

Beyond Budgeting in Statoil

Ownership towards Ambition to Action

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“This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Neither the institution, the advisor, nor the sensors are – through the approval of this thesis – responsible for neither the theories and methods used, nor the results and conclusions drawn in this work.”

Abstract

Beyond Budgeting is the concept of moving away from the traditional budget, and ownership is crucial when going beyond the budget. According to Pierce, Kostova and Dirks (2001, 2003), psychological ownership is when an individual feels psychologically tied to something. This thesis aims to enrich the ownership literature, and factors influencing psychological ownership towards Statoil's performance management process, Ambition to Action, have been hypothesized. Ambition to Action involves strategic objectives, KPIs, actions and individual goals.

Statistical findings indicate that the feeling of ownership towards KPIs tends to be weaker than the feeling of ownership towards actions, strategic objectives and individual goals. Furthermore, time is an issue when working on Ambition to Action. The hypotheses that were statistically supported in this thesis are related to the number of sub-units, trust and information sharing. Hypotheses related to dependency and number of employees do not get support, and are therefore rejected.

Preface

This thesis is written as an ending of the Master of Science in Economics and Business Administration program at the Norwegian School of Economics (NHH), with a major in Business Analysis and Performance Management (BUS). It is conducted in co-operation with Statoil, and supported financially by the research program Future-Oriented Corporate Solutions (FOCUS).

Beyond Budgeting is a wide topic, which requires extensive research, and without the support and assistance from Statoil, this thesis would not have been possible. Our gratitude goes out to all first line managers that participated in this study, and to our contacts in Statoil: Bjarte Kristiansen, Olav Martin Bjordal, Erik Hermansrud and Irene Winterthun.

We are grateful for the financial support that FOCUS have provided, and our sincere thanks go out to Torstein Nesheim, for providing constructive inputs in the early stages of the study. In addition, we sincerely express our gratitude to our advisor, Karen Modesta Olsen, for outstanding assistance, support, and constructive suggestions, throughout this process.

There are some strengths and limitations related to this study, which should be highlighted. The strengths with this study are related to the fact that it is one of few studies about ownership towards performance management processes and it considers a broad specter of ownership dimensions. The main limitations are: the findings cannot be uncritically generalized, the data collection might not be large enough and hypotheses that were rejected should might have been kept or vice versa.

Bergen, June 5th 2012

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1.0 Introduction

The purpose of this first chapter is to present the background of the report and the problem statement. Furthermore, relevance, empirics, limitations and scope and structure of the study will be described.

1.1 Report background

Markets are becoming more unpredictable, customers expect more, competition is more intensified and employees are better educated and able to take on more responsibility, compared to recent years (Bogsnes, 2010). Nickels, J. M. McHugh and S. M. McHugh (1990) claim that future workers will demand a new management style that provides less monitoring and more vision and direction from their leaders, such that employees have more freedom to act. Hence, in today's business environment, it is challenging to maintain a traditional management style where decisions are made at the top of the hierarchy, which means that performance management processes cannot be executed like they were thirty years ago (Bogsnes, 2010). Consequently, employees closer to the market should be given more authority, and the traditional budget is not necessarily the best management tool anymore (Ibid).

In recent years, many academics have criticized the budget as a management tool (Bergstrand, 2009; Bogsnes, 2009b; Daum, 2002; Hope & Fraser, 2003; Kaplan & Norton, 1996). According to Bergstrand (2009), one cannot forecast next year's volumes and prices correctly because the actual future might be very different than expected. Since predictions for the next year most likely will be obsolete in the beginning of the budget year, it is not sufficient to decide on funding only once a year (Bogsnes, 2009b; Daum, 2002). Further, researchers claim that fixed budgets are too time consuming and expensive (Hope & Fraser, 2003). Additionally, Kaplan and Norton (1996) suggest that the budget is not a suitable

management tool to create long-term performance, since its main focus is on short-term financial goals.

Due to this skepticism, combined with the fact that business is becoming unstable, companies are looking for new processes to manage performance. Beyond Budgeting, developed by Hope and Fraser, is such an innovative management process where management is executed without the use of a budget, by following twelve principles. Six of the principles involve ways to enable a high level of adaptation, and the rest of the principles highlight how to ensure a decentralized organization (Hope & Fraser, 2003). Decentralized authority means that decisions are made by lower level management, accustomed with local conditions and improves profit, flexibility and communication (Bergstrand, 2009; Nickels, J. M. McHugh and S. M. McHugh, 1990). Also, in decentralized organizations there is more local awareness, which will lead to improved cost-consciousness, easier decision-making and increased efficiency (Bergstrand, 2009). In general, workers become more satisfied, secure and motivated in the workplace with decentralized control (ibid). Based on this, the essence in the Beyond Budgeting philosophy is that people should work independently in order to create value at all times, and organizations do this by releasing employees from the top-down hierarchy and trusting that they are competent enough to do the right thing. In order to facilitate the Beyond Budgeting concept, companies take alternative management tools into use, e.g. Balanced Scorecard, benchmarking and rolling forecasts (Hope & Fraser, 2003). Through decentralization, lower hierarchical levels in organizations are becoming more involved in management processes, and thus we are going to focus on the lowest level of managers in this paper.

In this thesis we study the Norwegian company Statoil, a large and global oil and gas organization, as our research object. The oil industry is characterized by a high degree of unpredictability and fluctuations (Meeting with Statoil, 12.03.2012). Additionally, large companies find it difficult to maintain a centralized command and control approach (i.e. management is centralized) in today's business environment (Bogsnes, 2010). Therefore, large oil and gas companies must employ management processes that enable them to react

rapidly to changes. Statoil has abolished the budget and implemented a decentralized, budget free performance management process, which is called “Ambition to Action”.

Statoil is a matrix organization, vertically formed by six hierarchical levels and horizontally formed by different process owners (The Statoil Book, 2011). According to Bergstrand (2009), matrix organizations are designed such that they combine “business areas” and functional divisions. In Statoil, “business areas” refer to the vertical levels, while functional divisions are the process owners. In Statoil, the first vertical level after the CEO is the Corporate Executive Area, level two is the Business Areas, level three the Business Clusters, level four consists of the Business Units, then comes the Business Sectors and at level six the Departments. The horizontal part of the Statoil matrix consists of process owners, and they work across the organization. According to The Statoil Book (2011), the process owner’s main responsibilities are to develop and improve Statoil’s global work processes and drive simplification and improve initiatives across the groups. Furthermore, the process owners have a supporting role involving compliance monitoring towards Statoil’s global requirements and assist the Business Areas in deployment of defined positions (Ibid).

One of the success factors in implementation of Beyond Budgeting is ownership. According to Daum (2005), a feeling of ownership is crucial to achieve goals and to enable employees to do management more event-driven. In this sense, ownership is what an individual consider as “mine”, and is therefore related to individuals’ feelings (Pierce, Kostova & Dirks, 2001, 2003). Even though ownership to work related activities such as work tools, groups, and the job can occur (Van Dyne & Pierce, 2004), it has been given little attention in the literature. Consequently, the aim of this thesis is to study the concept of ownership towards Ambition to Action.

In the following study, ownership is considered as a psychological state, and five dimensions of psychological ownership that we have included in our study are: efficacy and effectance, self-identity, control, intimate knowledge and investment of the self (Pierce, Kostova & Dirks, 2001, 2003). Generally, there are different explanations why psychological ownership is a positive contribution to the workplace and why it makes a difference. According to

Organ (1988), citizenship behavior is an outcome of feeling psychologically attached to a target, i.e. flexible behavior that contributes to an efficient and effective functioning of the organization promoted independent of the formal organizational reward system or expectations. Further, VandeWalle, Van Dyne and Kostova (1995) suggest that psychological ownership result in extra-role behavior, which is mediated by organizational commitment and satisfaction. Additionally, individuals may take personal risks and make sacrifice in order to do what is best for the organization if they feel ownership towards it (Pierce, Kostova & Dirks, 2003). It should also be kept in mind that ownership can have negative effects. Pierce, Kostova and Dirks (2003) argue that ownership can hinder cooperation because individuals take exclusive control over the target, which can motivate individuals to not share the target of ownership with others. Psychological ownership can also be related to stress, driven by the burden of responsibility (Ibid). With this in mind, it should not be given too much autonomy to employees such that they get excessively psychologically attached to their own Ambition to Action, which in turn may result in misalignment with the overall strategy.

1.2 Problem statement

In this thesis we want to highlight the following problem statement:

“In the case of Statoil, which factors influence ownership towards Ambition to Action?”

Thus, the main objective with this study is to investigate what influences ownership to the Ambition towards Action process in Statoil. In addition, an overview of Statoil employees' feelings of ownership to Ambition to Action will be given. As will be outlined in chapter two, Ambition to Action is a process that translates Statoil's overall ambition into strategic objectives, KPIs, actions and individual goals (The Statoil Book, 2011). Since Ambition to Action involves four different parts, ownership to these might differ. Consequently, our objective is to analyze ownership to Ambition to Action in four different analyses (i.e. ownership towards strategic objectives, KPIs, actions and individual goals). The objects of

analysis are first line managers in Statoil, meaning that they are managers closest to the market, responsible for one Ambition to Action, out of many.

As mentioned, ownership is a success factor when going beyond the budget. Experience indicates that there are internal differences in the feeling of ownership towards Ambition to Action between employees (Meeting with Statoil, 02.01.2012). Thus, we want to highlight which factors that influence this relationship, and the factors that we consider are related to the organizational context in which the respondents are operating. Five hypotheses on the organizational structure and culture will be formulated and tested. An example of a structural factor that will be hypothesized is number of employees in the entity, and an example of a cultural factor is trust between employees. The background information of the respondents will act as control variables (i.e. age, gender, tenure and entity).

In order to address the problem statement, we first introduce theoretically what Ambition to Action is. Second, we present theory on ownership and highlight some dimensions of psychological ownership. Theory on factors influencing the feeling of ownership and what we expect to find will then be given. Finally, based on hypotheses on the relationship between factors influencing ownership and ownership, we analyze what explains Statoil's first line managers' different degrees of ownership to Ambition to Action.

1.3 Relevance

Beyond Budgeting is a field that has been given more focus over the last decades, and Statoil has been analyzed in a range of different aspects. Analyses on how Beyond Budgeting works, effects of the implementation and how managers can use information in such a system have been done, and knowledge on the concept of management without a budget has been developed. However, research on ownership towards Ambition to Action has not yet been investigated. Due to the fact that few studies on psychological ownership have been revealed, it may be a challenging area to research. Still, it is an important field to study since researchers claim that psychological ownership at the workplace benefits the

organization, and without ownership to processes linked to performance management it will not be possible to act fast when necessary (Avey et al., 2009; Daum, 2005; Pierce, Kostova & Dirks, 2003; VandeWalle, Van Dyne & Kostova, 1995).

Findings will be interesting for Statoil in particular, but other companies that have abolished the budget or intend to do so might also find it interesting. Increased knowledge on a company's experience within this field may be an eye-opener and is necessary in the further development of psychological ownership theory. Based on relevant findings, suggestions for improvements in the case of Statoil will be given.

1.4 Empirics

The research in this paper is based on quantitative analyses, more specifically a questionnaire (see Appendix 1). Additionally, we are going to run two interviews with Statoil employees responsible for an Ambition to Action as a pilot to the questions in the questionnaire. According to Hague (1993), the objective with pilot interviews is to see if there is anything about the questionnaire that does not work. In other words, the purpose of the interviews is to improve the questionnaire, and by doing this we make sure that all the questions are understandable and clear, as well as suggestions on which questions to adjust or eliminate will be given. Hence, the questionnaire will be similar to the questions asked in the interviews, apart from those questions that we decide to adjust, remove or add. It is necessary to emphasize that answers from the respondents being interviewed will not be included in the analysis. In addition to the questionnaire and interviews we have access to plans, procedures and models describing Ambition to Action, which have been provided by Statoil.

The respondents in our survey are managers at the front lines, working in the Business Cluster Technology Excellence (TEX), in Norway. More specifically, the questionnaire will be sent to fifty-nine first line managers within TEX, Statoil. In close cooperation with higher

levels in Statoil, i.e. performance management and human resources entities in TEX, and contact at NHH, questions for the questionnaire will be formulated. The main objective with the analysis is to reveal the relationship between factors influencing ownership and ownership to Ambition to Action.

1.5 Limitations

This thesis has limitations related to both time and variation in the empirics. The time perspective concerns the timeframe of the master thesis, and implies that we are only doing research at one point of time. Findings from studies conducted at a different time, would possibly give different results. However, the survey has to be limited due to time constraints.

The other perspective is associated with limitations in the collected data. This paper analyzes which factors that influence ownership towards Ambition to Action within TEX, Statoil. Distinct from many of the other Business Clusters, TEX is the high competence cluster, and therefore, findings might not be generalized to all parts of Statoil. Still, findings might be useful for comparable entities within Statoil, e.g. Research and Development, and even within similar entities externally. In addition, the number of respondents might not be large enough to make assumptions about which factors that influence ownership. With more case objects, e.g. more companies managing without the traditional budget and more Business Clusters within Statoil, general conclusions could be drawn. However, findings will give insightful information for both Statoil and other companies that have implemented or intend to implement budget free management processes.

1.6 Scope and structure

This study focuses on factors influencing psychological ownership. To be able to analyze how ownership to Ambition to Action varies between first line managers in Statoil, we are

going to give a thorough understanding of ownership theory. Additionally, a theoretical understanding of Beyond Budgeting and Balanced Scorecard is presented and linked to Statoil's Ambition to Action. To be able to conclude in this report we have to involve empirical research along with theory.

The thesis consists of eight chapters, including this first introduction chapter. Chapter two is about Statoil, the study object. In chapter three we present the theoretical perspective, concluding with a theoretical framework that will be employed in the interpretation of our findings. In chapter four we list the defined hypotheses and what we expect to discover through our study. Chapter five describes research methodology and gives detailed explanations on how we have gathered the data and performed the analysis. In chapter six, we analyze and discuss our findings. In chapter seven, we summarize our main findings and give recommendations for Statoil. Finally, in chapter eight we conclude our report by summing up the main findings and give proposals for further studies. Bibliography and appendix are included in chapter nine and ten, respectively.

2.0 The Case: Statoil

The research object, Statoil, is described in this chapter. First, we present Statoil's background and the Business Cluster TEX. Then, we explain why Statoil has moved beyond the budget and outline how Statoil executes without the budget, through Ambition to Action.

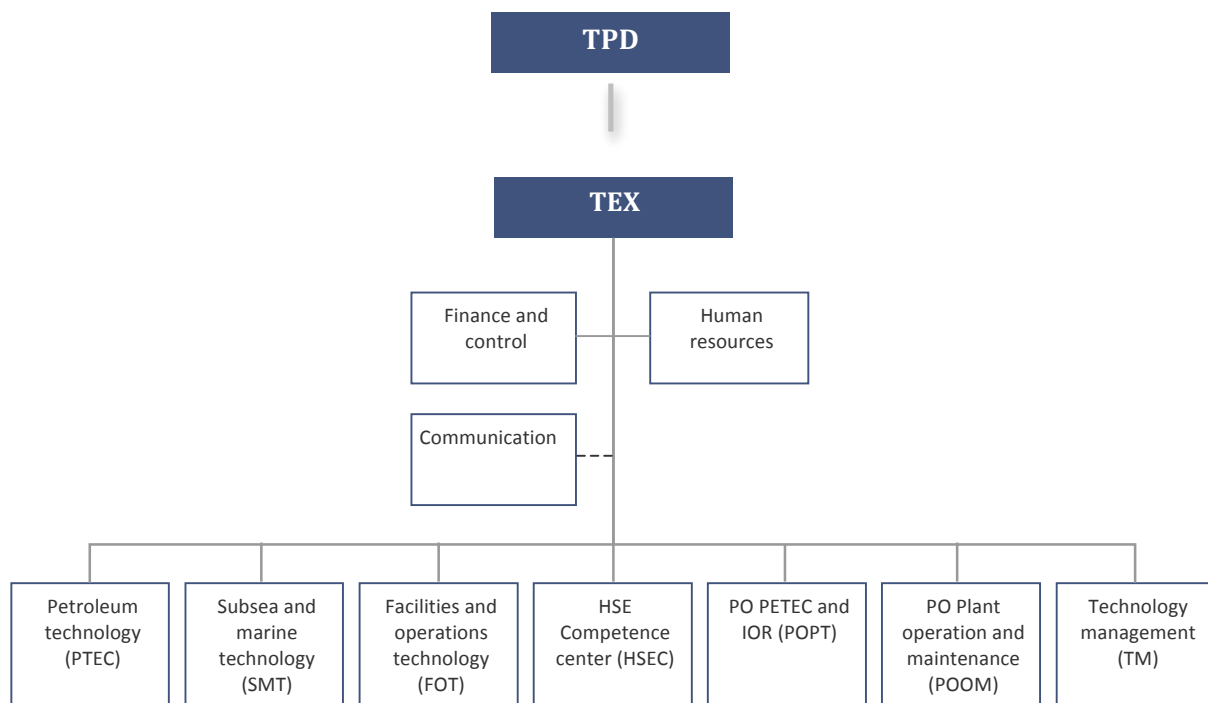
2.1 Statoil's background

Statoil was established as a national Norwegian oil company in 1972, and during the seventies and eighties Statoil experienced rapid growth (Bogsnes, 2009b). Since its early days, Statoil has been one of the most central actors within the Norwegian oil industry, always hungry for growth opportunities (Statoil's homepage, 2012). In order to come closer to the ambition of being an industry leader and strengthen the position in the market, Statoil merged with Hydro's oil and gas division in 2007 (Ibid). According to Statoil's homepage (2012), the company is one of the largest performers in the Norwegian oil industry, and has made Norway one of the most productive oil provinces and a technology driven country. Additionally, Statoil is Scandinavia's market cap and one of the world's leading suppliers of oil and gas with operations in thirty-six countries. The company counts 20.000 employees per se and its headquarter is located in Norway (Ibid). Statoil is a value-based company, and the four values "open", "courageous", "hands-on" and "caring", should give guidance in business and drive performance (The Statoil Book, 2011). Statoil believes that the values are essential if they are to succeed over time in competitive environments (Ibid). In the following, the Business Cluster, TEX, will be presented.

2.2 Business Cluster: Technology Excellence (TEX)

As mentioned, the focus in this paper is on the Business Cluster Technology Excellence (TEX), and the respondents of analysis are related to this part of Statoil. TEX consists of approximately 1150 employees, and is one of five Business Clusters within the Business Area TPD (Technology, Projects and Drilling). Employees in TEX are the specialists of technology in Statoil, since a high degree of engineers and other employees with higher education and competence work in this cluster (TPD Management Summit, 2011). TEX employees' main function is to provide support to the business through expertise and technical solutions (Ibid). The cluster has two process owners, Petroleum Technology and Increased Oil Recovery (POPT) and Operation and Maintenance (POOM). In addition, TEX has five other Business Units and the organizational structure is presented in figure 2.1.

Figure 2.1: Organizational structure in TEX



The seven listed entities at the bottom line are Business Units, and our questionnaire was only given to first line managers within these units. More detailed information about main responsibilities in the Business Units can be found in Appendix 2.

2.3 Going beyond the budget

“The world has changed – Isn’t it time to change the way we lead and manage?”

(Bogsnes, 2010)

Statoil abolished the traditional budget in 2005, and is moving toward a more dynamic management system (Merchant & Van der Stede, 2011). Gärtner (2009) defines dynamics as fluctuations and reactions taking place instantaneously when time passes. Correspondingly, dynamic is defined as *“always changing and making progress”* in the Oxford Advanced Learner’s Dictionary (2010). Bogsnes (2009b) suggests that good performance is best achieved if people can act dynamically, not based on a budget decided months ago. Hence, actors closest to the market should be given more responsibility in order to create more dynamic management processes (Ibid).

