewer through the questions that are asked. Bias can also be demonstrated in the way the responses are interpreted (Easterby-Smith, Thorpe, Jackson, & Lowe, 2008; as cited in Saunders et al., 2011). The concept of double hermeneutics suggests that the researchers are subjects and are just as much interpreters of social situations as the people being studied (Myers, 2013). In this thesis, a literature review was conducted prior to the conducted interviews. Myers (2013) warns that this sequence may prevent an “open mind” during the analysis of data. Also, the analysis process includes a translation from Norwegian to English, which might add a risk of an answers meaning being different from initially intended.

In response to the reliability issues faced by qualitative research using semi-structured interviews, emphasis is made on the complex and dynamic circumstances that are explored. Non-standardised methods are not intended to be replicable as they reflect reality at the time they were collected. The value of using semi-structured interviews comes from the flexibility used to explore the complexity of the topic. An attempt to ensure that the study could be replicated would not be realistic or feasible without undermining the strengths of the chosen method (Saunders et al., 2011).

The research findings are not sufficient if only reliable, as validity is also an essential requisite. Validity concerns the degree as to which the study represents reality (Johannessen et al., 2011). In other words, if the findings are really about what they appear to be about (Saunders et al., 2011). Validity of the research design can be categorised into internal and external validity:

Internal validity is the extent to which findings can be attributed to the interventions rather than flaws in the research design. In a context of a qualitative study with semi structured interviews, validity suggests the extent to which access is gained to participants knowledge, and the ability to infer a meaning intended by the participants with the language used (Saunders 2011). As the data collection method in this study consists of semi-structured interviews, the results will be of higher validity as questions can be clarified, meanings of responses probed and topics investigated from various angles (Saunders et al., 2011).

External validity concerns the generalisability of a study, which is the extent to which the research can be equally applicable to other research settings, such as other organisations (Saunders et al., 2011). The nature of exploratory studies limit the transferability of findings, as a modest number of samples cannot result in generalization (Myers, 2013). Therefore, the results from this study cannot be used to make generalisations, as a case study consisting of one organisation may be unrepresentative for the general population.

4. Research results

4.1 Introduction

This chapter will summarize and present the results provided from the qualitative interviews conducted as presented in the methodology chapter. The structure of this section is based on the preliminary objectives with an outline of the most relevant answers. Reoccurring answers will be categorized based on the themes identified throughout the interviews.

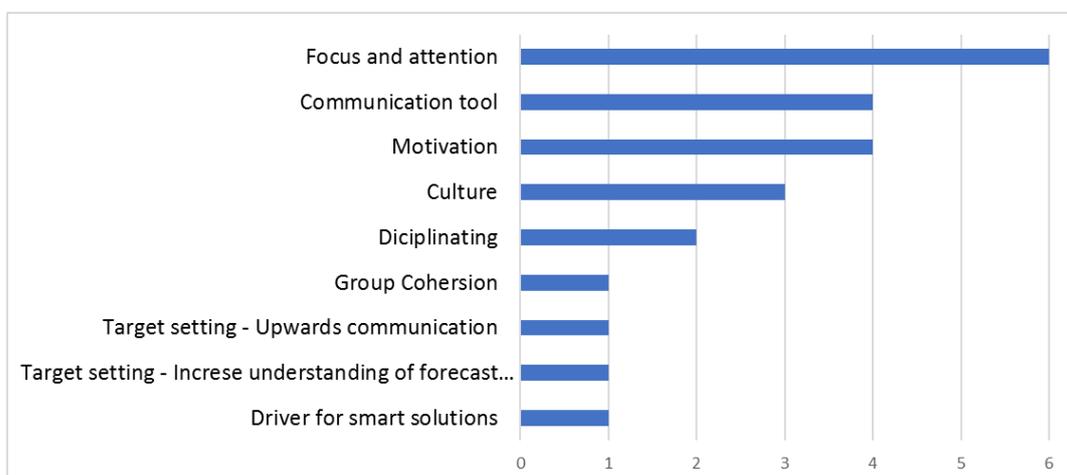
4.2 Objective 1: How does target cost effect a project?

The analysis of results related to objective 1 will provide a summary of the main findings in relation to positive effects on projects as mentioned by the participants. Thereafter a short summary of the effects target cost has on the participants personal way of working in projects will be provided. The analysis of objective 1 will conclude with the results associated with negative effects and risks that might arise from a target cost. Appendix 4 provides a tabulated overview of the results used in the data analysis process.

4.2.1 Positive effects of target cost

The findings from the conducted interviews revealed a number of different positive effects related to target cost. Based on a subjective assessment, these have been categorized into nine different effects. Although some of these effects are interrelated, and may be a cause or result of one another, the categories chosen will be applicable for further analysis and discussion in the following chapter. Figure 11 illustrates the nine effects of target cost identified, with the number of participants mentioning the effect during the interviews.

Figure 11: Identified positive effects of target cost



Focus and attention

All participants respond with focus and attention as a clear effect of implementing target cost. Although varying on detail given in their answers, this effect was identified as a common theme throughout all the interviews.

According to participant B, target cost contributes to cost consciousness over the entire project organisation. This is supported by participant A, suggesting target cost helps increase attention on forecast and results, especially for technical personnel, which have been primarily focused on technical solutions.

Participant C suggests that all targets including target cost helps create focus and attention. This focus will effect prioritization in discussions, decision processes and act as a guidance for the project. The result of this focus and attention will in turn result in improvement.

Participant D reflects on projects without target cost, and suggests that focus on cost was not as clear as it is today, suggesting that one used what one had in the budget, and was content with the result. Participant D elaborates on the benefit of target cost's effect on focus:

“The extra focus on cost has made the projects even more clear on what we are going to deliver. It becomes clear that we shall built this platform, it shall work within this date, and you shall make sure it becomes this cheap”

Participant B suggests that although attention on cost would be reduced without a target cost, this is entirely dependent on the project and the project organisations prioritization of target cost. Participant E suggests that target cost along with all KPI's help focus on performance.

Target cost increases motivation

Of the six participants interviewed, four mentioned motivation as a direct effect of having a target cost in the projects.

Participant C suggests that project members are motivated by the project management teams focus on target cost. Participant D explains that the improved cost awareness culture in Statoil has allowed target cost to become increasingly motivational, and that target cost is today one of the best motivators in Statoil's projects. Participant A explains that he is driven and motivated by the current effectivity and production requirements in which target cost is a part of, but not target cost directly. Finally, participant E suggests that target cost only has a

motivating effect if the target is broken down to a relatable level. This was also mentioned in the results for objective 3 and 4, and will be further elaborated in sections 4.4 and 4.5.

Of the two participants not mentioning motivation as a positive effect, both clearly suggest attention and focus as the main benefit of target cost.

Target cost maintains Discipline

Two out of the six participants claim that target cost helps maintain discipline in relation to cost expenditure. Participant F suggests that target cost has a disciplinary effect on project members by increasing cost awareness on daily efforts. Similarly, participant E explains that target cost also has a disciplinary effect on his own decisions:

“Every day we are presented with options, for example: We are replacing a bundle (Contents of a compressor), and we can see that the casing is starting to look rusty. Why don’t we change the casing at the same time? It is easy to say we will replace everything. By having a target cost, I can implement discipline and refer to our target. «If we do this, we won’t reach our target” The discipline makes you do what you are supposed to do, and nothing more than that.”

Target cost as a Communication tool

Three of the participants mention that an effect of implementing a target cost will be the ability for managers to use the targets as an internal and external communication tool. According to participant F, cost awareness can be increased in the organisation by using target cost as a tool for communicating what the project is measured against.

Participant D, suggests that if there is a positive development towards reaching the target cost, the target will become a powerful communication tool. This will allow you to talk positively about the project and how you are moving in the right direction. The cost reductions may be due to a specific sub-project, or a specific sub-contractor who is managing to reduce costs. The communication surrounding target cost will then create expectations and pressure towards other sub-contractors and sub-projects, or even other Statoil projects. By communicating externally that there is a positive development towards reaching the target, a contribution towards a positive reputation for the project and company will be made.

“It shows that we do not spend money like drunken sailors. We are no longer the ones buying the most expensive champagne, always taking taxis, and flying business. Now there are others who do that. We are becoming a company managing the communities’ assets, and we are showing how we do this responsibly.”

Target cost can also, according to participant A, become a communication tool towards establishing an improvement culture in the projects. This is described further in the following section.

Target cost effects culture

Three out of six participants mention target costs effect on culture during the interview sessions. Participant B suggests that one of the main benefits of target cost is the contribution it has on the performance culture within the projects. By creating a target below the most likely estimate (P50), projects with different levels of risk coverage will be stimulated to save cost.

“In Statoil, the P50 estimate is perceived as an exact science, however, it is an assessment upon how we view risk. Some projects place “buffers” in the P50 estimate to cover risk, and some projects don’t. The different assessments behind the P50 estimate suggests that some projects view this estimate as something we can use. Target cost helps projects acknowledge that they can complete the project using less. It leads us towards to a performance culture, and that is the core.”

According to participant A, target cost can contribute to create culture, and may acts as a tool to accept an improvement culture. The target may also lead to an increased commercial culture within the technical areas. Although target cost can have a positive effect on culture, participant A warns that a target cost will be meaningless without a clear improvement agenda and a pre-existing improvement culture within the projects.

Target cost effects group cohesion

Participant D explains how target cost adds to project culture by strengthening team-cohesion. This is because target cost is a clarification of what the project is going to achieve together.

“Target cost clarifies what we are going to achieve together. It is a culture building element. We are welded closer together, and this leads to other spin-offs. One can discuss problems and solutions quickly, take extra tasks, try to work more on digitalization, LEAN because we have such a cohesive culture. I think this is one of the main spin-offs by having such a clear goal and drive as the target cost gives us.”

Target cost effects on creativity and new ideas

Of the six participants, only one mentioned the positive effect of target cost on stimulating creativity.

Target setting increases understanding of forecast content and opportunities.

Only one participant mentioned the beneficiary effect of target cost setting as a process to identify opportunities. According to participant B, a greater consciousness of the contents in the budgets and where opportunities for cost savings may lie is developed through target setting.

Target cost setting as a process for upwards communication of opportunities

Participant B also mentions target process as a tool for communicating opportunities and potential savings upwards in the organisation.

“It is a way of communicating. Instead of saying there is money in the budget, we can stretch even further. That is the method you get from the target cost.”

In relation to target setting as both a process for understanding forecast content and communication of opportunities participant B explains:

“It means you try to create a buffer in the project. The starting point is P50 (Most likely). Then you start looking where the extra money is hidden, and how can you save this money. You are making this amount visible, and clarifying what good performance is.”

4.2.2 Personal effect on performance

When asked whether the participants believed target cost has a direct effect on their performance as project directors/managers, four out of six replied yes. Of the two participants not answering yes, one stated that it is not target cost in itself, but the will to end up under the

P50 (most likely) estimate that drives performance. The last participant stated that target cost did not have any personal motivational or performance effect.

4.2.3 Negative effects of target cost

All six participants agree that there is some degree of risk associated with a target cost. The common theme suggests that too much focus on achieving target cost might be at expense of HSE, quality, value creation or result in future expenses after the project execution phase.

Too much focus on achieving target cost may cause difficulties for the operational phase. However, participant F explains that there is a balance which must be taken into consideration:

“If there is too much focus on cost in the execution phase you might put the operational phase in a difficult situation. That is when the company will earn its money. There is always a balance to be aware of. Operations also wants to include things that makes their life easier, without necessarily creating value for the company.”

A second identified potential risk suggests that there is a risk of demotivating project personnel if target setting is wrong. This is further clarified under objective 3.

