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# Decision-making on downsizing in an industry specific downturn

*A qualitative study on the Norwegian petroleum sector's decision-making on  
downsizing following the drop in the oil price*

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

## **Executive summary**

This master thesis seeks to explore the decision-making processes in firms that follow a decrease in demand due to an external shock. Specifically, decision-making connected to human capital and downsizing in Norwegian firms in the petroleum industry after the drop in the oil price in 2014 is explored. The purpose is to understand how the need for downsizing is identified and the ensuing selection of whom to lay off, followed by examining the execution of the layoff process itself. Further, the thesis wishes to uncover how different implications of the oil crisis impact the amount of layoffs in a firm.

The study is of an explorative nature and is based on qualitative data. The empirical findings in this study are based on 14 in-depth, semi-structured interviews with decision-makers in the same amount of firms in the Norwegian oil and gas industry. In addition, the firms that were interviewed have previously answered an extensive survey on which measures they have taken as a result of the drop in the oil price and findings from this are also used.

The conclusion from the research is that perceived negative impacts from the crisis combined with the expected length of the downturn for a firm seem to affect decision-making and the number of layoffs. The decision-making process is also affected by several other factors. The experiences of decision-makers are found to have a large impact on the decision-making process. Contagion effects through what competitors are doing and how the crisis is portrayed in the media is according to the firms not impact decisions, but this might be affected by self-serving bias of the interviewed decision-makers. Prospects of loss and gains for the future are expected to influence the decisions made, and this is supported for some firms, but not for others. In addition, motivation of remaining employees is found to be of importance to the decision-makers.

The thesis outlines how the decision-process unfolds in the companies interviewed. The decision-process is found to include the management team in most firms. Some small firms are highly influenced by the CEO, whereas other, more hierarchical firms involve middle managers to a large extent. Employees themselves are not involved in the process until at the very end.

## **Preface**

This thesis was written as a part of an ongoing research project at the Norwegian School of Economics' Center for Strategy, Organization and Performance (S T O P) in the fall semester of 2015, and has been supervised by professor Lasse Lien. It accounts for 30 ETCS and is part of my Master of Science in International Business.

The topic for this thesis was chosen due to the new and interesting research in S T O P, headed by Lasse Lien and Eirik Knudsen, on how firms change their investments during recessions. I learned about this research in the course Strategic Analysis in the fall semester of 2014, and thus the idea for the thesis was born.

Writing a thesis truly is a learning experience, and the result would not have been possible without the help, input and support of several people. First of all I want to thank Lasse Lien for his support and guidance throughout the process of writing this thesis. I am very grateful for the six companies that took time out of their day to be interviewed, and for their willingness to share their experiences. Without their input the realization of this thesis would not have been possible. In addition, I want to thank Catharina de Vibe and Solveig Peersen, who conducted and shared eight interviews based on the same interview guide. I also want to thank S T O P for making it possible to interview the companies in their offices, something that made data collection much easier. Lastly, I want to thank Dan for proofreading and for being patient when I was stressing.

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# 1. Introduction

## 1.1 Background

Since the 1970s the Norwegian economy has been booming, largely due to vast exploitation of oil fields in the Norwegian Sea (Eika & Olsen, 2008). In the last year, though, a massive drop in the oil price has led to an industry-wide recession, with massive layoff schemes and large scale cuts in new investment (Baffes, Stocker, Kose, & Ohnsorge, 2015). There have been ups and downs in the golden age of oil in Norway, but in the last 20 years overall earnings and expectations for the future have increased, and in 2007 oil related industry made up 26 percent of the Norwegian GDP, helped a large deal by the high oil price (Eika & Olsen, 2008).

A key driver for growth in the oil industry has been the high oil price. The sudden drop in the oil price from at least \$105 per barrel over a four-year period to less than \$50 in June 2014 had an immediate effect on the earnings of the oil companies (Baffes et al., 2015). Ripples from this event soon started to spread throughout the industry, affecting supplying and subcontracting firms.

From the drop in the oil price in 2014 until October 2015, nearly 26.000 jobs in the oil and gas industry have disappeared, and expected numbers of total cuts in the industry range from 50.000 to 100.000 jobs (Aarø, 2015). In 2014 there were 330.000 people employed in petroleum related industry in Norway (Blomgren et al., 2015), which makes the impending cuts a massive blow to the industry. In addition, seeing as there are many jobs that are in some way or another connected to the petroleum industry, be it hotels and conference centers, auditing and accounting firms, or cleaning and construction companies, the repercussions of the crisis can be widespread and grave. It also makes the crisis an important factor for the entire Norwegian economy, which makes the theme of this thesis relevant and current. The recent forecasts for the oil price are not showing any clear signs of increase.

In the graph below the Brent Crude oil price development from 1998 until February 2015 can be seen (Anderson, 2015). As one can see, there was also a large drop in 2008/2009, which coincides with the financial crisis that affected much of the world. In 2014 the dramatic price drop can be seen clearly.

### Brent crude oil price, 1988-2015



The following graph shows the Brent Crude oil development for the last year (from December 10<sup>th</sup> 2014 to December 10<sup>th</sup> 2015) (Screenshot from dn.no's oil price index). As the graph displays, the trend is still further decreases in the crude oil price.



## 1.2 Research questions

Strategy literature has only recently started studying what happens with firms' investments during recessions (Knudsen & Lien, 2014b). An ongoing research project at the Center of Strategy, Organization and Performance (S T O P) at the Norwegian School of Economics (NHH) has been studying how firms' investment into research and development, human capital and capital goods change in recessions. This thesis' purpose is to contribute to this new strain of research by examining which employees are laid off in a downturn and how decision-making processes connected to the layoffs unfold. The downturn in the Norwegian petroleum industry is thus an opportunity to further develop the knowledge on firm behavior in recessions.

This thesis will, by in-depth interview with several Norwegian companies in the oil and gas industry, try to answer the following research questions.

- 1. Who is laid off in a downturn and why are they chosen?**
- 2. Who is involved in the decision-making process?**
- 3. How does the decision-making process unfold?**
- 4. Which factors influence decision-making?**

The first question is meant to uncover which type of employee is laid off in a downturn and why these are the ones to be cut. The research in this area expects employees with low adjustment costs if new hiring becomes necessary to be laid off first, and it is investigated whether this rings true for the firms interviewed. The second question is aimed to find which persons are involved in the decision-making process when a downturn is ongoing. The third question then follows up on the second question, and should be answered with how the actual decision process is carried out when it comes to time of involvement and degree of influence from different people in the organization. The fourth and final question is meant to supplement the second and third questions by looking into which factors impact the main decision-makers in the decision-making process.

These questions are important to highlight because little research has been done on how decision-making processes happen in connection to downsizing after an external shock. In total, 14 in-depth interviews with firms in the petroleum industry have been

conducted. Additionally, the results build on an extensive survey on the effects of the oil crisis that the interviewed firms answered earlier in 2015.

### **1.3 Structure**

First previous research and relevant theory on the topics are explored and presented in section 2. Following that, the methodology of the study is explained and argued for, and weaknesses connected to the method are pointed out in section 3. The fourth section, Results, presents the main findings from the in-depth interviews conducted with firms in the Norwegian oil and gas industry. After this, the findings that are most interesting for the purpose of this thesis are explored and analyzed further in section 5, Analysis. The overall findings and results from the study are then summarized in the concluding section.

## 2. Theory

This thesis' purpose is to look beyond what rational economic theory predicts firm and managerial behavior in a downturn will be by pairing it with decision-making theory, which is largely built upon the assumption that human behavior is less than rational. The theoretical section begins by outlining the economic theory connected to economic shocks and reactions within and around firms during such times. It then goes on to explore how decision-making has been found to happen within firms, and factors that matter in decision-making processes.

### 2.1 Strategy: Exploration or exploitation

All firms need strategy to be able to attract investors, to guide the actions of management and employees and to steer the course of the firm (Bowman, 2003). Strategy is important because its purpose is to make sense of and adequately (or beyond) compete in the competitive landscape (Porter, 2008). An earlier contribution by Porter (1996) states that strategy is about being different and performing a specific set of activities in a manner that is unique to the firm, creating value for customers.

For the purpose of human capital investments, it is useful to divide strategies into two broad types; explorative and exploitative. Using this classification is suitable because whether a firm is innovative or traditional is thought to affect their investments in human capital (Gupta, Smith, Shalley, & Smith, 2013; Knudsen & Lien, 2015b). This is also done because it is expected that within the oil and gas industry, most firms will fall into mainly one of these two categories. The two strategies can be understood as follows; exploration is exploring new possibilities and exploitation is exploiting old certainties (March, 1991). Explorative firms focus on finding or employing new technology or ideas, go into new markets or use disruptive business models, whereas exploitative firms use current technology and set processes, stick to known markets and traditional business models (Gupta et al., 2013).

There is some discordance as to whether firms are either exclusively explorative or exploitative, or whether they might be ambidextrous, ie score high on both (Gupta et al., 2013; Knudsen & Lien, 2015b). This thesis will for simplicity maintain that the two strategies are generally separated, assuming that a predominantly explorative firm will

have behavior similar to a wholly-explorative firm, and a mainly exploitative firm will behave like an exploitation-only firm (Knudsen & Lien, 2015b).

Firms that choose one strategy above the other, do this because they believe this is where they most likely will find sustainable competitive advantage. For a competitive advantage to be sustainable it needs to be valuable, rare, inimitable and non-substitutable (Barney, 1991). Competitive advantage can arise from many places; physical or system assets and cultural, knowledge or relational resources (Bowman, 2003). Narrowing the focus, one can further segment these resources into two major blocks, tradeable and non-tradeable assets. Tradeable assets are physical assets that can be bought in a market, whereas non-tradeable assets cannot be bought – for example relational assets such as consumer loyalty and knowledge assets such as research and development capabilities (Dierickx & Cool, 1989). An important part of assets are human capital resources.

### **2.1.1 Human capital resources**

Human capital resources are, as the name suggests, those resources that originate in employees in a firm. Human capital resources are knowledge and competences found in employees in a firm, and also their skills and ways of working (Coff, 1997; Hatch & Dyer, 2004). Human capital is unique in its characteristics – employees can leave a company and use their knowledge in competing firms, something capital goods cannot do (Coff, 1997). However, since work and processes in different firms vary, human capital is usually not completely transferrable; most employees working in one firm cannot be put in another company and provide the exact same return – because some of their knowledge is often firm specific (Hatch & Dyer, 2004). An employee can be of more or less value in different firms depending on characteristics of the firm, such as its social complexity and the environment in the company (Coff, 1997). This mobility and difference in return makes human capital resources tradeable, but not completely transferrable.

As mentioned, human capital resources are grounded in knowledge. Knowledge can be split into two dimensions; (1) codified or tacit and (2) general or firm specific knowledge. The first two can be combined with the two latter, which then explains how hard it is to transfer knowledge. Codified knowledge is easily transferred between and explained to employees. Tacit knowledge is knowledge that is not easily transferred; in fact, people might not even know how to do so. General knowledge is not tied to a specific company,

whereas firm specific knowledge is just that; specific to the firm – ie it will not be immediately useful in a different context. Codified general knowledge is then easy to explain and transfer, whereas tacit general knowledge is harder to explain. Codified firm specific knowledge is easier to learn than tacit firm specific knowledge (Lecuona & Reitzig, 2014).

An important distinction between firms that focus on exploitation and firms that focus on exploration is that the latter often requires more firm specific knowledge in their employees (Knudsen & Lien, 2015b). As exploitative firms to a large extent build on more traditional and well-known processes, markets or products that are widely available it is likely that the need for firm specific knowledge is not as high as for explorative firms (Gupta et al., 2013; Knudsen & Lien, 2015b). Because its processes are similar to those of many other firms, it is intuitive that this type of knowledge can be put to use in several firms. This also means that the required type of labor is rather easy to find in a strategic factor market since the skills they possess are not highly firm specific. The ease of finding such human capital in a labor market depends on additional factors such as scarcity of the resource or the required competence. For example, an engineer within a specific field might be difficult to replace if there is a scarcity of such engineers, or there may be different levels of competence found in engineers within the same field.

Innovation often requires more firm specific skills, and firm specific skills are not readily available in the factor market (Hatch & Dyer, 2004). Building firm specific skills requires larger training investments in the employees, and the required return from the employees is expected to be larger than without these investments (Lepak & Snell, 1999).

Employees with firm specific knowledge are therefore hypothesized to have higher adjustment costs, ie cost of searching, training or replacing an employee, than employees with general knowledge (Knudsen & Lien, 2015b).