According to Hope and Fraser (2003), companies executing without a budget should focus on the twelve Beyond Budgeting principles summarized in the following:

Process principles:

1. Set stretch goals aimed at relative improvement
2. Base evaluation and rewards on relative improvement contracts with hindsight
3. Make action planning a continuous and inclusive process
4. Make resources available as required
5. Coordinate cross-company actions according to prevailing customer demand
6. Base controls on effective governance and on a range of relative performance indicators

Management principles:

1. Provide a governance framework based on clear principles and boundaries
2. Create a high-performance climate based on relative success
3. Give people freedom to make local decisions that are consistent with governance principles and the organization's goals
4. Place the responsibility for value creating decisions at the front line teams
5. Make people accountable for customer outcomes
6. Support open and ethical information systems that provide "one truth" throughout the organization

Six of the principles are related to processes and should ensure a high level of adaptation, while six of the principles are related to management and should ensure a decentralized organization. In order to ensure adaptation and to make management more decentralized, as these principles suggest, Statoil has implemented the Balanced Scorecard. The Balanced Scorecard system seeks to balance non-financial and financial measures (Kaplan & Norton, 1996), and may be defined as:

A strategic planning and management system that is used extensively in business and industry, government and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications and monitor organization performance against strategic goals

(The Balanced Scorecard Institute's homepage, 2012)

Organizations that use Balanced Scorecard focus on four general perspectives, which are the learning and growth-, the internal business processes-, the customer- and the financial-perspectives (Kaplan & Norton, 1996). The four perspectives are causally linked and allow non-financial measures to be used to yield financial performance. In today's fast changing economies there is a growing need for long-term capabilities and customer relationships, and the former importance of financial measures, as in the budgets, are now given more space to other important perspectives such as non-financial measures (Ibid). Statoil implemented its own version of the Balanced Scorecard in 1997, and has included a fifth

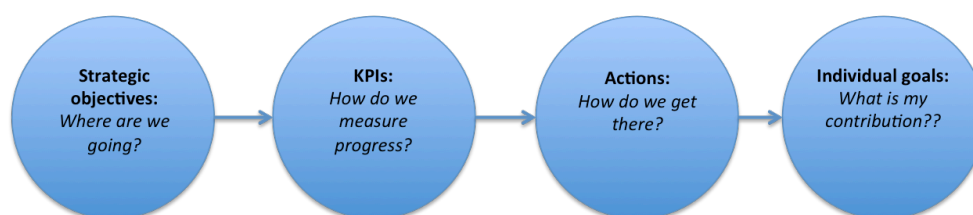
perspective, Health, Society and Environment (HSE) (The Statoil Book, 2011). The purpose of introducing the Balanced Scorecard was to modify the company's budget processes and improve the performance management system at that time (Bogsnes, 2009b). Literature highlights that in most cases when employees can choose between using a Balanced Scorecard and a budget, they get confused and choose the budget since budgets are the most familiar (Merchant & Van der Stede, 2011). Accordingly, when Statoil removed the budget, the focus was moved to the Balanced Scorecard (Bogsnes, 2010).

To summarize, Statoil employees have faced comprehensive changes in management and planning activities during the last decade. However, these modifications have been necessary in order to facilitate dynamic operations and improve performance in today's business environment. Since Beyond Budgeting management is best performed if a sense of ownership to it exists (Daum, 2005), factors influencing ownership towards Ambition to Action should be given more attention. Consequently, it is necessary to describe what Ambition to Action is and how it works, and further, ownership theories are presented.

2.4 Ambition to Action

According to The Statoil Book (2011), *"Ambition to Action is an integrated performance management process, which translates the company's ambitions and strategies into strategic objectives, key performance indicators (KPIs), actions and individual goals"*. This can be illustrated in figure 2.2:

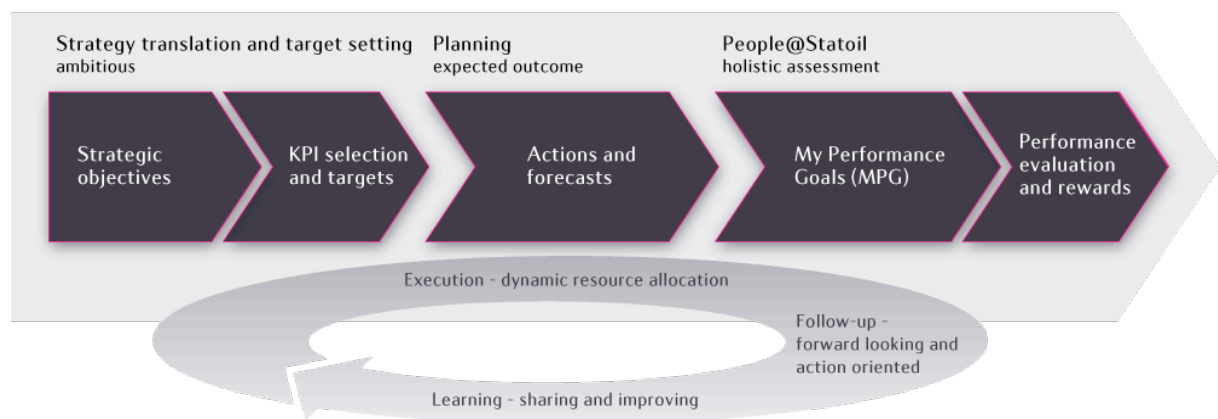
Figure 2.2: Translation of Statoil's ambitions and strategies



Statoil's overall ambition is "production above 2,5 million boe/d in 2020" (TPD Management Summit, 2011). Through Ambition to Action, Statoil translates the overall ambition into more specific strategic objectives, KPIs and actions across all five perspectives in the Balanced Scorecard, whereas individual goals are not necessarily directly linked to the scorecard. In order to align strategic direction and common business processes with empowerment and local business responsibility, Ambition to Action involves some important aspects, which are summarized in figure 2.3 (The Statoil Book, 2011):

Figure 2.3: The Ambition to Action process

The Ambition to Action process



Whereas the traditional budget treats target setting, forecasting and resource allocation as one process, Ambition to Action breaks these into three different processes. This enables Statoil to improve each of the activities (Bogsnes, 2010). The different aspects in figure 2.3 are explained in the following.

Strategy translation and target setting

Strategy development is risk based, event-driven and should define ambitions and give direction to where the company wants to be (The Statoil Book, 2011). Objectives and targets are inspired by expectations from customers, shareholders, by the performance of

competitors and so on (Ibid). Although this process is dynamic and event driven, it is the least dynamic part of Ambition to Action (Meeting with Statoil, 12.03.2012). The reason is that strategic objectives are translation of a longer-term ambition, and should probably not be more dynamic.

Delivery against strategic objectives is reflected in the KPIs (The Statoil Book, 2011). KPIs are indicative measures of strategic delivery and are usually annual or longer-term targets with “never ending” time horizons (Bogsnes, 2009a). Good KPIs are relative, measure progress against strategic objectives and address areas of improvement (The Statoil Book, 2011). A relative KPI means that performance is compared to others or the use of resources is compared to deliveries. KPIs can be challenging to define in some areas, and clear strategic objectives and actions should therefore be defined in order to secure focus and direction (Ibid). In the case of Statoil, it is very important that each entity across the organization defines and monitors its own KPIs to ensure ownership (Ibid). When necessary, corrective actions must be taken.

Planning (forecasts)

The planning starts when objectives and targets are set. Planning in Statoil begins with understanding risk and actions necessary to act, and stresses two dimensions: actions and unbiased forecasts. On the one hand, planning involves actions, which is defined as how to move towards strategic objectives and how to deliver on KPI targets (The Statoil Book, 2011). Actions do usually have a short-term horizon, are concrete, have clear deadlines, include clear accountabilities and are based on expected delivery (forecasts) (Ibid.). This part of Ambition to Action is the most dynamic and changes are done frequently (Meeting with Statoil, 12.03.2012). Hence, it is vital that autonomy is given to the front lines in the “action” part of Ambition to Action, such that employees have more freedom to act. On the other hand, planning should consider unbiased forecasting of these actions’ expected effect on relevant KPIs. Thus, an early warning of potential gaps in reaching the targets and other financial or operational trends are provided (The Statoil Book, 2011).

Targets are what Statoil wants to happen, whereas forecasts are what is expected to happen, should support decision-making and be unbiased (Ibid). Consequently, targets and forecasts may differ. In Statoil, both actions and forecasts are dynamic and updated as required, such that they are not calendar driven. Revision of the actions is a part of the business follow-up that will be presented later on.

People@Statoil

The individual goals, better known as My Performance Goals (MPG), are each employee's contribution to reach the strategic objectives, and evaluation of employee performance is referred to as People@Statoil (The Statoil Book, 2011). The goals set in People@Statoil are holistic as they emphasize delivery and behavior, both dimensions equally important and weighted (Ibid). Delivery goals should clarify accountability and support performance evaluation for each employee, whilst behavior goals should be guidance to follow values as well as required and expected behavior. These goals are influenced by the Ambition to Action of the entity and other relevant entities. Hersey, Blanchard and Johnson (2008) claim that evaluation of employee performance should highlight different aspects and the purpose should be to solve performance problems of employees. Their suggestions therefore support the way Statoil is evaluating employee performance.

Resource allocation

Theory highlights that a range of different mechanisms to allocate resources exist, and the crucial question to ask is whether the allocation is efficient or not (Rødseth & Riis, 1998). An efficient allocation, referred to as Pareto efficiency in economic theory, reflects that allocated goods could not be allocated differently without making someone else worse off (Pindyck & Rubinfeld, 2009). As mentioned, Statoil is a project driven organization and resources are assigned at project decision points, not at an annual pre-allocation basis (The Statoil Book, 2011). Instead of giving each entity within Statoil a pot of money, contrasting

the budget thinking, resources are available. However, there are boundaries to which projects that get accepted. Thus, resource allocation in Statoil is dynamic and flexible, such that value creation is optimized at all times, but with clear boundaries (Ibid).

Follow-up

The Ambition to Action follow-up process is a monitoring activity managed through reviews, and should be forward-looking and action oriented with focus on gaps between targets and forecasts, and on the development of underlying risk drivers (The Statoil Book, 2011). In Statoil, careful follow-up is done in the Management Information System (MIS), which describes corrective actions (Ibid). Follow-up in Statoil can be related to literature, and according to Hersey, Blanchard and Johnson (2008), the performance review at a workplace should generate problem-solving alternatives that can be applied in the future.

Learning

In order to improve performance, learning is a key, and learning in Statoil develops through business follow-up and performance evaluation (The Statoil Book, 2011). Sharing of knowledge is promoted by making information on all Ambition to Actions open and available, unless it is determined to be confidential (Ibid). Senge (1990) claims that encouraging thinking as a part of the whole, and making employees perceive progress towards goals as attractive will result in a learning organization. If an employee realizes how important the job is in relation to the rest of the company, the employee will be more engaged. More reflective and open work environments result in growing employees, and create a learning organization (Ibid). Thus, the literature supports Statoil's view that open and available information promotes sharing of information and best practices.

In order to make Ambition to Action meaningful and value adding, strong line ownership is required. In other words, a strong local ownership and alignment with the overall ambition

and direction is maintained when strategic objectives, KPIs, actions and individual goals reflect own business realities (The Statoil Book, 2011). Based on this, top-down cascading of strategic objectives, KPIs and actions should be avoided. However, in order to move all parts of the company in the same direction, alignment of the overall strategy across Statoil is crucial, and it is therefore less autonomy related to strategic objectives compared to actions and KPIs. Some top-down interaction should take place when changes occur, but it is crucial that the way change is implemented emerge from the bottom of the organization to ensure ownership and commitment (Balogun & Hailey, 1999). In other words, Balogun and Hailey (1999) suggest that a combination of top-down and bottom-up management is important when implementing change.

3.0 Theoretical Perspective

The purpose of this chapter is to present relevant theory that can be linked to the analysis in chapter six. To start with, the concepts of management, leadership and performance management are shortly introduced, followed by a definition of psychological ownership. There are many definitions related to these concepts, and we have chosen those that are the most relevant for this thesis. Subsequently, theories on the genesis and development of psychological ownership are given. Then, a discussion of factors influencing the state of psychological ownership and the theoretical framework of this thesis is presented.

Ambition to Action is a management process and it is therefore natural to define management in this section of the report. Management is often related to a certain group of people at the top of the organization, and Massie and Douglas (1981) define management as *“the process by which a cooperative group directs the use of resources (money, people and things) toward common goals.”* The first part of this definition means that management is a process, it is active, and involves clearly defined purposes, e.g. planning, organizing, staffing, leading, communicating and controlling. The second part of the definition states that management deals with cooperation of humans, and involves behavioral components on how people can best work together to reach common goals.

Correspondingly, since Ambition to Action is a process highly associated with leadership, we have chosen to incorporate the concept of leadership in this paper. Northouse (2010) has defined leadership as *“a process whereby an individual influences a group of individuals to achieve a common goal.”* Thus, leadership has four central components. The first component is process, which outlines that there is an event happening between a leader and its followers. The second component is influence and relates to how the leaders affect and is affected by its followers. The two last components are common goals and groups, which suggest that leadership is about persuading a group of persons who have a common objective. Consistently, Kauffman and Kauffman (2003) suggest that leadership concerns guidance and taking initiative. According to Yukl (2006), early studies on leadership do not focus on the emotional and symbolic aspects of leadership, but underline leadership as a

traditional, bureaucratic process where influence is based on authority, rules and tradition. More recent work on leadership has emphasized the softer side of leadership and the importance of putting the needs of the organization above the goals of selfishness (Ibid). By moving away from top-down leadership and by giving more freedom to employees, a feeling of meaningfulness develops and employees get highly involved in what they are doing. According to Ghafoor et al. (2011), this will lead to psychological ownership of the job.

Ambition to Action is a performance management process, and it must therefore be evident what performance management is. Armstrong (1992, as referred to in Dransfield, 2000) has defined performance management as *“a process which is designed to improve organizational, team and individual performance and which is owned and driven by line managers”*. According to Dransfield (2000), good performance management systems outline the organization’s values and objectives, individual goals, which are linked to the organization’s objectives, regular performance reviews throughout the year, performance-related pay, training and counseling. If everyone across the organization is pulling in the same direction, as well as having a clear psychological contract based on trust and commitment between employers and employees, goals will be met in an efficient manner (Ibid).

We have now introduced and defined relevant notions for this thesis, and in the following the main theoretical perspective: Psychological ownership is described.

3.1 Psychological ownership

Pierce, Kostova and Dirks (2001, 2003) have defined psychological ownership as a state when an individual feels as though the target of ownership, or a part of that target, is “theirs” (i.e. “mine”). In other words, psychological ownership is when an individual feels psychologically tied to something, meaning that it is a sensation of ownership rather than physical ownership. Other academics suggest that a sense of ownership is a psychologically

experienced phenomenon where employees develop possessive feelings for the target (Van Dyne & Pierce, 2004). Furthermore, psychological ownership is one of several conditions, which describe the psychological relationship an individual form with their work and organization (Pierce & Jussila, 2011). Each condition can be seen as the psychological glue that connects and bonds the individual to the work that they do, as well as to the organization in which this work is performed (Ibid). Also, Pierce and Jussila (2011) suggest that the answer to the question “*What do I feel is mine?*” is connected to psychological ownership. Thus, this question emphasizes that the main focus is on what an individual feels, rather than what is actually his or hers.

Ownership at the workplace is often thought of as owning shares or stock options in the company, and early research on organizational sciences has mainly focused on this function of property. However, Etzioni (1991) discovered that there is a distinction between real and symbolic ownership. Real ownership is defined as “*property existing outside minds, values and symbols*”, while symbolic ownership refers to the individual identifying ownership through attitudes, validation by others and support from the culture (Ibid). Thus, the rights and responsibilities related to a target of psychological ownership are defined by the individual and not by the legal system. Correspondingly, Pierce, Rubinfeld and Morgan (1991) suggest that ownership “*operates from both a formal and a psychologically experienced phenomenon*”. In other words, ownership may be based on formalities or simply based on a feeling. Consequently, a sense of ownership to work related activities is likely to emerge without real or formal ownership. In this study, we are only analyzing the psychological side of ownership.

Individuals have a sense of ownership towards different targets, and individuals at a workplace develop feelings of ownership towards the organization and its organizational features (Pierce, Kostova & Dirks, 2001, 2003). According to Van Dyne and Pierce (2004), employees can develop feelings of ownership towards the organization or the workplace as a whole, towards specific aspects of the organization, groups, the job, work tools and work itself. Hence, employees have a tendency to use the word “mine” about the office, the computer or the chair that they use. In this research, we intend to analyze which factors

that influence a first line manager's feeling of ownership towards the four parts of Ambition to Action.

3.2 Genesis of psychological ownership

The Concise Oxford English Dictionary (2001) defines genesis as the origin of something. In other words, genesis of psychological ownership is what creates psychological ownership. There is little empirical evidence related to the genesis of psychological ownership, but academics have done a lot of speculations within this field. Pierce, Kostova and Dirks (2001, 2003) propose that psychological ownership is rooted in the three human motives: efficacy and effectance, self-identity and having a place. These human motives are satisfied when individuals sense psychological ownership towards a target. In the following, we will only focus on efficacy and effectance and self-identity.

3.2.1 Efficacy and effectance

A major root for actions is efficacy, meaning that people have little incentive to act if they do not believe that their actions will produce desired effects (Bandura, 1997). Efficacy is usually expressed as self-efficacy or personal efficacy as it relates to a person's feeling of efficacy. Bandura (1997) proposes that perceived self-efficacy is an individual's belief in personal capability that makes one able to organize and execute the courses of action, which in turn are prerequisite for given achievements. Humans have a need to feel efficacy and be able to produce desired outcomes in the environment, and the motivation for ownership stems from this (Dittmar, 1992; Furby, 1978, 1980).

Effectance concerns what individuals can influence and is highly associated with competence, which is defined as *"an organism's capacity to interact effectively with its environment"* (White, 1959). In other words, effectance is when individuals aim to interact

effectively with the surroundings they are a part of. According to White (1959), it is through interaction with and manipulation of the surroundings that humans produce effective changes in the environment, and in turn, produce a feeling of efficacy. When individuals are able to affect the environment in which they live, the feeling of efficacy and pleasure is stimulated (Bandura, 1997). Correspondingly, Furby (1978) suggest that one of the main reasons why we take ownership is because of an effectance or competence motive to produce desired outcomes in the environment. Hence, individuals take possessions because they want to control or affect the target of ownership such that they can manage and deal effectively with the surroundings. Empirical studies support this, and McIntyre, Srivastava and Fuller (2009) found that the effectance motive is a dimension of psychological ownership. The effectance feeling is rooted in both tangible and intangible objects (Van Dyne & Pierce, 2004). For example, for some people, a red sports car can help them feel more powerful, whereas it for others is a feeling that triggers things to happen that strengthens the sense of effectance.

With this in mind, it is expected that those employees experiencing efficacy and effectance when working on strategic objectives, KPIs, actions and individual goals will have a stronger ownership feeling towards Ambition to Action.

3.2.2 Self-identity

According to Pierce, Kostova and Dirks (2001, 2003), self-identity is one of the roots to ownership. McIntyre, Srivastava and Fuller (2009) tested this empirically, and they claim that an individual will perceive an organization as a part of its self-identity if the individual's values are corresponding with the organization's values, or if a person fits the organization. Hence, there is statistical support that self-identity is a dimension of psychological ownership

Dittmar (1992) suggests that material possessions are considered as an individual's extended self, such that people regard possessions, knowingly or unknowingly, as a vital part of the self. In the Western world, the link between material objects and self is developed early in the childhood (Ibid). Early attachments to others and the process to which we make distinctions between self and others develop through possessions. Furthermore, possessions may serve as both direct and symbolic interpersonal regulators of relationships (Ibid). Direct regulators are decisions related to possessions based on a sense of control and power over others, whereas symbolic regulators are what strengthen the owner's social meaning. Hence, persons take ownership partly because they have a need to feel control and partly because they want to be meaningful socially. Correspondingly, Furby (1978) suggests that possessions are important for identity and social status, since they are extensions of the self and can help defining the individual.

Pierce, Kostova and Dirks (2003) propose that ownership encourage individuals to define themselves, express their self-identity to others and maintain the continuity of the self across time. In other words, people become psychologically committed to objects, and integrate the objects into their self through associations with the process of coming to know themselves, expression of self-identity to others and maintaining self-identity across time. When an individual view oneself from the same perspective as others, a sense of identity is developed (Ibid).

Thus, we suggest that Statoil employees that identify with the four parts of Ambition to Action have a stronger feeling of ownership to them, compared to those employees that identify less with the four parts of Ambition to Action.

Efficacy and effectance and self-identity are not within direct control in an organizational context, meaning that Statoil cannot control the employees' feelings of efficacy and effectance and self-identity (Pierce, Kostova & Dirks, 2001, 2003). However, the target of psychological ownership can be affected (Ibid). This implies that the Ambition to Action parts can be controlled, but not the employees' human motives.

3.3 Development of psychological ownership

Psychological ownership at a workplace develops through three different paths, which are control over the target, intimate knowledge of the target and investment of the self into the target (Pierce, Kostova & Dirks, 2001, 2003). In other words, the feeling of ownership towards activities and objects at work develops if employees are in control, have intimate knowledge and/or invest themselves into the work activities. Employees get psychologically attached to the ownership target through these mechanisms, and it becomes a part of the extended self.