An additional risk of demotivating project members is suggested by participant D. As the largest contributors to achieving target cost may create winners, it may also have a negative effect on project members that contribute negatively towards the target. This may create a loser culture, and demotivate some project members.

When presented with the question regarding target cost and risk, several participants mentioned the risk of contradicting KPI's. This is discussed further under objective 3.

4.3 Objective 2: Why does target cost effect the project?

The analysis of objective 2 will provide the results from the interviews explaining why target cost effects individuals in the project in terms of behaviour. This is followed by a summary of the results suggesting why culture in the project will be effected by a target cost. The analysis of objective 2 is concluded by a description of the participants experience working in projects without target cost compared to working with target cost.

The results related to why target cost may impact individual's behaviour in a project are mentioned in relation to general behaviour. Few participants went into detail when asked why they thought their mentioned behaviours occurred.

4.3.1 Why does target cost effect behaviour in the projects?

Participant C mentions the Hawthorne studies when explaining why he believes target cost can lead to increased motivation. He suggests that all changes have an effect, and will lead to increased performance:

"If management put goals towards your work, it will be because what you do is important. We know this drives performance. If management sees what you are doing, it will be very motivating. If there is a target on your work, it will mean the management is watching you, and this increases performance."

Participant F explains that progressing towards the target entails a degree of satisfaction by showing the project can achieve lower costs than expected. Participant A suggests that goal attainment towards the target creates an energetic drive and good feeling. He goes on to claim:

"It is a self-regulated exercise in goal achievement. It is like running a marathon really. The feeling you get is when you have participated and achieved something."

Three of the interviewed participants mention competition as a driving factor in explaining why a target cost may motivate.

"Target cost becomes a competition. One can celebrate who was best at achieving the target."

Participant D adds:

"Target cost is more valuable in working toward for those who like the idea of competition"

In relation to competition, participant D also suggests that he is driven by gaining better results than on previous projects. He adds that a sense of pride in saving cost occurs. Also stretch targets are an exciting possibility to motivate. Working towards a target becomes "fun" in order to try to make the project even cheaper.

Participant C goes on to suggest that not all members are triggered by target cost:

“It is based on an individual’s motivational profile. Not everyone is triggered by the target. It is like telling children you are going to time them when running. Some children run faster, however, some are not motivated in the same way.”

Participant A explains that the improvement and cost saving culture change in Statoil has led to an increased acceptance of target cost, and that project members are therefore more easily motivated by the target. This is because target cost is no longer seen as something that is forced upon projects, or viewed as an awkward way of working.

In terms of rewards in order to motivate a change in behaviour, participant C suggests:

“The question “What’s in it for me” needs to be asked. We no longer measure performance on employees by grading. It is difficult to combine target setting towards rewards provided by the company if achieving the target.”

Similarly, participant F adds that no motivation in terms of financial rewards is present and suggests that this might be useful to increase focus on target cost.

“What’s in it for me? Why make yourself uncomfortable if you don’t get anything from it. The more you stretch on cost the more challenging your job becomes. If you want someone to take ownership, then a form of incentive for key personnel may be useful to gain focus on target cost.”

In terms of personal incentives, all six participants did however mention that they had target cost included in the set of KPI’s in which their performance was measured against.

Indications from the interviews suggested however, that this did not have a significant effect on motivation among the participants.

4.3.2 Why does target cost effect culture?

The analysis of objective 1 suggests that target cost may effect the performance and improvement culture in the projects. The participants mentioning this effect were further challenged to explain why target cost effects culture:

Participant D provides an explanation as to why target cost might effect a change in culture by reflecting back before target cost became a requirement in the projects: This was a time when Statoil was proud of being able to estimate projects at a relatively precise level, and the

budget was seen as an expected value in which the projects should meet. The final cost might go above or under this budget, but normally it went a bit above. The sanction estimate was a starting point, and there was an acceptance that we would slightly overspend. As long as this overrun was small for example a single digit percentage, this was accepted.

“When target cost was introduced we stopped fooling ourselves by accepting that projects would become more expensive than expected. We decided to try to make things cheaper. This happened at the same time there was an improvement and cost saving focus in Statoil. The projects became skilled in setting targets on cost and schedule. When you set a finish line, then this will become a very good addition to the saving and improvement culture in Statoil.”

“Statoil are known to deliver, either by leading edge technology projects or large construction projects. And we agreed that target cost was something important we wanted to deliver on. This resulted in a culture change. There was a certain pride in saving cost over the entire organisation.”

4.3.3 Experience without target cost

Of the six participants, five can reflect on the traditional budget as the predecessor to the forecast and target cost in today’s reporting structure. Four of the six participants state that the budgets before target cost was introduced were so ambitious, they were considered a target in themselves. Participant A suggests the budget in his previous project was set too low, and that there was no chance to deliver on budget. This in turn led to demotivated project personnel not taking commercial responsibility. Similarly, participant F suggests that it was the contingency levels in the budget that were set so low the forecast became a target.

Two participants suggest that before target cost was introduced in Statoil, project members were more protective and focused on their own budgets and paid less attention to the overall cost in the projects. Participant D also indicates that the free disposal of budgets might lead to a higher likelihood of budgets being spent.:

“It was about delivering on budget. The dialog was different. The sub-projects were managing their budgets in a different way. It was clear that there were different requirements for them then than there is today. Now they are almost embarrassed when they have to use from their contingency. The mandates were set up differently then. They disposed of their budgets more freely. This resulted in the budgets being spent.”

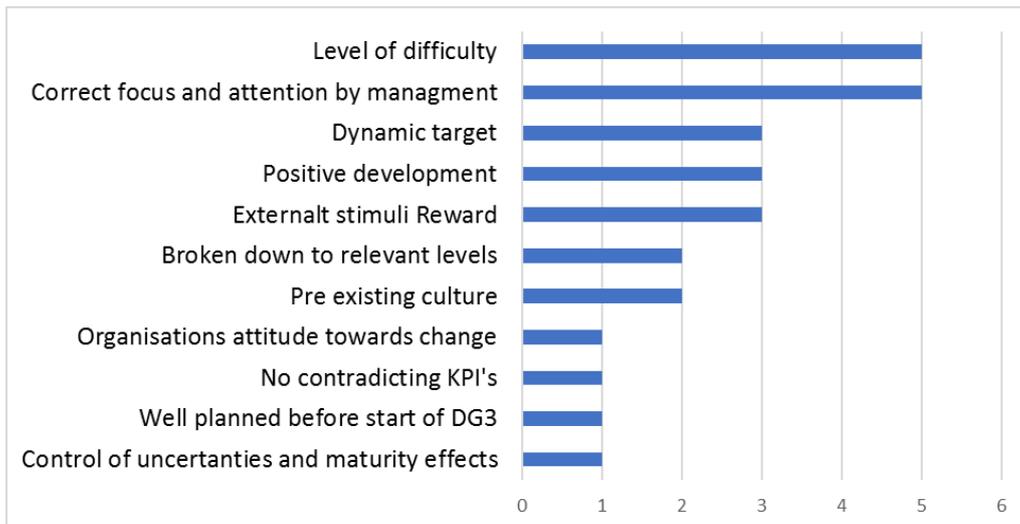
4.4 Objective 3: When is target cost effective?

The analysis of objective 3 will summarise the results related to factors that might contribute to target cost effecting projects. Firstly, a summary of the results from the interview relating to the most important factors influencing the effects of target cost will be provided. Thereafter the views upon how difficult target cost should be set will be given.

4.4.1 Factors mediating target cost effect

Figure 12 illustrates the various factors identified from the interviews with the number of participants mentioning that specific factor. The figures quantification of each effect does not necessarily represent their importance, as these are rather effects identified throughout the interview. The results do however show focus and attention by management, and correct levels difficulty when setting target as the two reoccurring factors suggested to influence the effectiveness of target cost.

Figure 12: Factors influencing target cost effect



Correct focus and attention by management was mentioned by five participants as a factor that influences the effect of target cost in Statoil projects. As a common theme mentioned by these five participants, target cost is only effective if someone has ownership towards the target. This is controlled by the management in projects, starting with the project manager/director's attention and communication regarding target cost. As participant A explains:

“Target cost is entirely dependent on the project directors influence and engagement. Thereafter the project management team engagement, and so on throughout the project.”

Two participants suggest that a pre-existing improvement culture must be present for target cost to have a positive effect on projects. Participant A suggests that:

“It is not given that target cost creates an improvement culture, it is however, necessary with an improvement culture to have a target cost.”

External stimuli and reward was mentioned by three participants as a factor that would have a positive effect on the projects performance towards achieving target cost. Participant F suggests that key personnel should have some sort of incentive towards target cost. As there are no longer individual grading mechanisms in Statoil for performance, participant C suggests that this removes the reciprocity between company and employees at goal achievement. Although there is still a possibility for recognition and promotion, this link may influence employees’ goal attainment. Participant A suggests that although there is relatively no financial reward for anyone in the project towards target cost, there should be to some degree. As there are no external stimuli from the base organisation, participant A suggests that working towards achieving target cost is mainly an exercise in personal goal attainment.

Participant F stresses the importance of avoiding contradicting KPI’s in the project. Being coordinated on targets will improve the effect of target cost in the projects.

“A new person joined the project from the technology environment. That person had her own KPI’s. It was no wonder the project was going in the wrong direction. Her KPI’s were to introduce as much new technology as possible, while our KPI was to reduce cost.”

The organisations attitude to change was mentioned by one participant as an important factor influencing target cost attainment. Participant A suggests that the principle the company has held imposing a “no change” philosophy after DG3 (start of execution phase), has been a major weakness towards the improvement agenda. Participant A elaborates in a project execution setting:

“One needs a lot of change after DG3, only then can you achieve your target. A no change philosophy is meaningless. Communicating “no change” and target at the same time is ridiculous”

Two participants state that the target cost needs to be broken down to a relevant level in order for project members to build a relation to the target figure. Participant E provides the following example:

“As of today, the total project target is known by everyone. But if you are working on a small widget costing 10-20 million NOK, then you won’t be able to relate to the total target. If target cost is to have an effect, then it needs to be broken down.”

Participant A adds that target cost is clearly most effective in the start of the project execution phase. This is when you involve subcontractors and increase the manning of the organisation. By having the right mindset, culture and contract strategies etc. in place before this point is a prerequisite when starting the execution phase. If these are in place, target cost will have a greater effect on the project.

“you can imagine that the beginning is before you are taken by the big ship, when everything is started, setting the standard, focus and culture etc. If you are not on-board, you will be running behind putting out fires. Therefore, everything that happens before execution is vital.”

Control of uncertainties and maturity effects before execution phase is also mentioned as a prerequisite by two participants. By having a realistic estimate going into execution phase, projects will be less prone to large forecast increases which in turn may lead to poor effect from having a target cost. As participant D explains:

“Take for example project x, which was a technology project in which we had no idea how much would cost, as we had not done this kind of project before. If we have to save cost by not taking taxis on the one hand, and at the same time increase cost on the other by five billion NOK because there was something you have forgotten, then something is not right.”

This effect is closely related to the increased effect of target cost when there is a positive cost development in the project. Three participants mention that target cost is most effective when there is a cost reduction development within the project. Inversely, a negative cost development will result in a poor effect from a target cost. Participant F gives the following example:

“If you are going to reach a target, and then you say you need an extra 2-300 million NOK, this will be treated negatively in the organisation. There becomes a negative focus. No one wants to touch the target cost, because they know it is just a negative thing.”

Participant D adds:

“Target cost is a sort of self-fuelling mechanism. When we have a positive development, and you hand back money, there becomes an additional drive in the project.”