## **2.2 Economic shocks**

We will now look into what economic shocks are, how firms are affected by shocks and how investments in human capital change after a shock. An economic shock is a crisis, that is, an event that has a low probability, but that has a great impact on the sustainability of an organization; that is hard to predict and solve, but necessitates swift action when it strikes (Pearson and Claire, 1998; cited in Pollard & Hotho 2006). Crises have generally been regarded as adverse events for the affected firm(s). A time of crisis

initially has perceived negative consequences, but the long-term effects are often positive (Pollard & Hotho, 2006). An economy usually sees a lot of restructuring and efficiency increases after a recession (Geroski & Gregg, 1996). Economic shocks can broadly be divided into three types; firm specific, industry specific and cross-industry, and into two main types of changes; permanent and temporary. An example of a permanent change is a technological shock, whereas a temporary shock can be a drop in the price of an output, such as crude oil (Knudsen & Lien, 2015b).

The epitomized temporary economic shock is a recession. Recessions are part of the business cycle, and are defined by NBER as the period from a peak to a trough, whereas an expansion is the period from a trough to a peak in the business cycle (NBER, 2010). The business cycle consists of economic fluctuations in activity, from booms to recessions. The ups and downs in an industry can be affected by exogenous or endogenous factors, such as war, which is external to the industry, and changing consumer preferences, which may be industry internal (Mascarenhas & Aaker, 1989). Recessions have grave impact on the firms affected, but they also create entrepreneurial opportunities and drive innovations (Knudsen & Lien, 2015b). This thesis' locus is the industry specific downturn after the drop in the oil price, and it is assumed that theory on economic shocks, downturns and recessions is generally applicable in an industry specific downturn as well.

Traditionally, crises studies have been within macroeconomics, ie on an aggregated level, where most factors are normally considered homogenous. Macroeconomics deals with the economy on a larger scale, which necessitates simplifications of firm specifics. Several works within macroeconomics have taken heterogeneity between firms into account, but these theories have not gained a whole lot of traction. Even if heterogeneity is taken into account, the overarching goal of macroeconomists is to study the aggregate rather than exploring differences between firms. Thus the macroeconomic research on economic shocks is useful, but does not reveal the entire picture. Research in strategy, however, is built on the assumption that all factors are not the same, but that resources are heterogeneous. The key phenomenon in the strategy field is the differences between firms. Building on findings in strategy literature to gain understanding of reactions to recessions and crises is imperative for building better future solutions for firms in a downturn (Agarwal, Barney, Foss, & Klein, 2009). Even literature on strategy has not

dug deeply into what happens to firms during recessions until recently, though, and it is still a vastly unexplored field. With the recent shocks the world has seen, it is becoming increasingly clear that recessions matter – their frequency has gone up, and the impact on businesses and individuals is still high (Knudsen & Lien, 2014b).

Cutting to the core, recessions are basically adverse changes in the environment. To be able to adequately meet and tackle recessions, a firm needs to be susceptible to change and initiate necessary steps to keep afloat. Adapting the strategy to face the business cycle's dips and peaks can be seen as a new way of gaining competitive advantage, by being able to take advantage of sudden change in the environment (Stensaker and Meyer, 2011).

### **2.2.1 How firms are affected by shocks**

It is not optimal for firms to have a rigid strategy through the troughs and peaks of the business cycle; they should adapt the strategy to the environment because of the differences in demand and competition in the business cycle. There is empirical evidence that firms do adapt their strategy during recessions, and interestingly, it is not always the case that firms that were profitable pre-recession are better at handling downturns – they might be hit very hard (Geroski & Gregg, 1996; Mascarenhas & Aaker, 1989). When a shock hits, firms are likely adversely affected in one or more ways – drop in demand, changes in consumer preferences, less access to financing. However, due to the changes in the environment, several opportunities may arise as well; talent might be available at reduced cost, capital goods might be available at reduced prices and so on (Knudsen & Lien, 2015b). It is thus hard to predict which firms are hit hardest by recessions. There are however findings that give pointers toward which factors may affect how hard a firm is hit by a recession.

Ownership structure has been found to affect how firms tackle recessions. Firms with strong ownership, such as family owned companies, are less severely affected than firms with more dispersed ownership. Firms with diverse ownership likely have numerous investors with low percentages of shares, which makes them less likely to intervene in decisions, as their relative influence on decisions is lower, whereas concentrated ownership increases the influence of the owner(s) has on decisions. However, these results are hard to validate thoroughly, as many of the firms with dispersed ownership are

large, and large firms often tackle recessions better (Geroski & Gregg, 1996). The effect of ownership is thus somewhat ambiguous.

An important factor in how firms are affected by a downturn is their financial structure. Firms with more external financing are hit harder by recessions than those with higher access to internal financing (Braun & Larrain, 2005; Campello, 2003; Tong & Wei, 2008). Campello (2003) finds that firms that are heavily debt financed perform badly during recessions in industries where the majority of firms are internally financed, but concludes that in industries where the norm is being heavily leveraged, the same is not seen. Tong and Wei (2008) find that firms that have higher external financing before a crisis have a bigger drop in the share price during a crisis than those that have more internal leeway financially. Firms that are reliant on external financing will face lower willingness to lend from financial institutions and higher expected return from investors (Braun & Larrain, 2005). This means that they may have to focus more on short-term gains to survive, for example by selling capital goods, which can hurt long-term performance, ultimately making the firm less interesting as an investment object.

Noticeably, firms which rely more on external financing have a higher propensity for investing in tangible assets such as capital goods, which especially interesting in our context of investments in human capital. Investments in tangible goods facilitate further external financing, as tangibility makes it easier to repay investors in case of default (Almeida & Campello, 2007). It is then reasonable to believe that firms that have high leverage invest less in human capital than their less leveraged counterparts, and that this is especially true in a downturn.

A study done in Norway on the aftermath of the recession that started in 2008 found that industry characteristics are indicators for how hard a firm is affected by a downturn. High share of durable goods and intense prerecession competition in the industry indicates a negative impact of a crisis. A high share of capital goods means that the firms' demand drops relatively more in a recession, as consumers put off these purchases in tough times. Intense competition prerecession has a negative effect because then the margins of the firms are already very slim, and additionally there are many equally good options for consumers, so a firm's product is easily substitutable. A smaller, but significant effect is seen for industries where there is vertical differentiation in price and

quality. In such industries, substitution effects draw demand from high quality and high price products to lower quality and lower price companies in a downturn, due to a drop in the willingness to pay among consumers. Finally, a small effect was seen from industry growth before the recession. The higher the industry growth, the higher the probability that a firm is adversely affected by the recession (Knudsen & Lien, 2012).

## 2.2.2 Human capital investments during downturns

### *Utilizing slack in times of low activity*

There is a growing literature on how human capital investments play out in recessions. When demand drops, the opportunity cost of investing in training of employees is lowered; it is both cheaper to use experienced employees as instructors and to give new and existing employees training (Knudsen & Lien, 2015b). This is due to increased slack in human capital (Knudsen & Lien, 2014a). Slack is excess capacity; when a company has more capacity in its resources than is necessary to perform their routine operations, in other words that they pay more for the resources they have than what is necessary to maintain revenue (Cyert & March, 1963). Keeping employees in the company even when there is an increase in slack due to a drop in demand is referred to as labor hoarding (Knudsen & Lien, 2014b).

Slack has traditionally been viewed as something that gradually builds in an organization, but can just as well arise suddenly from exogenous shocks. Slack is often kept to meet fluctuations in demand (Cyert & March, 1963; Lecuona & Reitzig, 2014). Generally, slack has been regarded as a negative effect, but can also be positive; excess capacity can encourage innovation and development in an organization (Knudsen & Lien, 2015a). Whether it is beneficial to reallocate idle labor to development activities depends on the expected value that can be created from it (Knudsen & Lien, 2015b). Encouragement of innovation and development is possible because of the unique nature of human capital slack. What differentiates human capital slack from other kinds of slack is that humans possess knowledge, which can be utilized in many contexts, whereas excess capacity in capital goods might be harder to utilize, eg. machines producing product components cannot be easily transferred to other tasks (Lecuona & Reitzig, 2014). Basically, human capital is more flexible than machines, and in addition, humans learn, which machines do not do to the same extent.

To exploit the opportunities that follow excess capacity, though, firms need to believe that by investing in human capital in times with slack they will emerge from the downturn stronger than before. To be able to make this happen, firms also need to have enough financial flexibility to sustain these investments. As such, it is possible that an exogenous shock that increases slack like a recession might benefit internal innovation. Explorative firms are more likely to invest in training for employees in times of externally created slack because they have more firm specific knowledge, as mentioned earlier. This higher firm specificity indicates higher adjustment costs from firing and hiring, incentivizing explorative firms to hoard labor for a longer time than exploitative firms with lower adjustment costs (Knudsen & Lien, 2014b). Noting that learning is cumulative, ie the more you know the easier it is to learn more, it is also beneficial to exploit a downturn to increase knowledge, especially firm specific knowledge, due to the decreased alternative cost from moving employees from their regular tasks. This also means that it is beneficial, especially for explorative firms, to hire new labor during a downturn, as it is less costly to attract and train them than in an upswing (Knudsen & Lien, 2015b).

Whether labor hoarding and investment in training in a downturn is beneficial for a firm depends on several factors. If employees will not yield high enough returns of the human capital investment needed to make them part of the organization, it is likely that the firm will not hire them (Lepak & Snell, 1999). The same can be applied in the context of recessions; if the expected return of the employee is lower than the cost of hoarding said employee, the firm will not hoard. Several factors impact this proposition. If the drop in demand is considered temporary, it might be better for a firm to hoard labor to avoid hiring and training costs (Knudsen & Lien, 2015b).

A firm's expectation for the length of a downturn will affect their propensity to hoard labor (Knudsen & Lien, 2014b). Even firms with good financial standing can only defend paying salaries to idle employees for a certain period of time. If there is not an expectation that the hoarded labor will be needed in the future, it is unlikely that the firm will invest in human capital when there is slack in the organization. The longer a downturn lasts, the more forgone savings from laying off employees with slack in their job. The adjustment costs for hiring new labor when demand picks up will be lower than

the cost of hoarding the labor if the downturn lasts beyond a certain point (Knudsen & Lien, 2015b).

### *Downsizing*

When facing a crisis firms must often turn to downsizing, which is defined as cutting costs by reducing the number of employees (Vollmann & Brazas, 1993). Downsizing can be done in both beneficial ways and in less ideal manners. Vollmann and Brazas (1993) distinguish “rightsizing” from downsizing. Rightsizing is a wanted and beneficial part of downsizing – by reducing the organization in a planned way to make it more efficient and fine-tuned. Putting this in the context of a downturn, it is possible that firms use the threat as an opportunity to cut those employees who are not performing optimally (Filipowskaja, Hjartåker, & Nesheim, 2015).

Knudsen and Lien (2015b) hypothesize that firms with explorative strategies will fire more employees with general knowledge than exploitative firms because they have higher incentives to hoard employees with firm specific knowledge, as this type of knowledge is a prerequisite for the exploration strategy. The underlying assumption Knudsen and Lien (2015b) make is that firms hold on to their employees with firm specific knowledge rather than those with more general skills, and because explorative firms are especially dependent on these employees, they have higher incentives to labor hoard. To finance this hoarding, firms can fire employees without high firm specific knowledge to save costs. This assumption is not tested, and is noted as a cavity in the paper, but seems to be reasonable nonetheless. One point to make again here is that differences in level of competence are also important here. Firms might want to keep a highly skilled person within a non-firm specific position rather than a lower skilled person in a firm specific position. However, when choosing between a non-firm specific and firm specific employee with the same return, it is likely that the firm specific knowledge is kept longer due to higher adjustment costs.

Since resources that are heterogeneous and valuable are often the root of competitive advantage (Peteraf, 1993) it is logical that firms want to hold on to their heterogeneous resources in rough times. Human resources are especially heterogeneous, and human knowledge is near impossible to measure and replicate, due to its uniqueness (Lepak & Snell, 1999). Because firm specific knowledge is more heterogeneous than general knowledge, it is likely that firms want to keep their firm specific knowledge workers as

long as they believe the downturn will pass within reasonable time (Knudsen & Lien, 2015b).

## **2.3 Decision-making**

Having considered the rational route for how making decisions on human capital should happen in crises, we now try to look into how reality may deviate from economic theory. Human beings are not always completely rational, and do not always follow set processes for finding a solution. This section will look into decision-making and bounded rationality, and other factors that influence a decision-making process. Decisions are based on one or more of the three following points; logic, statistics or heuristics (Gigerenzer & Gaissmaier, 2011).

### **2.3.1 Experience-, description- and heuristics-based decision-making**

Decisions based on logic and statistics have generally been regarded as rational methods for decision-making (Gigerenzer & Gaissmaier, 2011). Logic encompasses facts and experience of the decision-maker. Basing decisions on logic and past experiences is called experience-based decisions (Kudryavtsev & Pavlodsky, 2012). Basing decisions on statistics means that quantitative reasoning is behind the decision, and this is called description-based decisions (Gigerenzer & Gaissmaier, 2011; Kudryavtsev & Pavlodsky, 2012). A concept with growing interest in decision-making literature is heuristic decision-making. Heuristics are the use of prior experience to ignore parts of information to quickly, prudently and accurately make decisions than by using more complex models. The use of heuristics have often shown more accurate results than more complex methods, as the mind intuitively excludes non-viable alternatives (Gigerenzer & Gaissmaier, 2011).