3.3.1 Control

One of the paths to develop psychological ownership is through control exercised over the ownership target. The Oxford English Dictionary (1989) defines control as exercising direction, power or authority upon something. In this thesis, control is related to management, meaning that it reflects the level of authority, power and influence a manager has.

Furby (1978) suggests that the more control an individual has towards a target, the more it will be psychologically considered as a part of the self. Moreover, the right to use and control over are the most important defining characteristics of possession, and are crucial in making an object integrated into the user's self. Individuals tend to perceive objects that they can control, manipulate or be affected by as parts of their self (Prelinger, 1959). Likewise, objects that cannot be controlled, manipulated or affected in one way or another are less likely to be perceived as a part of an individual's self. Prelinger (1959) named the latter "neutral" objects, and suggests that such items tend to be significantly less included in the self.

In an organizational context, several opportunities to exercise control are provided. To mention some, employees may take control over organizational factors such as the job, workspace, people and projects (Pierce, Kostova & Dirks, 2001). With this as a starting point, Pierce, O'driscoll and Coghlan (2004) empirically scrutinized what the organizational sources of control are. They found that if employees are empowered such that they can exercise control over a particular target, the feeling of ownership toward the same target is enhanced. This implies that the environment structure at the workplace should be created and maintained such that individuals have autonomy and take part in decision-making processes as well as it should avoid a high degree of technological routines. In addition, scholars suggest that the amount of control is minimized in centralized command and control structures because power is only given to a chosen number of employees (Mischel, 1973; O'driscoll, Pierce, & Coghlan, 2006; Pierce, Kostova & Dirks, 2001; Pierce, O'driscoll & Coghlan, 2004). Thus, the level of control that individuals have over their job and work environment is one dimension of ownership.

Based on this, we assume that first line managers having sufficient control or influence towards the four parts of Ambition to Action have more ownership to it, compared to first line managers without adequate control or influence.

3.3.2 Intimate knowledge

Intimate knowledge about the target of ownership is another developer of the feeling of ownership. According to Jacobsen and Thorsvik (2007), knowledge is defined as insight about why something works or occurs. More knowledge about an object, a person or a place makes it more attached to its own self and stimulates the feeling of ownership (Beaglehole, 1932). James (1890) suggests that individuals develop feelings of ownership to objects that they have a living relationship with. Thus, perceptions of objects that we have experience with is more like a process of sensations and not just thoughts or knowledge about the objects. Generally speaking, James (1890) claims that *"the less we analyze a thing,*

and the fewer of its relations we perceive, the less we know about it..." Hence, individuals will only develop thoughts, and not feelings, towards such objects that they do not have a living relationship with. In other words, knowledge is related to an understanding of, or thoughts about an object, whereas intimate knowledge is more than just knowledge and is a consequence of having a living relationship with an object.

According to Pierce, Kostova and Dirks (2001), the more intimate knowledge an employee has the stronger is the feeling of ownership. Consequently, it is likely that more information and knowledge about, as well as interaction with, an item at the workplace will strengthen the feeling of ownership, because the item gets closer to the individual's self. In an organization, employees are provided knowledge about potential targets of ownership through their work, job team or project, and it is through this knowledge and information that the sense of ownership develops (Ibid). Still, it is not sufficient to just provide information about an object, but the amount and continuousness of interactions with the ownership target result in intimate knowledge, which will influence the degree of ownership (Ibid). Furthermore, intimate knowledge will be promoted through accessible information. Active participation or association with an object gives people more knowledge about the target, and the feeling of ownership is stimulated (Pierce, Kostova & Dirks, 2003). Thus, a sense of ownership will emerge towards objects that we continuously employ and get to know.

This can be linked to the situation in Statoil, and based on theory more frequent use of and more information and knowledge about the different parts of Ambition to Action strengthen the feeling of ownership. Therefore, we expect to find that respondents revising strategic objectives, KPIs, actions and individual goals frequently feel more ownership than respondents that do not revise as often.

3.3.3 Investment of the self

Investing the self into the target is another path to develop psychological ownership, and scholars have highlighted the relationship between investment of the self at work and psychological ownership (Csikszentmihalyi & Rochberg-Halton, 1981; Locke, 1779; Pierce, Kostova & Dirks, 2001, 2003; Pierce & Jussila, 2011; Sartre, 1943). Pierce, Kostova and Dirks (2001) suggest that the more employees invest themselves into a target of ownership, the stronger the feeling of ownership gets. In other words, the feeling of ownership develops the more an individual gets invested into a target of ownership.

According to Locke (1779), individuals tend to own what they create, shape or produce because they own their work and themselves. Individuals' psychic energy is involved in labor, not only time and physical effort, and therefore individuals tend to develop psychological ownership towards work. Also, Sartre (1943) studied this concept, and argues that when an individual is involved in the making of an object, a particular right of ownership towards the object emerges. This is revealed by the fact that the object exists through the individual itself and the individual has invested its time, effort and energy into it (Ibid). Thus, ownership to an item emerges if an individual spends a significant amount of time on the item. However, ownership does not develop if others force you to invest yourself into the target. Related research also suggests that investment of energy, time, attention and effort into an item will have a direct effect on the self, and increase the feeling of ownership towards the item (Csikszentmihalyi & Rochberg-Halton, 1981).

As mentioned, employees will experience more control in non-routine technology structures. This can be explained by the fact that investment of own ideas, unique knowledge and personal style are allowed in such work structures (Pierce, Kostova & Dirks, 2001). Through creation of something, persons invest time, energy and identity, and consequently they invest themselves into it. Responsibility for a target does also strengthen the sense of ownership, and individuals tend to invest themselves by putting energy, care and concern into the target when having responsibility (Pierce, Kostova & Dirks, 2003).

With this in mind, it is expected that first line managers investing enough time into its entity's strategic objectives, KPIs, actions and individual goals will have a stronger ownership feeling than other first line managers.

Pierce, Kostova and Dirks (2003) suggest that the three developers of psychological ownership are distinct, complementary and additive, such that the sensation of ownership will be stronger if following multiple paths to ownership (e.g. intimate knowledge and investment of the self) than if just following one path. Some of the paths to psychological ownership are more efficient than others, and studies show that control and investing the self into the target seem to be the most efficient (Ibid). The explanation behind this logic is that control and investment of the self are most efficient in bringing the target within the self-region and have the potential to coming to know personally.

In this paper, we have considered the genesis and the developers of psychological ownership as dimensions of psychological ownership. In other words, we did not distinguish between the genesis and developers of psychological ownership in our analyses, but we treated them equally, as dimensions of psychological ownership.

3.4 Factors influencing psychological ownership

Different factors influence psychological ownership, and such factors are highly influenced by situational forces (Pierce, Kostova & Dirks, 2003). In other words, how individuals relate to their possessions is influenced by social and cultural factors (Dittmar, 1992). According to Van Dyne and Pierce (2004), more research on cross-level effects of social structure, such that group size, norms, role, breadth, interdependence and culture, in connection to psychological ownership should be done. Moreover, ownership related to aspects of the work environment (e.g. space, tools and projects) and the work unit where the individual operates are also important factors of analysis (Pierce, O'driscoll & Coghlan, 2004). Hence, our purpose is to analyze which organizational factors, e.g. group size, dependence and

trust that influence the feeling of ownership towards Ambition to Action (i.e. strategic objectives, KPIs, actions and individual goals).

Factors influencing psychological ownership are related to structural- and cultural- factors, characteristics with individuals and characteristics with the target of ownership (Pierce & Jussila, 2010; Pierce, Kostova & Dirks, 2003). Even though characteristics with the target of ownership can influence an individual's feeling of ownership it will not be emphasized in this thesis. Thus, structural- and cultural- factors and characteristics with individuals are the only factors described in the following.

3.4.1 Organizational structure

The organizational structure, defined by plans, laws, complexity and hierarchy, influence the feeling of ownership. According to Mischel (1973), systems and plans that an individual is facing influence its behavior and through his study, he presented a framework outlining that structural factors are creating strong or weak situations. Under strong structures at the workplace, such as a centralized command and control approach, psychological ownership is less likely to develop than under weak structures (Ibid). This can be explained by the fact that an individual has greater opportunity to define its own meanings, responses and engage in such behaviors within weak situations. Thus, the organizational hierarchy influences the emergence and presentation of attitudes and differences among individuals, which in turn influences psychological ownership.

Furthermore, the routes to psychological ownership discussed earlier may be difficult to engage in because of the structural context at work (Pierce, Kostova & Dirks 2003). The organizational structure may be seen as a "fence", limiting the chance to engage in key behaviors in which psychological ownership emerges. For example, a fence can be boundaries, physical barriers, laws, and so on, and may prevent control, intimate knowledge and investment of the self into the target (Ibid).

Through empirical testing, Pierce, O’driscoll and Coghlan (2004) found that the structure at the workplace and control are related, and in turn control is a dimension of psychological ownership. Work environment structures considered in the latter study are technology routinization, job design autonomy and participative decision-making. Whereas technology routinization seems to reduce the level of control, job design autonomy and participative decision-making increase the level of control. Thus, the work environment structure appears to impact on the feeling of ownership, since it is strongly influenced by control.

Corresponding studies highlight that the feeling of psychological ownership towards the organization and the job is better promoted within low structured work environments than in highly structured work environments (O’driscoll, Pierce & Coghlan, 2006). In other words, employees exercise more control, develop more intimate knowledge and invest themselves more into their job or work in lower structured work environments.

Cummings and Berger (1976) suggest that satisfaction and performance of organizational participants are affected by the organizational structure. Their findings show that decentralization generates *“less alienation from work, less dissatisfaction with work, greater satisfaction with supervision, increased performance among field salespersons, and greater communication frequency among co-workers at the same level in the organization”*. Hence, the organizational structure influences how individuals behave. Workforces used to be a part of a rigid hierarchy such that work was based on what those above them in the chain of command told them to do, and no questions were asked (Rosen, Case & Staubus, 2005). In recent years, employees have become an organization’s most valuable asset and work is more commonly based on competence and know-how, rather than physical labor (Ibid). This softening of the hierarchy has happened because it is desirable to make employees have a sense of ownership even though there is no actual equity ownership available.

In this thesis, we aim to hypothesize if psychological ownership is influenced by the structure at the workplace. The structural factors that we have included in our analysis are number of sub-units, number of employees in the entity and dependency to other entities, which will be further outlined in chapter four.

3.4.2 Organizational culture

Perception of an individual's feeling of ownership varies from culture to culture (Pierce, Kostova & Dirks, 2003). Additionally, experience has shown that the culture at the workplace influences psychological ownership (Erez & Earley, 1993; Rosen, Case & Staubus, 2005). In this thesis, we only focus on how cultural factors related to the workplace influence psychological ownership, such that cultural differences from region to region are not considered.

According to Schein (2010), culture is how we perceive, feel and act in a given society, organization or occupation, and may be thought of as the "rules" of social order. G. Kaufmann and A. Kaufmann (2003) define organizational culture as "*How we do things at this place*". Scholars suggest that culture is shaped through norms, traditions, mores and beliefs, and it defines a person's self-concept and values based on control, self-identity, self-expression, ownership and property (Pierce, Kostova & Dirks, 2003). Organizational culture is formed through learning experiences, beliefs, values and assumptions of an "originator" at the workplace and through accidents (G. Kaufmann & A. Kaufmann, 2009; Schein, 2010). Establishment of a certain culture at the workplace happens through the company's working procedures, goals, means, measurements and rules of interaction. In addition, treatment of employees, customers and communities, level of control, the way power and information is circulated through the hierarchy and the degree of commitment, conflict, innovation and trust conducted at the workplace form the organizational culture (G. Kaufmann & A. Kaufmann, 2009; Schein, 2010).

Erez and Earley (1993) suggest that there are two perspectives on why culture is influencing psychological ownership. First and foremost, the concept of the self (e.g. self-efficacy) is modified by situations, work practices and other contextual factors of culture. Consequently, culture is influencing psychological ownership since it alters the self. Second, the processes in which individuals interact with others or with tasks stimulate psychological ownership. Such socialization processes are partly influenced by the individual's self-motive, the work setting and the cultural values within the context.

An ownership culture at the workplace does not emerge automatically (Rosen, Case & Staubus, 2005). Development of an ownership culture occurs if information about the business and its operations, e.g. financial data, is shared as well as if involvement of employees in the decision-making, takes place. Other techniques to develop a culture of ownership at the workplace is to create self-managing or cross functional teams, give authority to lower levels and involve the employees in activities at work (Ibid). Hence, it is reasonable to expect that there is a relationship between the organizational cultural factors and psychological ownership.

Based on this, we are going to highlight two hypotheses associated with cultural factors and psychological ownership. The cultural factors included in our analysis are trust and information sharing, since these are the most relevant cultural factors in relation to our study object, Statoil.

3.4.3 Characteristics with individuals

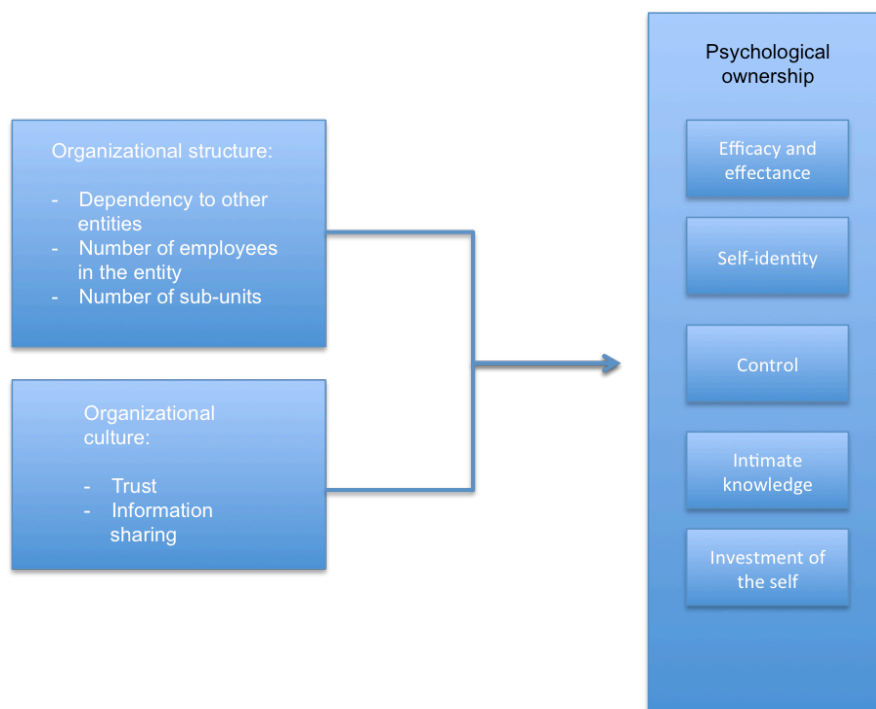
During the process of creating psychological ownership to a target there are some differences between individuals that affect the feeling of ownership. Research shows that age and gender can influence which targets of ownership individuals get attached to (Furby 1978; Kamptner, 1991). As mentioned, what individuals get attached to become a part of the self and the feeling of ownership is stimulated. Kamptner (1991) suggests that while females and older persons more easily associate with interpersonal and symbolic possessions, males and younger persons tend to favor objects reflecting immediate, instrumental, physical and active qualities. Other studies have shown that what creates ownership to a target varies with age (Furby, 1978). Hence, we expect that there might be differences between how females perceive the four parts of Ambition to Action and how males perceive them, and this relationship will be investigated through a questionnaire. Correspondingly, we aim to examine whether age and tenure influence the feeling of psychological ownership towards the four parts of Ambition to Action. Gender, age and

tenure are considered as control variables. There might be other differences between individuals that influence psychological ownership, but these will not be highlighted in this research.

3.5 Theoretical framework

So far we have presented the theoretical perspective, and based on this we suggest a theoretical framework that will act as background for the empirical research design and data collection. In order to justify our findings from the analyses, we need to link reality to theory. The paper will be more structured and to the point by having a theoretical framework, and a simplified model is outlined in figure 3.1, representing the background of our hypotheses in chapter four, and acting as guidance through the analysis part of this thesis. As mentioned, there are five dimensions of psychological ownership in this thesis.

Figure 3.1: Theoretical framework



4.0 Hypotheses

The purpose of this chapter is to present the hypotheses and what we expect to find. Based on discussions with Statoil and suggested areas for future studies, combined with relevant theories, five hypotheses have been formulated. Three of the hypotheses are related to organizational structure and two of them are related to organizational culture. This chapter consists of three sub-sections including organizational structure, organizational culture and summary of hypotheses.

4.1 Organizational structure

According to theory, the work environment structure within a company is likely to influence psychological ownership to work activities (Mischel, 1973; Pierce, Kostova & Dirks, 2003; Pierce, O’driscoll & Coghlan, 2004; O’driscoll, Pierce & Coghlan, 2006; Rosen, Case & Staubus, 2005). We hypothesize variables that are of relevance for Statoil, as well as areas that need more research within the psychological ownership literature. The three structural variables we are going to test are “dependency”, “number of employees” and “number of sub-units”, which are presented in the following.

Dependency

Van Dyne and Pierce (2004) have suggested that analyses on how interdependence in an organization influences psychological ownership should be done. Research shows that an individual’s judgment about a target of ownership can be affected by the relationship between the target and another entity (Beggan & Brown, 1994). In other words, how an individual judges an object is influenced by another individual’s relationship to the same object. This implies that a first line manager’s feeling of ownership towards the four parts of Ambition to Action might be affected by the dependency the manager’s entity has to other entities. Additionally, it is expected that management gets more complex the more

dependency between entities, and as mentioned by Mischel (1973), complexity will reduce the feeling of ownership. Hatch and Cunliffe (2006) define complexity as the number and diversity of features in the surroundings. Consequently, we assume that dependency between entities influences psychological ownership, and we expect to find that managers in entities highly dependent on other entities have less ownership to strategic objectives, KPIs, actions and individual goals, compared to less dependent entities.

Hypothesis 1: There is a negative relationship between dependency to other entities and psychological ownership.

Number of employees

Furthermore, Van Dyne and Pierce (2004) recommend that analyses on how group-size influences psychological ownership should be conducted. Generally, the degree of complexity increases with the number of employees in an organization (Cummings & Berger, 1977), and therefore we want to analyze the “number of employees” factor in relation to psychological ownership. Based on theory, we suggest that it will be harder to maintain control and find sufficient time to revise strategic objectives, KPIs, actions and individual goals when complexity increases, which in turn will affect the feeling of ownership. Accordingly, we expect to find that a high number of employees within the same entity will reduce the feeling of ownership towards the four parts of Ambition to Action.

Hypothesis 2: There is a negative relationship between the number of employees in the entity and psychological ownership.

Number of sub-units

As mentioned earlier, the respondents are managers at different levels within Statoil, and therefore they have varying numbers of sub-units. Theory suggests that complex

organizational structures, either it is vertically or horizontally, need more communication, coordination and integration, in order to achieve the same goals (Hatch & Cunliffe, 2006). A parallel to this is that a first line manager having many sub-units faces a greater need for coordination, communication and integration than those with few sub-units, which might threaten the feeling of ownership. This means that the more sub-units a first line manager is in charge of, the more centralized management is. Hence, we expect to find that the more sub-units a first line manager is responsible for, the lower is the feeling of ownership towards the different parts of Ambition to Action.

Hypothesis 3: There is a negative relationship between the number of sub-units and psychological ownership.

4.2 Organizational culture

According to theory, a relationship between organizational cultural factors and psychological ownership exists (Erez & Earley, 1993; Pierce, Kostova & Dirks, 2003; Rosen, Case & Staubus, 2005). Van Dyne and Pierce (2004) have proposed that the relationship between cultural factors within the work context and psychological ownership should be further studied. Thus, we are formulating hypotheses associated with trust and information sharing, to test if these factors influence psychological ownership.

Trust

A good organizational culture is reflected by trust being conducted within the work context (Schein, 2010). Based on several studies, Bessis (2009) claims that trust is important in order to work together successfully at any form of collaboration, which makes trust a positive phenomenon within an organizational entity. Further, control and trust mutually influence each other, and from theory we have learned that control is one of the dimensions of

ownership (Ibid). Based on this, we expect to find that trust strengthens the feeling of ownership towards strategic objectives, KPIs, actions and individual goals.

Hypothesis 4: There is a positive relationship between trust and psychological ownership.

Information sharing

One of the key pathways to learning and knowledge in Statoil is through information sharing and information on all Ambition to Actions is open and available, unless it is determined to be confidential (The Statoil Book, 2011). This indicates that information sharing stimulates the psychological ownership dimension, intimate knowledge. Intimate knowledge is likely to strengthen the feeling of ownership because the target of ownership gets more attached to the self (Beaglehole, 1932; James, 1890; Pierce, Kostova & Dirks, 2001, 2003). Consequently, we expect to find that increased information sharing gives more ownership to the four parts of Ambition to Action.