Of the six participants, five mention level of difficulty to achieve target as a main effect contributing to when target cost is effective. A common theme suggests that target should be realistic to achieve, however, with a degree of stretch involved. As participant A suggests:

“The target cost may be too tough, and then you demotivate. Setting a target to reduce forecast by 40%, will just lead to resignation, and people will not be bothered to perform extra”

The following section will provide a further analysis of the results obtained in relation to target setting difficulty.

4.4.2 Level of difficulty to achieve target cost

As mentioned in section 2.12, a target cost is a relative value in relation to an estimate. A target towards an estimate which has low levels of growth and contingency might be difficult to reach. This context is highlighted by several of the participants during the interviews. When asked how ambition target cost should be set, a degree of variance in answers between the participants were given. The analysis indicates that there are some participants favouring easier targets with frequent adjustment when target is achieved, while others seem to favour more ambitious target.

Of the five participants providing a clear answer to the question of how difficult the target should be to attain, all five suggest that the target needs to be realistic to have an effect. As two extremes, participant E suggests that target should be very difficult, while participant A suggests that target should not be difficult. Table 1 provides a brief summary from the five participants answers:

Table 1: Results: Target cost level of difficulty

A	Target cost should not be difficult. It should be realistic.
C	Target cost should be difficult to achieve. Must be realistic and should not be a walkover.
D	Not necessary that we achieve target; Important to maintain realism/belief in achievement.
E	Target cost should be very difficult. Must be realistic.
F	Target cost should be challenging but everyone should see that it is achievable.

Participant A suggests:

“Target cost should be within a semi-rational outcome. Those who are going to work towards a target cost must see that there is a possibility to achieve the target. The target should not be too ambitions.”:

On the other hand, participant D suggests a more ambitious approach:

“the only thing you can do wrong when setting a target is not setting it too ambitiously so that one cannot reach it, but setting it too ambitious and losing the locker room. People will not believe it will be possible, they won’t be motivated by it.”

Of the five participants, two suggest a frequent update of target. Participant A suggests that target is set incrementally, allowing for celebrating achievement of target cost.

“The first target cost should only be an appetizer on the volume of the growth potential one initially has. This is not visible in the beginning of the execution phase”

This is supported by participant F, suggesting that it is better to set a target early, and to revise the target in contrast to setting a long-term target you see you can’t achieve. Participant F elaborates:

“It is better to have a sequential target cost, and to set new targets. It is like professional sports. You constantly set new targets for yourself.”

4.5 Objective 4: Who is effected by target cost?

The analysis of objective 4 will summarise the interview participants views on who will be effected by a target cost in the projects. Firstly, this section will present results in relation to ownership and engagement towards target cost. Secondly results suggesting who delivers and performs towards achieving target cost will be outlined. This is followed by the results identifying personal traits such as the need for goal attainment, belief in internal locus of control and other identified traits. This section will be concluded with the results indicating who participates in target setting.

4.5.1 Who is committed towards the target?

The common theme suggests that ownership and engagement to target cost is largest at the top of the organisation, starting with the project director, then discipline leads, company representatives and so on. This is supported by four of the participants. Of the two remaining, one participant replied that he did not know, the other suggested that everybody is affected to some degree. Participant C suggests the importance of breaking the target down to relatable levels to increase ownership:

“The higher up in the project the more you are effected, the lower you are the more difficult it will be to create the same engagement towards target cost.” “This is however, dependent on how you break down the target cost. One thing is having a target on project level, but if you break it down allowing someone responsible for a contract to have a target, then you will gain some of the same effect there. But for an engineer to have the same ownership to the projects total CAPEX cannot be expected.”

The participants also mention that the project control function within the projects are the ones that are effected in terms of work processes, reporting and facilitating the target cost processes.

Participant A suggests the operational organisation within the projects has a larger potential to be committed towards target cost in an execution phase. Operations tend to be focused on operational costs (OPEX) rather than a balanced responsibility for CAPEX.

4.5.2 *Who contributes to goal attainment?*

In contrast to the findings suggesting ownership and engagement is largest at the top of the organisation, ideas and cost saving solutions may come from further down the projects organisational hierarchy. Two of the participants state that a significant contribution towards reaching the target cost originates from below in the project organisation. As participant F suggests:

“Cost saving ideas come from down in the project organisation. They have sessions on target cost to see what lies in the figures, and if there is anything more to add”

Participant A states that it is the engineering manager, along with the technical leaders who controls the scope both in early phase and in the execution phase that will have the largest impact on reaching target cost. Participant A goes on to suggest how he attempts to take advantage of the engineering disciplines potential to impact target attainment:

“I will call 30 engineering leaders to a meeting. I want a separate seminar with them to ensure they take ownership to a larger degree than others. Then I expect them to pass this ownership on within the discipline level. The engineering disciplines control a lot.”

Participant A goes on to suggest that the organisation managing the construction have less of a contribution towards reaching the target, apart from maintaining schedule. In this phase the importance relies on whether the design basis is correct or not in order to avoid changes.

Decisions to lower estimates due to lowered risk of increases will be made at the top of the organisation, as participant D explains:

“What happens with the estimates is decided in a triangle between myself, the project control manager and the sub-project or discipline leader. This is how we gain an insight into how far we can lower our forecast. But those who deliver the cost reductions they are the hero’s. There are some people that works hard with continuous improvement. We see this every month. There are many examples of improvements and changes that don’t happen by themselves.”

Internal locus of control

Two participants mention the perceived ability to effect attainment of target cost as a factor influencing engagement. According to participant F, a target will only work if an individual

has ownership to it, and will be able to influence it. Participant D suggests that individuals might be less engaged in target cost if they believe they have little ability to impact target attainment.

Need for achievement

In relation to individuals need for achievement as a personal trait for target cost commitment, no clear results were given. Three of the participants, however, suggest that people react differently to the motivational effects of having a target cost. According to participant A, some people will not be triggered by target cost in the same way as others might be triggered. Participant E suggests that individuals motivational profile indicates whether one is triggered by a target cost or not.

Other personal factors

A limited number of personal traits were identified from the results of the interviews. Three of the participants claim that it is mostly a leadership issue that influences people's commitment to target cost. As participant A suggests:

“It is dependent on the project directors influence, engagement, and thereafter PMT ownership and engagement and so on down the organisation.”

The only other personal trait identified from the interviews implies that project members that react to lack of reward will be less engaged.

Who participates in target setting?

To identify whether there is any correlation between those effected by target cost, and those who contribute to target setting, participants were asked to describe the target setting process and those involved. The results show that the ground work is made from outside the project management team. Of the five participants providing clear answers as to who contributes to target setting, all suggest that the ground work is done within the sub-projects below the level of PMT.

Of the five participants, three suggest that the target setting is a combination of bottom up contributions and a top-down management involvement. The top down contribution is to provide a degree of stretch in the target, as participant D explains:

“Target setting is firstly a process with an academic approach towards what the target should be. Secondly a top down management decision where we include additional improvement effects. It is an academic process connected with a leadership process.”

Participant B goes on to suggest:

“I think there is something in the organisations that suggests they must play safe. Unfortunately, project organisations are starting to learn how this works. They start to play even safer, and the KPI’s become less valuable. “

The importance of involving project members in target setting was stated by participant E, suggesting that there is a need for continuity, where the same people setting targets should work towards achieving them. In response to the question why some members were less engaged in target cost participant E gave the following example:

“What happens with drilling and well is that they have a team up towards DG3. In the execution phase they change their team. In this way, the people that come in have no ownership to the targets or the figures. There is some discontinuity that does not work well enough”; “In my opinion, ownership in relation to establishing target and estimate and executing on it needs to be rooted down in the value chain.”

4.6 Objective 5: Does target cost reduce project CAPEX?

Out of the six participants interviewed, all agree that target cost has an effect on reducing the project CAPEX. The participants also agree that it is impossible to quantify how much of an effect target cost will have on this reduction. An excerpt from each participants’ reply to the question of whether target cost reduces CAPEX is given below:

Participant A: *“It is obvious target cost reduces cost expenditure. To which degree will be impossible to quantify.”*

Participant B: *“The fundamentals with target cost is to measure performance”; “To drive performance is target cost to me. Yes, target cost reduces CAPEX.”*

Participant C: *“Yes. I honestly believe the target setting has an effect. However, what is difficult is telling how much of an effect it has on CAPEX.”*

Participant D: *“Yes. I believe that target cost helps us expect more of ourselves in relation to continuously improving. Even if some projects may have a cost increase, I believe that in relation to Statoil overall, target cost will help reduce cost. It is impossible to say how much target cost will effect CAPEX, although there will be a limit. By removing inefficiency, “gold plating”, things one does not need, excess functions and work, then you will be left with the basic cost for buying what you need.”*

Participant E: *“It sets attention on KPI’s, so target cost definitely helps reduce CAPEX. To what degree it effects CAPEX depends on which project you are on, and how strongly the project is driven by CAPEX. It is hard to give a general answer to that.”*

Participant F: *“To be honest, I think it reduces CAPEX. But if it is done correctly. If implemented wrongly, you may experience negative effects.”*

5. Discussion

5.1 Introduction

The following chapter will interpret and describe the significance of the results found in the qualitative interviews in relation to the existing empirical theories outlined in the literature review. This chapter will also attempt to explain any new understandings of the concept of target cost when taking findings into consideration. Each objective will be discussed in turn before the findings are summarized in the research model. The chapter is concluded with a brief discussion of the limitations of this research.

5.2 Objective 1: How does target cost effect a project?

The discussion of objective 1 will interpret the positive effects identified from the results. The tabular sheet from the analysis of this objective can be found in appendix 4.

The findings related to objective 1 provided a wide range of positive effects from implementing a target cost in a project. The most frequently mentioned effect consisted of “focus and attention”. This effect is related to both effect of goals (Locke & Latham, 2002) and stretch targets (Thompson et al., 1997), and was strongly anticipated to be mentioned by the interview participants. Although anticipated, the findings suggest that common themes within the effect of focus and attention can be placed into three sub categories. These are:

- A. Target cost may increase the overall cost consciousness within the project organisation.
- B. Target cost can increase focus on performance.
- C. Personnel not primarily focused on cost in their day to day work tasks may become more aware of cost issues.

Participants were more restrained from mentioning motivation as a distinct effect as a result from a target cost. Although the participants were not directly asked whether target cost would effect motivation, the set of questions asked would suggest that motivation would be mentioned more frequently. The participants who did not mention motivation as a direct effect of target cost were also the same participants that did not believe target cost effected their personal motivation or performance. These participants suggested other elements than target cost as motivational, such as HSE, quality, plan and delivering on the cost estimate.

The participants were not further challenged in the interview as to why they did not mention motivation as an effect for the project or for them personally.

In regards to goals increasing effort and persistence as stated by Locke and Latham (2002), no results were provided. The reason for this may be due to effort and persistence being intended as a construct of the term “motivation” when mentioned by the participants.

The identified effect of “discipline” as mentioned by two of the participants in the study was an unexpected result. Although strongly linked to “focus and attention” as an effect, the discipline effect suggests that it helps employees and project managers re-think and justify their actions and decisions in consideration to target cost attainment.

An additional finding shows that half the participants claiming that the result of having a target on project expenditure will allow an establishment of a tool for communicating internally and externally the cost development of the project. This communication tool might however only be of value if there is a positive development towards achieving the target. As several participants suggest the positive effects this tool will generate, no information is given on the effects this tool will provide if there is a negative trend. If a negative cost development is present, one may hypothesize a negative effect on reputation towards stakeholders and the establishment of a cost saving culture by using target cost as a communication tool.