Decision-makers who are more seasoned have naturally accumulated more experience on how to make tough decisions. This experience is a highly relevant topic when discussing decision-making, as prior encounters with a certain type of situation may be transferred into the next similar one (Gigerenzer & Gaissmaier, 2011). Experience- and description-based decisions have largely been at the forefront of decision-making models, but recently the literature on heuristic decision-making has been growing. Heuristics can be valuable because they narrow the scope of a problem by applying existing knowledge,

thus overcoming information overload problems, but are problematic in that they may lead to biased decisions (Conlisk, 2007).

Since the frequency of recessions has gone up (Knudsen & Lien, 2014b), it is likely that decision-makers have encountered similar crisis situations before, which would indicate that experiences and also heuristics are used also in these types of decision-making situations. Learning how to act in recessions might be of value when assessing the oil crisis in light of the recent financial crisis, for example.

### **2.3.2 Decision-making in organizations**

In organizations, for a decision to be made it has to be determined who will make the decision, and when the decision will be made. Who and when is to be included depends on the situation (Selart 2010). According to the rational model, all (or at least as many as possible) alternatives should then be considered and evaluated to come to the best solution. If all decision-makers were completely rational, all decisions would be optimal (Christensen & Knudsen, 2010). The bounds of rationality hinder evaluation of all possible solutions, and therefore decision-processes are most often not fully rational (Brunsson, 1982). Very broadly, two main types of error can arise when making a decision; rejecting a superior alternative or accepting an inferior alternative, both of which can be due to bounded rationality or limited resources (Christensen & Knudsen, 2010). Such a decision can be for example whether to make an investment, whether to go into new business areas, or whether to hire a new person. One such decision that a firm makes is whether it follows an explorative or exploitative strategy – which in turn will affect all future decisions.

Another point to consider when thinking about experience- and description-based decision-making is that its basis is making assumptions from past experience – which in a fast changing world, increasingly complex and dynamic, may not be optimal (Pollard & Hotho, 2006).

### **2.3.3 Bounded rationality**

Rationality is a term that in economics usually refers to the maximization of utility for an actor, given all information (Jones, 1999). For several reasons decision-making is often irrational, even in strategically important decisions, and in fact irrationality might be most prevalent in such larger decisions (Brunsson, 1982). Saying that decision-makers are

irrational does not convey the full picture, however. Most decision-makers want to make rational choices, but are hindered in some way (Jones, 1999). Brunsson (1982) points out three traditional, possible explanations for such irrationality in decision-making: first, that there is limited cognitive ability in decision-makers, second, that the inherent human nature is not rational, and finally that the amount of information, either too little or too much, makes it practically hard to make completely rational decisions. When individuals are aiming to make rational decisions, but are hindered by these factors, there is bounded rationality, a term first coined by Herbert Simon in the mid-20<sup>th</sup> century (Gigerenzer & Selten, 2002). Bounded rationality is then the concept of wanting to act in a rational manner, but being limited by cognitive ability or lack of information (Jones, 1999). Bounded rationality rests on many pillars – intuition, accessibility of information and knowledge, framing of a problem and prior experience (Kahneman, 2003).

However, it is not always optimal to act in a completely rational manner by evaluating all possible solutions to a problem. Due to the limited cognitive ability of people, too much information might create uncertainty as to which solution is superior: an abundance of alternatives evokes uncertainty on which decision will lead to the best actions and results. By limiting alternatives, one limits uncertainty, thus reducing lack of commitment and motivation (Brunsson, 1982). In addition, the search and processing costs of evaluating all possible solutions can quickly surpass the benefit from choosing a slightly more optimal alternative; rationality is thus not the same with or without search and processing costs. Even what is considered rational decision-making (experience- and description-based) is not fully rational, because there is always some asymmetry or lack of information.

#### **2.3.4 Strategic decision-making**

Strategic decisions shape a firm's future decisions and performance. Strategic decision-making is the process by which the firm makes these decisions (Mintzberg, Raisinghani, & Théorêt, 1976; Shrivastava & Grant, 1985). Very generally, a decision-making process consists of familiarizing with the problem and building a solution (Shrivastava & Grant, 1985). To get an overview of how decisions are generally made within organizations, an overview of the process is outlined below.

Mintzberg et al (1976) built one of the first empirically grounded models of decision-making. They found that strategic decision-making process can be broken down into

three phases; the identification phase, the development phase, and the selection phase. Each of the phases has subroutines which are carried out and that play a part in the process. In addition to these phases and their subroutines, there are three supporting routines to all the decision-making phases; decision control routines, communication routines and political routines. The following paragraphs will briefly outline the different phases and routines.

The identification phase is, naturally, when a problem or an opportunity arises, and it consists of two routines; decision recognition and diagnosis. In these routines, management attempts to weave out the issue and evaluate cause-effect relationships connected to it (Mintzberg et al., 1976).

In the development phase, one or several solutions to the issue is developed and evaluated. The development phase encompasses two routines: search and design. The search routine is typically used when similar decisions have been made before, and their solutions can be applied to the current issue. The design routine, conversely, is used when the issue at hand is novel and needs a customized solution. Interesting to note here is that when the design routine is initialized, companies only fully develop one solution due to the amount of resources needed, which necessitates a well-defined issue from the identification phase (Mintzberg et al., 1976). This lack of completeness is an important aspect of decision-making, as we saw when discussing bounded rationality. There seems to be relatively high emphasis on experience and knowledge, and low emphasis on managerial models and tools in the development phase when the decision process is reliant on a top manager (Shrivastava & Grant, 1985).

Finally, in the selection phase, there are three routines identified: screen, evaluation-choice, and authorization. Although the selection phase is the final phase of decision-making, it is often intertwined with the development phase, and the two iterate until a final solution is chosen. The screening routine is used to eliminate unfeasible or unwanted solutions, and to move forward with the solutions that are considered viable. The evaluation-choice routine is then used to select and move forward with an alternative. Ultimately, the authorization routine is invoked, whereby the decision-maker lifts the decision to a higher level in the organization to get additional resources for implementing the decision, if needed (Mintzberg et al., 1976).

The three supporting routines (decision-control, communication, political) that engross the decision phases play a large part in how the decisions are made and implemented. Decision control routines consist of decision planning and switching, ie planning of how resources will be delegated to the decision-making process and switching between different phases and routines. The communication routine can be split into three; exploration, investigation and dissemination. Exploration is when information is gathered and assessed at the beginning of a process, investigation is a deeper dive into information at different stages in the process, and dissemination is spreading and sharing information to gain traction for the solution. This third routine is political, whereby stakeholders use bargaining, persuasion and cooptation routines to get their way. Political routines play a major part in the interruption and delays of decision processes (Mintzberg et al., 1976)

It is important to note that not all decision-making processes function according to this framework (Mintzberg et al., 1976), but having a model of how these processes happen is useful when assessing how firms initiate and follow through on decision-making.

Having this framework in mind, Shrivastava and Grant (1985) identified four main strategic decision-making process models by studying 32 Indian firms. These are the Managerial Autocracy Model (MAM), Systemic Bureaucracy Model (SBM), Adaptive Planning Model (APM) and Political Expediency Model (PEM). The four are more adapted to specific organizational structures, whereas Mintzberg et al.'s framework has a broader approach. What is interesting about Shrivastava and Grant's (1985) framework is that it explicitly states how who is making the decisions affects the decisions being made.

The four models can be described very briefly as follows; MAM has one key decision-maker, usually a manager with lots of authority and leeway. In SBM organizational rules and norms are at the heart of the decision process, and external stakeholders are often involved. APM builds on long-term strategic plans of the company in the context of a specific decision. In PEM, groups of decision-makers form coalitions where they advocate their solution and lobby their opinion for the main decision-maker. Which type is in use in a company naturally affects which decisions are made and how they are implemented (Shrivastava & Grant, 1985).

### 2.3.5 Organizational structure

From Shrivastava and Grant's (1985) study it is clear that an organization's structure impacts how decisions are made. Which of the identified decision-making models is utilized depends on how the firm is governed, and how power is distributed within the organization. When regarding organizations on a spectrum of structure from completely hierarchical to polyarchical, ie flat in structure, several implications for how decisions are made become apparent (Christensen & Knudsen, 2010).

In a hierarchy the probability of an inferior solution being chosen is lowered due to the fact that it has to be approved by several layers of managers. In a polyarchical structure, it is less likely that a superior alternative is rejected, as the decision-makers are part of all the three phases outlined by Mintzberg et al (1976); the identification, development and selection phases. The two types of organizational structures thus counteract the errors that can happen in a decision-making process in different ways (Christensen & Knudsen, 2010). In a hierarchy, a solution can be dropped at any level. In a polyarchy, though, a solution can be accepted on any level and be implemented regardless of whether it has been rejected by someone else in the organization. As an illustrative example we can assume that an idea for a new product is being considered in two firms with three decision-makers each. Each decision-maker has a 20 percent chance of accepting the product. In the hierarchical firm, the decision has a 0.8 percent chance of being accepted ( $0.2 \times 0.2 \times 0.2 = 0.008$ ). In the polyarchical firm, the decision has a 49 percent chance of being accepted ( $1 - (0.8 \times 0.8 \times 0.8) = 0.49$ ). Thus the hierarchy often abandons projects that should have been executed, and the polyarchy often accepts projects that should not have been executed. Conversely, the hierarchy accepts fewer projects that should have been abandoned, and the polyarchy undertakes more projects that should be accepted.

The literature on decision-making is fragmented and often finds new paths that are not connected to prior research (Shrivastava & Grant, 1985). Intuitively, this is due to the fact that processes within firms differ widely, that firms are structured in very different ways, and that many decision-makers ground their solutions in experiences and intuition, rather than following strict models.

### 2.3.6 Decision-making and layoffs

One important decision managers face is whether to and whom to lay off in times of crises. A downsizing process should start with establishing a method for deciding who

can stay and who has to be laid off to make the selection transparent and understandable, because this can directly impact the perception of the fairness standard in the organization for the retained employees (James & Tang, 1996; Wingate, Thornton, McIntyre, & Frame, 2003). The perceived fairness will also impact whether a laid off employee will pursue legal actions to object the decision (Wingate et al., 2003). The use of performance appraisals as a means of choosing whom to cut from the organization in a layoff process is becoming increasingly common. These appraisals can be used as the only criterion for layoff, or it can be combined with other criteria such as tenure (Schraeder et al., 2006). Performance appraisals that are perceived to be objective can increase the impression of fairness among employees.

Norwegian firms are limited in their possibilities to diverge from the Work Environment Act, which dictates much of the layoff process. It states that the employee has to be included in discussions as early as possible in the process to discuss the grounds for notice and selection between different employees (Lovdata, 2015).

A study done on Norwegian firms found and that firms tended to lean on natural attrition and early retirements instead of direct layoffs due to cultural dissonance towards layoffs (Dahl & Nesheim, 1998). The study also found that the expected impact on the firm's reputation affected how layoff decisions were made, and that avoiding negative media attention was deemed crucial by many of the firms interviewed to maintain a good reputation, and this affected their decisions regarding layoffs. However, as this was a longitudinal study, there seemed to be a shift in the acceptability of resorting to layoffs as the intensity of such measures increased due to increasing fluctuations in the business cycle (Dahl & Nesheim, 1998).

Another point is worth mentioning when it comes to how decisions on layoffs are made: conflicting stakeholder interest. The strength and structure of owners can affect how decisions on downsizing are made. Owners might have different aspirations than employees, and this can have an impact on how processes in a downturn are conducted; owners want higher returns whereas employees want job security, for example (Dahl & Nesheim, 1998). Decision-makers will have to balance such conflicting interests.

### 2.3.7 Motivation of survivors

In a period of downsizing issues regarding motivation and feelings of security among the remaining employees inevitably arise (Schraeder et al., 2006). If the downsizing process is carried out in a way that makes the remaining employees unsure of whether they are next to be cut, the anxiety can decrease job performance (James & Tang, 1996). Being transparent in the selection of who is laid off and why they were chosen, in addition to being open on the situation of the firm can ease the insecurity in layoff survivors, according to James and Tang (1996), and thus maintain job performance.

Survivors of downsizing processes pay close attention to how the process unfolds, and how management proceeds in these situations will have an impact on the remaining employees' perception of the organization (James & Tang, 1996). Using performance appraisals as a tool for choosing whom to lay off should minimize the effect of job insecurity with remaining employees assuming the appraisal is objective and fair. One issue with such appraisals is that they are done by humans, and therefore cannot be entirely objective (Schraeder et al., 2006).