Hypothesis 5: There is a positive relationship between information sharing and psychological ownership.

4.3 Summary of hypotheses

Table 4.1 summarizes the five hypotheses listed above. The signs in the table indicate the expected signs of the coefficients for all of the five variables. There is an underlying assumption that the five variables have significant¹ relationships with psychological ownership. On the one side, we expect to find that dependency, number of employees and number of sub-units have negative relationships with psychological ownership. On the other

¹ According to statistics, the level of significance is a measure of the maximum allowable probability rejecting a hypothesis when it is actually true (Groebner et al., 2008). We have used a significance level of 5%, since it is the most commonly used significance level, meaning that our assumptions will be correct in 95 out of 100 times.

side, we expect that trust and information sharing have positive relationships with psychological ownership.

Table 4.1: Summary of hypotheses

Independent variable	Relationship to ownership
Dependency	Negative (-)
Number of employees	Negative (-)
Number of sub-units	Negative (-)
Trust	Positive (+)
Information sharing	Positive (+)

5.0 Research methodology

In this chapter the purpose is to explain how the research was performed, by describing the methodology used in this paper. Methodology is a mean that helps us use research to solve the research problem, while method is the procedures that are used in the research process (Saunders, Lewis & Thornhill, 2009). In other words, this chapter highlights the procedures used to solve our problem statement. The chapter is divided into eight parts where we focus on field of study, research design, data gathering, survey construction, data screening and preparations, evaluation of data quality, general statistics and study limitations.

5.1 Field of study

In order to understand the structural- and cultural- factors that influence ownership, we gathered information from first line managers in Statoil. Since the information was based on perceptions, the collected data was subjective. Saunders, Lewis and Thornhill (2009) describe subjectivity as a *“continual process in that through the process of social interaction these social phenomena are in a constant state of revision”*.

Due to the fact that focus on one research object would give more depth to our findings, we decided that Statoil would be the only company to study. As outlined in the previous chapters, this paper’s problem statement is related to which factors that influence ownership to Ambition to Action in Statoil. In order to answer this problem, cooperation with Statoil workers was established at an early stage in the process.

There have been few studies on performance management processes in the bottom of the hierarchy in Statoil, and thus, we only collected data from the lowest level of management, which are first line managers. Research was only done in entities in Norway and we chose to limit the data gathering to TEX, within the Business Area TPD.

5.2 Research design

Johannessen, Tufte and Kristoffersen (2006) define research design as a detailed description of the structured process of the complete research methodology. Yin (2003), has formulated research design as a logical plan for getting from A to B, where A is linked to an initial list of questions while B is related to the answers of these questions. In-between these relevant points, the collection of data and the analysis of the findings take place. The objective of the research design is to address the initial research questions and avoid situations where evidence does not answer questions related to the case (Ibid). In the following we describe the type of research design and how to define the research problem.

5.2.1 Type of research design

In this paper, the main focus was on quantitative research, more specifically a questionnaire, which was tried out through qualitative interviews that helped improve the questionnaire. Quantitative research is when phenomena are explained by gathering numerical data that are studied using mathematically, in particular statistics, based methods (Muijs, 2004). Such data is often collected through surveys, questionnaires and tests (Grey & Antonacopoulou, 2004). Quantitative research is the best method to use when measuring large samples, aiming to find cause-and-effect relationships, and quantitative methods are superior when the need for generalizing arises (Denzin & Lincoln, 2000). In this paper, quantitative research was represented through a questionnaire that was given to all first line managers in the Business Cluster TEX (see Appendix 1). The reason why we chose to use quantitative research in this paper was, as described above, because we wanted to generalize the findings as much as possible. This was done so that the study, to some extent, could be useful for other parts of Statoil, not only the Business Cluster TEX.

When doing research in organizations, scholars suggest that quantitative research is inadequate in some situations (Grey & Antonacopoulou, 2004). Thus, qualitative research

can be a good alternative or, as in this paper, a good supplement to the quantitative analysis. Qualitative research answers the question “why?” and gives the researcher an explanation of the individual (Robson & Foster, 1989). This type of research is very useful when you need more information than what you can get from standard questions in the quantitative research. In this thesis, the qualitative research was done through two interviews where the respondents were asked to read through the questionnaire and give feedback on each question. In addition, they were asked to explain the meaning of certain selected questions. This was to make sure that all the questions were comprehensible for the respondents in Statoil. Consequently, the study is highly quantitative, allowing replications for future studies with more qualitative research.

5.2.2 Defining the research problem

Even though a problem in a company has been discovered, it does not necessarily mean that the problem has been defined. Hence, Zikmund (1997) suggests that problems should be defined by creating research problems. According to Brewer and Hunter (2006), a research problem is a question indicating that the knowledge and scope have gaps. These questions are observed events of current accepted ideas that are challenged by new hypotheses. Reserachers have suggested some steps to follow when defining a research problem (Zikmund, 1997). However, we have only presented the ones that were relevant for this study.

When hired by a company to perform a research, it is important that both parts of the research process (the researchers and the company) agree upon what the purpose of the research is (Zikmund, 1997). The main intention with this paper was to write about Beyond Budgeting in Statoil. Through several meetings with employees in Statoil, it became clear that ownership towards Ambition to Action was the best choice under the topic Beyond Budgeting. Since little attention within the literature has been given to this topic, combined

with the fact that ownership is a success factor when going beyond the budget, our aim was to examine which factors that influence ownership to Ambition to Action.

It is equally important to get an understanding of the background of the problem (Zikmund, 1997). In meetings with Statoil we got the impression that employees have different views and experiences with strategic objectives, KPIs, actions and individual goals. This implies that employees have different degrees of ownership towards Ambition to Action. We were told that some employees have worked in Statoil for many years and experienced management processes come and go (Meeting with Statoil, 02.01.12). This might result in an attitude of resistance towards changes, and can indicate that tenure might influence ownership. Another issue is available time, which our contacts in Statoil claimed was a scarce resource. If managers do not have enough time to follow up on their entity's Ambition to Action it might result in lack of ownership. In addition, meetings with Statoil employees have given indications that some managers might have had a hard time letting the mindset of budgets go, which can be a potential hinder for an employee to engage in Ambition to Action (Ibid). This gave us indications of what conclusions we might find in the questionnaire.

Furthermore, it is important to identify the key variables that are influencing the research problem, which is anything that varies or changes in value, and only the variables most relevant to the problem should be defined (Zikmund, 1997). Zikmund (1997) distinguishes between dependent and independent variables. The dependent variable is what one aims to describe while the independent variable influences the dependent variable. The original dependent variables in this research are "efficacy and effectance", "self-identity", "control", "intimate knowledge" and "investment of the self". These are dimensions of psychological ownership, and we therefore made hypotheses related to these. In the definition of our hypotheses, we have considered psychological ownership as one dependent variable, which means that ownership is a result of how much efficacy and effectance, self-identity, control, intimate knowledge and investment of the self an individual experiences. Independent variables that are hypothesized in this analysis are related to the organizational context. The variables "dependency", "number of employees", "number of sub-units", "trust" and

“information sharing” are hypothesized. It is expected that the mentioned independent variables influence some of the dependent variables, and consequently, a relationship between ownership to Ambition to Action and the independent variables will be defined. An example at such is that first line managers responsible for entities with a high degree of information sharing might have more control over their entity’s strategic objectives, KPIs, actions and individual goals, and hence, have more ownership than first line managers in entities with less information sharing. Gender, age, tenure and organizational entity are also variables expected to influence psychological ownership, but are considered as control variables in this thesis.

5.3 Data gathering

We have now defined and explained the field of study and the research design. In this section, methodology used to collect data will be presented. There are many ways to collect data (Saunders, Lewis & Thornhill, 2009), and several methods were assessed. However, only methodology that has been used is described in the following.

For our data collection we chose surveys, because surveys are suitable for explanatory and descriptive research, as well as it allows collection from large sample sizes. As previously discussed, our survey consisted of a questionnaire and two interviews. The questionnaire was the main part of our data collection while the only purpose of the interviews was to strengthen the reliability and validity in the questionnaire. Reliability is the degree to which the questionnaire is free of errors and thus gives consistent results, while validity is related to how well the questionnaire measures what it is supposed to measure (Zikmund, 1997).

Researchers have separated interviews into categories by level of formality and structure (Saundes, Lewis & Thornhill, 2009), and in this paper semi-structured interviews were conducted. Semi-structured interviews are interviews with standard questions, but where deviation from the list of questions is allowed (Maylor & Blackmon, 2005; Saunders, Lewis &

Thornhill, 2009). The reason for choosing semi-structured interviews was that we needed to ask standard questions from the questionnaire, but at the same time it was important that the respondents were able to give feedback on the questions.

Saunders, Lewis and Thornhill (2009) claim that when there is a manageable population size, all data should be collected. Further, it is claimed that with larger populations, samples from the population can provide equally useful results as collecting data from the entire population. Samples should be done when it is impracticable to survey the entire population, if budget constraints or time constraints prevent you from surveying the entire population and/or if you have collected all the data but need the results quickly (Ibid). In this thesis, data was collected through samples because it was too time-consuming to collect data from all first line managers in Statoil.

According to Zikmund (1997), there are three main questions to be answered in the sampling process: "Who is to be sampled?", "how big should the sample be?" and "how to select the sampling units?". In order to answer the first question, the population and sample units had to be defined. Our respondents were selected based on the criteria that they had to be a Statoil employee, had to hold the title of first line manager and had to be employed in the Business Cluster TEX. Hence, the population is all first line managers in Statoil, and the sample units are first line managers in TEX. Concerning the second question, we used research from several researchers' studies. Experience shows that the larger sample size, the more representative is the sample (Ibid). However, as mentioned, it would have been too time consuming to collect data from all first line managers in Statoil. Based on several studies, Stutely (2003) found that the magnitude of the sample relative to the population is less important than the absolute sample size. One does not need a sample of 99% of the population to have a 99% confidence level and a sample of thirty is generally sufficient (Ibid). This was used as a guide for the size of our sample. The questionnaire was sent to fifty-nine first line managers and data from forty-three of those respondents were further analyzed, and thus, the minimum of thirty was satisfied. When answering the last question, Zikmund (1997) stresses the importance that the sample is representative for the whole population. The first line managers surveyed in this paper were all from TEX, which is considered as a

specialized high-knowledge Business Cluster, and differs from other clusters in Statoil. Consequently, data collected through this study might be different from those data collected if other entities were analyzed. This was considered when we evaluated the data material.

When we received the answers from the questionnaire the response rate was 77,9%, meaning that 77,9% of the respondents answered the questionnaire. 74% of the respondents were males, while the remaining 26% were females. Only 2% of the respondents were younger than thirty-five years, 33 % of the respondents were between the age thirty-five to forty-five and 65% of the respondents were older than forty-five years. In relation to tenure, only 7% of the respondents have worked in Statoil for less than three years, 44% have worked in Statoil between three and ten years and the remaining 49% have worked in Statoil for more than ten years. Additionally, there were differences in the number of respondents from each entity. There were zero respondents from the entities "PO Operation and maintenance (POOM)" and "PO Petroleum technology and Increased Oil Recovery (POPT)", 20,9% from "Petroleum technology (PTEC)", 39,5% from "Facilities and operations technology (FOT)", 14% from "HSE Competence center (HSEC)", 4,7% from "Technology management (TM)", whilst 20,9% from "Subsea and marine technology (SMT)". The Business Units "POOM" and "POPT" were the only process owners that received the questionnaire, and consequently, there are no collected data from process owners.

5.4 Constructing the survey

As mentioned, the survey in this paper consists of two interviews and a questionnaire, with the main focus being on the questionnaire. In the following, development and construction of the questions in the questionnaire will be explained.

Researchers have suggested some steps to follow when constructing questions for a questionnaire (Foddy, 1994). These steps refer to re-evaluation of the questions several

times to ensure validity and reliability, and in the construction of our questionnaire, such considerations were made. First, we individually collected necessary information, read it carefully and designed appropriate questions for our survey. Then, we met and worked on the design of the questions together. Next, we forwarded the proposed questions to Statoil and based on feedback adjustments were made. The modified questions were then sent to our contacts at NHH for further adjustments. This process was repeated several times and was how we designed the questions for the questionnaire. Additionally, the two interviews were conducted in order to make sure that the questions were perceived as intended. The interviewees had some improvement suggestions to our questions and adjustments were made accordingly.

Experience in Statoil shows that respondents are less likely to answer a questionnaire if it is long and time consuming, and as mentioned, it was vital that at least thirty employees were included in the analysis. With that in mind, the questionnaire was divided into four sections, each section having a limited number of questions. These four sections are “Background information”, “Characteristics with the entity”, “Perception towards Ambition to Action” and “Experiences with Ambition to Action”.

The “Background information”- and the “Characteristics of my entity”- section did both have questions related to factors influencing ownership, while the section “Perception towards Ambition to Action” included questions concerning the respondents’ view of Ambition to Action. The “Experiences with Ambition to Action” section contained questions concerning the dependent variables. Further, the latter part was divided into four sub-sections, each sub-section representing a part of the Ambition to Action process: strategic objectives, KPIs, actions and individual goals. Each section had four questions or less, to keep it from being too time-consuming. The only section that had more than four questions was the “Characteristics of my entity” section. This was done in order to cover as many relevant aspects of the entity as possible, to reveal relationships between the organizational context and psychological ownership.

In the questionnaire, efficacy and effectance were measured through the questions about value creation, for example “Work put into my entity’s actions creates value”. Self-identity was measured through questions concerning identify. One example of a question concerning identify is: “I identify with my entity’s strategic objectives”. When we measured the dependent variable control, we asked questions about both influence and control, and an example at such is: “I have sufficient influence on my entity’s strategic objectives”. Further, we measured intimate knowledge through the questions about revision and knowledge, and one example of this is: “I revise my entity’s actions when relevant changes occur”. Investment of the self was measured through questions related to time, for example: “I don’t have enough time to work on my entity’s KPIs”. By doing this, we were able to study the ownership dimensions separately, rather than just getting an overall impression on which factors that influence ownership. In other words, we could highlight for example efficacy and effectance and control, instead of only making general conclusions about influence on ownership. In our thesis, most of the dimensions of ownership were only measured through one question. These are efficacy and effectance, self-identity and investment of the self. Other dimensions of ownership, which are control and intimate knowledge, were measured through two questions.

Furthermore, theory suggests three types of variable data that can be collected through questionnaires, and such variable data are attributes, opinions and behavior (Saunders, Lewis & Thornhill, 2009). Firstly, the questionnaire in this thesis included attribute questions to attain data about the respondent’s characteristics, which was done through the “Background information”-and the “Characteristics of my entity”- sections. These questions made it possible to separate the respondents to see if the degree of ownership was influenced by characteristics related to the background and characteristics with the entity. One example of attribute questions used is “How long have you been working in Statoil?” Secondly, opinion questions were used to record how the respondents perceive Ambition to Action, which was reflected in the section called “Perception towards Ambition to Action”. In this part of the questionnaire, statements about Ambition to Action were made, and an example of this is “Ambition to Action is a process to manage performance”. These questions were meant to reveal the respondents’ perception and knowledge about

Ambition to Action. Thirdly, the section “Experiences with Ambition to Action” consisted of behavioral questions, to record behavior of the first line managers in relation to the four parts of Ambition to Action, for example “I revise my entity’s actions when relevant changes occur”. Behavioral questions were in this paper related to the four main parts of Ambition to Action, and the reason for this division was that first line managers might have a different degree of ownership to the different parts of Ambition to Action.

Knowledge was included as one single question in the “Perception towards Ambition to Action” section. Here, we only asked about “knowledge” and not “intimate knowledge”, since “intimate knowledge” is not a commonly known expression, as well as knowledge covers the basis of the intimate knowledge definition. The main reason for not including this question in all the different parts of Ambition to Action was to make the questionnaire smaller.

The questions in our questionnaire were mainly rating questions where the respondent had seven choices from “strongly agree” (rated as “seven” in the analysis), to “strongly disagree” (rated as “one” in the analysis). These were presented horizontally because this is how the respondent is most likely to process the data (Dillman, 2007). To not confuse the respondents, we used the same response categories on all the rating questions. Seven response categories were chosen, instead of six or eight, because it was important that the respondents were able to answer “not sure”. Many researchers do not include this choice to force an opinion from the respondent. However, in this research it was important that the respondents had the choice to answer “not sure”, to express if they neither agree nor disagree. Through conversations with our contacts in Statoil and contacts at NHH, we also chose to add a “not relevant”-box in addition to the seven response categories. The reason for including this response alternative was that if a respondent does not have strategic objectives, actions, KPI’s or individual goals, there was no point in answering the question. When a respondent answered “not relevant” to a question, this answer was removed from the analysis. Respondent number sixteen was removed from the analysis because this respondent had answered “not relevant” on all the questions about Ambition to Action. When using rating questions it is important to include both positive and negative

statements. An example of a negative statement included in the questionnaire is: “I don’t have enough time to work on my entity’s actions”. The motive for using both positive and negative statements was to ensure that the respondent had to think carefully about what to answer, and not just answer on autopilot. In the questionnaire, we have mainly focused on positive statements to ensure that negative feelings towards Ambition to Action and Statoil did not arise.

Category questions were included in the “Characteristics of my entity” section. When using category questions in a questionnaire, the respondents can only tick one of the boxes (Saunders, Lewis & Thornhill, 2009). Thus, we had to make sure that the answers from the respondents all could fit into one of the categories. An example of a category question included in the questionnaire is in the section “My entity consists of...” where the respondents could select between: “one sub-unit”, “two to four sub-units” or “five or more sub-units”. We got feedback from our contacts in Statoil and through the two pilot interviews, in order to make sure that the answers were relevant.

Anonymity and objectivity was important when designing this questionnaire. Firstly anonymity was mainly to make sure that the respondent’s identity was protected. This gave as truthful answers as possible. Secondly, anonymity maintained the objectivity, since we as researchers considered the respondents anonymously. Objectivity is vital to not misrepresent the data collected (Zikmund, 1997). Since the questionnaire did not contain sensitive personal data, the only reason for including anonymity was to keep the analysis objective.

5.5 Data screening and preparations

Before analyzing the data, it is important to screen the data to detect errors and deviations from assumptions that the analysis is based on (Mickey, Dunn & Clark, 2004). Variables should be considered one at a time (Ibid), and since we had a relatively small data set we

chose to handle the variables manually when screening for errors. As mentioned, respondent number sixteen was removed from the analysis because this respondent had answered “not relevant” on all the questions about Ambition to Action. Additionally, responses from respondent number twelve and thirty-three were removed since answers from those respondents reflected inconsistency. Influence and control were, as already pointed out, check-questions, and in order to determine whether answers on these questions were consistent or not we divided the response scale of one to seven into two parts (four being neutral). The respondents had to answer on the same side of the scale on these questions to be considered as “consistent respondent”. For example, if a respondent answered two and four on the statements about influence and control, respectively, the answers were kept. However, if a respondent answered three and six on those questions, the respondent was removed. Moreover, we had to make adjustments in the data related to the time statement. Initially, the question was formulated in a negative manner (e.g. “I don’t have enough time...”), which made seven the most negative answer, and one the most positive answer. In order to make this variable fit with the rest of the input data, we reorganized the answers in the time statements. Hence, answers of one, was changed to seven, answer two was changed to six and so on. Additionally, a few of the respondents answered “not relevant” on some of the questions, and those answers were removed from the analyses. This is reflected in the descriptive analyses presented in chapter six.

5.6 Evaluation on quality on the data

According to Foddy (1994), reliability and validity are particularly important when making questions to a questionnaire. Good quality on research design is important in order to reduce the chances of deriving wrong answers (Saunders, Lewis & Thornhill, 2009). In order to reduce the probability of getting errors in the responses, it was important to focus on reliability and validity in the design of the case study.