Target costs’ effect on creating an improvement and cost saving culture was mentioned by three participants in the study. Although Thompson et al. (1997) suggests that a correct form of culture must be present for a stretch target to succeed, target cost in itself was not expected to influence the culture. Some previous research does to a degree supports this finding. For example Madsen and Stenheim (2014) identified the balanced scorecard to have an effect on organisational culture. Although focusing on a wider set of targets rather than a specific target, their research provided evidence that the BSC would act as a cultural tool that could change how the organisation operates and “thinks” thus increasing performance.

Target cost effect on group cohesion according to findings by Scott and Townsend (1994) and Hope and Player (2012) was also identified within the interview results. Although mentioned by one participant only, this effect is of a more peripheral nature, and might have been mentioned by further participants by reformulating or adding an interview question to increase the likelihood of other participants mentioning this effect.

The effect of target cost in increasing creativity and cost saving ideas was mentioned by only one participant. The occurrence of this effect was expected to be higher, as creativity and stimulation of new ideas is rooted in both Locke and Latham's goal setting theory (2002) and for stretch targets as suggested by Thompson (1992).

Target costs' effect to increase the understanding of forecast content and opportunities through the target setting process was also an effect expected to be mentioned by further participants. This processual aspect of target cost derived from Galbraith (1973) and Chong and Chong's (2002) research on target and budget setting was considered to be an important effect. The effect was mentioned by one participant, stating that a higher consciousness of the contents in the forecasts is generated, and a further understanding of where opportunities for cost savings may lie will be developed through the target setting process. As with several of the other identified effects, this might have been mentioned by other participants if probing further during the interview.

The second processual effect identified was the effects of target cost as a tool for upwards communication of opportunities. Although one participant mentioned the communication of identified potential through target cost setting, the context in the identified result as to who this is communicated towards is unclear. The expected result suggested a context where opportunities are identified and communicated upwards from sub-projects towards project directors.

The results of the question linking personal performance and target cost showed four participants were confident target cost helped them perform. The participants who did not believe target cost effected their performance were the same participants that refrained from mentioning motivation as a general effect of target cost. Alternative motivators on performance were mentioned by these participants, such as HSE, quality, plan, and achieving better than expected cost.

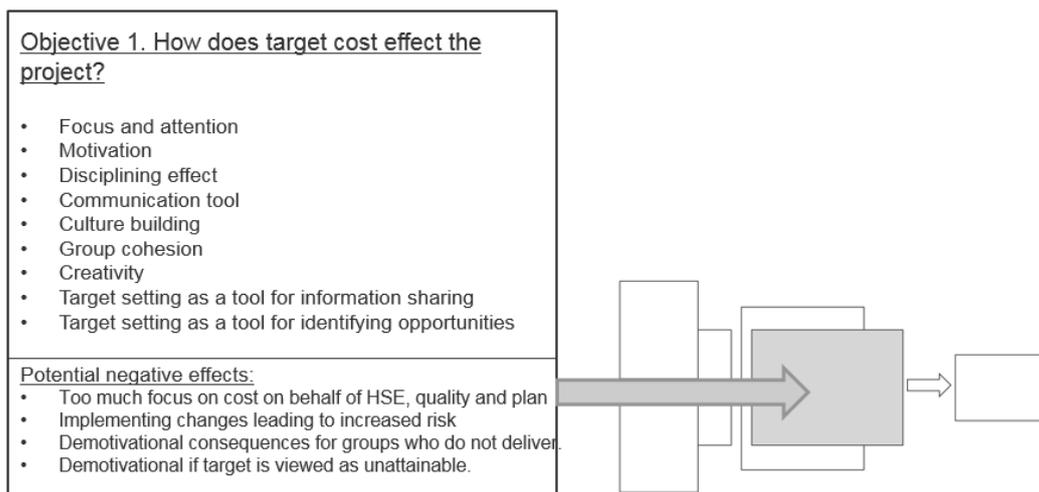
Regarding the negative sides of target cost, all participants agreed that a target cost might lead to increased risk. This result were predicted based on target leading to risky organisational changes (Greve, 1998) over-focus on targets (Bogsnes, 2016) and pursuing target at any cost (Hope & Player, 2012). The results did, however, identify additional risks associated with the target cost that were not expected. This was the demotivational consequences towards groups within an organisation that do not deliver cost reductions as well as other groups. A second risk identified from the results suggest that if the target setting

was set too ambitiously, and individuals view the target as unattainable, these individuals will be demotivated. This statement given by one of the participants can be linked to Locke and Latham’s (2002) goal setting theory where unattainable goals do not create commitment.

Summary: Objective 1

Objective 1 aimed to examine how target cost can effect a project. The results provided a range of expected effects as published in previous research regarding goal and stretch targets. The identified effects that were expected in this study reinforces the linkages from goal theory towards the concept target cost within the researched company. The research also provides some new effects not recognised in the secondary research. These effects were identified as the disciplining effect of target cost, the communication effect of cost status, and the effect target cost has on building culture. The findings from objective 1 also provides a brief picture of the frequency these effects are mentioned, however this frequency should not define the actual reliability or importance of each effect as a different set of questions might generate different outcomes. The results confirmed that there is an overall belief that target cost may lead to negative consequences on HSE, quality, schedule and cost, however, the findings also unexpectedly indicated that target cost may demotivate employees. The findings from objective 1 are placed into the research model for target cost:

Figure 13: Summary objective 1



5.3 Objective 2: Why does target cost effect the project?

The aim of objective 2 was to further investigate why the effects from objective 1 arise in terms of behavioural effects. As not all the findings from objective 1 were substantially explained as to why they occurred, this objective will be limited to discussing why target cost effects motivation in general. Finally, a discussion regarding why the implementation of target cost, together with the beyond budgeting principles have created a shift from a comfort zone to a stretch zone in Statoil.

Why target cost may lead to increased motivation provided few results from the interviews. Although all participants to various degrees mentioned behavioural effects of a target cost, few were willing or able to substantially provide the cause for these effects.

The most substantial explanation given from the interviews findings was not identified in the literature review section. One participant referred directly to the Hawthorne experiments when explaining why target cost motivates individuals. The Hawthorne experiments revealed that extra attention to individuals and interest shown by management resulted in increased productivity. The results indicated the importance of the views of managers and how they behaved as a vital aspect of motivation and performance in an organisation. By management focusing on individuals' goals, would therefore indicate an increased motivation towards achieving that goal (Mullins, 2002).

Intrinsic motivation

The findings from the interviews suggest that target cost does generate several positive emotions consistent with intrinsic motivation. Satisfaction and feelings of wellbeing and achievement were mentioned in context with goal attainment. Enjoyment and excitement towards a challenge were also indicated when working towards a target. The participants in the study did not indicate any personal negative emotions associated with target cost, suggesting that the target is viewed as a performance-approach goal which might lead to higher levels of intrinsic motivation.

The degree to which the interview participants mention competition as a factor for explaining increased motivation was not expected. Competition is mentioned by Hollenbeck and Klein (1987) as a situational factor that may lead to increased goal commitment. However, although mentioned under objective 3 of the literature review chapter, competition was not a highly

expected result. According to Reeve and Deci (1996), competition might reduce levels of intrinsic motivation towards goals. Findings have, however also shown that situations where competition is “less controlling” for example by being told to do better than others, intrinsic motivation might increase. Harackiewicz and Sansone (1991) suggest that differences in individuals moderate the effects of competition. Individuals high in achievement motivation should respond positively to competition compared to individuals with lower levels. As there is no controlled competition within Statoil regarding target cost, competition can be considered as a driver increasing intrinsic motivation towards cost saving activities in line with Reeve and Deci (1996) suggestions.

Extrinsic motivation

Although all participants have personal tangible incentives tied up to their overall performance, in which target cost is a part of, a strong indication from the results suggest that this is not a strong personal motivational factor. However, as discussed under the next objectives, some participants advocate for a stronger degree of tangible rewards for managers and individuals in general to increase the effects of a target. Other findings suggest that in the absence of financial rewards, extrinsic rewards such as promotion may be provided.

By indicating that extrinsic reward is not a driver personally, and at the same time suggesting a higher degree of reward for others to increase commitment towards target cost may seem contradicting. The findings in relation to the aspect of extrinsic motivation as a driver for commitment towards target cost will therefore be regarded as inconclusive.

Stretch zones and culture

In regards to the shift from comfort zones to stretch zones as a result of implementing the beyond budgeting principles, no direct reference towards this construct was identified. Although a direct reference to a stretch zone was not expected, some evidence towards the concept was. The results identified in relation to how projects functioned without a target cost can be combined with findings in relation to target costs effect on culture. As target costs’ influence on culture was not expected to be identified, further probing was conducted during the interviews to clarify why this effect occurred.

As the results indicate, a budget culture existed within Statoil prior to the implementation of the beyond budgeting principles. The culture consisted of a common acceptance for

overspending the budget. Also, the budget was regarded as an expected value, in which cost might go above or under, but most frequently above. A more free disposal over budgets was suggested to result in budgets being spent. Although the budget was argued by several participants to be set too low, the acceptance of projects becoming more expensive than expected can be associated with a degree of comfort with the current situation. The findings, although presented on a project based level rather than an individual decision maker level, describe the prior budgeting culture within Statoil as comparable to a comfort zone as described by Bourmistrov and Kaarbøe (2013)

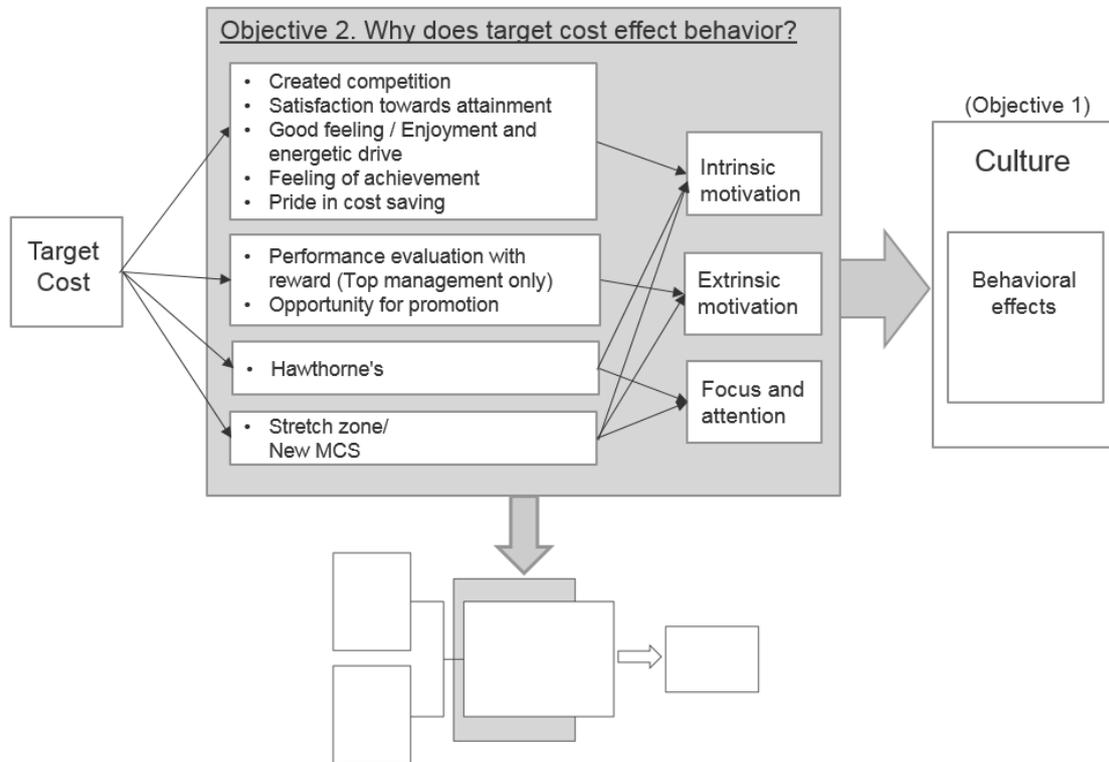
As a result of shifting from a budget based management control system to a beyond budgeting system, the results indicate that projects now view and respond towards cost differently. When implementing target cost and dynamic forecasts a change in culture occurred with a higher degree of attention and focus on cost saving. This finding corresponds with findings by Madsen and Stenheim (2014) where the balanced scorecard was found to be a cultural tool increasing the attention on activities that lead to better performance. As was indicated in the results, projects stopped accepting that projects would become more expensive than expected. The findings suggest that the pre-existing comfort towards overspending was removed, and succeeded by a culture consisting of increased motivation and focus towards cost saving. According to Mullins (2002) goals and objectives together with corresponding strategies play an important role in the development of a corporate culture. The findings indicating a culture of increased focus and motivation towards cost saving, is suggested to be a result of decision makers being moved into stretch zones as a result of implementing target cost.