For a firm to perform well compared to other firms it is impervious that they keep turnover low, as firms with high turnover perform significantly worse than those with higher retention rates (Hatch & Dyer, 2004). This is connected to the costs of training new employees, as frequent changing of employees will lead to fewer paid hours spent on revenue attaining activities. Additionally, Hatch and Dyer (2004) find that in high turnover companies, defect goods are more common than in companies with lower turnover, due to tenured engineers to create continuously training new employees and fixing their mistakes. Whether it is high turnover that affects motivation or low motivation that leads to high turnover can be debated, but it is clear that the two impact each other. Firm that downsize may have problems with low motivation in remaining employees, which may lead to higher turnover (Gilliland & Schepers, 2003). For a firm that initially does not have problems with turnover or motivation, downsizing due to an external shock might lead to lower motivation in remaining employees, which in turn can lead to higher turnover, initiating the vicious circle of low performance explained above.

Tying motivation and turnover together should then logically be highly important in a downsizing process – the people who are kept in the organization are proportionally

more important. If an employee has the impression that he has less job security than before, there is evidence that organizational commitment decreases, stress level increases and that the probability of high turnover for those employees the organization wanted to keep increases (Schraeder et al., 2006). A strategically sound downsizing plan might then be disrupted by human factors in the organization if employees do not perceive it as fair.

### 2.3.8 Prospect theory

An interesting point to consider is how the risk of choosing the wrong solution to a problem affects how a decision is made. Prospect theory, developed by Kahneman and Tversky (1979) examines differences in risk aversion when it comes to gains and losses. They find that people underweight outcomes that might be obtained with probability  $X$  compared to outcomes that are obtained with certainty, that they do not base their decisions on the expected outcome. This is a stark contrast to the rational economic models with perfectly rational individuals, but in line with the previously explored bounded rationality.

For example, if a person has the opportunity to win \$100 with certainty or \$200 with a probability of 90 percent, many will choose the certain alternative even though the expected value of the second alternative is higher (\$180). However, when the situation is flipped and the situations deals with the certain loss of \$100 or a \$200 loss with a probability of 90 percent, many who would choose the certain alternative in the first situation would now choose the risky alternative with an expected loss value of \$180. Thus, prospect theory states that when there is high probability of the risky alternative people are risk seeking in choices in the domain of loss and risk averse when the choice is in the domain of gains. If, however, the risky alternative has a low probability, people become risk seeking in the domain of gain and risk averse in the domain of loss. A 5 percent chance to win \$1000 or a certain win of \$55 leads to the person choosing the risky alternative with an expected outcome of \$50, and conversely the \$55 loss is preferred before the 5 percent probability of a \$1000 loss (Kahneman & Tversky, 1979).

Table 1: Summary Prospect Theory

|                  | Gains   | Losses  |
|------------------|---|---|
| High probability | Risk averse: chooses to win \$100 rather than \$200x50% (\$180) | Risk seeking: chooses to lose \$200x50% (\$180) rather than \$100 |
| Low probability  | Risk seeking: chooses to win \$1000x5% (\$50) rather than \$55  | Risk averse: chooses to lose \$55 rather than \$1000x5% (\$50)    |

Combining human capital investments and prospect theory, it is useful to expand on whether managers perceive themselves to be in a domain of loss or a domain of gain. If downsizing in downturn is perceived as being in the domain of loss with low probability, there should be more layoffs than if downsizing in a downturn is considered to be in the domain of gain. Put bluntly, if you downsize because you believe that otherwise you will go bankrupt, you are in the domain of loss, and will probably downsize more. If you are downsizing because you see an opportunity for gain, ie rightsizing, you will downsize less because you are more risk averse than risk seeking.

### **2.3.9 Contagion effects and herd behavior**

In changing environments, how others react and act can influence how people perceive a situation and how they consequently make decisions (Barsade, 2002; Palley, 1995; Scharfstein & Stein, 1990). This type of behavior is captured in two different paths in organizational behavior; contagion effects and herd behavior. Contagion effects have an impact on how a situation is perceived and thereafter acted upon within decision-making teams (Barsade, 2002), while herd behavior revolves around following what other actors in the environment without necessarily having personal contact with them (Palley, 1995; Scharfstein & Stein, 1990).

The behavioral attitudes of one person or group can influence other people or groups. This type of emotional contagion is called the ripple effect (Barsade, 2002). In firms, just like water that ripples from the point where it has been disturbed, one person's actions and feelings can affect other people's perception of reality. A negative outlook on the future from one key decision-maker may affect others' perception of the future state, even if they had a positive perception initially, and vice versa. Barsade (2002) finds that negative and positive contagions have an equal affect on the mood of a group (however, it should be noted that the two were not tested in a single group to see which is dominant). Traditionally, emotional contagion has been thought to happen through interaction between humans, that is, by words, tone of voice, body language and so on (Hatfield, Cacioppo, & Rapson, 1994). New, experimental research has found that emotional contagion can spread without direct interpersonal contact, for example through social media or news papers (Guillory, Hancock, & Kramer, 2014). It is then likely that firms' decision-making also is affected by what other firms are doing, and how that is portrayed in the media and through social networks, constituting a form of ripple

effect. This is an especially interesting point when dealing with a recession or a wide-spread shock, as the media coverage often is extensive and negative (eg. Aarø, 2015; Skjetne, 2015).

Herd behavior is a well-known effect that has been extensively researched in financial market behavior literature, and is an effect that is seen when people do not want to go against the grain, even if they have information that indicates that the masses have it wrong. As managers are often remunerated on their relative performance, they may disregard information that would indicate not mimicking the general trend in the market, because the repercussions if an individual decision goes south are generally much harder than if there is a general drop in performance across the board (Scharfstein & Stein, 1990). An example of this is that a manager may reject an investment decision although he has information on its positive expected value, because someone else has rejected it previously (Scharfstein & Stein, 1990).

One can imagine interesting interactions when thinking of prospect theory, contagion effects and herd behavior. Real life outcomes have less certain probability distributions than the stylized examples from the lab, and managers have less accurate outcomes from their choices, making it harder to assess prospects. The contagion effects that might arise can affect the perceived probabilities of outcomes, affecting the perceived probability of loss or gain for the manager. Herd behavior can also influence the perceived probability of loss or gain, or at least the backlash from loss can be considered diminished when following the herd, lessening the prospect of loss.

Connecting these factors to human capital investments in recessions, it can be hypothesized that firms start downsizing due to other firms' actions. Additionally, the picture painted in the media on the crisis can affect perceptions on the crisis and impact decision-making.

## **2.4 Summary of theoretical section**

This theoretical section has summarized previous research and combined different strains of literature to create a backdrop for the rest of the thesis. The theories explored here will be tested empirically in in-depth interviews and analyzed in section 5.

First, two different types of strategies were defined; exploration and exploitation. Then, human capital resources were defined and different kinds of knowledge within human capital resources were explored. Following that came a section on what economic shocks are and how they affect firms, including how shocks affect investments in human capital. This was built on theory that regards firms as rational economic actors. The next section challenges the rational view and looks at theory that expects actors to be less-than-rational. Decision-making in organizations is explored both in how the process is expected to be and by looking at what factors are expected to affect decision-makers. Factors covered beyond the decision-makers experience, heuristic knowledge and the statistical facts are motivation of the remaining employees, prospects for the future, contagion from the environment and tendencies to follow the herd.

## 3. Methodology

### 3.1 Research design

The starting point of this thesis was to build on an extensive survey on changes in human capital investments due to the drop in the oil price. The survey had recently been distributed to 1312 companies in the oil and gas industry in Norway, and was answered by 266 companies. The idea was to now dig deeper, beyond the quantifiable; number of employees, layoffs and so on, and try to look further into how the process actually happens within the company when decisions are made in this type of environment. Such a study is explorative, that is, it seeks to uncover new insights into a phenomenon (Saunders, Lewis, & Thornhill, 2009).

Data collection can be done inductively or deductively. Inductive data are collected and subsequently theory is built, while deductive data collecting grounds the research in previous theoretical works and building on that (Saunders et al., 2009). This thesis is deductive in that it thoroughly reviews theoretical contributions, aiming to make new connections in established constructs.

#### 3.1.1 Method

Methodically, one can choose between a qualitative and a quantitative outset. Quantitative data are collected in a standardized way, often through surveys or experiments, in which meaning is attributed to the results from the aggregated data. Qualitative data are data that have not been quantified and that cannot be immediately transcribed as numerical values, or that might not be assigned meaningfulness through being quantified (Saunders et al., 2009). Qualitative data are often collected through individual interviews, focus groups or by observing the phenomenon in question. By using a qualitative approach, several points that would not have been even considered when creating a quantitative approach might arise, shedding light on new and interesting aspects of the real world (Miles & Huberman, 1994).

The survey this thesis builds on gathered quantitative data, which are very useful for studying effects in scale, but can miss out on small nuances of what happens in smaller environments. When it is necessary to understand the reasoning behind why decisions have been made, qualitative interviews are an invaluable method (Saunders et al., 2009). It was therefore decided that carrying out a qualitative study was the best approach to fill

in the gaps in how the decision processes in times of crises are carried out. Considering the scattered research on how decision-making happens, capturing the processes quantitatively seems an unlikely feat. However, one must be mindful of bias that might interfere with the quality of the results. For example, researcher or observer bias impact how the results from a qualitative study are interpreted, which may lead to over- or underemphasizing of certain points (Miles & Huberman, 1994).

## **3.2 Data collection**

When carrying out research, several types of data sources can be used. Primary data is data that is collected specifically for a research project. Secondary data is data that is not specifically gathered for the project, but that can be applied in a meaningful manner for the purpose of the project. By using and combining these two types of data, a researcher triangulates the data to deduct meaningful conclusions (Saunders et al., 2009).

The data used in this thesis is both primary and secondary. The primary data gathered during interviews are the primary source for illuminating the research questions, whereas the secondary data, the previously collected data from the survey and other supporting articles and sources, form the frame in which the data are analyzed. By triangulating all these different data sources, the hope is that the final product can provide valuable insight. The results of research will inevitably be affected by the ways in which it is carried out, but using different forms of data can diminish the problems arising from this (Saunders et al., 2009).

### **3.2.1 Interviews**

A common way of collecting qualitative data is through interviews. Interviews are useful when trying to find answers to questions that are complex and open-ended, and that cannot be easily quantifiable. In-depth interviews are recommended when the progression of the interviews needs to be varied, when there is a need to probe further into what the interview subject is saying, and when personal contact will enable deeper questioning and answers (Saunders et al., 2009). Establishing personal contact is paramount for getting the answers needed in an interview setting (Yin, 2009).

A semi-structured interview style was selected for this thesis. This was done because semi-structured interviews lets the interviewer guide the interview with overall themes,

but lets the flow of the conversation lead the way. This means that the questions are not necessarily answered in the same order, but should all be touched upon. By letting the conversation lead the questions rather than the questions leading the conversation, the flow of the interview is often better. Semi-structured interviews demand focus from the interviewer, as there is a need to summarize and clarify what the subject is saying, to make sure that the answer is understood (Saunders et al., 2009).

The gathering of primary data for this thesis then happened through in-depth interviews with six companies within four days in October and November. Each interview lasted from 50 minutes to 1.5 hours. In addition, transcripts from eight other interviews carried out by two other students with the same interview guide were used.

### **3.2.2 Potential problems with in-depth interviews**

When conducting interviews, reliability issues may arise. Reliability issues might be due to interviewer bias, that is, the way the interviewer's behavior affects how the respondent answers, and also how the interviewer interprets the answers when repeating or following up on them. Related to this is the interviewee bias, where interviewee's impressions of the interviewer might dictate how the responses are given (Saunders et al., 2009). When conducting the interviews, I wore neutral clothing and clearly presented myself as a student, so that the other person would feel comfortable with my intentions and feel at ease.

Many subjects might feel vulnerable or exposed in an interview setting, especially when the interviewer tries to probe into areas that the interviewer is hesitant about discussing. This is especially true in situations where the interviewer is probing for confidential or sensitive information (Saunders et al., 2009). This was tried counteracted by expressing to the interviewees that their answers would be treated with complete confidentiality and would be anonymous in all written forms. In addition, all the interviews were started by an introduction of the purpose of the study and of myself, followed by a question about the interviewee. The intention behind this was to build trust between the interviewee and I, and to get the conversation flowing naturally. By assuming a neutral tone of voice and posture during the interview, I tried to diminish any bias I might project onto the interviewee. In fact, the impression I got from the interviews was that the interviewee was eager to talk about their experiences in a context where their utterings would be kept confidential.

Bias may not only be connected to the perception of the interviewer, but also to the interview setting itself (Saunders et al., 2009). By having the interviews in the offices of the company, the latter effect was hoped counteracted. It is however a possibility that the interviewee feels uncomfortable talking about layoffs of colleagues and employees in a setting where they normally interact, but as all the interviews were held in closed rooms, this is not seen as a big issue. In one instance, where there was a possibility of others overhearing what was said, the interviewee noticeably lowered her voice when talking about layoffs.

Another issue with in-depth interviews is that they have limited validity for predicting results over a larger population, as they cannot be said to be representative. In addition, when a semi-structured form is chosen, it can be hard to be certain of the reliability of the data, considering the lack of standardization that is inherent in this type of interview (Saunders et al., 2009). Starting all the interviews in the same manner, and guiding them into all of the overarching themes that were in the interview guide, even if the order of the questions did not always the same, hopefully prevented this. The questions were mostly posed in an open-ended manner, except when there was clarification needed from my side.