5.6.1 Reliability

Reliability is evident when results are reproducible. In other words, if the same measure over and over gives the same results, there is reliability (Zikmund, 1997). Mitchell (1996, as referred to in Saunders, Lewis, & Thornhill, 2009) suggests three approaches to evaluate reliability, which are test re-test, alternative form and internal consistency. The test re-test approach concerns re-testing the questionnaire to make sure that answers from the second time are the same as the ones from the first time. Basically, the respondents have to answer the questionnaire twice, at two different points of times (Saunders, Lewis & Thornhill, 2009). This was not possible in our thesis, since first line managers in Statoil probably would be reluctant to answer the survey two times as it intervenes in their work hours. Theory only suggests the test re-test approach to be a supplement to other methods, and therefore we did not make the respondents answer the questionnaire twice. The alternative form-approach recommends some “check-questions” to be included for the purpose of comparing responses to the same type of questions. The objective is to check whether the respondents give more or less the same score on these questions. In this paper’s questionnaire, we included one pair of “check-question”, which are the questions concerning influence and control, e.g. “I have sufficient influence on my entity’s KPIs” and “I have no control over my entity’s KPIs”. By including these questions in the questionnaire, errors were minimized. Furthermore, internal consistency is about linking the answers from one question with answers from other questions (Ibid). We performed a statistical analysis method where we tested the correlation between each of the answers in the questionnaire. In other words, checking that the correlation between the independent variables is not too high, hence increasing the reliability. Naturally, we found the “check”-questions concerning control and influence to have a high correlation. The correlation coefficient of these two independent variables was above 0,8, and thus we computed them into one independent variable in Stata (see Appendix 3 and 4). The new variable was the mean from the two initial variables, meaning that we in some of the descriptive statistics got decimal numbers, i.e. a minimum value of 1,5 in the descriptive statistics related to KPIs.

Wells and Wollack (2003) claim that reliability improves as the questionnaire increases in size. Further, Groves (2004) suggest that the researcher should ask several questions concerning the same underlying construct, in order to make sure that results are reliable. In other words, the questionnaire should include more than one question on each dependent variable. However, from meetings with Statoil we got indications on the fact that when questionnaires are long and time consuming, employees might be reluctant to answer the questionnaire (Statoil meeting, 12.03.2012). In this thesis we have made two questions concerning the dependent variable “control”, which includes the questions about influence and control, as well as with intimate knowledge, which refers to the questions about knowledge and revision. Concerning the other dependent variables, we have only been able to ask one question on each variable, to reduce the size of the questionnaire.

We have now explained the analysis of Mitchell’s three approaches to evaluate reliability, which are test re-test, internal consistency and alternative form. Also, we looked at reliability in terms of number of questions included in the questionnaire. Reliability analysis was done after the data gathering, but to ensure reliability at an early stage, it was also considered when preparing the questionnaire. In total, the research seems to satisfy the need for reliability. Next, we want to see if the validity in the research was sufficient.

5.6.2 Validity

Validity is the extent to which the questionnaire measures what it is intended to measure, which means that the survey measures what we want it to measure (Zikmund, 1997). In the following, we evaluate two types of validity applied in our research: internal and external validity.

According to Saunders, Lewis and Thornhill (2009), internal validity is *“the extent to which the findings can be attributed to the inventions rather than any flaws in your research design”*. Explained in other words, it is the extent to which you have measured what you

intended. In this aspect it was crucial that the questionnaire reflected the problem statement, research questions and hypotheses. Schwab (2005) claims that internal validity is present when variation in the independent variable causes variation in the dependent variable. When discussing validity, content validity, criterion-related validity and construct validity is often mentioned. Content validity and construct validity are discussed in the following, as it was the most relevant for this paper.

Content validity is present when the questions in the survey are adequate (Cooper & Schindler, 2008; Saunders, Lewis & Thornhill, 2009). We checked for content validity by asking ourselves the question: "Does the questionnaire cover all relevant aspects of ownership towards Ambition to Action?" In other words, are the dependent variables in this paper sufficient to make conclusions about ownership to Ambition to Action? Theory was used thoroughly when constructing the questions and we revised them several times alone, together and with help from our contacts at NHH and Statoil. Furthermore, the interviews were used for testing the questions in the questionnaire, and consequently, we expect content validity to be maintained. Construct validity is satisfied if the questions in the survey measure what they intend to measure (Ibid). To ensure construct validity in this paper, we asked ourselves the question: "Does the questionnaire really measure ownership towards Ambition to Action?" The questions in the survey are based on ownership theory, and hence it is expected that the survey measured ownership towards Ambition to Action. In that aspect, there are indications on the fact that the research has sufficient validity. Several of the hypotheses seem to be supported, and one example of this is that hypothesis 5: "*There is a positive relationship between information sharing and psychological ownership*" is supported in relation to the dependent variables "revise", "value creation", "control" and "identify" in at least one of the four parts of Ambition to Action.

Schwab (2005) explains external validation as the practice when researchers study different types of research generalization. In other words, external validation involves examining if the findings can be generalized to use in other studies. Further, Schwab (2005) suggests questions to be asked when a researcher wants to generalize the research. These questions are: "Are the findings in the sample applicable for the population? Will the findings last over

time? Are the findings applicable to other organizations? Will improvement of the problems yield better results?" In the following, we explain how we decided whether the research could be generalized or not.

Firstly, there were indications that first line managers in TEX do not represent all managers in Statoil. In addition, forty-three first line managers replied to the questionnaire, which might not be enough to represent all first line managers in Statoil. If first line managers in TEX are not representative for all managers in Statoil, this could harm the external validity. However, first line managers in TEX might be representative for similar entities in Statoil. Secondly, findings were generally based on past experiences, and Schwab (2005) argues that it is important that the findings also are applicable for the future. In this paper, the questionnaire was only conducted at one point in time, which means that findings may not be applicable for the future, such that further studies are recommended. Nevertheless, based on the theoretical framework, we defined some independent variables that were influencing ownership and these relationships are expected to be the same in potential future studies. Thirdly, performance of a specific case study has limited value in other organizations (Ibid). Since our research paper only considers ownership in the case of Statoil, little generalization of the findings could be done. Thus, we recommend extensive use of the findings only within this company, or similar entities in other companies. Finally, we had to consider if suggested improvements would give higher ownership towards Ambition to Action. In other words, whether our recommendations strengthen the feeling of ownership. Since improvement suggestions will be carefully considered, based on observations and findings, we believe that suggested improvements could possibly strengthen ownership feeling.

Overall, there should be sufficient reliability and validity in our research. The aspects that threatened reliability and validity in our study were: not re-testing the data, only measuring the data at one point of time, measuring some aspects of ownership through only one question, having few respondents as well as there might be limitations related to generalization.

5.7 General statistics

Important statistical expressions that were used in the analysis are explained in this part of the thesis. Statistics is about principles and methods to answer specific questions (Foosnæs et al., 1998). The methods are often referred to as quantitative methods and can be everything from mathematical theories to fully usable models. The statistical software used in this thesis is Stata, and there are several ways to analyze quantitative data material. First, we applied descriptive statistics on how the respondents replied in the questionnaire. Second, we performed multivariate regression analyses.

Descriptive statistics concerns methods of arranging, summarizing and presenting a set of data in such a way that useful information is produced to give an overview of collected data (Keller, 2006). It is helpful to look at the variables one at a time through descriptive statistics, and a variety of descriptive statistics could have been used (Mickey, Dunn & Clark, 2004). In this thesis, we chose to focus on number of agrees (i.e. answers equal to five, six or seven on the scale) and disagrees (i.e. answers of one, two or three). Additionally, the descriptive statistics contained mean, standard deviation and minimum and maximum values. According to Anderson, Sweeney and Williams (2011), the standard deviation is defined as the positive square root of the variance, where variance is the measure of variability that utilizes all the data.

Regression analyses are used to determine the value of the dependent variable from the value of the independent variables, except for small measurement errors (Keller, 2006). Since we have several dependent variables that define psychological ownership, multivariate regression analyses were applied in order to facilitate the work. Outcomes from multivariate regressions in Stata are the same as outcomes from multiple regression analyses. Multiple regression analyses have k independent variables related to one dependent variable, and is represented by the following equation: $y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k + \varepsilon$ (Ibid). Y is the dependent variable, x_1, x_2, \dots, x_k are the independent variables, β_0 is the y -intercept, β_1, \dots, β_k are the coefficients indicating the direction of the independent variables, and ε is the error variable measuring the difference between actual and estimated value of

the dependent variable. A dependent variable is a variable whose variation we seek to explain, and an independent variable is a variable that is used to explain variation in another variable (Gordon, 2010). The third type of variable that we have included in our analysis is control variables. According to Agresti and Franklin (2009), a control variable is a variable held constant in a multivariate analysis, and analyzes whether a relationship can be explained by a third variable. The control variables tested in this report are gender, age, tenure and entity.

When checking for significant control variables through multivariate analyses, we included significant independent variables and control variables. This means that for actions we checked for information sharing, trust, number of sub-units and number of employees. For KPIs we tested for information sharing and number of sub-units. Furthermore, for strategic objectives we checked for information sharing, trust and number of sub-units. Analyses of control variables and individual goals included number of sub-units and number of employees. Additionally, there were more than one control variable in some of the multivariate analyses.

Due to few observations, we could only test for two to three variables at the time in the multivariate regression analyses. Thus, we had to run a range of different multivariate regressions with the same variables, to be able to make conclusions whether hypotheses got statistical support or not. When employing multiple regression analyses, the issue of multicollinearity arises, which means that independent variables are highly correlated and it gets difficult to determine the separate influence of an independent variable in relation to the dependent variable (Anderson, Sweeney & Williams, 2011). Correlation (ρ) is when there is a linear relationship between two variables (Foosnæs et al., 1998), and has a lower and an upper limit, which are -1 and 1, respectively (Keller, 2006). Thus, before we conducted multivariate regression analyses, correlation tests of the independent variables were made. As a rule of thumb warning of potential problems with multicollinearity, it is suggested to make a new independent variable if a sample coefficient is greater than + 0,7 or less than - 0,7 for two independent variables (Ibid). This rule was employed in this paper, for example we computed the influence and control variables into one common variable.

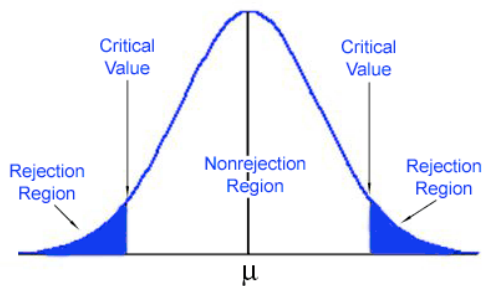
The coefficient of determination (R^2) measures an independent variable's variation in the dependent variable (Ubøe & Jørgensen, 2004), and R^2 was included in our analysis. Since we are only testing a few independent variables at the time, combined with the fact that many other factors may influence ownership, R^2 was relatively low.

Most of the dependent and independent variables incorporated in this paper are variables that can be measured in scale. Additionally, there are some variables that cannot be measured in scale. Dillon and Goldstein (1984) claim that the latter variables often serve as label descriptions or as a display of quality (either absent or present). With such data, it is not possible to create a natural scale of differentiation for the different categories in the variables. In this paper, examples at such are gender, age, tenure, entity, number of sub-units and number of employees are variables treated as dummy variables. According to Keller (2006), a dummy variable is a variable that can assume either one of only two values (most commonly is zero or one), where one value represents the existence of a certain condition and the other value indicates that the condition does not hold. For instance, we created two dummies for the variable gender, such that if the variable is "Male" the value is one if the respondent is male and zero otherwise. The complementary dummy variable is "Female", and has the value one if the respondent is female and zero otherwise.

Our objective was to test the five hypotheses defined in chapter four. According to Ubøe and Jørgensen (2004), a statistical hypothesis test consists of a null hypothesis (H_0), an alternative hypothesis (H_A), a random variable (W) and a rejection region. In general, hypothesis testing is a procedure of making inferences about a population in order to determine if there is enough statistical evidence to conclude that a belief or hypothesis about a parameter is supported by the data (Keller, 2006). As mentioned, the level of significance used in this paper is 5%, reflecting a confidence interval of 95%. A confidence interval is an interval that with a given likelihood has an unknown parameter, or more precisely a random observed value, and reflects the non-rejection region of the null hypothesis (Ubøe & Jørgensen, 2004). Thus, when the hypothesized value of the independent variable was below 0,05, H_0 was rejected with 95% certainty that the variables were significant, and assumptions that the defined hypotheses were right could then be

made (Ibid). The hypothesized value of the independent variable included in our analysis is the p-value. The p-value is the lowest significance level that allows us to reject H_0 , and the lower the p-value the more evidence there is for H_0 to be rejected (Foosnæs et al., 1998). An illustration of the rejection region is given in figure 5.1.

Figure 5.1: Rejection region



5.8 Study limitations

This thesis is highly based on findings from the data collection. The problem with data collection is that, if not careful, there are factors that can easily be overlooked, and in this section we will discuss some of these factors. It is important to emphasize that all the data collected through the questionnaire, was not included in the analysis (e.g. how work is performed).

There might be limitations in the study because of the chosen sample. As mentioned by Zikmund (1997), it is vital that the sample is representative for the population. All the respondents in this study are from the same Business Cluster in Statoil (i.e. TEX), which means that findings cannot be uncritically generalized. There might be differences between first line managers in TEX and first line managers in other Business Clusters, and these differences may not be visible without further studies. If that is the case, the data collected in this thesis may be specific for first line managers in TEX, but only an indication of the actual situation in Statoil.

Further, the number of respondents that have replied to the questionnaire is forty-three, which might be a low number of observations. According to Zikmund (1997), the larger the sample size the more representative it will be. Hence, the sample size in this thesis might not be adequate to make conclusions about the whole population, which should be kept in mind.

Additionally, there is always the possibility that first line managers that responded to the questionnaire have responded differently than what other first line managers would have responded. For example, it might be the case that only the most eager managers answered the questionnaire, since the questionnaire was voluntary. If that is the situation, we will have sample units that do not represent the actual population. We have no indications on the fact that the respondents that answered the questionnaire are different from the first line managers that did not respond. Still, this was considered when we evaluated the data.

When collecting data, subjectivity needs to be considered in order to make the analysis as valid and reliable as possible. The questions in the questionnaire are mainly based on the respondent's experiences and perceptions towards Ambition to Action, which are subjective and might affect the outcomes.

Moreover, due to the fact that we could only include two to three independent variables in the multivariate regression analyses, we might have overlooked some significant relationships or rejected some hypotheses that are actually true. In other words, a H_0 that should have been kept might have been rejected and vice versa (Ubøe & Jørgensen, 2004). Another issue related to the use of multivariate regression analyses in this thesis is that we could only test two to three independent variables in the same regression, due to a low number of observations. This impacts the relationships between the dependent and independent variables, as well as the coefficients of determination (R^2). As noted, R^2 is relatively low in many of the regressions.

Schwab (2005) claims that when humans know that they are participating in a research study they will act differently than if they did not know. Theory shows that participants are

likely to acquire additional knowledge about the topic before the study when they know they are to participate in one (Ibid). Statoil informed all the respondents about the survey beforehand, and according to theory, it is likely that many respondents will gather more knowledge about Ambition to Action before conducting the survey, in order to seem more informed. Particularly, this can be an issue in the questions where we aimed to measure the respondent's knowledge and perception towards Ambition to Action. If the sample was more informed than the population in general it might harm the internal validity of our research.

Another limitation that needs to be considered is the fact that there were only one or two questions included about each of the ownership dimensions. As mentioned, reliability would increase if we had asked more questions on each dimension of ownership. However, it was not possible to increase the size of the questionnaire.

In addition, questions in the questionnaire might be misleading or formulated in a way that could have been misinterpreted by the respondent, which will harm the data of analysis. In other words, it is crucial that all of the respondents interpreted the questions as intended, if not, conclusions will be based on wrong assumptions. However, we tried to prevent misinterpretation by explaining in the beginning of each section what we had in mind with each question. Also, we used the two interviews and re-evaluated the questionnaire several times to minimize misinterpretation.

Also, it is important to highlight the fact that some of the hypothesized independent variables were not significant. Several reasons may explain this, and we will mention a few possible reasons. Firstly, a reason might be that the hypothesized variables do not affect any of the dimensions of ownership. Secondly, there were a limited number of respondents in this study. In other words, other variables might have been significant if we had collected more data. Lastly, there might be mistakes in the data set from when we screened and sorted the data.

The last weakness that needs to be considered is the fact that we have included indirectly defined dependent variables in the questionnaire, in order to ask questions about ownership. An example of this is that instead of using the expression “investment of the self” in the questionnaire, we used the variable “time”, which is easier for the respondent to understand. Different answers might have been given if we were to ask questions concerning the directly linked variables (e.g. investment of the self instead of time). In that case, findings must be carefully interpreted.

6.0 Analyses and discussions

In this part of the paper, described theory is applied to make assumptions about first line managers' feelings of ownership towards actions, strategic objectives, KPIs and individual goals, which are the four parts of Ambition to Action in Statoil, accompanied by analyses of which factors that influence ownership. As mentioned, the dimensions of psychological ownership applied in this paper are efficacy and effectance, self-identity, control, intimate knowledge and investment of the self. These ownership dimensions were included in the analyses of factors influencing ownership towards each of the four parts of Ambition to Action.

To get an overview of the collected data, descriptive statistical analyses were used. Further, multivariate regression analyses were conducted in order to find relationships between dependent and independent variables. Our purpose was to test if dependency, number of employees, number of sub-units, trust and information sharing has an impact the feeling of ownership towards actions, strategic objectives, KPIs and individual goals, and five hypotheses have been formulated. As mentioned, hypothesis 1 is *"There is a negative relationship between dependency to other entities and psychological ownership"*, hypothesis 2 is *"There is a negative relationship between the number of employees in the entity and psychological ownership"*, hypothesis 3 is *"There is a negative relationship between the number of sub-units and psychological ownership"*, hypothesis 4 is *"There is a positive relationship between trust and psychological ownership"* and hypothesis 5 is *"There is a positive relationship between information sharing and psychological ownership"*. In addition, we are investigating if the control variables, gender, age, tenure and the entity in which the first line managers are responsible, influence ownership. Numerous multivariate regression analyses were conducted, but only those that involved significant independent- and control-variables were presented.

This chapter is divided into five sub-sections, where the first sub-section is an analysis of how first line managers perceive Ambition to Action, followed by four sub-sections including

analyses of which factors that influence ownership to actions, strategic objectives, KPIs and individual goals.

6.1 Perception towards Ambition to Action

In this sub-section we have analyzed the four questions asked in the section “Perception towards Ambition to Action” in our questionnaire (see Appendix 1). Hence, we aim to investigate if first line managers in TEX perceive Ambition to Action in accordance with Statoil’s intentions. In addition, we analyze if our hypotheses are supported when knowledge is the dependent variable. The reason for not testing our hypotheses in relation to the three first statements in table 6.1 is that the statements might have different meanings to the first line managers, as well as these statements cannot be directly linked to the dimensions of ownership.

Table 6.1: Descriptive statistics “Perception towards Ambition to Action”

Perception towards Ambition to Action	N	Total agree	Total disagree	Mean	Standard deviation	Min	Max
Ambition to Action is a process to manage performance	43	74,4%	16,3%	5,21	1,49	2	7
Ambition to Action is a process to make employees work towards Statoil’s overall strategy	43	72,1%	9,3%	5,33	1,43	2	7
Ambition to Action is a process to make Statoil able to react to changes in the market	43	51,2%	25,6%	4,47	1,33	2	7
I have sufficient knowledge to use my entity’s Ambition to Action	43	93%	2,3%	6,02	0,94	3	7

Table 6.1 is a result from descriptive statistics in Stata, and gives an overall picture of how the respondents have answered in the questionnaire. From the table, we can see that all the respondents replied to each of the questions, indicating that the questions were relevant. In general, the respondents agree on the queries, which means that most of the first line managers in TEX perceive Ambition to Action in line with Statoil’s intentions.

In the first statement, “Ambition to Action is a process to manage performance”, 74,4% of the respondents answered five or more, reflecting a mean of 5,21. The standard deviation demonstrates that the respondents have answered relatively close to the mean. Since the minimum value is two, none of the respondents answered one on the statement. Hence, it seems as though a high percentage of first line managers in TEX view Ambition to Action as a process to manage performance. However, those respondents that do not perceive Ambition to Action as a process to manage performance might feel that it is not a good way to administer performance, or that Ambition to Action is more than just performance management. In order to outline this distinction, further studies might be necessary.

Also, the second question, “Ambition to Action is a process to make employees work towards Statoil’s overall strategy”, has a great level of agreeing respondents. 72,1% of the respondents rated the statement as five or more, reflecting a mean of 5,33. The standard deviation on this question also reflects that the respondents have given answers relatively close to the mean. In addition, none of the respondents answered less than two. This implies that most first line managers in TEX perceive Ambition to Action as a process to work towards the overall strategy in Statoil.

Concerning the third statement, roughly 51% of the respondents answered five, six or seven on the response scale. Accordingly, the statement has a mean of 4,47, which is the lowest mean in this part of the questionnaire. Also, the standard deviation is lower than on the first two questions, indicating that the respondents have given less “spread out answers” on this statement compared to the two previous ones. None of the respondents evaluated this statement lower than two. Based on this, there seem to be some disagreement about Ambition to Action being a process to make Statoil able to react to changes in the market. An explanation at such is that some first line managers might feel that the process is not dynamic enough, whilst others might feel that it is more than just dynamic. Alternatively, it might be that it is difficult to use Ambition to Action dynamically. Since one of the objectives with Ambition to Action is dynamic performance management (The Statoil Book, 2011), we suggest that this finding should be further studied.