Summary: Objective 2

The findings from objective 2 are placed in the research model for target cost: The model demonstrates how target cost leads to the identified emotions that are consistent with intrinsic motivation. Some extrinsic motivational factors have been identified and added to the model. The increased attention by management, leading to the overall project attention to cost saving explained through the Hawthorns effect is included. The implementation of beyond budgeting principles together with target cost indicates an influence on culture within the projects. The results and corresponding discussion suggest that a stretch zone is created, which in turn will influence a culture consisting of higher motivation and focus towards cost saving. To

summarise, intrinsic and extrinsic motivation together with focus and attention is suggested to lead to the behavioural effects and culture building effects identified in objective 1.

Figure 14: Summary objective 2



5.4 Objective 3: When is target cost effective?

Objective 3 aimed to explore factors that influence the effectiveness of a target cost. The results from the interview sessions provided a wide range of identified prerequisites for target cost to be effective. As was identified by the results, six of the eight expected factors from the literature review section were identified.

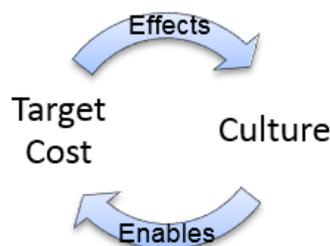
The degree of focus and attention by managers towards target cost was mentioned by five participants as a main prerequisite for target cost to have an effect. Although not mentioned as an expected outcome in the literature review, the engagement and influence applied by management will be considered vital in any introduced management initiative.

The third expected factor identified suggests that a higher degree of incentive would increase the effect of performance towards target cost. Although all participants have a general

performance rating towards the overall project scorecard, in which target cost is included, and thus have to a degree a financial incentive towards performing towards reducing cost levels, a further incentive towards target cost was suggested to increase performance. Although suggested by Hollenbeck and Klein (1987) to increase attractiveness of goal attainment, the beyond budgeting principles advocate for less individual incentives towards targets, as they provide little effect and may result in ethical implications (Bogsnes, 2016). The findings show that although principles adopted in the organisation of avoiding incentives towards targets, there is a common belief that increasing incentives will lead to increased performance. It is important to note that a degree of bias in these results might be present as participants might favour increased financial incentives towards work related goals.

Culture was mentioned in objective 1 as an effect of target cost, but was also mentioned as a prerequisite to implement target cost. This finding is in line with Thompson et al. (1997) theory suggesting stretch targets are not guaranteed to succeed if the correct working environment and organisational culture is not in place. Considering target cost effecting culture as found in objective 1, a model can be hypothesized, suggesting a cycle where a cost saving and improvement driven culture enhances the effect of a target cost (figure 15). The target cost in turn, contributes by reinforcing the organisational culture by communicating shared values and assumptions as discussed under objective 2.

Figure 15: Hypothesized model of target cost and culture relationship



As identified in the results chapter, a positive development towards reaching the target was suggested to enhance the effect of a target cost. Similarly, a negative development may cause the target to be ineffective. This specific condition was not expected prior to the interviews, however, the positive or negative development will effect the current perception of attainability of a target, thereby linking the finding to Locke and Latham (2002) goal setting theory. Carver and Scheier (2001) suggests that individuals' motivation towards specific goals are a result of their evaluation of attainability. When the pursuit of goals is interrupted, individuals will evaluate whether further effort will be worthwhile. If the goal is still seen as

attainable, motivation will increase. If the goal is seen as unattainable, however, individuals will disengage and decrease effort (as cited in Lench & Levine, 2008). Individuals might also disengage from important goals to preserve resources and motivation in order to achieve alternative goals (Wrosch et al. 2003).

Similar to the effect of development on target effectiveness, a sufficient control of uncertainties in the project will also effect the perceived attainability of the target. This finding can be related to Peters and O'Connor's (1980) suggestion that constraint on performance due to external influences will lower commitment towards a goal, as attainment will be beyond one's control. Although only briefly mentioned in the literature review chapter, this situational factor was not highly expected to be identified. The finding can also be related to an expected finding under objective 4, suggesting individuals with an internal locus of control will be effected by a target cost. No control of uncertainties will seemingly discourage an individuals' belief of being able to influence target attainment, as events out of one's control may throw the project off course from achieving the target.

Breaking the project target cost down to relevant levels for sub-projects and contracts was identified as a prerequisite to increase the effectiveness of the target. Although not specifically mentioned as an expected outcome in objective 3, not sufficiently breaking the target down to relevant levels implies that the goals are no longer explicit or relatable for individuals to achieve sufficient goal commitment (Locke & Latham, 2002).

The importance of planning and preparing for a target cost prior to the execution phase was identified as an important factor to increase the effectiveness of the target. This prerequisite was not expected prior to the interviews, however, preparing culture, and giving focus and attention to the target seems logical considering the initial stage of the execution phase is when contractors are involved, and the project organisation is built.

Avoidance of contradicting KPI's within the project was identified as a prerequisite for target cost effectiveness. This finding was expected based on theory of goal conflict as suggested by Locke and Latham (2002) where conflicting goals may undermine performance. Some examples of these conditions were provided during the interviews, however, the extent to how this exists as a problem in the researched company is unknown.

Linked with the perception of attainability, the importance of being able to review the target cost figure based on either achieving the target or when the target becomes unrealistic due to

unforeseen events, was identified as a mediator for target cost effectiveness. This function was mentioned prior to the interviews based on Bogsnes (2016) suggestion that targets should not be set in stone. The results did identify a degree of variance between the organisations guidelines for target cost setting and the interview results regarding the frequency of target cost adjustments. As mentioned in section 2.12, Statoil guidelines suggests that target is set during at the initiation of the execution phase at an ambitious level, and should normally stay unchanged during this phase. The findings indicate that there is a preference by two participants to reduce the level of difficulty and increase the frequency of reviewing target cost. This will be discussed further in the following sections.

The organisations attitude towards change was identified as a factor determining the efficiency of target cost. This factor will be especially relevant for stretch targets which may require significant alterations in processes to achieve (Thompson et al., 1997). Although not mentioned as an expected factor within the literature review, the chapter did mention the influence of structural accommodation as to why individuals will accept seemingly impossible stretch-goals. Structural accommodation as suggested by Thompson et al. (1997) should increase the organisations acceptance for teams or individuals to make changes to achieve a target.

No results were provided to support Sitkin et al. (2011) theory suggesting slack and recent performance will be a determinant for stretch target success. Although positive performance was identified to enhance the effect of target cost this was however, discussed in a different context.

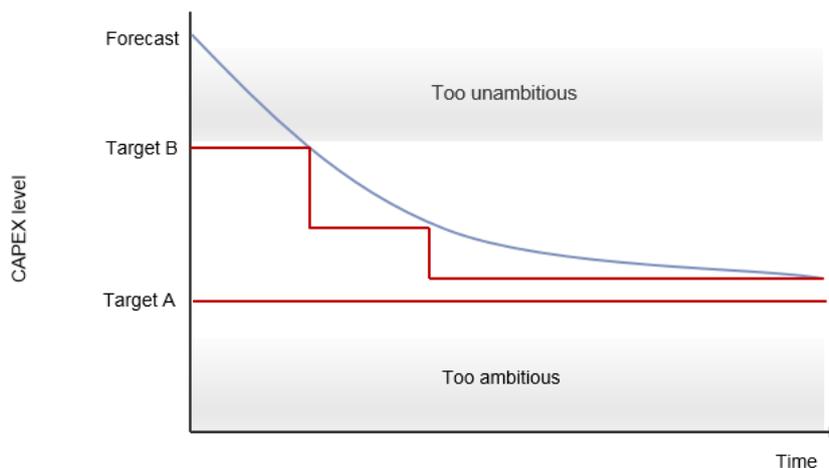
Apart from competition identified and discussed under objective 2, the remaining situational factors mentioned in the literature review consisting of publicness, social influence, task complexity and supervisor supportiveness provided no substantial evidence. This may be due to the questions and corresponding discussion during the interviews being focused on the primary expected factors or that the relevance of these factors being more peripheral in the context of target cost.

Level of difficulty to achieve target cost:

The results from the interviews showed that the degree of difficulty to achieve target cost was regarded as a vital prerequisite for gaining any positive effects from having a target. This finding corresponds with the substantial amount of available literature regarding goal setting

and target setting theories (Locke et al., 1981; Locke & Latham, 2002). The findings did however, reveal a variation among the participants concerning how difficult target cost should be to attain. This assumption is based on interpretation of answers given, not on quantifiable figures. The variations in belief of how ambitious the target should be ranges from “very difficult” to “not difficult”. The participants who favour the less difficult view also suggest that target should be frequently adjusted when achieved. Figure 16 illustrates the two extremes of the interpreted results in a context of a positive cost development. Target A indicates an ambitious target level bordering the “too ambitious” area. Target A might never be achieved or adjusted, however, will still be considered realistic. This target also shares the traits of target cost as defined in Statoil’s guidelines. Target B borders the “too unambitious” area, and is achieved and reviewed at several occasions when the forecast meets the target. If the forecast trend were to be negative (upwards trend), the corresponding target would be adjusted accordingly to maintain a degree of achievability.

Figure 16: Theoretical level of ambitiousness identified



Justification given by the participants who favour a less difficult target B over target A suggest that meeting the target creates an opportunity to celebrate an achievement and induces additional motivation in the project. This is in line with Von Bergen and Soper (1995), stating that if a goal is reached and success is celebrated, motivation to do even more in the future will be increased. The results indicate that all participants favour a target less ambitious than a stretch target as suggested by Sitkin et al. (2011) of 0% probability based on current capabilities. Of the participants favouring Target A, two indicate that the target should lie in the areas of 10% probability, while the remaining suggest that the target should be difficult, but must be perceived as achievable. The results indicate that target cost is

perceived as a challenging goal rather than a stretch goal, falling within the 10% probability of attainment category as suggested by (Locke & Latham, 1990a).