### **3.2.3 Sampling**

Sampling is an important part of a any research process. Who you choose to interview sets the boundaries for the conclusions you can draw, and therefore needs to be given thorough consideration (Miles & Huberman, 1994). To choose which firms to interview for this thesis, several criteria were set. The firms needed to be in the oil and gas industry in Norway, as this industry is now in a downturn, making it interesting to use their experiences to check whether the theoretical backdrop can be empirically substantiated. As mentioned, a survey conducted some months ago for another thesis was the baseline for which companies to contact. By having this survey already filled out by heaps of companies, the interviews conducted now could be more straight to the point, as a lot of questions had already been answered. However, by choosing to build the interview guide on the assumption that a lot of questions were already answered, the amount of companies that could be approached was decreased. This decision nonetheless was made because of the large additional amount of information available on the companies.

When this approach had been chosen, additional criteria for which companies to contact were set. For example, it was deemed interesting to see whether there were differences in the decision-making processes in internationally owned versus locally owned companies. In addition, the size of the company was thought to have some impact on the decision processes. Finally, the self-evaluated degree of innovativeness was also set as a criterion, as there was a wish to check whether the type of strategy (explorative/exploitative) matters when it comes to downturns and decision-making.

The criteria led to the selection of 32 companies that fit the desired descriptions. Due to time constraints and logistical issues, not all of them could be interviewed. In a day it can be hard to find the time to conduct more than a couple interviews, considering scheduling, travel time between interview locations and maintaining concentration for the interviewer. Additionally transcribing an hour long interview can take up to 10 hours, which has to be accounted for in the planning phase for interviews (Saunders et al., 2009). Lastly, there may be limited added value from interviewing more than a certain amount of firms, and this was something I experienced when asking certain questions in the interview process. In total, a little less than half of the sample firms were interviewed.

Keeping in mind that the focal point of this thesis is how strategic decision-making is done in a downturn, it was important to interview those people in an organization that have an influence over, or at least in-depth knowledge of how such decisions are made in the company. It was therefore decided to contact chief executive officers (CEO) and if they were not available, then the heads of human resources (HR). The initial contact was done by phone, as it was deemed easier to get the attention of the company by calling rather than sending an email. During the call, a brief explanation of the purpose of the interview was provided. If attendance was confirmed right away, a date and a time was set immediately, if not, some suggested times were sent by email after the call. When the time had been confirmed, a calendar invite was sent to the participant's email, to make sure that the appointment was not forgotten. The email can be found in the appendix.

A problem that might arise when conducting research by interviews is that there might be a biased sample that agrees to be interviewed. Interviews are time-consuming, and some people that might give valuable insights might not be readily willing to spend time on interviews (Saunders et al., 2009). However, this bias is hopefully overcome by the

careful selection of the companies of the sample. Only one of the companies where the wanted interview subject was communicated with turned down the request for an interview, and this company was similar to many of the others that were interviewed in its characteristics.

### 3.2.4 Interview preparation and execution

#### **Interview guide**

Initially, the focus of this work was mainly secondary sources and theoretically significant work, which would lead to the creation of an interview guide. An interview guide is meant to list the topics that you are to cover during an interview and to guide the interview so that the data collected from the different interviewees follow similar paths. In addition, an interview guide is useful when you know the topics you want to cover, as an interview without a structure can lead to too much superfluous information being covered (Miles & Huberman, 1994). The interview guide used was created in collaboration with another group of students and our supervisors, Lasse Lien and Eirik Knudsen. Initially, the two groups created a set of questions each tied to the theoretical backbone of the two theses. The interview guides were sent to contacts in the oil and gas industry for feedback. The two sets were then checked for similarities and differences. Subsequently, a final interview guide was created in a meeting with Lien and Knudsen and the two groups of students.

For semi-structured interviews having such a guide is useful for checking that the conversation does not go too far off topic and to make sure that important aspects are not forgotten (Saunders et al., 2009). To ensure that the data gathered from the interviews is relevant and valuable, it was important to first explore current theory on decision-making in downturns. Since the concepts that are studied in this thesis were predefined in the theoretical part, and since the thesis is mostly deductive, prior instrumentation of the interview structure is useful (Miles & Huberman, 1994). Bearing this in mind, it was taken into account that certain things need not be answered due to the survey that already had been filled out by the company. This saved valuable time during the interviews, as they could move quickly toward the core of the information that was to be collected. The interview guide can be found in the appendix.

## **Interview setting**

As mentioned, the interviews began with me explaining the purpose of the study, ensuring the confidentiality of the answers, and then the subject talking about his or her background. When the first pleasantries were undergone trust had hopefully been built between the subject and I, making it easier for the interviewee to answer the tougher questions in the interview truthfully. The interview guide was built with this mechanism specifically in mind.

The interviews I conducted were all done face-to-face in Bergen and Oslo, in the companies' offices. Before the interviews started, the interviewee was informed of the confidentiality of their answers and that the company would be anonymous in the thesis. The general impression I got from the interviewees was that they appreciated being able to talk to someone outside of the organization about the good and the bad of crises and layoffs. They seemed willing to share their experiences, and there were no questions that were expressively asked to not be answered. In a few instances the interviewee expressed uncertainty as to whether they could answer the question with their knowledge, but still gave an adequate answer.

Out of the 14 interviews, I conducted six and two other students conducted the remaining eight. Since different people carried out the interviews that provide the data foundations for this thesis, there might be some differences in the ways the interviews were carried out and the bias that might have arisen from the interviewee. This type of error is called observer error, and arises when questions are posed in different ways, which may lead to the answers being answered on different grounds (Saunders et al., 2009). Hopefully using a common interview guide minimized this effect.

## **3.3 Data analysis**

### **3.3.1 Data preparation**

All interviews were recorded after obtaining consent from the interviewee, and subsequently transcribed in the days after the interview was conducted. The interviews were transcribed verbatim to ensure the context of the answers was taken into account for the analysis, although filler words and what might be called listening sounds were not

included for readability. When the transcription was done, the interviews were shared with the collaborating student group.

### 3.3.2 Data analysis

To get an overview of the data, it is smart to summarize it to condense the most important data (or what is considered most important) (Saunders et al., 2009). I summarized all interviews to approximately two pages, trying to extract the parts I felt were most crucial to the thesis. This proved very beneficial since most of the transcripts were over 15 pages, making it much easier to get a proper overview of the interview. After this, I started gathering the data in a spreadsheet to easier compare what the different firms answered in the interviews. By doing this I gained a very good overview of the data. Subsequently, I started coding the data. When qualitative data are to be analyzed, coding of the data is frequently used (Saunders et al., 2009). Coding of quantitative data is very useful when trying to see patterns and themes that are recurrent in the data to make broader assumptions, or to see differences in how participants respond to a certain questions (Miles, Huberman, & Saldana, 2014).

Miles and Huberman (1984) highlight several different ways of coding data; on the one hand deductively by using the research questions, theoretical background, and other hypotheses, and on the other hand by inductively by assigning codes to the concepts and contexts. A combined approach is also mentioned as useful for coding the data, where a certain set of codes is created before coding and concurrently revised as the coding progresses. This is the method that has been used to codify the interviews conducted for this thesis, as it was the most convenient and fruitful one. Revisiting is a necessary part of coding, as the subject that come up during the interviews are never exactly what was expected (Miles & Huberman, 1994). Codes were added or adjusted as the coding process evolved.

### 3.4 Research Quality

There are several issues of quality of the research conducted by in-depth, semi-structured interviews that have to be addressed when analyzing the data. These are usually considered to be connected to the reliability and validity of the data and the different forms of bias that might arise in and after the interviews (Saunders et al., 2009). However, since validity and reliability are concepts that are constructed for quantitative

research, it is useful to expand and tweak the concepts a little (Miles et al., 2014; Saunders et al., 2009). Miles et al (1994) formed a framework more suited for qualitative research and its trustworthiness. They define five issues concerning the trustworthiness of qualitative work; objectivity/confirmability, reliability/dependability, credibility/authenticity, transferability/fittingness and utilization/application. These constructs form the overall credibility of the research. Credibility is the degree to which the data are reliable and whether the analysis is trustworthy (Saunders et al., 2009).

#### **3.4.1 Objectivity/Confirmability**

The confirmability of the data is affected by the biases that are inherent in the person gathering the data, which then is a reflection of the objectivity of the interviewer (Miles et al., 2014). This has hopefully been counteracted by producing a transparent results section, and by thorough explanations of the procedures for the interviews.

#### **3.4.2 Reliability/dependability**

Reliability/dependability is whether the techniques used for collecting will provide consistent answers that can be replicated should another perform the same procedure at another occasion (Miles & Huberman, 1994). It is also of importance that there is transparency in how the results are found from the raw data. Threats to reliability are participant and observer biases and observer error, which have been covered earlier. Additionally, participant error, when respondents say what they think their superiors want them to say, can affect reliability (Saunders et al., 2009). The results from the interviews conducted are summarized as transparently as possible in section 4, Results, without compromising on the respondents' anonymity.

Another aspect of this is whether the way of collecting data is consistent and stable both over time and across researchers. This means, for example, that the research questions have to be clear, the data collection process is described transparently, there is congruency between data collection among the researchers, and that data quality checks have been made (Miles et al., 2014). The data quality check refers to checking for bias, reliability issues and generalizability issues, and this has widely been discussed earlier in the methodology section.

#### **3.4.3 Credibility/authenticity**

The credibility or authenticity of the data refers to whether data seem credible and authentic, fittingly enough. This means that the results should make sense to the reader,

that results gathered from the triangulation of data are coherent, and that the data are connected to prior research in a fitting way (Miles & Huberman, 1994). The purpose of this thesis is to build on previous theoretical findings and connect different strains of research to the interview material collected. Hopefully the results will be a coherent and valuable contribution to the field.

#### **3.4.4 Transferability/fittingness**

Transferability of the data is the degree of generalizability of the collected data; whether it can be applied to a wider set of cases (Saunders et al., 2009). By interpreting the data and seeing patterns the researcher can uncover transferability. For qualitative studies, the characteristics of the sample and the results from the research need to be clear and understandable. It is valuable to be able to draw connections to extant theory, as this helps confirm the transferability. Ideally, the findings have been or could be replicated in another study to check for its robustness (Miles et al., 2014). Here there is an issue in this research, because of the sensitivity of the data collected the people interviewed need to be anonymous, which necessitates their characteristics remain largely hidden. This means that the results cannot be directly replicated. By making the sampling criteria and the recounts of the results as clear as possible, the transferability issue is tried counteracted.

#### **3.4.5 Utilization/Application**

The final issue that arises is whether the study is useful for others (Miles & Huberman, 1994). As this thesis is part of an ongoing research project at S T O P at NHH, the results will be valuable to that cause. Utilization also refers to ethics (Miles & Huberman, 1994), which will be discussed in the next section.

### **3.5 Ethical considerations**

When conducting interviews it is important to maintain an ethical approach toward the interview subjects and toward the storing of the data collected. The subjects were first contacted by telephone, where a brief description of the project was presented and the interview time determined. Following this, an email with more information on the project was sent to the person, reemphasizing the confidentiality of the interviews and that they would be anonymous in the final thesis.

It is important to save transcribed documents in a manner that keeps the information anonymous, while still making sure that the researcher knows which interviews the documents contain (Saunders et al., 2009). The transcribed documents were made

completely anonymous and the document identifying the companies was kept separately, to ensure that the integrity of the data was kept intact. The recordings of the interviews were deleted when the transcription was finished.

### 3.6 Weaknesses of this study

As two groups with slightly different projects gathered the data, a certain skewedness can be seen in the focal points of the interviews. Although the interview guide used was the same, there is not time to cover all questions in the interview setting. When I interviewed, I would try to cover the themes I found most interesting for my thesis, whereas it is clear that the other interviewers have focused on the part they find most interesting for theirs. These differences are noticeable, but are possible to overcome. Where there is lack of data for some themes from certain interviews, the information has either been searched for in the survey results, or that interview was not considered for that specific theme.

There might also be issues of the subject not being completely truthful in their answers, or that they are telling only parts of the truth, either because of bounded rationality, misgivings on the purpose of the study or self-serving bias in the interviewee. I did not pick up on any indicators that this might be the case in the interviews I conducted, but as I only have transcripts of the interviews the two other students administered, it is impossible to accurately say whether falsifications happened in these.

Sometimes the results from the survey and the results from the interviews are used together. This may lead to some skewedness in the analysis, as the survey was answered up to six months before the interviews were conducted. For example, a firm that said it was moderately negatively affected by the crisis in the survey now has much larger problems. However, this is not the case for most of the firms, so it not considered a big issue. The possibility to examine the situation at two points in time is rather considered a valuable addition to the analysis.