The last question, “I have sufficient knowledge to use my entity’s Ambition to Action”, includes the dependent variable “knowledge”. According to theory, knowledge about an object makes it more attached to the self and stimulates the feeling of ownership (Beaglehole, 1932; James, 1890; Pierce, Kostova & Dirks, 2001, 2003). In our questionnaire, 93% of the respondents agree on this statement, whereas roughly 2% disagree. The mean is 6,02, and no responses were rated lower than three. The respondents seem to scale the statement about knowledge rather equally, such that the standard deviation is quite low. This indicates that first line managers in TEX have sufficient knowledge about Ambition to Action, which according to theory strengthens the feeling of ownership.

In order to analyze if any of our hypotheses are supported when regarding knowledge as the dependent variable, we have conducted multivariate regression analyses in Stata. Findings from these analyses signify that there are no significant relationships between knowledge and the independent variables: “dependency”, “number of employees”, “number of sub-units”, “trust” and “information sharing”.

One explanation of the insignificant findings on the dependent variable “knowledge” may be that among the forty-three observations we have, nearly all of the respondents agree on the knowledge question, as well as the standard deviation is low. Findings might have been different with a larger number of respondents in combination with more “spread out answers”. In addition, managers are expected to have sufficient knowledge about the performance management system they are using, and consequently respondents reply that they have sufficient knowledge. Also, it might be that some of the respondents have acquired more knowledge about Ambition to Action before conducting the survey. In order to conclude any further, complementary studies should be conducted.

Based on these statistical analyses, there are indications that first line managers in TEX generally perceive Ambition to Action in line with Statoil’s intentions. Employees view Ambition to Action as a process to manage performance and to make employees work towards Statoil’s overall strategy. In addition, employees seem to have sufficient knowledge about Ambition to Action. However, there is some disagreement about Ambition to Action

being a dynamic process (i.e. statement number three), as well as none of our hypotheses is supported when testing for which factors that influence knowledge.

6.2 Ownership towards Actions

The following sub-section concerns the questions asked in the action part of the questionnaire (see Appendix 1). In the following we aim to examine if the respondents have ownership to actions, which has been analyzed through descriptive statistical analyses.

Besides, hypotheses 1 – 5 are tested in relation to the action part of Ambition to Action.

Table 6.2: Descriptive statistics - Actions

Actions	N	Total agree	Total disagree	Mean	Standard deviation	Min	Max
I revise my entity's actions when relevant changes occur	43	79,1%	4,7%	5,47	1,10	3	7
I have enough time to work on my entity's actions	43	46,5%	39,5%	4,21	1,68	1	7
Work put into my entity's actions creates value	43	83,7%	11,6%	5,42	1,20	2	7
I have sufficient control over my entity's actions	43	88,4%	4,7%	5,63	0,98	3	7

All the forty-three respondents have replied to the questions concerning actions. In general, findings indicate that first line managers have positive experiences with actions, which is an observation based on the relatively high means and the percentages of “total agree” given in table 6.2. In addition, the standard deviations are moderately low, demonstrating that the respondents have rated the statements close to the mean. Still, it is important to notice that some of the respondents have answered on the negative side of the scale, meaning that they disagree on the statements.

Approximately 79% of the respondents agree on the first statement in table 6.2, which means that they revise their actions when relevant changes occur, whereas less than 5%

disagree on this question. According to The Statoil Book (2011), actions should be the most dynamic part in Ambition to Action, and it is therefore desirable that managers have enough authority to use actions dynamically. Further, based on ownership theories, interaction strengthens the feeling of ownership since the object gets closer to the individual's self (James, 1890; Pierce, Kostova & Dirks, 2001, 2003). Thus, the amount and continuousness of interactions with actions influence the degree of ownership, such that the more interaction with actions, the more ownership to it (Ibid).

In the second statement we consider time as the dependent variable. More than 39% of the respondents disagree that they have enough time to work on actions, reflecting a relatively low mean of 4,21. Furthermore, the respondents have answered somewhat differently on this question, making this the statement where the respondents have conducted the most variable answers from the mean. With this in mind, time seems to be a challenge in relation to work on actions. Scholars suggest that the more time, energy and effort an individual invest in an object the stronger is the feeling of ownership (Csikszentmihalyi & Rochberg-Halton, 1981; Locke, 1779; Pierce, Kostova & Dirks, 2001, 2003; Sartre, 1943). Consequently, it is expected that the more time used on something, the stronger is the feeling of ownership, such that the time perspective should be further studied in order to strengthen the feeling of ownership.

The statement related to value creation is highly supported by the first line managers, and almost 84% agree on it. The objective with this question was to see if first line managers have an efficacy and effectance feeling when they work on actions. To review the literature, people have little incentive to act if they do not believe that their actions will produce desired effects (Bandura, 1997). This is important in relation to psychological ownership since efficacy and effectance are dimensions of psychological ownership (Dittmar, 1992; Furby, 1978, 1980; McIntyre, Srivastava & Fuller, 2009). Relevant numbers from descriptive statistics indicate that first line managers in TEX feel that work on actions creates value.

The final statement is about control over the entity's actions, and a quick look at table 6.2 gives us support to assume that the respondents have sufficient control over their entity's

actions. The mean is 5,63 and only 4,7% of the respondents have rated the statement negatively (i.e. three on the rating scale). Thus, descriptive analyses indicate that first line managers have sufficient control over actions. According to theory, control is a positive phenomenon since the more control the stronger is the feeling of ownership (Furby, 1978; Pierce, O’driscoll & Coghlan, 2004; Prelinger, 1959).

To summarize, it seems like most of the first line managers in TEX have a strong feeling of ownership towards the action part of Ambition to Action. However, the statement related to time has a high degree of negative answers, and it may therefore reduce the overall feeling of ownership towards actions for some managers.

In the following, we aim to analyze if hypotheses 1 - 5 mentioned earlier, gets support when testing for ownership towards actions.

First, the variable “six to ten employees” has a significant positive relationship with the time statement, as presented in table 6.3. In other words, there are indications that hypothesis 2: *“There is a negative relationship between the number of employees in the entity and psychological ownership”*. However, this finding seems random, because if the variable “six to ten employees” is significant, the variable “five or less employees” should be significantly related to time as well. This randomness might be explained by the fact that only six respondents have group sizes of six to ten employees, meaning that the number of observations is relatively low. However, there might be other explanation to this observation as well.

Second, we found that first line managers responsible for only one sub-unit tend to revise actions more often than first line managers responsible for two to four sub-units. These relationships are revealed from tests of the dummy variables related to the number of sub-units. The variable “two to four sub-units” has a significant negative coefficient, whereas the variable “one sub-unit” has a significant positive coefficient. Hence, findings indicate that the more sub-units the less interaction with actions, which is consistent with hypothesis 3:

“There is a negative relationship between the number of sub-units and psychological ownership”.

Third, trust seems to have a significantly positive relationship with revision of and control over actions, which is outlined in table 6.3. Hence, hypothesis 4: “There is a positive relationship between trust and psychological ownership”, is supported when testing it in relation to actions. In other words, findings indicate that more trust between employees reflect more revision of and more control over actions.

Finally, we found that the variable “information sharing” is significantly related to revision, value creation and control over actions, and results are presented in table 6.3. Thus, findings indicate that first line managers responsible for entities with a high degree of information sharing revise their actions more often, feel that work put into actions creates more value and have more control over their actions, than those responsible for entities with less information sharing. This finding supports hypothesis 5: *“There is a positive relationship between information sharing and psychological ownership”*, such that we have statistical evidence to reject the fifth null hypothesis. Findings from these multivariate regression analyses are summarized in table 6.3.

Table 6.3: Summary of multivariate regression analyses Actions – Independent variables

Multivariate regression analyses Actions – Independent variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Revise			0,2131
Information sharing ²	0,4686**	0,1652	
Two to four sub-units ³	-1,4109**	0,5002	
Six to ten employees ⁴	-0,2327	0,4548	
Constant (β_0)	2,8333	0,9950	
Dependent variable: Time			0,0246
Information sharing ²	-0,3062	0,2737	
Two to four sub-units ³	-1,2233	0,8283	
Six to ten employees ⁴	2,0522**	0,7530	
Constant (β_0)	5,9074	1,6477	
Dependent variable: Value creation			0,1380
Information sharing ²	0,4132**	0,2022	
Two to four sub-units ³	-0,8471	0,6121	
Six to ten employees ⁴	-0,3190	0,5565	
Constant (β_0)	3,074	1,2177	
Dependent variable: Control			0,3743
Information sharing ²	0,6463**	0,1424	
Two to four sub-units ³	-0,0825	0,4310	
Six to ten employees ⁴	0,0858	0,3919	
Constant (β_0)	1,7778	0,8573	
Dependent variable: Revise			0,1480
Dependency ²	0,1096	0,1161	
Trust ²	0,4949**	0,2080	
Constant (β_0)	1,7651	1,4143	
Dependent variable: Control			0,2360
Dependency ²	0,0300	0,0977	
Trust ²	0,6070**	0,1750	
Constant (β_0)	1,6887	1,1902	

Independent variables: “Information sharing”², “two to four sub-units”³, “six to ten employees”⁴, “dependency”² and “trust”²

As mentioned, the coefficient of determination (R²) measures an independent variable’s variation in the dependent variable (Ubøe & Jørgensen, 2004). In general, R² is relatively low, meaning that the independent variables included in the regression analyses do only explain variations in the dependent variables to some extent (see table 6.3).

Furthermore, there are some variables we aim to control for. Also, when analyzing how the control variables influence ownership to actions, multivariate regression analyses were conducted. Here we included significant independent variables from table 6.3 and tested for

² Continuous independent variable

³ Compared to “one sub-unit”

⁴ Compared to “five employees or less”, “eleven to fifteen employees” and “sixteen employees or more”

** Indicates significant variables

the different control variables. Only analyses with significant control variables were presented.

We found that age, gender and entity are significant and as mentioned, these are all dummy variables. Results from tests of the age dummies, indicate that the variable “thirty-five to forty five years” is positively related to value creation, whilst the variable “older than forty-five years” is negatively associated with value creation. Only one respondent was included in the first age dummy variable, meaning that only one respondent was less than thirty-five years. Hence, we assume that the feeling that work put into actions creates value decreases with age, and suggest that work put into actions creates less value for first line managers the older they get.

Correspondingly, gender seems to be significant for the dependent variables “control” and “value creation”. Findings imply that the variable “male” is negatively significant for control and value creation, whereas “female” is positively significant for control and value creation. These findings indicate that male respondents feel that work put into actions creates less value, compared to females. In addition, males tend to have less control over their entity’s actions compared to females.

Also, there are some significant findings in relation to entities. The dummy variable “Petroleum technology (PTEC)” seems to have a significant negative relationship with control and value creation. Hence, indications that first line managers in PTEC feel less value creation when working on actions and less control over actions than first line managers in other entities are given. Furthermore, the entity “Facilities and operations technology (FOT)” is positively significant for the dependent variables revise and value creation. This implies that respondents from FOT revise their actions more often than respondents from other entities, as well as first line managers in FOT have a stronger feeling that work put into actions creates value compared to those first line managers in other entities. The entity “HSE Competence center (HSEC)” seems to be negatively significant for the dependent variable “revise”, which signifies that first line managers from HSEC revise their entity’s

actions less than other first line managers. Findings related to control variables are summarized in table 6.4.

Table 6.4: Summary of multivariate regression analyses Actions - Control variables

Multivariate regression analyses Actions - Control variables	Coefficient (β)	Standard error (ϵ)	R ²	Multivariate regression analysis Actions - Control variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Value creation Entity PTEC ⁵ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	-0,9389** -0,5861 0,2517 6,0139	0,4456 0,2014 0,5903 1,2498	0,2335	Dependent variable: Value creation Male ¹⁰ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	-0,8577** -0,7909 0,4329** 3,5531	0,3797 0,5759 0,1891 1,1571	0,2450
Dependent variable: Control Entity PTEC ⁵ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	-0,8201** 0,1098 0,5273** 2,6503	0,3026 0,1368 0,4010 0,8490	0,4660	Dependent variable: Control Male ¹⁰ Thirty five to forty five years ¹¹ Information sharing ⁷ Constant (β_0)	-0,6234** -0,0727 0,6798** 2,0511	0,2651 0,4021 0,1320 0,8079	0,4443
Dependent variable: Revise Entity FOT ⁸ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	0,6617** -1,4645** 0,4545** 0,1525	0,2739 0,4673 0,1525	0,4096	Dependent variable: Value creation Thirty-five to forty-five years ¹¹ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	0,7747** -0,7689 0,3587 3,1022	0,3552 0,5784 0,1898 1,1479	0,3249
Dependent variable: Value creation Entity FOT ⁸ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	0,8120** -0,9095 0,3939** 2,8369	0,3354 0,5722 0,1867 1,1408	0,2578	Dependent variable: Value creation Older than forty-five years ¹² Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	-0,7693** -0,7612 0,3357 3,9921	0,3516 0,5784 0,1909 1,2103	0,2396
Dependent variable: Revise Entity HSEC ⁹ Two to four sub-units ⁶ Information sharing ⁷ Constant (β_0)	-0,9242** -1,5303** 0,4545** 3,0303	0,3897 0,4712 0,1529 0,9299	0,4068				

Control variables and independent variables: “PTEC”⁵, “two to four sub-units”⁶, “information sharing”⁷, “FOT”⁸, “HSEC”⁹, “male”¹⁰, “thirty five to forty five years”¹¹ and “older than forty-five years”¹²

When including the control variables in the same regression analyses as significant independent variables, the R² increases. Hence, the control variables have a positive impact on the explanation of the variation in the dependent variables listed in table 6.4.

To summarize, we found that there is a generally strong feeling of ownership towards the action part of Ambition to Action, with the variable “time” as an exception. Further, we

⁵ Compared to “SMT”, “FOT”, “HSEC” and “TM”

⁶ Compared to “one sub-unit”

⁷ Continuous independent variable

⁸ Compared to “PTEC”, “SMT”, “HSEC” and “TM”

⁹ Compared to “PTEC”, “SMT”, “FOT” and “TM”

¹⁰ Compared to “female”

¹¹ Compared to “under thirty-five years” and “older than forty-five years”

¹² Compared to “under thirty-five years” and “thirty-five to forty-five years”

** Indicates significant variables

found support on hypotheses 3 – 5: *“There is a negative relationship between the number of sub-units and psychological ownership”*, *“There is a positive relationship between trust and psychological ownership”* and *“There is a positive relationship between information sharing and psychological ownership”*, meaning that these hypotheses should be kept when action is the target of ownership. There are also indications that gender, age and entity influence the feeling of ownership towards the action part of Ambition to Action.

6.3 Ownership towards Strategic objectives

In this part of the analysis we are highlighting the strategic objective part of the questionnaire (see Appendix 1). Our objective is to investigate if first line managers in TEX have ownership towards strategic objectives, and analyze which factors that influence this ownership feeling.

Table 6.5: Descriptive statistics - Strategic objectives

Strategic objectives	N	Total agree	Total disagree	Mean	Standard deviation	Min	Max
I have sufficient control over my entity's strategic objectives	43	86%	9,3%	5,42	1,21	2	7
I identify with my entity's strategic objectives	43	95,3%	4,7%	5,88	0,96	3	7
Work put into my entity's strategic objectives creates value	42	85,7%	4,7%	5,60	1,08	2	7

From table 6.5 we can see that a high percentage of first line managers agree on the statements about ownership to strategic objectives. At least 85% of the respondents have answered five, six or seven on the response scale on all the questions, resulting in means between five and six. Additionally, few respondents disagree on the statements, none rated it as one, and the standard deviations are low. This indicates that the feeling of ownership towards strategic objectives is generally strong.

In the first statement in table 6.5, 86% of the respondents answered that they have sufficient control over their entity's strategic objectives. The standard deviation is 1,21, which implies that the respondents generally rate the questions close to the mean (i.e. 5,42). To review what the literature says, control is one of the dimensions of psychological ownership, such that the more control an individual has over a target the more ownership to it (Furby, 1978). Consequently, control over strategic objectives should strengthen the feeling of ownership, and these findings suggest that first line managers in TEX have sufficient control over strategic objectives.

In the second statement, "I identify with my entity's strategic objectives", 95,3% of the respondents agree, which makes the mean relatively high. Furthermore, the lowest rating on this statement was three, and the standard deviation is quite low, demonstrating that the respondents have given answers close to the mean. According to theory, individuals tend to perceive an organization as a part of its self-identity if the individual's values are corresponding with the organization's values or if the person fits the organization (McIntyre, Srivastava & Fuller, 2009). In turn, self-identity is a dimension of psychological ownership (ibid). This means that the more an individual identify with an object, the more it will be perceived as a part of the individual's self-identity and the ownership feeling strengthens. Hence, it is assumed that those first line managers that identify with the entity's strategic objectives develop a feeling of ownership towards strategic objectives.

In the final statement, "Work put into my entity's strategic objectives creates value", approximately 86% of the respondents agree, and less than 5% disagree. In addition, the mean is 5,60 and the standard deviation is 1,08. As mentioned, this statement relates to the dependent variable efficacy and effectance, meaning that value creation can be linked to efficacy and effectance. Since humans have a need to feel efficacy and effectance, they are motivated to take ownership (Furby, 1978). Based on this, high scores on the value creation statement outlined in table 6.5 indicate that the respondents have a sense of ownership to strategic objectives.

Overall, the responses signify that a great number of first line managers in TEX have a strong feeling of ownership towards strategic objectives. Only a few managers disagree on the control, self-identity and value creation statements associated with strategic objectives. However, it should be kept in mind that some of the respondents have answered four on one or more of the statements, indicating that they do not know if they agree or disagree.

Furthermore, we aim to analyze if the five hypotheses mentioned gets support in relation to ownership towards strategic objectives.

The first significant variable is the number of sub-units. Regression analyses of the dummy variable “two to four sub-units” show that it has a significant negative relationship with control, meaning that the complementary dummy variable “one sub-unit” has a significant positive relationship with control. These findings support hypothesis 3: *“There is a negative relationship between the number of sub-units and psychological ownership”*. However, less than 10 % of the respondents disagree on the control statement, and findings must therefore be carefully interpreted.

The second significant variable is trust. According to table 6.6, the variable “trust” has a significant positive relationship with the identify- and value creation variables. Based on this, we suggest that the more trust there is within an entity, the more a first line manager identify with its strategic objectives. In addition, the more trust between employees, the stronger is the feeling of value creation when working on strategic objectives. This gives support to hypothesis 4: *“There is a positive relationship between trust and psychological ownership”*.

The last significant variable is information sharing, which seems to be positively related to control, identify and value creation. Thus, the more information sharing within an entity, the more control, the more self-identity with and the more value creation when working on strategic objectives. This supports the hypothesis: *“There is a positive relationship between information sharing and psychological ownership”*. Relevant findings related to factors influencing ownership towards strategic objectives are summarized in table 6.6.

Table 6.6: Summary of multivariate regression analyses Strategic objectives - Independent variables

Multivariate regression analyses Strategic objectives – Independent variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Control			0,2717
Information sharing ¹³	0,4722**	0,1844	
Two to four sub-units ¹⁴	-1,3267**	0,5674	
More than sixteen employees ¹⁵	0,1829	0,3401	
Constant (β_0)	2,8333	1,1658	
Dependent variable: Identify			0,2159
Information sharing ¹³	0,3749**	0,1575	
Two to four sub-units ¹⁴	-0,8006	0,4848	
More than sixteen employees ¹⁵	-0,0046	0,2906	
Constant (β_0)	3,7430	0,9962	
Dependent variable: Value creation			0,2267
Information sharing ¹³	0,4082**	0,1769	
Two to four sub-units ¹⁴	-0,9538	0,5446	
More than sixteen employees ¹⁵	-0,0936	0,3264	
Constant (β_0)	3,3025	1,1189	
Dependent variable: Identify			0,1975
Dependency ¹³	-0,0646	0,0997	
Trust ¹³	0,5623**	0,1823	
Constant (β_0)	2,7646	1,2172	
Dependent variable: Value creation			0,1596
Dependency ¹³	-0,0780	0,1154	
Trust ¹³	0,5693**	0,2110	
Constant (β_0)	2,4882	1,409	

Independent variables: “Information sharing”¹³, “two to four sub-units”¹⁴, “more than sixteen employees”¹⁵, “dependency”¹³ and “trust”¹³

In table 6.6 we can see that R² is less than 30% on all the regression analyses. The coefficients of determination (R²) are relatively low, meaning that the independent variables included do only explain some of the variation in the dependent variables.