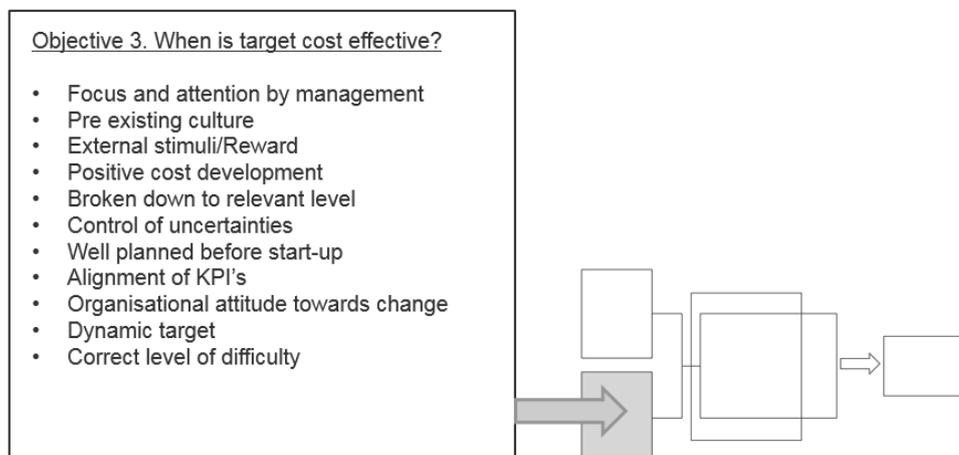
Although the research identifies variations in belief of how ambitious a target should be set, no additional evidence suggesting which level is most beneficial can be given. Additional research distinguishing the two extremes discussed may therefore provide an answer.

Summary Objective 3

The findings reinforce expectations based on theory suggesting focus and attention, incentives, avoidance of contradicting KPI's and a pre-existing culture are prerequisites to increase the effectiveness of target cost. As culture has been identified as both an effect and a precondition to target cost, a theoretical model has been established. Additional findings identify development towards target and control of uncertainties to influence the effectiveness of target cost by changing the perceived attainability of the target.

Organisational attitude towards change was identified as an influencing factor suggesting the degree of structural accommodation increases target cost efficiency. The importance of breaking the target cost down into relevant levels to achieve explicitness was identified to increase goal commitment. Findings related to the level of ambitiousness and frequency of target setting review provided variations in opinions. Two extremes were identified, with one participant favouring an easy goal with an incremental adjustment, and the remaining favouring a more ambitious target. The findings indicate that target cost should be defined as a challenging goal, and not a stretch goal. The findings from objective 2 are entered into the research model for target cost (figure 17):

Figure 17: Summary objective 3



5.5 Objective 4: Who is effected by target cost?

Objective 4 aims to identify which groups of individuals are most likely to be effected by a target cost. Firstly, findings in relation to personal traits consisting of internal locus of control and need for achievement will be discussed. Thereafter other identified traits related to individuals effected by a target cost from the interviews will be mentioned. This is followed by a discussion of whether those who participate in goal setting will be more committed to the target. Finally, objective 4 will be concluded with a discussion based on the interview results in regard to who will be most likely be committed to a target cost, and who will be likely to impact target attainment.

Need for achievement

No conclusive results were obtained in relation to the personal factor suggesting that the need for achievement will add to project members commitment to target cost. The results did indicate that individuals react differently to the motivating effects of target cost, and are not triggered in the same way as others. Although this might be related to individuals need for achievement as a motivational factor this cannot be concluded. The results obtained do not prove nor disprove Hollenbeck and Klein's (1987) theory suggesting need for achievement being a personal factor influencing goal commitment also being valid for target cost.

Internal locus of control

The interviews provided some evidence suggesting that internal locus of control is a factor influencing goal commitment towards target cost. This indicates that Hollenbeck and Klein's (1987) theory also will be valid for target cost, as commitment will be effected by individuals perceived personal influence on goal attainment.

Other traits

Other personal traits identified from the interviews provided only one additional factor. Those who react to lack of tangible reward was identified as a response to the question why some individuals are less engaged towards target cost. Reformulating this statement suggests that those who are motivated by tangible reward will be less committed to target cost. This response can be related to the situational factor; "reward structures" in Hollenbeck and Klein's (1987) expectancy theory model with antecedents and consequences of goal

commitment. The reward structures will effect the attractiveness of goal attainment, however, personal factors will determine the extent of motivation tangible rewards will produce. Response to rewards is not mentioned by Hollenbeck and Klein (1987) as a personal factor influencing goal commitment and will therefore be regarded as a new finding under this objective.

Volition

Regarding who participates in target setting in projects, the results indicated that the ground work of establishing the target is made below the project management team level (PMT). This is often adjusted by the project director to increase the level of ambitiousness of the target. The target setting therefore becomes a bottom up vs top down approach. Including individuals in target setting is suggested by Hollenbeck, Williams, et al. (1989) to result in a higher degree of volition, and thus a higher degree of commitment to difficult goals. The results from the interviews provided evidence corresponding to this statement, suggesting that the same people setting targets should be the same ones working towards achieving the targets, and that this would result in increased engagement to target cost in the project. Although some research indicates that assigned targets result in an equal level of goal commitment (Latham & Lee, 1986; Locke & Latham, 1990a), this study provides a slightly higher degree of findings in favour of participatory target setting than assigned targets in relation to commitment to target cost.

Commitment towards target cost

The findings from Objective 4 indicate that ownership and engagement to target cost is highest at the top of the organisation. This was expected based on Hope and Player's (2012) statement suggesting commitment towards targets cascades down the organisation hierarchy. The results indicate that the participants are unsure of how engaged personnel further down the organisation will be, however a consensus suggests that lower levels will be harder to engage. As identified in the results, breaking the target down to relatable levels will increase the effect of ownership and engagement further down the hierarchy. Participants also highlighted the importance of communication to increase focus and attention down the organisations levels in order for everyone in the project organisation to deliver towards the target.

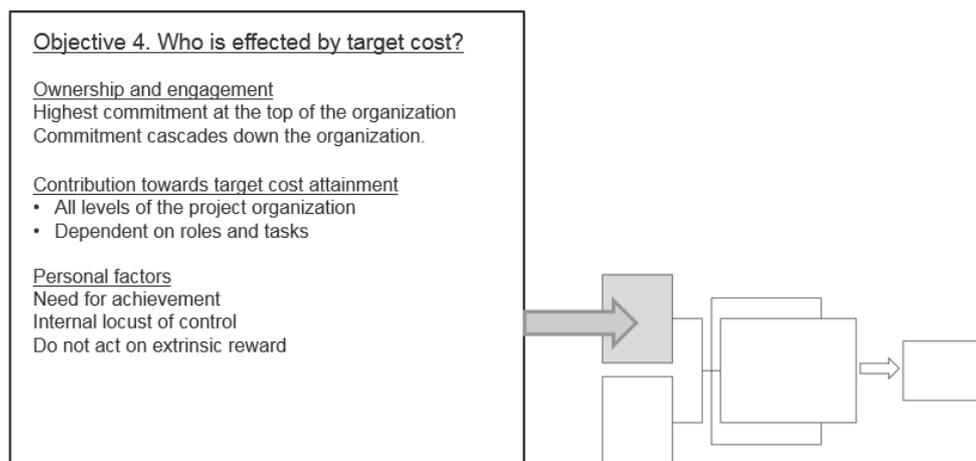
Performance towards target cost

The results suggest that efforts and solutions towards target cost attainment originate from across the project hierarchy. This is incoherent with Hollenbeck and Klein's (1987) theory suggesting that goal commitment correlates with performance, as commitment to target cost has been found to be highest at the top of the project organisation. One participant is specific and mentions the engineering organisation as the primary source of impact towards attainment, with less impact coming from the construction side of the organisation. The findings are in line with the expected notion of roles and tasks within an organisation being a primary factor influencing potential impact on performance towards target cost.

Summary objective 4

The findings from objective 4 are entered into the research model for target cost (figure 18). The results indicate that goal commitment towards target cost is highest at the top of the project organisation. Although management was suggested to be most engaged with target cost, the results suggest that performance towards goal attainment derives from throughout the project organisation. Indications was found supporting participation in target setting and an internal locus of control to increase commitment to target cost. Findings suggesting reaction to available rewards were also identified as a personal factor towards commitment to target cost.

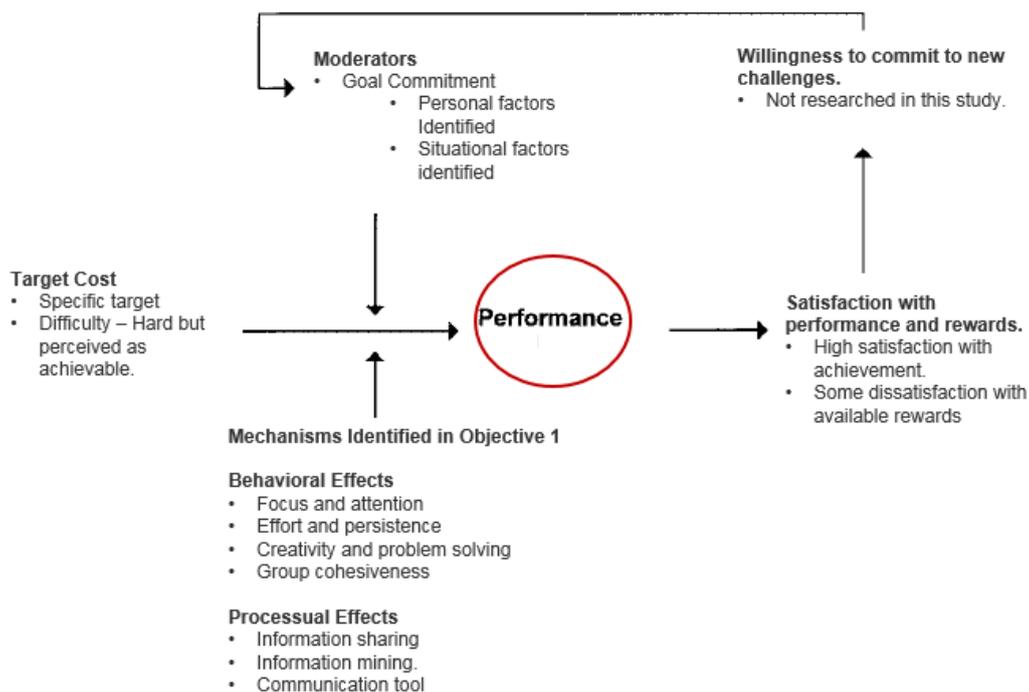
Figure 18: Summary objective 4



5.6 Objective 5: Does target cost reduce project CAPEX?

Objective 5 seeks to identify whether target cost contributes to reduce capital expenditure in projects. The results from the interviews show that all participants agree that target cost has to some degree an effect on cost reduction. Assuming performance towards target cost results in reduced CAPEX, the results will be line with theory suggesting that goals and stretch targets will lead to increased performance (Locke & Latham, 2002; Thompson et al., 1997). To further support this outcome, confirmations and findings from objectives 1 to 3 can be drawn together into a modified version of Locke and Latham's (2002) High Performance Cycle (figure 19). The modified high-performance cycle demonstrates how goal traits, moderating effects and mechanisms identified throughout objectives 1 to 3 enhances performance towards a target.

Figure 19: Target cost adapted version of Locke and Latham's (2002) High Performance Cycle



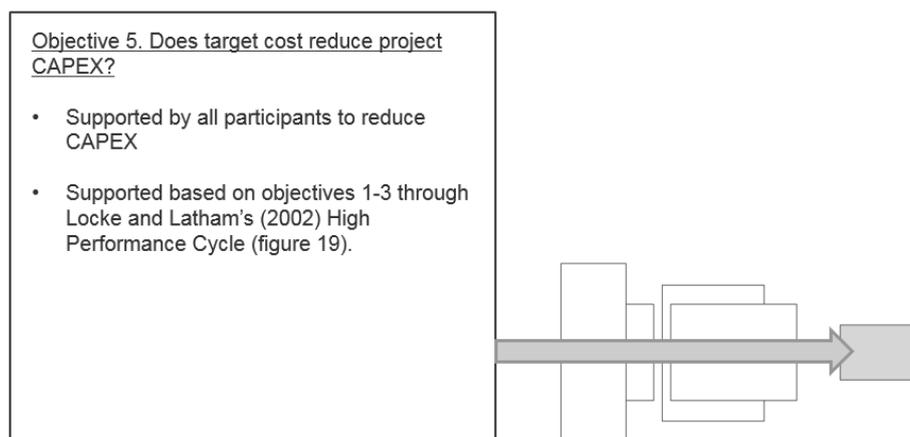
Target cost corresponds with the goal core of the performance cycle, as the target is numerical and specific. Objective 3 has indicated that substantial consideration is made by managers in evaluating the degree of difficulty and stretch needed to motivate projects.