## 4. Results

The interviews provide preliminary results for the research. These are presented here. The results build primarily on the information given in the interviews and in some instances on results from the survey referenced earlier. The structure of this chapter is similar to that of the interview guide. The results for the 14 firms are condensed where possible. Some quotes and individual statements are inserted where appropriate. Where found important, tables of what has been done in the different firms are presented.

The Results section has been grouped according to the overarching themes explored in the interviews and is split into four parts; about interviewee, internal situation, external environment, and decision-processes. The first part is a brief introduction of the people interviewed, plus the overall strategic orientation of the firms. In the internal section, the internal situation of the companies are outlined; business strategy, structure, number of layoffs, reallocations and effects of previous crises. The next section on the external environment encompasses the power balance in the market and the effect of media and labor unions on the companies. The final part is dedicated to decision processes. The internal and external environment touch upon some things that have to do with the decision-making process, but this is mostly kept to the final part. The results that are most relevant for the research questions of this thesis are mentioned in the Results section, but only briefly so. These are explored further in the Analysis section.

### 4.1 About company and subjects

The firms have been characterized as small if they have less than 50 employees, mid-sized are those firms with 50 to 300 employees and large firms are those that have more than 300 employees. Following this characterization, four firms interviewed are small, seven firms are mid-sized and three are large. For simplicity the identified strategy of the companies is included in Table 2. The classification of strategy is discussed more in the coming Internal part.

The people interviewed were mainly those with human resource decision power, to a larger or smaller extent. Most were CEOs or HR directors (with varying job titles). In some instances, especially in smaller firms, the person interviewed was responsible for HR, but this was not their only job. Typically they were combined HR responsible and

chief of administration or doing other administrative tasks. It turned out that speaking to the HR responsible was especially valuable, as they were both part of the decision process, but also were closely connected to the direct layoff process. Below the characteristics of the subjects are listed. The ones that are in charge of HR, but also have responsibility areas outside of HR are listed as HR responsible.

Table 2: Company and subjects

| Company        | Business model     | Subject               | Tenure in company |
|----------------|--------------------|-----------------------|-------------------|
| 1 – large      | Exploitation       | HR director           | 5 years           |
| 2 – small      | <i>Exploration</i> | CEO and owner         | 15 years          |
| 3 – mid-sized  | Exploitation       | CEO                   | 2 years           |
| 4 - mid-sized  | Exploitation       | HR responsible        | 7 years           |
| 5 - small      | Exploitation       | HR responsible        | 8 years           |
| 6 – small      | <i>Exploration</i> | Owner, previously CEO | 19 years          |
| 7 – small      | <i>Exploration</i> | HR responsible        | 1 year            |
| 8 – large      | Exploitation       | HR director           | 4 years           |
| 9 – mid-sized  | <i>Exploration</i> | HR responsible        | 3 years           |
| 10 – mid-sized | Exploitation       | HR responsible        | 8 years           |
| 11 – mid-sized | <i>Exploration</i> | HR manager            | 12 years          |
| 12 – mid-sized | Exploitation       | HR responsible        | 3 years           |
| 13 – mid-sized | Exploitation       | HR director           | 6 years           |
| 14 - large     | Exploitation       | HR director           | 1 year            |

## 4.2 Internal

### 4.2.1 Strategy

The firms in the sample were chosen partly by the strategy they had according to the survey. The question regarding which strategy a company has was in a way disguised in the survey, as it asked how important low prices, high quality and innovation was in the firm's competitive situation on a scale from 1 to 7. There was no internal ranking of the importance of the three. In effect, the respondent could say that all three were of the highest importance. In the survey, all except one company said that emphasis on innovation was important or very important in the competition with their competitors. When asked this question during the interview, significantly fewer stated that they actively and regularly perform innovativeness-building activities. Overstating innovativeness in the survey might have several reasons, for example the lack of ranking

between the three options, that respondents might want to show themselves in a good light (assuming that innovation is seen as something positive), or that the question has been misunderstood by the respondent.

In the interviews, nine of the 14 companies were mainly exploitative by their own account (ie that they were more focused on cost-saving than innovation). The remaining five characterized themselves as innovative, and can be said to have an explorative strategy. The answers to this question in the interview was compared to the survey answer and showed that performing qualitative interviews yields a different perspective on how questions are answered compared to when a survey is filled out.

#### 4.2.2 Ownership

Four of the firms interviewed are affiliates of listed companies either in Norway or abroad. One of these is half owned by employees and half owned by another Norwegian oil company. The interviewee explicitly stated that the company shareholder did not meddle in the firm’s business much, so this company is considered an independent, not listed company. The total of listed companies is then three, ie 21 percent. The rest are privately held, 21 percent are owned by investment funds and 57 percent are family owned or owned by a small group of owners.

Table 3: Ownership (rounded)

| <b>Ownership</b>                        | <b>Percentage</b> |
|---|-------------------|
| Listed or primarily affiliate of listed | 21 %              |
| Private equity                          | 21 %              |
| Family or independently owned           | 57 %              |

In addition, 36 percent of the firms have employees as central owners. This was not stated in the survey by all of them, which again supports the notion that qualitative interviews can lead to additional information being uncovered.

#### 4.2.3 Organizational structure

Norway is a generally non-hierarchical country, and the same is seen in the companies interviewed. Nearly all of the companies mentioned that their organizational structure is flat and that there are very short power distances internally. The larger international firms naturally have more layers in their organizations, but are similar to the other firms

interviewed within the Norwegian organization. The mid-sized firms usually have three levels of managers.

The small firms are naturally the most polyarchical, usually with one or two levels of managers. The smaller firms often have a more powerful CEO, though, who is often also an owner of the company.

*“The CEO is very visible here. So he makes most decisions on the overarching level.”*

- HR responsible in small, exploitative firm

#### 4.2.4 Human capital

The specifics of the human capital in the firms are listed in the table below. The main types of education levels are taken from the survey responses, and those types that encompass more than 20 percent of employees are listed.

Table 4: Education level and firm specific knowledge

| Company        | Main type of education level                              | High firm specific knowledge |
|----------------|---|------------------------------|
| 1 – large      | Craft certificate or bachelor degree                      | No                           |
| 2 – small      | Master degree   | Yes, among core employees    |
| 3 – mid-sized  | Bachelor or master degree                                 | No                           |
| 4 - mid-sized  | Craft certificate or bachelor degree                      | No                           |
| 5 - small      | Master degree   | Yes                          |
| 6 – small      | Bachelor or master degree                                 | No                           |
| 7 – small      | No formal education, craft certificate or bachelor degree | No                           |
| 8 – large      | Bachelor or master degree                                 | Somewhat high                |
| 9 – mid-sized  | No formal education, craft certificate or bachelor degree | No                           |
| 10 – mid-sized | Craft certificate or bachelor degree                      | Somewhat high                |
| 11 – mid-sized | Craft certificate or bachelor degree                      | No                           |
| 12 – mid-sized | Bachelor or master degree                                 | Yes                          |
| 13 – mid-sized | Bachelor or master degree                                 | Somewhat high                |
| 14 - large     | No formal education or craft certificate                  | No                           |

The specification of whether there is a large degree of firm specific knowledge is based on the interviews and the survey. This proved valuable, because there are some discrepancies in the answers. From the survey, the firms’ responses to the degree of firm specific knowledge in employees and whether it would be easy for employees to do the

same job in competing firms are used to balance what was stated in the interviews. An aspect that becomes apparent when looking at the answers from the survey is that the respondents may not have had a clear image of what firm specific knowledge is, especially since many of those that claimed high firm specific knowledge also answered that the employees easily could perform the same work at a competing firm. This ambiguity of what firm specific knowledge is was something that was considered while executing the interviews, and the suspicion was confirmed. When asked bluntly whether employees had high firm specific knowledge the response was usually yes. However, when the question was rephrased, by asking if it took long for employees to be able to work independently (an indicator of firm specificity), the answer was often no. Generally, there seems to be high industry specific knowledge and lower firm specific knowledge in the petroleum industry.

#### 4.2.5 Impact of downturn on the firm

How hard the company is hit by the crisis is often evaluated by how much revenue drops compared to the budgeted revenue and the accompanying layoffs among the interviewed firms. All firms that had downsized said that the drop in the oil price had adversely affected them. The two companies that have not downsized nor used temporary layoffs said that they were not affected economically by the downturn, although they did see a certain drop in the amount of tenders to bid on, which was considered a negative effect.

Among the companies that have downsized, the degree to which they are affected varies. One small company is almost on the verge of bankruptcy, and the HR responsible is himself on temporary leave due to the crisis.

*“We are a pretty small company. There hasn’t been a drop in demand, but it has been near impossible to be competitive. We have not been able to compete against foreign operators.”*

- HR responsible in small, explorative firm

In the survey, the companies were asked to rate the impact the drop in the oil price and its repercussions had on them. The scale ranged from -5, highly negative, through 0, neutral, and up to 5, highly positive. The classification for how hard the firms were hit by the recession is included in table 5. Those that indicated a score of -5 and -4 are classified as highly negatively affected. Those who ticked -3 are seen as being negatively affected, and those who chose -2 and -1 are classified as somewhat negatively affected. None of

the firms indicated that they were not affected or positively affected. Since the survey was answered approximately a half-year before the interviews were conducted, the situation for the companies might have changed. This is adjusted for when needed in Table 5 by using information from the interviews.

#### 4.2.6 Layoffs

All except three of the 14 firms had turned to layoffs due to decreased demand after the drop in the oil price. Temporary leaves were used by one of the companies that had not yet resorted to layoffs. This company had significantly cut prices, and put the employees that were least sellable on temporary leave. The percentage of employees laid off in companies that had resorted to this varied from 73 percent to 4 percent. Smaller companies are naturally proportionally more affected by each layoff than bigger companies, and the absolute numbers of layoffs are much larger in companies with more than 100 employees before the crisis.

Table 5: Number of layoffs (approximately) due to the drop in demand after oil price decline at the time of the interview and impact of crisis on firm

| Company        | Employees before/now | Percentage downsized      | Impact            |
|----------------|----------------------|---------------------------|-------------------|
| 1 – large      | 520/400              | 23 %                      | Somewhat negative |
| 2 – small      | 11/3                 | 73 %                      | Highly negative   |
| 3 – mid-sized  | 200/150              | 25 %                      | Highly negative   |
| 4 - mid-sized  | 260/160              | 38 %                      | Negative          |
| 5 - small      | 35/35                | 0                         | Somewhat negative |
| 6 – small      | 40/40                | 0                         | Somewhat negative |
| 7 – small      | 25/21                | 16 %                      | Highly negative   |
| 8 – large      | 744/644              | 13 %                      | Negative          |
| 9 – mid-sized  | 124/100              | 19 %                      | Highly negative   |
| 10 – mid-sized | 146/100              | 32 %                      | Negative          |
| 11 – mid-sized | 135/130              | 4 %                       | Somewhat negative |
| 12 – mid-sized | 105/105              | 0 (only temporary leaves) | Somewhat negative |
| 13 – mid-sized | 137/100              | 27 %                      | Highly negative   |
| 14 - large     | 650/370              | 43 %                      | Negative          |

#### *Criteria for whom to layoff*

What might not come as a surprise is the conformity of the criteria for whom to lay off in the different firms. Four points are mentioned by nearly all; competence, suitability,

social criteria and seniority. All firms who mentioned seniority emphasized that this was not a primary criterion, but could be a determinant when all else was equal. One large company also mentioned diversity as one of the criteria they emphasized.

Competence embodies formal and informal competence of an employee. By competence, the firms often mean the how salable a person is, how many billable hours they list and their prowess in the job. Suitability is similar to competence, but it is more in connection to the personality of the employee and its fit for the job and the company, whereas competence is more formalized and easier to quantify. Social criteria are personal characteristics or situations that might affect the layoff decision. For example, if the spouse of an employee recently has been laid off, this might help the employee in keeping their job. Seniority is the length of employment in the company for a person.

Three firms had regular performance appraisal reviews that were used in the downsizing process. Some of the firms used formal performance appraisals when choosing whom to cut, but surprisingly many did not have any such recurring evaluations for use in downsizing situations. Several of the firms mentioned appraisal interviews (medarbeidersamtaler in Norwegian) as a factor that was considered when evaluating the employees, but that these were often based on direct managers' memories and therefore might be subjective.

Another point that arose in many of the interviews is that much of the business done in the petroleum industry is project-based. According to the firms, this affects the layoff process. When a project is cancelled ahead of time, the employees working there will either need to be reallocated to other projects, developmental activities or laid off/sent on temporary leave. The people that are needed currently and in the imminent future are therefore kept longer than those for which there is less need.

*“Our temporary leaves and our choices regarding who is put on temporary leave depend on how much we have had to do, like which competence we are completely reliant on to survive”*

- HR responsible, small, explorative firm.