In addition to test the hypotheses, we aim to examine if the control variables influence ownership to strategic objectives. From multivariate regression analyses, we find that the significant control variables are entity, age and tenure (see table 6.7).

First, the age dummy variable “thirty-five to forty-five years” is positively significant for the “identify” variable. In other words, it seems like first line managers between the ages of

¹³ Continuous independent variable

¹⁴ Compared to “one sub-unit”

¹⁵ Compared to “five employees or less”, “six to ten employees” and “eleven to fifteen employees”

** Indicates significant variables

thirty-five to forty-five identify more with strategic objectives than what other age groups do.

Second, indications that the dummy variable “less than three years of tenure” has a significant positive relationship with the dependent variable “control” are revealed. This indicates that first line managers with less than three years of tenure in Statoil feel a higher level of control over their entity’s strategic objectives. However, the questionnaire only includes three respondents that have worked in Statoil for less than three years, which may not be enough to base conclusions on. Because of this, we will not study this finding further.

Third, the entity PTEC has a significant negative relationship with the dependent variables “control”, “identify” and “value creation”. In other words, first line managers in PTEC tend to have a lower degree of control over, feel less value creation when working on and identify less with strategic objectives, compared to other entities in TEX. The FOT entity seems to be positively significant for the dependent variable control. Thus, we have statistical evidence to suggest that first line managers in FOT have more control over strategic objectives than first line managers in other entities. Significant findings from multivariate regression analyses involving control variables are presented in table 6.7.

Table 6.7: Summary of multivariate regression analyses Strategic objectives - Control variables

Multivariate regression analysis Strategic objectives - Control variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Control			0,4122
Entity PTEC ¹⁶	-1,4180**	0,3769	
Thirty five to forty five years ¹⁷	0,3456	0,3125	
Information sharing ¹⁸	0,2570	0,1753	
Constant (β_0)	4,1374	1,0844	
Dependent variable: Identify			0,3276
Entity PTEC ¹⁶	-0,7411**	0,3320	
Thirty five to forty five years ¹⁷	0,5652**	0,2752	
Information sharing ¹⁸	0,2521	0,1544	
Constant (β_0)	4,3823	0,9551	
Dependent variable: Value creation			0,3848
Entity PTEC ¹⁶	-1,2320**	0,3591	
Thirty five to forty five years ¹⁷	0,4200	0,2977	
Information sharing ¹⁸	0,2274	0,1670	
Constant (β_0)	4,3705	1,0332	
Dependent variable: Control			0,2884
Entity FOT ¹⁹	0,7818**	0,3252	
Older than forty-five years ²⁰	0,4249	0,3448	
Information sharing ¹⁸	0,5011**	0,1808	
Constant (β_0)	2,4482	1,1598	
Dependent variable: Identify			0,2657
Entity FOT ¹⁹	0,3818	0,2721	
Older than forty-five years ²⁰	-0,6159**	0,2884	
Information sharing ¹⁸	0,3663**	0,1512	
Constant (β_0)	3,9718	0,9701	
Dependent variable: Value creation			0,2925
Entity FOT ¹⁹	0,7018**	0,3020	
Older than forty-five years ²⁰	-0,5800	0,3202	
Information sharing ¹⁸	0,4270**	0,1679	
Constant (β_0)	3,1462	1,0770	

Control variables and independent variables: “PTEC”¹⁶, “thirty-five to forty-five years”¹⁷, “information sharing”¹⁸, “FOT”¹⁹ and “older than forty-five years”²⁰

When including the control variables in the same regression analyses as significant independent variables, the R² increases. The R² is between 26% and 41% in table 6.7.

To summarize, findings indicate that first line managers in TEX have a strong feeling of ownership towards strategic objectives. When testing which factors that influence psychological ownership, we found support on hypotheses 3 – 5: “*There is a negative relationship between the number of sub-units and psychological ownership*”, “*There is a*

¹⁶ Compared to “SMT”, “FOT”, “HSEC” and “TM”

¹⁷ Compared to “under thirty-five years” and “older than forty-five years”

¹⁸ Continuous independent variable

¹⁹ Compared to “PTEC”, “SMT”, “HSEC” and “TM”

²⁰ Compared to “under thirty-five years” and “thirty-five to forty-five years”

** Indicates significant variables

positive relationship between trust and psychological ownership” and “There is a positive relationship between information sharing and psychological ownership”, meaning that these hypotheses should be kept when strategic objectives is the target of ownership. There are also indications that age, tenure and entity influence the feeling of ownership towards the strategic objective part of Ambition to Action.

6.4 Ownership towards KPIs

In the following, our objective is to analyze first line managers’ feeling of ownership towards KPIs, and the input data are collected from the KPI part of the questionnaire (see Appendix 1). Additionally, factors influencing ownership to KPIs are highlighted.

Table 6.8: Descriptive statistics - KPIs

KPIs	N	Total agree	Total disagree	Mean	Standard deviation	Min	Max
I have sufficient control over my entity’s KPIs	39	51,3%	30,8%	4,44	1,31	1,5	7
I have enough time to work on my entity’s KPIs	38	39,5%	26,3%	4,34	1,34	2	7
Work put into my entity’s KPIs creates value	39	43,6%	20,5%	4,36	1,11	2	6

Descriptive statistics highlighted in table 6.8, shows that total observations on the questions concerning KPIs are less than forty-three. Another interesting finding is that more respondents have used the negative side of the response scale in relation to KPIs. In other words, a higher percentage of first line managers disagree on the KPI questions, compared to the questions about actions and strategic objectives. This is also reflected in the means, which are close to four on each of the statements. The standard deviations are relatively low, indicating that the respondents generally gave answers close to the means.

In the first statement in table 6.8, “I have sufficient control over my entity’s KPIs”, 51,3% agree, 30,8% disagree and 17,9% either agree or disagree. Thus, there is an indication that many first line managers in TEX do not feel control over KPIs. One of the dimensions of ownership is control, such that the more control an individual has towards an object the more it will be perceived as a part of the individual’s self, strengthening the sense of ownership (Prelinger, 1959). Hence, the fact that a high number of first line managers do not have sufficient control over KPIs might prevent the feeling of ownership towards KPIs.

The second statement considers time, and approximately 39% of the respondents agree that they have enough time to work on KPIs. In other words, more than 60% of the respondents either disagree or are not sure whether they agree or disagree, which gives a mean of only 4,34. As noted in previous sub-sections of the analysis, statements about time receive low scores from the respondents. This indicates that changes may have to be implemented in order to strengthen the overall feeling of ownership towards KPIs. As mentioned, the statement about time is related to the dependent variable “investment of the self”, and individuals may invest themselves into a target through time investments (Pierce, Kostova & Dirks, 2001). This implies that the more time invested in KPIs, the more ownership towards it.

In the third statement listed in table 6.8, the percentage of respondents that agree that work put into KPIs creates value is about 43%. This means that roughly 60% either disagree or are not sure whether they agree or disagree on the value creation statement. Moreover, none of the respondents have rated the statement as seven (i.e. “Max” is six). According to theory, humans have little incentive to act if they do not believe that their actions will produce desired effects, which relates to the ownership dimension “efficacy and effectance” (Bandura, 1997; Furby, 1978). Hence, some first line managers in TEX might not feel tempted to put work into the KPIs if they experience that it does not create value, which may threaten the feeling of ownership towards KPIs.

To recap, descriptive statistics indicate that respondents have a lower degree of ownership towards KPIs than towards actions and strategic objectives. Still, it is important to notice

that the means are on the positive side of the response scale, meaning that some of the respondents have ownership to KPIs. Thus, further studies on ownership to KPIs should be accompanied, as well as measures to strengthen the feeling of ownership to KPIs should be initiated.

Now, we aim to analyze if hypotheses 1 – 5 in this paper, gets support in relation to ownership towards KPIs.

The first relevant finding revealed from multivariate regression analyses, as outlined in table 6.9, is that the dummy variables related to sub-units have significant relationships with value creation. The variable “two to four sub-units” has a negative relationship with value creation, demonstrating that the more sub-units the less value the respondent feels that work on KPIs create. Hence, we get statistical support on hypothesis 3: *“There is a negative relationship between the number of sub-units and psychological ownership”*.

The second relevant finding is that information sharing seems to have a significant positive relationship with control. This implies that the more information sharing within an entity, the more control a first line manager has over KPIs. Thus, we have statistical evidence to suggest that hypothesis 5: *“There is a positive relationship between information sharing and psychological ownership”* should be kept. Statistical summary of the Stata results are given in table 6.9.

Table 6.9: Summary of multivariate regression analyses KPIs - Independent variables

Multivariate regression analyses KPIs – Independent variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Control			0,2415
Information sharing ²¹	0,6059**	0,2297	
Two to four sub-units ²²	-0,9154	0,6415	
Six to ten employees ²³	-0,2953	0,7200	
Constant (β_0)	0,9581	1,4017	
Dependent variable: Value creation			0,1369
Information sharing ²¹	-0,0018	0,2112	
Two to four sub-units ²²	-1,3000**	0,5901	
Six to ten employees ²³	-0,5478	0,6624	
Constant (β_0)	4,5593	1,2895	

Independent variables: “Information sharing”²¹, “two to four sub units”²² and “six to ten employees”²³.

The coefficients of determination (R²) are relatively low, meaning that the independent variables included do only explain some of the variation in the dependent variables. The values of the R² are included in table 6.9.

Furthermore, we aim to analyze which of the control variables that influence the feeling of ownership towards KPIs. Findings revealed from multivariate regression analyses indicate that the only significant variable is the entity “Technology management (TM)”, and relevant results are summarized in table 6.10. Findings show that TM has a significantly positive relationship with the dependent variable “time”, which indicates that first line managers in TM have more time to follow up on their entity’s KPIs compared to other entities. Nevertheless, less than 5% of the respondents work in TM, meaning that there might not be enough observations to make conclusions, and consequently this finding will not be considered as a main finding. The coefficient of determination (R²) is 0,3025, meaning that 30,25% of the variation in the dependent variable is explained by the independent variables included in the regression analysis. Relevant findings are summarized in table 6.10.

²¹ Continuous independent variable

²² Compared to “one sub-unit”

²³ Compared to “less than five employees”, “eleven to fifteen employees” and “sixteen employees or more”

** Indicates significant variables

Table 6.10: Summary of multivariate regression analyses KPIs - Control variables

Multivariate regression analysis KPIs – Control variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Time			0,3025
Entity TM ²⁴	2,9700**	0,9123	
Two to four sub-units ²⁵	-0,6100	0,6514	
Information sharing ²⁶	-0,2200	0,2414	
Constant (β_0)	5,5700	1,4641	

Control variables and independent variables: “TM”²⁴, “two to four sub-units”²⁵ and “information sharing”²⁶.

To recap, findings indicate that the respondents have a relatively weaker feeling of ownership towards KPIs, compared to the other parts of Ambition to Action. When testing which factors that influence psychological ownership, we found support on hypotheses 3 and 5: *“There is a negative relationship between the number of sub-units and psychological ownership”* and *“There is a positive relationship between information sharing and psychological ownership”*, indicating that these hypotheses should be kept. There are also indications that type of entity influences the feeling of ownership towards the KPI part of Ambition to Action.

6.5 Ownership towards Individual goals

In the following, we outline the individual goal part of the questionnaire (see Appendix 1). We aim to investigate if first line managers in TEX have ownership to this part of Ambition to Action, as well as to analyze which factors that influence the feeling of ownership towards individual goals.

²⁴ Compared to “PTEC”, “SMT”, “FOT” and “HSEC”

²⁵ Compared to “one sub-unit”

²⁶ Continuous independent variable

** Indicates significant variables

Table 6.11: Descriptive statistics - Individual goals

Individual goals	N	Total agree	Total disagree	Mean	Standard deviation	Min	Max
I revise my subordinates' individual goals when relevant changes occur	43	76,7%	9,3%	5,10	1,28	1	7
I have enough time to work on my subordinates' individual goals	43	55,8%	27,9%	4,72	1,72	1	7
Work put into my subordinates' individual goals creates value	43	90,7%	2,3%	5,79	1,06	2	7
I have sufficient control over my subordinates' individual goals	43	88,4%	0%	5,67	0,94	4	7

Results from descriptive statistics are presented in table 6.11, and findings indicate that high score on the statements related to individual goals are given. The means on three of the statements are relatively high, reflecting that the respondents generally agree on the statements. Additionally, the standard deviations are relatively low, which means that the answers are close to the means. However, the whole response scale has been used on the two first statements (i.e. "Min" is one and "Max" is seven), and it must therefore be kept in mind that some of the first line managers disagree on these statements. Furthermore, none of the respondents have answered "not relevant", so we assume that they are all involved in their entity's individual goals.

Analyses of the first question show that almost 77% agree that their subordinates' individual goals are revised when relevant changes occur. This indicates that more than three fourths of the first line managers treat individual goals dynamically, influencing psychological ownership in a positive manner. To review what the psychological ownership theory says, interaction with the target of ownership strengthens the feeling of ownership (James, 1890; Pierce, Kostova & Dirks, 2001). Through interaction, individuals get more connected to the object, and the level of intimate knowledge is likely to increase (Ibid). Hence, the more dynamic use of individual goals the more ownership. Still, some respondents highly disagree that individual goals are revised when relevant changes occur, reflecting a standard deviation equal to 1,28.

In the next statement, “I have enough time to work on my subordinates’ individual goals”, approximately 56% agree. Thus, a high number of respondents either disagree or are not sure whether they agree or disagree on the time statement. According to table 6.11, the mean on this question is 4,72. This question does also have the highest standard deviation, demonstrating that the respondents have given somewhat varying answers.

Since investment of the self is one of the dimensions of ownership, disagreement on the time statement may reduce the feeling of ownership towards individual goals. Theory suggest that the more time, energy and effort an individual put into an object, the more it will affect the self, and the feeling of ownership will increase (Csikszentmihalyi & Rochberg-Halton, 1981; Locke, 1779; Pierce, Kostova & Dirks, 2001, 2003; Sartre, 1943).

Furthermore, results show that more than 90% of the respondents agree that work put into individual goals creates value. According to theory, people do not act if their actions do not create valuable outcomes in the environment, and this is one of the dimensions of psychological ownership (Bandura, 1997; Dittmar, 1992; Furby, 1978, 1980). Given the high percentage of approving respondents, combined with the fact that only 2,3% disagree, we suggest that most first line managers in TEX feel that work on individual goals creates value.

The last statement in table 6.11 can also be linked to theory of ownership. 88,4% of the respondents agree on the statement concerning control over individual goals, whereas zero of the respondents disagree. This implies that 11,6% of the respondents either agrees or disagrees (i.e. they have chosen four on the response scale). Scholars suggest that items that individuals control are psychologically considered as a part of the self, and this in turn develops the feeling of ownership (Furby, 1978; Pierce, O’driscoll & Coghlan; Prelinger, 1959). With this in mind, most first line managers in TEX tend to have sufficient control over individual goals.

To summarize, these findings indicate that first line managers have a relatively strong feeling of ownership towards individual goals, since most of the respondents agree on the statements in the questionnaire. However, roughly estimated, only 55,8% of the respondents claim that they have enough time to work on the individual goals.

Consequently, this aspect may threaten the overall ownership feeling, and should therefore be given more focus.

In the next step we aim to understand which factors that influence the feeling of ownership towards individual goals.

Outcomes from tests of hypotheses 1 – 5 in relation to ownership to individual goals signify that the number of employees has a significant relationship with control. Findings imply that when the number of employees within an entity is sixteen or more, the first line manager has less control over the subordinates' individual goals. In other words, the variable "sixteen employees or more" seems to have a significant negative relationship with control. Based on this, there are indications that hypothesis 2: *"There is a negative relationship between the number of employees in the entity and psychological ownership"* should be kept.

In addition, the number of sub-units has a significant relationship with revision. The dummy variable "two to four sub-units" seems to have a negative coefficient, whereas it is positive when testing for the dummy variable "one sub-unit". Thus, hypothesis 3: *"There is a negative relationship between the number of sub-units and psychological ownership"* is supported. Statistical support on these findings is presented in table 6.12.

Table 6.12: Summary of multivariate regression analyses Individual goals - Independent variables

Multivariate regression analyses Individual goals – Independent variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Revise			0,1266
Information sharing ²⁷	0,1732	0,2174	
Two to four sub-units ²⁸	-1,4180**	0,6828	
More than sixteen employees ²⁹	0,1072	0,4012	
Constant (β_0)	4,1085	1,3606	
Dependent variable: Control			0,1699
Information sharing ²⁷	0,1057	0,1564	
Two to four sub-units ²⁸	0,2094	0,4911	
More than sixteen employees ²⁹	-0,7600**	0,2886	
Constant (β_0)	5,4652	0,9786	

Independent variables: “Information sharing”²⁷, “two to four sub-units”²⁸ and “more than sixteen employees”²⁹

In table 6.12 we can see that R² is less than 17% on all the regression analyses. The coefficients of determination (R²) are relatively low, meaning that those independent variables included do only explain some of the variation in the dependent variables.

Furthermore, we test if any of the control variables influence psychological ownership to individual goals. The dummy variable “three to ten years of tenure” has a significantly negative relationship with revision, whereas the variable “more than ten years of tenure” has a significantly positive relationship with revision. Further, respondents with three to ten years of tenure revise individual goals less, compared to other respondents. Hence, there are indications that first line managers that have worked in Statoil for more than ten years revise individual goals more often than other first line managers.

Additionally, findings indicate that the entity “Technology management (TM)” has a significant positive relationship with the dependent variable “control”. Based on this, we suggest that first line managers from TM tend to have more control over individual goals than first line managers from the other entities. However, we have to be careful when making conclusions based on this finding, since only 4,7% from TM responded on the

²⁷ Continuous independent variable

²⁸ Compared to “one sub-unit”

²⁹ Compared to “less than five employees”, “six to ten employees” and “eleven to fifteen employees”

** Indicates significant variables

questionnaire. Another finding is that the entity “Petroleum technology (PTEC)” seems to be negatively significant for the revise variable, indicating that first line managers from PTEC revise their entity’s individual goals less than line managers from other entities. Findings related to control variables are summarized in table 6.13.

Table 6.13: Summary of multivariate regression analyses Individual goals - Control variables

Multivariate regression analysis Individual goals – Control variables	Coefficient (β)	Standard error (ϵ)	R ²
Dependent variable: Revise			0,2811
Three to ten years of tenure ³⁰	-1,0506**	0,3473	
One sub-unit ³¹	1,4631**	0,6144	
Sixteen employees or more ³²	0,1631	0,3630	
Constant (β_0)	4,1121	0,6844	
Dependent variable: Revise			0,2130
More than ten years of tenure ³³	0,8027**	0,3596	
One sub-unit ³¹	1,5072**	0,6428	
Sixteen employees or more ³²	0,0905	0,3786	
Constant (β_0)	3,2581	0,7251	
Dependent variable: Revise			0,2298
Entity HSEC ³⁴	-1,3304**	0,5456	
One sub-unit ³¹	1,5514**	0,6364	
Sixteen employees or more ³²	-0,2348	0,3949	
Constant (β_0)	3,9848	0,7040	

Control variables and independent variables: “three to ten years of tenure”³⁰, “one sub-unit”³¹, “sixteen employees or more”³², “more than ten years of tenure”³³, “HSEC”³⁴

R² is somewhat higher when control variables are included in the regression analyses. Hence, more of the variation in the dependent variables related to individual goals is explained when the regression analyses involves control variables. However, the R² is relatively low.

To summarize, we found that there is a strong feeling of ownership towards individual goals, with the variable “time” as an exception. Also, we found support on hypotheses 2 and 3: *“There is a negative relationship between the number of employees in the entity and psychological ownership”* and *“There is a negative relationship between the number of sub-units and psychological ownership”*, meaning that these hypotheses should be kept when

³⁰ Compared to “less than three years of tenure” and “more than ten years of tenure”

³¹ Compared to “two to four sub-units”

³² Compared to “less than five employees”, “six to ten employees” and “eleven to fifteen employees”

³³ Compared to “less than three years of tenure” and “three to ten years of tenure”

³⁴ Compared to “PTEC”, “SMT”, “FOT” and “TM”

** Indicates significant variables

individual goals is the target of ownership. There are also indications that tenure and entity influence the feeling of ownership towards the individual goals part of Ambition to Action.

7.0 Main findings and recommendations

In this part of the thesis, we present the main findings from the previous analyses. Main findings involve findings that were significant across the four parts of Ambition to Action. In other words, findings that appeared random are not considered as main findings. In addition, recommendations and improvement suggestions to Statoil are given.