Mechanisms such as focus and attention, effort and persistence, creativity and problem solving were identified in objective 1. In addition, further identified effects such as group cohesiveness and processual effects are included. Antecedents of goal commitment which inhabits a moderating role on performance have been identified and associated to target cost in terms of personal traits and situational traits under objective 3. Objective 2 identified intrinsic motivational effects connected to performing towards a target. As tangible rewards are not significantly available, they were however suggested by participants to increase performance.

Summary objective 5

The results from objective 5 suggest that target cost has an effect on the reduction of CAPEX. The findings are in line with theory suggesting that targets increase performance. Locke and Latham's (2002) High Performance Cycle adapted to target cost further supports the result of objective 5, as identified goal traits, moderating effects and mechanisms are congruent with goal theory.

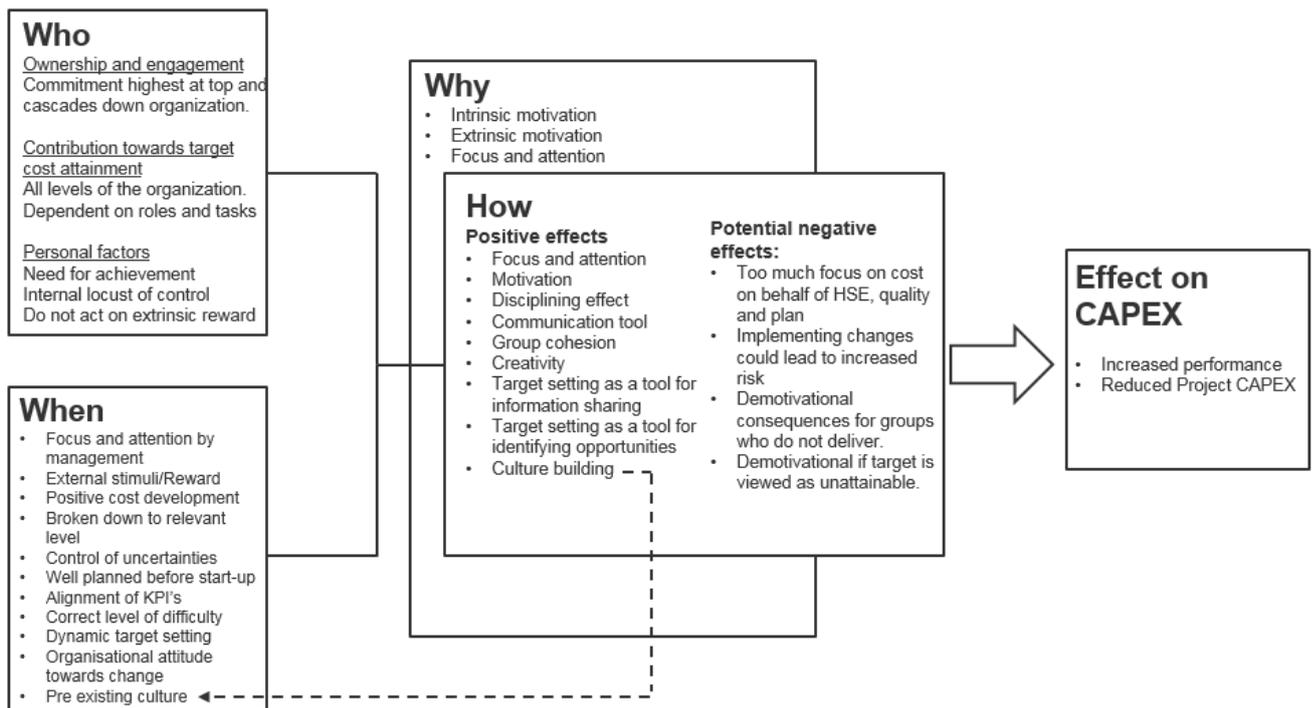
Figure 20: Summary objective 5



5.7 Summary

Drawing together the results identified and discussed in relation to objectives 1-5, a theoretical model of the effects of target cost can be established (figure 21). A further summary of the results and corresponding discussion will be provided in the following chapter.

Figure 21: Completed research framework; Model of target cost effects



5.8 Limitations of the research

There are several limitations to the research conducted in this thesis. Firstly, as this research is an exploratory research which is limited to one case study only, transferability will be low, suggesting the results may not be generalised and applied to other companies. The generalisation of results may also be limited due to the study only interviewing project directors, and thereby excluding opinions from the general population of project members.

The second limitation of this study is due to the subjective views of the author. The data analysis in relation to the objectives have been complex, causing a higher degree of subjective assumptions. Also, conducting a literature review in advance of the interviews may contribute to a less “open mind”, resulting in a bias towards pre-existing theory rather than identifying new aspects of a topic.

Thirdly, the objectives have covered an extensive subject area which has proven limitational in providing detailed results and discussions. As theory and results discussed in certain sections are interrelating, complex and often cross-referenced between objectives, a narrower approach to this thesis main aim could have been considered. This would also have resulted in more explicit and reliable results, and subsequently less complex data analysis and discussion.

6. Conclusions and recommendations

6.1 Conclusion

This thesis has provided an exploratory investigation into the effects of target cost in a project execution phase within the energy company Statoil ASA. Set in a beyond budgeting context, an investigation into this concept is of interest as traditional budgets cannot provide sufficient value as a target function. In order to explore this concept within the researched company, five objectives were formulated, contributing to an overall increased knowledge and understanding of target cost. The findings from the study reinforce linkages between target cost and goal theory, in addition to revealing unexpected results adding to the overall construct.

The research revealed nine different positive effects of target cost, including effects of attention and focus, motivation, creativity, group cohesion and process effects as expected through secondary research. An unexpected finding was the disciplining effect of a target cost, suggesting the target to be a tool for regulating and directing cost expenditure. The communication effect of target cost was perceived to be a significant instrument for delivering internal and external messages. Findings indicating target cost's significance towards influencing culture was also revealed, suggesting that target cost contributes to the overall improvement and cost saving culture in Statoil. A degree of risk in relation to target cost was identified, indicating that the target can lead to risky changes and an excessive focus on cost. An unexpected finding in relation to risk showed that celebrating those who deliver on cost savings may demotivate those who have difficulties delivering.

A central finding as to why target cost effects focus and attention was identified as being in relation to the Hawthorne studies, where attention by management will increase individuals' perception of the importance of target cost. In terms of why individuals are motivated by a target cost, a wide range of positive emotions were identified consistent with intrinsic motivation. The feature of competition was identified as an unexpected factor leading to increased intrinsic motivation. Although the research shows that motivation towards target cost is intrinsic, increased extrinsic rewards were advocated by several participants to increase commitment. Findings indicate that the traditional budget led to a culture where there existed an acceptance to budget overspending. By introducing beyond budgeting and unbundling the traditional budget, a higher focus and discontent with overspending occurred. The findings are suggested to be related to the concept of moving from a budget based comfort zone to a beyond budgeting based stretch zone.

In order to explore when target cost is most effective, a number of situational factors were identified. Although most factors were expected through the literature review, some new findings were found. A pre-existing culture was identified to be a prerequisite for target cost effectiveness. Together with findings indicating that target cost influences culture, a hypothesized model of target cost and culture relationship was established. A second noteworthy finding suggests that positive or negative progress towards the target, and control of uncertainties will influence individual perception of attainability, and thereby effect commitment to target cost. Control of project uncertainties may also inflict a constraint on performance, resulting in lowered commitment as attainment will be beyond ones' control. Finally, organisational attitude towards change was identified as situational factor suggesting that structural accommodation will increase target cost efficiency.

Findings suggesting when target is most effective in terms of goal traits, reveal varied results ranging from "very difficult" to "not difficult". Project directors in favour of the less ambitious target were shown to advocate a more frequent re-adjustment of the target in order to celebrate goal attainment. The results indicate that target cost falls within the category of "difficult goals" according to Locke and Latham (1990a), rather than stretch target with a close to 0 % chance of attainment as suggested by Sitkin et al. (2011).

Regarding who will be effected by a target cost, findings reveal that goal commitment is highest at the top of the project organisation, while performance towards goal attainment derives from all level of the project. Findings in relation to this objective also suggests that participation in target setting will increase commitment towards target cost.

All participants in the study claimed that target cost will have a positive effect towards reducing the projects capital expenditure. Implementing results from the previous objectives into Locke and Latham's (2002) High-Performance Cycle provides a theoretical basis which reinforces the participants statements of target cost increasing performance towards cost reduction.

As a result of the identified results from the research objectives, a conceptual framework of the effects of target cost has been established. This framework can provide value to organisations intending to establish a target cost, or aim to increase effects of already existing targets. Although the findings in this research are based on a beyond budgeting context, the implementation of target cost in an organisation with a budget based management control system might also provide beneficiary, as the budget has previously been show to function as

a suboptimal target. Nevertheless, target cost in the case study of Statoil ASA has shown to be a valuable addition in terms of creating a culture for improvement and cost saving, which in turn indicates increased performance towards reducing overall project capital expenditure.

6.2 Recommendations for further research

To further investigate effects of target cost, a quantitative study including all levels of a project organisation can be recommended. Goal commitment towards target cost could be identified and measured using one of several available sets of questions available within existing literature. Measuring goal commitment towards target cost, and including additional measures based on findings from this thesis, may enhance the reliability of the constructed conceptual framework.

Measuring the correlation between goal commitment towards target cost and actual performance would be considered interesting. This, however, will be challenging in terms of validity, as there are far too many factors within a project that could influence performance.

Finally, an interesting future investigation would be to perform a corresponding study on projects within a company which primarily uses budgets as financial targets. This would allow a comparison of findings in order to identify differences and possible advantages of a target cost.

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8. Appendices

8.1 The principles of beyond budgeting (Bogsnes 2016, p. 71)

Leadership principles	Management processes
Purpose – Engage and inspire people around bold and noble causes, not around short-term financial targets.	Rhythm – Organize management processes dynamically around business rhythms and events, not around the calendar year only.
Values - Govern through shared values and sound judgement, not through detailed rules and regulations.	Targets – Set directional, ambitious, and relative goals; avoid fixed and cascaded targets.
Transparency – make information open and for self-regulation, innovation, learning, and control; don't restrict it.	Plans and forecast - Make planning and forecasting lean and unbiased processes, not ridged and political exercises.
Organization – cultivate a strong sense of belonging and organize around agile and accountable teams; avoid hierarchical controls and bureaucracy.	Resource allocation – Foster a cost-conscious mindset and make resources available as needed, not through detailed annual budget allocations.
Autonomy – Trust people with freedom to act; don't punish everyone id someone should abuse it.	Performance evaluation – Evaluate performance holistically and with peer feedback for learning and development, not based on measurement only and not for rewards only.
Customers – Connect everyone's work with customer needs; avoid conflicts of interest.	Rewards – Reward shared success against competition, not against fixed performance contracts.

8.2 Interview questions and corresponding objectives

Research objectives

1. How does target cost effect the project?
2. Why does target cost effect the project?
3. When is target cost effective?
4. Who is effected by target cost?
5. Does target cost help reduce project CAPEX?