### *Who is laid off*

The following table lists which employees were laid off first in the different firms. If the firm has had several layoff rounds with different types of layoffs, the type of people or

the criteria used are listed as well. In addition, the characteristics of the employees the firms try to keep in a layoff process and the percentage of layoffs are listed

Table 6: Who is laid off first, who is laid off in case of several layoff rounds, characteristics of employees that are tried retained, and percentage downsized

| <b>Company</b> | <b>First laid off</b>  | <b>Subsequently</b>   | <b>Characteristics of those tried kept</b>                    | <b>Percentage downsized</b> |
|----------------|--|---|---|-----------------------------|
| 1 – large      | Cutting costs in departments, selection based on performance review and criteria | Same criteria   | Those with prowess in their jobs                              | 23 %                        |
| 2 – small      | Administration   | Those without projects  | -   | 73 %                        |
| 3 – mid-sized  | Administration   | Those with narrow skill set, low performers on the criteria scale | All-rounders and those with highest amount of billable hours. | 25 %                        |
| 4 - mid-sized  | Administration, engineers without projects                                       | Engineers without projects  | Those with experience and product knowledge                   | 38 %                        |
| 5 - small      | No layoffs   | -   | -   | 0                           |
| 6 – small      | No layoffs   | -   | -   | 0                           |
| 7 – small      | All kinds of employees   | -   | Special competences, necessary for core operations            | 16 %                        |
| 8 – large      | Engineers and administration   | Those not needed for current projects                             | Has to keep competency  | 13 %                        |
| 9 – mid-sized  | All kinds of employees   | -   | Tries to think of positions rather than people                | 19 %                        |
| 10 – mid-sized | Engineers, mechanics, project managers   | Administration, electricians                                      | Tries to keep electricians                                    | 32 %                        |
| 11 – mid-sized | Support functions and sales  | -   | -   | 4 %                         |
| 12 – mid-sized | Cross-functional employees, without very specific special competence             | -   | How salable they are  | 0 (only temporary leaves)   |
| 13 – mid-sized | All kinds of employees   | -   | Has defined core employees                                    | 27 %                        |
| 14 - large     | All kinds of employees   | -   | Those with core competences                                   | 43 %                        |

One clear pattern is that administrative personnel are laid off first. More than half of the companies interviewed explicitly mentioned in the interviews that employees without technological knowledge were among the first to be laid off: administration and sales people. Many chose to allocate some of the technical personnel's time to do these types of tasks. Another clear pattern among the rest of the firms is that all types of employees in a firm are affected in the first layoff rounds.

#### **4.2.7 Temporary leaves**

Nine of the 14 companies are currently using temporary leaves as a means to tackle the drop in demand. Several state that the reason for this is that they hope that demand will pick up before the maximum time for temporary leaves is surpassed. Some also mentioned that temporary leaves is a way to “get rid of employees they do not need”, as many find a new job while on temporary leaves, which saves the company costs associated with having to pay salary in the layoff notice period (usually three months).

The new temporary leave rules of July 1<sup>st</sup> 2015 give companies the opportunity to use temporary leaves for 30 weeks, as opposed to 26 weeks before (Nito, 2015). This change was considered beneficial by all firms, but many mentioned that four extra weeks do not make a big difference for them.

#### **4.2.8 Reallocation of personnel**

When asked whether they actively tried to reallocate their employees if their initial work became redundant, the answer was yes from 12 and no from two of the firms. As noted earlier, many reassign some administrative tasks to technical personnel when administration is laid off. Some firms reallocate engineers from office work to fieldwork and some of the companies with offices in several countries had sent people abroad. Several firms mentioned the importance of having versatile employees that can be of use in several different situations.

Three firms had reallocated or planned to reallocate employees to developmental project. One of these firms (mid-sized) stated that they did not see any significant results from this reallocation, as the most talented people had enough normal work, and the less talented people did not manage to drive development projects sufficiently for much good to come of it.

*“The employees who are not as initiative seeking, or so, they become available. That means that, yes, the available people can do development work, but then you need someone to lead that. And that would be the people that are selling and are doing everything else, so we are struggling to see a real effect of it.”*

- CEO in mid-sized, exploitative firm

#### **4.2.9 Other measures**

In many instances several other means of cost saving are implemented before downsizing. Spending on social events and such were cut in many instances. Three firms effectuated pay cuts with support from the employees. Three firms stated that they were planning to use excess time for competence building activities.

Interestingly, one mid-size firm had hired a new sales person whose extensive network in land based industry was hoped to provide the company with projects in other industries within oil and gas. Several other firms also stated they were trying to enter or expand into new areas of business. Another large firm held a conference for the entire company after they had decided that they would resort to downsizing, but justified this by saying that the company had to focus on the future even if there had to be layoffs.

#### **4.2.10 Effect on motivation of survivors**

For many of the firms it was important to make sure that the process of getting information to the employees was swift to minimize uncertainty. Several subjects said that they had all-hands meetings for the entire company only after they had informed the affected employees.

Most of the firms discussed the criteria for selection with either the labor unions or the employee representative, so that these were kept in the loop and given a chance to affect the final criteria. Several of the firms that has downsized said that they had received positive feedback from the employees on how the process had been handled.

#### **4.2.11 Experience from previous crises**

When the interviewee was asked whether previous experiences with crises affected how the process was handled this time around there were several types of answers. Some immediately mentioned their own experience as a crucial factor in this downsizing process, while others perceived the question more in the lines of the organizational learning that affected the layoff process. Of the 12 firms which had resorted to downsizing or temporary leaves, four said that personal experiences had affected how

they handled the process, four said that organizational experiences affected how the process was conducted, and three explicitly mentioned that both personal and organizational experiences affected the process. One company said it was not affected by previous crises, but this person was himself on temporary leave and was not directly involved in the process.

### *Personal experience*

One HR director said that he has gone against the initial wishes of several CEOs of the company over the years due to his previous experience with what works in layoff processes. He was adamant that the direct managers of the affected employees had to be a vital part in the decision process and that they should be the key messenger toward the employees, whereas the CEOs had meant that HR should be the main point of contact and decision maker. The HR director stated that the layoff process would just have been an exercise for the HR department in that case, and he did not think that would benefit the remaining workers' motivation if decisions were top down. He believed it was important that the direct managers were leaders in both good and bad times, to build trust and become a true leader.

Others mentioned that experiences they had in earlier stages of their careers affected how they approached the current process. Two mentioned their roles as layoff agents previously, and how having to lay off people directly has led them to be more vary of how the process is conducted, and that this had heightened the significance of there being individuals on the receiving end of the bad news. One CEO stated that he had learned from previous layoff processes that it is important to start with a wider specter of measures and aim for a higher percentage of layoff than what is actually needed, because things do not go according to plan so there is need for a buffer.

### *Organizational learning*

Those that mentioned that previous crises had an effect on how the layoff process was done this time mainly had a less-than-ideal process previously. Three of the firms also mentioned that they had seen ups and downs in the industry before, and that this kept optimism for the future high, because they expect the dip to be temporary.

The company that had downsized the most was hit extremely hard by the financial crisis in 2008 had since been very careful in their hiring, and now nearly only use consultants

or hired manpower. The interviewee said that having few permanent employees, the quickly can let go of those who are not needed due to a lack of projects.

One company that had not downsized before said that it had no previous organizational experiences to rely on in this process, but they definitely would bring lessons from the current process with them in the future.

#### 4.2.12 Expected length of reduction in demand

When the firms were asked what their expectations for the longevity of the downturn for their company, several of the pointed out that they thought this was the start of a permanent shift in the industry. Three firms explicitly stated that they expected a change of paradigm due to the drop in the oil price; that the locus on the oil and gas industry in Norway would shift to something else.

The following table summarizes when the firms first noticed times were harder, and their expectations of the length of the downturn for the company. In some of the interviews, these questions were not asked, and are therefore left blank in the table.

Table 7: Expected length of demand reduction

| Company        | First noticed drop         | Expectation of length        | Percentage downsized |
|----------------|----------------------------|------------------------------|----------------------|
| 1 – large      | August 2015                | 2017                         | 23 %                 |
| 2 – small      | Before drop in oil price   | Will take a long time        | 73 %                 |
| 3 – mid-sized  | Early 2014                 | Some more years              | 25 %                 |
| 4 - mid-sized  | Fall 2014                  | 2018                         | 38 %                 |
| 5 - small      | Not been directly affected | -                            | 0                    |
| 6 – small      |                            |                              | 0                    |
| 7 – small      | May 2014                   | 2016/2017                    | 16 %                 |
| 8 – large      | Fall 2014                  | At best 2017                 | 13 %                 |
| 9 – mid-sized  | Fall 2014                  | The worst is over            | 19 %                 |
| 10 – mid-sized | -                          | Long time                    | 32 %                 |
| 11 – mid-sized | -                          | -                            | 4 %                  |
| 12 – mid-sized | Fall 2014                  | Improvements in a few months | 0 (only temp leaves) |
| 13 – mid-sized | Fall 2014                  | -                            | 27 %                 |
| 14 - large     | Fall 2014                  | Will never be the same       | 43 %                 |

## 4.3 External

### 4.3.1 Balance of power in the business environment

The petroleum industry in Norway is dominated by a few large oil companies and Statoil is by far the largest actor (Blomgren et al., 2015). There is however a plethora of subcontractors that deliver solutions to the main exploiters of the oil field, which can impact how the firms interviewed perceive their dependence on major players in the industry. The large oil companies can have a great impact on the companies interviewed. One interviewee mentioned that the oil companies can stop projects with extremely short notice. One firm said that they had a project cancelled with only two days notice.

*“We have been relatively lucky, in all this. Because we are not THAT dependent on Statoil. There are some that have nearly no other customers than Statoil.”*

- HR director in large, exploitative firm

The dependence on certain big clients especially affects those companies that are involved in the development of new oil fields, whereas the companies that do maintenance work on platforms etc are less severely affected by the drop in the oil price, as this is work that cannot be put off.

Table 8: Percentage of revenue from the three largest customers for the firm

| Company        | Most important customer (%) | Second most important (%) | Third most important (%) | Total three most important (%) | Percentage downsized |
|----------------|-----------------------------|---------------------------|--------------------------|--------------------------------|----------------------|
| 1 – large      | 15                          | 14                        | 10                       | 39                             | 23 %                 |
| 2 – small      | 60                          | 35                        | 5                        | 100                            | 73 %                 |
| 3 – mid-sized  | 50                          | 30                        | 10                       | 90                             | 25 %                 |
| 4 - mid-sized  | 50                          | 30                        | 0                        | 80                             | 38 %                 |
| 5 - small      | 40                          | 25                        | 10                       | 75                             | 0                    |
| 6 – small      | 40                          | 20                        | 10                       | 70                             | 0                    |
| 7 – small      | 50                          | 20                        | 20                       | 90                             | 16 %                 |
| 8 – large      | 40                          | 20                        | 20                       | 80                             | 13 %                 |
| 9 – mid-sized  | 40                          | 20                        | 5                        | 65                             | 19 %                 |
| 10 – mid-sized | 0                           | 0                         | 0                        | 0                              | 32 %                 |
| 11 – mid-sized | 70                          | 25                        | 3                        | 98                             | 4 %                  |
| 12 – mid-sized | 4                           | 3                         | 3                        | 10                             | 0                    |
| 13 – mid-sized | 40                          | 25                        | 5                        | 70                             | 27 %                 |
| 14 - large     | 20                          | 15                        | 10                       | 45                             | 43 %                 |

Looking at the importance of the top three customers in the context of the percentage of layoffs, there does not seem to be any significant indicators that those with high dependence on one to three large customers layoff more or retain more. Firms with high dependence and firms with low dependence on a few large customers have low and high percentages of layoffs.

#### **4.3.2 The Work Environment Act**

The regulations for the work environment in Norway are implicitly embedded in the downsizing process, as all the firms are obliged to follow the law. Many do not mention the law explicitly, and when it is asked about, the replies are usually along the lines of the Work Environment Act regulating much of the process; it is basically the skeleton the firms build the downsizing progress on. In some instances where firms have operations abroad it was mentioned that downsizing was quicker in other countries due to less stringent regulations.

#### **4.3.3 Media**

One of the questions asked in the interviews was whether the interviewee believed that the media pressure on the crisis affects how decisions are made. Most of the companies answered that this did not matter. Some of the subjects said that it was likely that the wide media coverage of the tough times in the oil industry affected the people in the company, either consciously or unconsciously. However, many mentioned that it was easier to obtain understanding from the people in the organization on the impending layoff process due to the wide media coverage than it would have been without the coverage.

#### **4.3.4 Labor unions**

Approximately half of the firms interviewed said that labor unions have a strong presence in their organization. Eight of the firms said that labor unions are strongly present in their organization, and that they have an influence on the layoff processes in the company. Four companies said there are labor unions represented in their organization, but that these do not have a strong presence and do not influence the layoff process. Two of the firms have no or very little presence of labor unions.

Of the firms that say the labor union are strong in their organization, several note that due to meetings with and involvement of the labor unions the processes move more slowly than they would have otherwise. A couple of the companies donned the labor

unions a policing role, because they do not change anything in the process, but by having them present the company was conscious of keeping in line even more than they would have been without the labor unions present.