7.1 Main findings

From descriptive analyses we found that most first line managers have a strong ownership feeling towards the different parts of Ambition to Action, with KPIs as an exception. In general, it seems as though first line managers have less ownership towards KPIs, compared to actions, strategic objectives and individual goals. As mentioned in chapter two, KPIs can be challenging to define, which might affect the feeling of ownership towards KPIs (The Statoil Book, 2011).

Another evident finding revealed from descriptive statistics is that many first line managers in TEX do not have enough time to work on Ambition to Action. In other words, first line managers feel that they do not have enough time to work on actions, KPIs and individual goals. From meetings with contacts in Statoil, we got the impression that time could possibly be an issue, and our statistical findings support that fact.

As mentioned, the principal objective with this research was to test if the factors dependency, number of employees, number of sub-units, trust and information sharing affect psychological ownership, and hypotheses have been formulated based on this. The four parts of Ambition to Action were used as targets of ownership, and tests of our five hypotheses show different findings across strategic objectives, KPIs, actions and individual goals. Main findings in relation to the hypotheses are presented in the following.

First, findings from the analysis chapter do not support hypothesis 1: *“There is a negative relationship between dependency to other entities and psychological ownership”*. In other words, the degree of dependency between the entity in which the first line manager is in charge of and other entities does not seem to have an effect on the feeling of ownership towards Ambition to Action. Hence, our assumptions about dependency influencing psychological ownership are not supported through this research. Explanations might be related to the fact that there are relatively few observations and that dependency might not affect any of the ownership dimensions.

Second, we found that hypothesis 2: *“There is a negative relationship between the number of employees in the entity and psychological ownership”* is only supported when testing for control over individual goals. In other words, hypothesis 2 is not supported when testing for control over actions, strategic objectives and KPIs, or when testing for the other dependent variables. Thus, there is not enough statistical support to claim that the number of employees in an entity influences ownership towards Ambition to Action. This implies that we have to reject hypothesis 2, and we assume that the number of employees in an entity does not have a negative relationship with psychological ownership. These insignificant findings might be explained by the fact that there are relatively few observations and that the number of employees might not affect any of the ownership dimensions.

Third, findings indicate that there is a significantly positive relationship between the number of sub-units and psychological ownership in relation to the revise, control and value creation variables. This means that we have statistical support to keep hypothesis 3: *“There is a negative relationship between the number of sub-units and psychological ownership”*. Hence, we suggest that first line managers in Statoil responsible for only one sub-unit, seem to have a stronger feeling of ownership towards Ambition to Action, compared to first line managers responsible for two to four sub-units. To recap, Hatch and Cunliffe (2006) suggest that the need for coordination, communication and integration increases when the organizational structure gets more complex. More sub-units means more complex structures, such that there is a greater need for coordination, communication and integration with more sub-units, which is expected to influence ownership in a negative

manner. The number of sub-units seems to affect three of the dependent variables, as well as theory supports our findings, which strengthens our assumptions about keeping hypothesis 3.

Fourth, statistical findings support hypothesis 4: *“There is a positive relationship between trust and psychological ownership”*. Results from the analyses in chapter six show that the trust hypothesis gets support for the dependent variables “value creation”, “identify”, “revise” and “control”. In other words, there is statistical support to suggest that first line managers in charge of entities with a high degree of trust have a stronger feeling of ownership, since they feel more value creation, identify more with, revise more and have more control over the different parts of Ambition to Action, compared to other first line managers. According to theory, trust and control mutually influence each other (Bessis, 2009), and this was the origin of the direction of the trust hypothesis. In addition to having an impact on control, trust seems to affect “value creation”, “identify” and “revise”, which are dependent variables included in this thesis. Since trust influences four of the dependent variables, combined with the fact that theory supports our hypothesis, we assume that trust and psychological ownership has a positive relationship.

Finally, there are indications that information sharing influences psychological ownership, such that hypothesis 5: *“There is a positive relationship between information sharing and psychological ownership”* is supported. Findings signify that a high level of information sharing reflect more revision of, more identification with, a feeling of more value creation when working on and more control over Ambition to Action. As mentioned, we expected to find that information sharing is positively related to psychological ownership since it stimulates to intimate knowledge, which was measured through the revise questions. Moreover, information sharing seems to be significant for the variables “identify”, “value creation” and “control”, which are dependent variables comprised in this thesis. The fact that the mentioned hypothesis was supported in four of the dependent variables, as well as the literature supports our findings, indications that information sharing has a positive relationship with psychological ownership are given.

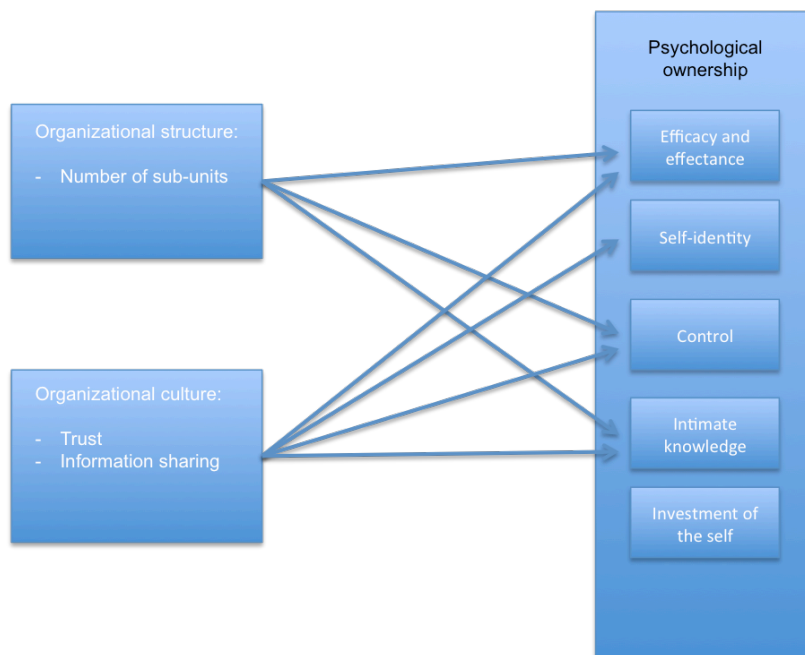
Through analyses of the relationships between control variables and psychological ownership there are few significant findings considered as main findings. The only control variables that seem to influence ownership towards Ambition to Action are the entities “Facilities and operations technology (FOT)” and “Petroleum technology (PTEC)”. FOT seems to be positively significant with revision, value creation and control. This indicates that first line managers in FOT, to a certain extent, have a higher degree of ownership towards Ambition to Action, compared to first line managers in the other surveyed entities. The PTEC entity seems to be negatively significant for the dependent variables “revise”, “value creation”, “identify” and “control”. Hence, first line managers in PTEC tend to have less ownership towards Ambition to Action, compared to first line managers from other Business Units in TEX. In general, gender, age and tenure do not seem to influence psychological ownership. For example, this implies that whether a first line manager is male or female do not affect the revision of, if there is a feeling of value creation when working on, if there is enough time to work on, if there is identification with, and if there is control over Ambition to Action.

As mentioned, we measured the five ownership dimensions, efficacy and effectance, self-identity, control, intimate knowledge and investment of the self, through the expressions: value creation, identify, control, revise and time, respectively. In other words, efficacy and effectance was measured through the value creation statement, self-identity was measured in the identify question, control was measured through the control statement, intimate knowledge was measured through the revision statement and investment of the self was measured in the time questions.

To summarize, hypothesis 3 – 5 get support when testing in relation to ownership towards Ambition to Action, meaning that the number of sub-units, trust and information sharing seem to influence psychological ownership. Hypothesis 3, *“There is a negative relationship between the number of sub-units and psychological ownership”*, gets support for the intimate knowledge, control and efficacy and effectance dimensions of ownership. Hypothesis 4, *“There is a positive relationship between trust and psychological ownership”*, is supported in relation to the efficacy and effectance, self-identity, intimate knowledge and

control dimensions of psychological ownership. Correspondingly, hypothesis 5, “*There is a positive relationship between information sharing and psychological ownership*” seems to be supported when testing for efficacy and effectance, self-identity, intimate knowledge and control. More generally, findings indicate that the structural factor “number of sub-units” is negatively related to ownership, whereas the cultural factors “trust” and “information sharing” seems to be positively related to ownership. Based on these main findings, we have updated the theoretical framework from chapter three, which is presented in figure 7.1.

Figure 7.1: Updated theoretical framework



7.2 Recommendations

Our first recommendation concerns KPIs, as our analysis gives indications that first line managers feel less ownership towards this part of Ambition to Action. Therefore, we recommend Statoil to have extra focus on KPIs, if more ownership to it is desirable. The

main emphasis in relation to ownership to KPIs should be on efficacy and effectance, control and investment of the self.

The second recommendation to Statoil involves time, since a relatively high percentage of first line managers disagree on the questions concerning time. In other words, first line managers feel pressured on time when working on actions, KPIs and individual goals, which might threaten the feeling of ownership towards Ambition to Action. Possible explanations of the time problem might be that the workload is quite large, that it is time consuming to employ Ambition to Action, or that the available time to use on Ambition to Action is not sufficient. In order to conclude any further, we recommend further investigations.

Next, we recommend Statoil to limit the number of sub-units a manager is responsible for. This means that responsibility might have to be delegated as far down in the hierarchy as possible, to increase the likelihood that actions, strategic objectives, KPIs and individual goals are revised when relevant changes occur, that first line managers have control over the four parts of Ambition to Action and to make work value adding.

Another recommendation for Statoil is to maintain the strong organizational culture reflected by trust and information sharing. To review our main findings, both hypotheses related to trust and information sharing seem to have support, indicating that the more trust and information sharing, the stronger is the feeling of ownership. Thus, we suggest that Statoil should maintain focus on trust and information sharing within the entities' organizational cultures. In the case where entities do not have sufficient trust and information sharing, improvement measures should be initiated.

The last recommendation we suggest is to keep the number of employees within the same entity at a relatively manageable level. Even though we rejected hypothesis 2: *“There is a negative relationship between the number of employees in the entity and psychological ownership”*, our statistical findings indicate that when the number of employees is sixteen or more, first line managers tend to have less control towards individual goals. Hence, we

recommend that first line managers should not have responsibility for more than fifteen employees.

8.0 Concluding remarks

The purpose of this chapter is to complete the thesis by summarizing the main findings, include limitations and provide suggestions for further studies.

Through this study, we have emphasized the question: *“In the case of Statoil, which factors influence ownership towards Ambition to Action?”* As outlined in chapter two, Ambition to Action is Statoil’s integrated performance management process and involves strategic objectives, KPIs, actions and individual goals (The Statoil Book, 2011). According to Pierce, Kostova and Dirks (2001, 2003), psychological ownership is a state when an individual feels as though the target of ownership, or a part of that target, is “theirs” (i.e. “mine”). Scholars suggest that potential targets of ownership are work, tools, physical or material objects, ideas, people, relationships, body parts, and so on (Pierce & Jussila, 2010; Pierce, Kostova & Dirks, 2001, 2003; Pierce, O’driscoll & Coghlan, 2004; Pierce, Rubenfeld & Morgan, 1991; Prelinger, 1959). Within the work and organizational context, the work that one does, products, tools, workspace and colleagues are some examples of potential targets of ownership. Hence, it is appropriate to consider Ambition to Action as a target of ownership. Five hypotheses were defined based on our theoretical framework, with the aim of examining whether dependency, number of employees, number of sub-units, trust and information sharing influence psychological ownership.

Cooperation with Statoil employees was initiated at an early stage, and through regular meetings we enriched our knowledge about Ambition to Action, as well as we identified Statoil’s needs. Quantitative analyses have been conducted, and data was collected through a questionnaire sent to all first line managers within the Business Cluster Technology Excellence (TEX). The data revealed from the questionnaire was statistically analyzed in Stata, and some relevant findings had to be considered. First, findings indicate that the feeling of ownership towards KPIs is generally weaker than towards actions, strategic objectives and individual goals. Second, we discovered that time is a challenge, which is a finding revealed from the number of disagrees on the time statements in the questionnaire. Third, there were no indications that hypotheses 1 and 2 are supported. Hence, dependency

and number of employees within an entity do not seem to influence psychological ownership. Fourth, hypothesis 3: *“There is a negative relationship between the number of sub-units and psychological ownership”* was kept, and thus, there is statistical support to assume that the number of sub-units influences psychological ownership. Fifth, hypothesis 4: *“There is a positive relationship between trust and psychological ownership”* is supported, indicating that trust influences the feeling of ownership. Finally, hypothesis 5: *“There is a positive relationship between information sharing and psychological ownership”* was statistically supported, and consequently, findings indicate that information sharing affects psychological ownership.

As mentioned, ownership is a success factor when implementing a budget free management process, which means that a feeling of ownership is crucial to achieve goals and to enable employees to do management more event-driven when going beyond the budget (Daum, 2005). Accordingly, it is of importance for Statoil that managers have a feeling of ownership towards Ambition to Action, and this study is constructed as a contribution to the development of ownership towards Ambition to Action. Furthermore, findings revealed from this thesis may be used as a general guide to which structural- and cultural- factors that influences psychological ownership.

8.1 Limitations

The main findings highlighted through this research are based on findings from the data collection, and there are some factors that might be overlooked if the data is not carefully interpreted. Limitations associated with this research were discussed in chapter 5.8 Study limitations, and a more detailed explanation of the limitations can be found there.

To summarize, our study has limitations related to the sample, since we are only surveying first line managers within TEX. There are also limitations in relation to the number of observations, meaning that analysis of data from forty-three persons may not be enough to base our conclusions on. Furthermore, subjectivity might be a limitation as different

respondents can answer differently based on perceptions and experiences. Another limitation is related to the rejection of hypotheses, and there is always the possibility that we keep a hypothesis that should not be kept or vice versa. Moreover, our study has limitations associated with the use of multivariate regression analyses, since we can only test for two to three variables at a time. Prepared versus not prepared respondents might also influence on the respondents' answers, and is therefore a limitation in this study since Statoil informed all the respondents about the questionnaire beforehand. Additionally, potential misinterpretation of the questions in the questionnaire might result in wrong results. Further, the use of indirectly defined dependent variables in the questionnaire can cause unfortunate linking of the dependent variables included in the regression analyses and the ownership dimensions. The final limitation to be mentioned is associated with only asking one or two questions about each of the ownership dimensions, which limits our opportunity to measure internal consistency.

8.2 Suggestions for further studies

As previously mentioned, there are some areas that must be studied further. We suggest that more thorough studies on ownership towards Ambition to Action should be supplemented. In this research, we have conducted a quantitative analysis such that the respondents could only rate the questions. In order to collect more specific and reflective answers, more focus on interviews may give a broader understanding of which factors that influence the feeling of ownership towards Ambition to Action. Hence, we suggest that future studies should include interviews with first line managers or other managers, in order to analyze which factors that influence ownership towards Ambition to Action.

Further, we suggest future investigation on ownership to KPIs, since the feeling of ownership towards KPIs seems to be inferior to the feeling of ownership towards actions, strategic objectives and individual goals. Supplementary studies related to managers' experiences with and perceptions towards KPIs might be helpful to understand why there is a relatively weaker feeling of ownership towards KPIs compared to the other parts of

Ambition to Action. Such research might be a contribution in the discovering of what can be done to strengthen the feeling of ownership towards KPIs.

Additionally, other independent variables should be hypothesized in order to enrich the ownership literature. It is expected that a number of other factors than those tested in this thesis influence psychological ownership, and we suggest future research to hypothesize potential supplementary factors influencing ownership.

Furthermore, investigation on why first line managers, to some extent, do not agree on the question: “Ambition to Action is a process to make Statoil able to react to changes in the market” should be initiated. One of the main objectives with Ambition to Action is to make Statoil able to react to changes in the market, and future studies should therefore highlight why there is disagreement related to this.

Another area that should be highlighted through future research is the time perspective. As noted in this paper, first line managers feel that there is not enough time to work on Ambition to Action. Thus, analyses of why time is a problem and how the time problem can be solved are examples of future time studies in relation to ownership to Ambition to Action.

Finally, we suggest that future studies should involve other entities within Statoil since there might be internal differences between the company’s Business Clusters. This means that the factors influencing ownership towards Ambition to Action in TEX might be different if comparing to other Business Clusters in Statoil.

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10.0 Appendix

10.1 Appendix 1 –The questionnaire: Ownership to Ambition to Action in TEX

Gender

- Male (1)
- Female (2)

Age

- Under 35 years old (1)
- 35-45 years old (2)
- Older than 45 (3)

How long have you been working in Statoil?

- Less than 3 years (1)
- 3-10 years (2)
- More than 10 years (3)

Current organizational entity in TEX

- POOM (1)
- POPT (2)
- PTEC (3)
- FOT (4)
- HSEC (5)
- TM (6)
- SMT (7)

Characteristics of my entity

In the following questions we are interested in characteristics of the entity that you manage

My entity consists of

- 1 unit (1)
- 2-4 sub-units (2)
- 5 or more sub-units (3)

My entity has

- 5 employees or less (1)
- 6-10 employees (2)
- 11-15 employees (3)
- 16 employees or more (4)

My entity usually do work

- In teams (1)
- In projects (2)

Individually (3)

Please rate the following on a scale from 1-7 where 1 is "strongly disagree" and 7 is "strongly agree"

	Stronglydisagree1	2	3	4	5	6	Stronglyagree7	Not relevant
My entity is highly dependent on other entities within Statoil. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my entity we generally trust each other (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my entity we generally share information with each other (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Perception towards Ambition to Action

In the following questions we are interested in your view of Ambition to Action

	Stronglydisagree1	2	3	4	5	6	Stronglyagree7	Not relevant
Ambition to Action is a process to manage performance (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ambition to Action is a process to make employees work towards Statoil's overall strategy (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ambition to Action is a process to make Statoil able to react to changes in the market (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have sufficient knowledge to use my entity's Ambition to Action (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Experiences with Ambition to Action

In the following questions we are interested in your experience with the different parts of Ambition to Action:

Actions – How do we get there?

By actions we think about the activities you do to reach your entity's goals.

	Stronglydisagree1	2	3	4	5	6	Stronglyagree7	Not relevant
I revise my entity's actions when relevant changes occur (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't have enough time to work on my entity's actions (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work put into my entity's actions creates value (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have sufficient control over my entity's actions (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Strategic objectives – Where are we going?

By strategic objectives we think about the goals your entity will achieve.

	Stronglydisagree1	2	3	4	5	6	Stronglyagree7	Not relevant
I have sufficient influence on my entity's strategic objectives (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I identify with my entity's strategic objectives (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work put into my entity's strategic objectives creates value (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have sufficient control over my entity's strategic objectives (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Key performance indicators (KPIs) – How do we measure progress?

By KPIs we think about measurement of progress of your entity's strategic objectives.

	Stronglydisagree1	2	3	4	5	6	Stronglyagree7	Not relevant
I have sufficient influence on my entity's KPIs (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have don't enough time to work on my entity's KPIs (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work put into my entity's KPIs creates value (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have sufficient control over my entity's KPIs (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Individual goals – People@Statoil – What is my contribution?

By individual goals we think about your subordinates' contribution to reach the entity's strategic objectives.

	Stronglydisagree1	2	3	4	5	6	Stronglyagree7	Not relevant
I revise my subordinates' individual goals when relevant changes occur (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't have enough time to work on my subordinates' individual goals (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work put into my subordinates' individual goals creates value (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have sufficient control over my subordinates' individual goals (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10.2 Appendix 2 - Main responsibilities in the Business Units in TEX

Business Unit	PTEC	SMT	FOT
Main responsibilities within:	Geology Geophysics Petro physics Reservoir technology Production technology Redetermination Onshore shale Ultra deep water Heavy oil	Pipeline and transport technology Subsea technology and diving Platform and marine technology Mapping, meta ocean and geographic Maritime competence center	Electrical technology and operations Process technology Mechanic technology Operation technology Material technology

Business Unit	HSEC	POPT	POOM	TM
Main responsibilities within:	Develop and globally deliver expertise, tools and services within HSE performance and risk assessments Environmental technology Impact assessment Occupational health Working environment technology Chemical management Safety technology Flight technology	Process owner: should act in accordance with The Statoil Book	Process owner: should act in accordance with The Statoil Book	Establishing and review the corporate technology strategy and strategic business to agreements Develop, maintain and implement processes for technology development and implementation Facilitate the technology arena to achieve strategic goals Manage Statoil's intellectual property in line with the technology strategy Find and commercialize new technology developments through new projects or technology investments

10.3 Appendix 3 – Correlation matrix strategic objectives

Correlation strategic objectives	Influence	Control
Influence	1,0000	
Control	0,8253	1,0000

10.4 Appendix 4 – Correlation matrix KPIs

Correlation KPIs	Influence	Control
Influence	1,0000	
Control	0,8471	1,0000