No.	Question	Objective				
		1	2	3	4	5
1	<i>In what way does target cost effect the project?</i>	X				
2	<i>What does Statoil gain by having a target cost in the project?</i>	X				
3	<i>Does target cost have any effect on risk in the project?</i>	X		X		
4	<i>Have you ever worked in a project without a target cost? How was this different?</i>					
5	<i>Follow up question to question 1. Why does X effect the project?</i>		X			
6	<i>What does target cost mean in relation to your performance in the project?</i> <ul style="list-style-type: none"> • <i>Do you have target cost as a goal in your P@S (Performance review and reward system)</i> 	X	X	X		
7	<i>If there were no target cost in the projects, would the you or the project work any differently?</i>	X		X		X
8	<i>How difficult should target cost be to achieve?</i> <ul style="list-style-type: none"> • <i>Why should it be this difficult?</i> 		X		X	
9	<i>Is everyone as engaged towards target cost?</i> <ul style="list-style-type: none"> • <i>Why are some people less engaged?</i> • <i>Do you do anything to engage people in target cost?</i> 			X	X	
10	<i>Who is most effected by a target cost?</i>				X	
11	<i>Who are the people that deliver on target cost with new cost saving solutions/ideas?</i>				X	
12	<i>Can you quickly explain how target cost is set in your project/projects?</i> <ul style="list-style-type: none"> • <i>Who is involved in the target setting process.</i> 			X	X	
13	<i>Are there any factors that need to be in place for target cost to have an effect?</i>			X	X	
14	<i>Do you believe target cost contributes to lowering project CAPEX? If so, to what degree?</i>					X

8.3 Interview question sheet

- | |
|---|
| <p>1. In what way does target cost effect the project?</p> <p>a. Follow-up: Why does this happen? i.e.:
Why do you think target cost can be motivating for the project?</p> |
| <p>2. If there were no target cost in the projects, would the you or the project work any differently?</p> |
| <p>3. What does Statoil gain by having a target cost in the project?</p> <p>a. Anything that hasn't been mentioned earlier?</p> |
| <p>4. Have you ever worked in a project without a target cost?</p> <p>a. How was this different?</p> |
| <p>5. Does target cost have any effect on risk in the project?</p> |

6. What does target cost mean in relation to your performance in the project?
a. Do you have target cost as a goal in your P@S?

7. Who is most effected by a target cost?

8. Who are the people that deliver on target cost with new cost saving solutions/ideas?

9. Can you quickly explain how target cost is set in your project/projects?
a. Who is involved in the target setting process.

10. Are there any factors that need to be in place for target cost to have an effect?

11. How difficult should target cost be to achieve?

a. Why should it be this difficult?

12. Is everyone as engaged towards target cost?

b. Why are some people less engaged?

c. Do you do anything to engage people in target cost?

13. Do you believe target cost contributes to lowering project CAPEX?

d. If so, to what degree?

8.4 Data analysis objective 1

How does TC effect projects?						
	Participant A	Participant B	Participant C	Participant D	Participant E	Participant F
	Increase attention on cost	Target er mer en metode	Focus and attention	Addition to saving and improvement culture.	Driver/motivator to do things more efficiently* But has to be broken down.	To create cost conciusness overall in the project.
	Contribute to Improvement culture. Communicate culture	Stimulate a setting where you contribute to save cost.	Motivating when managment pays attention.	Driver to find smart solutions save money	Maintain discipline in the project.	Diciplinating effect
	Motivation	Change attitudes		Part of culturechange. > Pride in saving money	Focus on KPI's	Drive/focus
		Attention and Focus on cost Cost conciousness		Driver in organisation		Management tool: communicate what we are measured against.
		Stimulate a performance culture		One of the best motivators in statoil		
		Gain a better concept of what is includen in budgets, and where you can reduce cost		increase clarity for what the project will deliver'		
		It is a way of communicating intrad of sayin there is money in the budget, we can stretch even further.		Culture building		
				Coherent group with spinnoffs		
				communication tool Internally and externally		
Performance	Yes	Not by target cost, but delivering under P50 estimate	Yes	Motivates performance	Motivats performance just as all other KPI's.	Doesn't effect performance
Personal incentives towards target cost	in P@S	in P@S	in P@S	in P@S	in P@S	in P@S
Risk taking	yes	To a lesser degree	yes Balance between diffrent targets	yes	yes	yes

Effect	Frequency
Driver for smart solutions	1
Target setting - Increase understanding of forecast content	1
Target setting - Upwards communication	1
Group Cohersion	1
Diciplinating	2
Culture	3
Motivation	4
Communication tool	4
Focus and attention	6

8.5 Data analysis objective 2

Why does Target cost effect behaviour in the project?						
	Participant A	Participant B	Participant C	Participant D	Participant E	Participant F
Why does target cost effect individuals?	Culture change - acceptance for target		Hawthorne study - Increased motivation			
Attainment	Participant A: To achieve target cost is a incredibly energy giving and gives a good feeling.		Being measured it is based on individuals motivational profile. Not everyone is triggered by the target.			
Competition	Participant A: It becomes a competition. One can celebrate who was best at achieving the target."			Target cost is more valuable in working toward for those who like the idea of competition		It has become a sort of competition on topside in our project in who can reduce cost.
Need for achievement	Participant A: It is a self-regulated exercise in goal achievement.		Depends on motivational profile it is based on individuals motivational profile. Not everyone is triggered by the target. It is when you tell children, I will time you , some children run faster.	Need to achieve better result than previous projects Helps create expectations to ourselves Positive emotions saving cost: Pride Stretch targets are exciting possibilities to motivate. "Fun" to try to make the project cheaper.		Entails a degree of satisfaction showing we can achieve a lower cost than expected.
Reward			The question "What's in it for me needs to be asked. We no longer measure performance There is still however, possibilities for recognition.			What's in it for me? Why make yourself uncomfortable if you don't get anything from it. The more you stretch on cost the more challenging your job becomes. Incentives for key personnel may be useful to gain focus on target cost.
Why personal motivation?			Motivated by being measured against target.	Motivated due to previous reductions. Direction of project. Fun trying to make things cheaper.		No personal motivation from target cost.
Differences in working i projects W/O TC	The budget was way too low to start with. We experienced budget overruns. Budget was target forecast at the same time. It was a narrower world. Individuals became protective of their own budget, and did now care about other budgets.	It started in the 2000 sometime. As an answer to an improvement agenda. Before this we had a focus on contingency. Example PUD cost	In the projects i have worked in there has been target cost	The budgets were the targets. Culture change There were different requirements for sub-project leaders. They had more room to do what they wanted with their budgets. They made sure the budgets were spent.	One budget No different because there was so tight cost. So that the estimate was a budget in itself.	Had low level of contingency, meaning forecast was considered target.

8.6 Data analysis objective 3

When does TC effect projects?						
	Participant A	Participant B	Participant C	Participant D	Participant E	Participant F
Focus and attention	Focus and attention by management	Focus and attention by management	Focus and attention by management	Focus and attention by management	Focus and attention by management	Focus and attention by management
Difficulty	Correct level of difficulty		Difficult but realistic	Difficult.	Difficult but realistic	Has to be realistic
Culture	Present Culture			Present Culture		
Reward	External stimuli/ /Reward		What's in it for me? Still possible for promotion and recognition, but there is no longer a clear link for each individual for grading.			Might be useful for key personnel to have some form of incentive.
Breaking down the figure			When the target is broken down to each relevant level.		When the target is broken down to each relevant level.	
Development		No effect when there are large cost overruns.		When the project is going in the right direction		Target Cost is viewed negatively with large cost increases
Control of uncertainties		Prerequisite that the project is economically robust		Control of uncertainties and maturity effects.		
Planning				Start planning before start-up,		
Conflicting goals						Contradicting KPI's
Attitude to change	Attitude towards change must be positive					
Dynamic/flexible target	Should be changed often					Should be set early, then set new targets when you achieve it you set a new target. Better than setting a long-term target that you never achieve.
Level of difficulty 2	between 5-10%	No more than 10% probability		P10 figure		
Level of difficulty 3	Should not be difficult	Under P50	Should be difficult but realistic. No walkover	Not necessary to reach the target. Better than expected. Needs to be realistic	Should be realistic. No point in having something that is not achievable. No easy pick	Should be challenging, but everyone should see that it is achievable

Effect	Frequency
Control of uncertainties and maturity effects	1
Well planned before start of DG3	1
No contradicting KPI's	1
Organisations attitude towards change	1
Pre existing culture	2
Broken down to relevant levels	2
External stimuli Reward	3
Positive development	3
Dynamic target	3
Correct focus and attention by management	5
Level of difficulty	5

8.7 Data analysis objective 4

Who is effected by target cost?						
	Participant A	Participant B	Participant C	Participant D	Participant E	Participant F
Engagement and ownership	Project director. Ownership is largest at the top, and trickles down. In execution phase, the engineering leader controls the scope.	Those with budget responsibilities on the WBS that is effected. They deliver	The higher up in the project thus more effected you are by target cost. Lower down it will become difficult to engage people, But it is all about how you break down the figure.	Everyone has their own variation of target cost. It is a triangle between me, the proj. control manager and the sub-projects that decide where estimates forecast are lowered.	Cascades down the organisation. Firstly my discipline leads, then down to the contract reps. Etc. Ideally it should engage everyone, but i don't think it does.	If you look down the organisation, then i am unsure how much people relate to target cost. It is management that is important in this setting, they are the ones controlling it.
Delivery/Performance	Cost awareness and commercial understanding especially for technical personnel who have been primarily engaged in the technical solutions.	Those with budget responsibilities on the WBS that is effected. They deliver				Sub-projects and areas. It is within the sub-projects organisation. They have sessions to se look at target cost and if there is anything more we can reduce.
Contribution	organisations managing the construction have less of a contribution towards reaching the target, apart from maintaining schedule.	Sometimes it feels like project control because they are concerned with the process		Project control as a facilitator. Works most with TC. Delivers the least		Project control work the most with it.
Internal Locus of control				Why are some people less engaged in target cost? Because they believe they have little ability to impact target achievement		To get a target cost to work, someone needs to have ownership to it, and has to be able to influence it.
Need for achievement	Not all people react or are triggered by targets		Also an individuals motivational profile. How one is triggered.			People are different. Some people gain satisfaction by completing projects at a lower cost than first estimated.
Is everyone as engaged to achieve target cost?	Absolutely not	It varies a lot	no	No	Yes, I think so.	i don't think so
Why are some people less engaged in target cost?	It is dependent on the project directors influence, engagement, and thereafter PMT ownership and engagement and so on down the organisation. Bad leadership Lack of reward. Not all people react or are triggered by targets	The further you get from it the more i think people think it is unachievable. Cost development going the wrong way.	It has to do with leadership, and the leaders focus. Also an individual's motivational profile. How one is triggered. It is like children. When i say i am timing the race, some run faster, others don't.	Because they believe they have little ability to impact target achievement	Need Continuity. Same people setting targets should work towards achieving them.	People are different. Some people gain satisfaction by completing projects at a lower cost than first estimated. Someone working on a E&I discipline has a different focus.
Participation in target setting	N/A	Building bottom up rarely gives the stretch needed. But you need the bottom up process.	Bottom up, meets top down.	It is a P10 estimate. An academic approach. The second step is a top-down leadership decision.	Project control leader, the project team and my leader group have been involved. Need continuity. Same people setting targets should work towards achieving them.	From sub-projects. Project control
Participation - Short	N/A	Leadership group. But it has to be built up.	Starts level below management team. Peripheral under that level	Ground work project control sub-projects.	Project team, project control, leadership group	Sub-projects. Project control