#### **4.4 Decision processes**

This part will cover how the problems identified within the organization, who is involved in the decision-making, and how the decision-making process plays out.

##### **4.4.1 Identifying the problem**

How the problem is identified follows roughly the same pattern for most of the firms interviewed: the management identifies an unwanted trend in the financial situation for the company. Many also report a drop in demand for projects and sudden cancellations as a major initiator for the layoff and temporary leave process. The problem is identified through what the business can actually see in their accounting data. One company, internationally listed, stated that the reason for the initiation of the process was that the owners wanted better results.

The internationally owned firms said that they are to a large degree autonomous in their management, and that the problems are identified in the Norwegian management team. It was mentioned that if the Norwegian management had not taken action as early as they did, the international management would have contacted them to initiate measures.

One divergence from the normal problem identification was one company that started to downsize long before the drop in the oil price. The CEO of this company said that he had seen that the costs in the oil industry were way too high, which made him doubt the sustainability of the amount of people employed in the sector. The company thus started downsizing in 2010 in their petroleum-focused departments. Initially, it was hard to gain understanding from the organization for the changes, and the management had difficulties legitimizing the downsizing. Now that the drop in the oil price led to a massive drop in demand, though, the organization has managed well and not downsized again.

##### **4.4.2 Involved parties in the decision-making**

Higher-level decision-making, such as whether there is a need for layoffs, how many need to be laid off, and the time-frame for the process, is done by the people with the top profit/loss responsibility for the organization, usually the CEO. In the more

hierarchical organizations with division managers who have the financial responsibility of their sub-organizations, these are highly involved in the process. They crawl their organization for possible improvements and needed adjustment, creating a plan for layoffs if needed. This plan is then revised and approved by the CEO. The following paragraphs will outline how different stakeholders in the organizations affect the decision processes.

### **Owners**

Here it is useful to distinguish between owners that are a highly involved part in the daily dealings of the organization and those that are not. The owners frequently have more regular dealings with small, family-owned or independent firms. Often owners are key employees in these cases, and part of the management group. They thus have much say in the decision-making. For firms with less direct contact with owners, the situation is somewhat different. In some instances the owners required higher returns, which initiated cost saving processes in the organizations.

The internationally owned companies stated that they were mostly independent from the mother entity, but that if the Norwegian organization had not reacted as early as they had, the international management would contact them to set things in motion. When asked whether the international management gave instructions for what should be done with staffing, one interview subject replied the following.

*“No, they [international management] provide guidelines. But we have to face Norwegian laws and collective agreements. Obviously you can’t slalom your way around that [...]”*

- HR manager in mid-sized, explorative firm

### **CEO**

In most of the firms, the CEO is the initiator and final decision-maker. All of the firms mentioned the CEO as a key person in the decision processes, often having to give consent for a decision to be executed.

One mid-sized firm’s HR director explained that the CEO was not part of the decisions concerning who to lay off, but that the responsibility lay with the HR director and the direct manager of the affected department. The CEO was kept in the loop all along the

process and was given reasoning for why the decisions were made, but did not directly affect it. This is the exception rather than the rule.

### **Management team, excluding HR**

The management team is mentioned in most firms as being a vital part of the decision making process by being part of discussions. The management team usually consists of the CEO, an HR function and head of finance at the core, and depending on the company different division directors are included. The management team usually takes part in the primary discussions on criteria and selection of employees to be laid off.

### **HR**

The HR function plays an important part in most of the companies where such a role exists. The notable exception is a small company where HR responsible is on temporary leave, and therefore not included in the process.

For mid-sized and large companies, HR's main task is to make sure that the process follows legal guidelines and internal goals. HR is often part of the management team and is therefore a part of the discussions of selection criteria and downsizing choices. One HR director in a large company dubbed himself the "executioner" in the company – he had only recently started there, knew no one, and was the one to sign all letters of notice.

### **Department managers**

Department managers are middle managers that have a leadership role for a specific department within the organization. The reoccurring theme in the organizations that have these types of positions is that these managers are involved in the selection of who to lay off. The reasoning for this is that these are the ones that know the employees best. The decision does not lay on these managers alone, though, the selection has to be argued for and several discussion rounds with upper level management and HR are done before the final selection. Before a final decision is made, there are talks conducted with the employees by the department manager and, usually, HR to uncover if there are social criteria that might affect the layoff decision.

## **Labor unions**

Labor unions have been covered earlier, but the main point for those companies that have a strong presence of unions is that they are involved in discussions on layoff criteria and that they make the process longer than if they were not present. Most companies say that the labor unions are cooperative in times like these, but there are exceptions:

*“They actually demanded extensive pay raises, and man count increases, too, just a couple of months ago, where this... You start to wonder, do they not watch the news or read... They should be worried about completely different things, right. So in that sense they are pretty, maybe a little myopic, in our opinion.”*

- CEO in mid-sized, exploitative firm

## **Employee representatives**

In instances where there are no labor unions the employee representative often takes the part of the labor union, and is part of the discussions regarding layoff criteria.

## **Employees**

None of the firms interviewed said that their employees directly affect the decisions made other than through their representatives and by highlighting social criteria that can affect the layoff decision.

### **4.4.3 Characteristics of the decision-making process**

Once the problem has been identified, the most common next step is that the management discusses what needs to be done and set a number of layoffs they deem necessary. Then middle managers are invited to give their input on how they can downsize in their department, and sometimes given the task of choosing whom to lay off. Labor unions are often involved in the molding of the criteria as well as in the discussion meeting between manager and employee.

In one of the small firms that has not downsized due to the drop in the oil price, the CEO has taken a strong stance saying that the company will get through this. He has, in cooperation with the board (of which he himself is part), decided to not downsize, but rather use slack for developmental activities. In this case, the head of administration and HR was interviewed and said “the CEO is very visible here”. Another small firm that had not downsized is family-owned, currently with the founder’s son as the CEO and the founder now as Chief Financial Officer. This company downsized considerably in 2010

on the founder and then-CEO's orders, as he believed the projects in oil and gas were not sustainable.

#### **4.4.4 Evaluating the process**

Next to none of the companies formally evaluated the layoff process. Several of the companies said that what they learned during the downsizing would affect future decision-making processes, and in that sense there is an evaluation of what was successful and what was not. Most companies stated that a layoff process was considered successful if there were no legal repercussions from the victims of layoffs.

## 5. Analysis

Having outlined the main results from the interviews conducted in the Results section, this part will expand on those results that are most interesting for answering the research questions for this thesis. The questions are repeated here to refresh the memory of the reader:

- 1. Who is laid off in a downturn and why are they chosen?**
- 2. Who is involved in the decision-making process?**
- 3. How does the decision-making process unfold?**
- 4. Which factors influence decision-making?**

### 5.1 Lay offs and downsizing

#### 5.1.1 Layoffs and firm specific knowledge

Knudsen and Lien (2015b) hypothesize that employees with firm specific knowledge will be hoarded for longer periods of time than those with more general knowledge.

Conversely one would expect employees with less firm specific knowledge to be laid off first. The data gathered in this study is ambiguous on this matter. As discussed in Results, many firms do cut administration first, which can be assumed to be employees with more general knowledge, but other firms cut engineers and mechanics first - employees one would imagine had a higher percentage of firm specific knowledge. However, this may be because the industry is mainly exploitative, and because there seems to be less firm specific knowledge and more industry specific knowledge in the oil and gas industry according to the firms. The generally low level of firm specific knowledge reported by the firms supports this. Most employees can do a similar job in a competing company. The adjustment costs from training new labor are therefore considered to not be very high. However, it can be expected that core employees are the most important for obtaining new projects. Should a new project be won after core employees had been laid off, it would be necessary to search for new such employees, which indicates adjustment costs for hiring. An increase in administration after downsizing will probably not have the same urgency when a project is won, and the adjustment costs from hiring new such employees is deemed to be lower.

Following the arguments on adjustment costs, it is reasonable for the firms to keep their core employees longer than administrative personnel. There does not seem to be any significant differences in the type of people who are laid off in explorative and exploitative firms, both types of firms have followed the two main patterns of layoffs; cutting administration first or cutting all types of employees first. In the firms that have downsized across the board, most of the activity of employees that perform core work is connected to projects from clients, and it is often these employees that are idle when projects are stopped. Most likely these firms find that the adjustment costs for rehiring do not outweigh the cost of labor hoarding.

The following table displays results that will be discussed and drawn lines between in this section. The perceived impact of the crisis on the firm, the strategy, the expectation of the length of the downturn, the percentage downsized, and the willingness to reallocate employees is included. This is done because these results are deemed interesting to further investigate as they are expected to impact downsizing.

Table 9: Compilation of selected results

| Company        | Impact            | Business model     | Expectation of length | Percentage downsized | Re-allocation |
|----------------|-------------------|--------------------|-----------------------|----------------------|---------------|
| 1 – large      | Somewhat negative | Exploitation       | Optimistic            | 23 %                 | Yes           |
| 2 – small      | Highly negative   | <i>Exploration</i> | Pessimistic           | 73 %                 | Yes           |
| 3 – mid-sized  | Highly negative   | Exploitation       | Pessimistic           | 25 %                 | Yes           |
| 4 - mid-sized  | Negative          | Exploitation       | Pessimistic           | 38 %                 | Yes           |
| 5 - small      | Somewhat negative | Exploitation       | -                     | 0                    | Yes           |
| 6 – small      | Somewhat negative | <i>Exploration</i> | -                     | 0                    | Yes           |
| 7 – small      | Highly negative   | <i>Exploration</i> | Optimistic            | 16 %                 | No            |
| 8 – large      | Negative          | Exploitation       | Pessimistic           | 13 %                 | No            |
| 9 – mid-sized  | Highly negative   | <i>Exploration</i> | Optimistic            | 19 %                 | Yes           |
| 10 – mid-sized | Negative          | Exploitation       | Pessimistic           | 32 %                 | Yes           |
| 11 – mid-sized | Somewhat negative | <i>Exploration</i> | -                     | 4 %                  | Yes           |
| 12 – mid-sized | Somewhat negative | Exploitation       | Optimistic            | 0                    | Yes           |
| 13 – mid-sized | Highly negative   | Exploitation       | -                     | 27 %                 | Yes           |
| 14 - large     | Negative          | Exploitation       | Pessimistic           | 43 %                 | Yes           |

### 5.1.2 Layoffs, impact and expected length

Since the expectation of length is hypothesized to impact labor hoarding, this is interesting to examine. What constitutes a long expectation of length of the crisis is hard to say, but a reasonable estimate is that if a firm believes the crisis will be over in 2016, it

is optimistic, whereas a firm that believes the downturn will last longer than 2017 can be considered pessimistic. Firms 2, 3, 4, 8, 10 and 14 are determined to have a pessimistic expectation for the length of the crisis.

Table 10: Firm strategy, expectation of length and average percentage downsized

|              | Optimistic | Pessimistic |
|--------------|------------|-------------|
| Exploitative | 12%        | 30%         |
| Explorative  | 18%        | 73%         |

From table 10, we see that firms with a pessimistic outlook on the future seem to downsize more than those with an optimistic outlook. However, the results for explorative firms are hard to generalize, as only one firm has a pessimistic outlook. There also seems to be a difference between explorative and exploitative firms in the downsized percentage. The three firms with the highest percentage of layoffs in the sample have a pessimistic outlook on the future. If we assume that those with higher percentages of layoffs labor hoard less, this would support Knudsen and Lien's (2015b) hypothesis that if a drop in demand is considered temporary the firm has a higher propensity for labor hoarding, and likewise that firms with more pessimistic outlook on the future tend to labor hoard less.

Table 11: Firm strategy, impact of crisis and average percentage downsized

|              | Highly negative impact | Somewhat negative impact |
|--------------|------------------------|--------------------------|
| Exploitative | 26%                    | 8%                       |
| Explorative  | 36%                    | 2%                       |

From table 11, it is clear that those firms that were highly negatively impacted by the crisis downsize on average much more than firms that were only somewhat negatively affected. Exploitative firms that have a strong negative effect seems to downsize less than explorative firms in the same bracket. For the firms with a weak negative effect, the reverse is seen; exploitative firms downsize more than explorative.

Three out of five explorative firms said that the crisis had a highly negative impact on them. Two out of the nine exploitative firms said the same. Since the sample is not very large, it is hard to draw certain conclusions, but it seems like explorative firms are hit harder by the crisis than their exploitative counterpart. One reason for this might be that

some of the explorative firms offer services and products that are untraditional and not well known for the decision-makers in the potential buyers.

*”And the oil fields are often owned, one field is often owned by many partners, so the decision-processes are quite extensive. Big meetings, long meetings. Much trying to convince someone who might own a big part of the field who is against installing a system or something, while there are for the process, and then it takes time, you know.”*

- CEO, small, explorative firm

In a time of crisis it can be assumed that it will be even harder to convince a skeptic to make an investment in an untraditional system. The system in question is one that is said to give increased accuracy in drilling, which can save the oil company from drilling an empty well. However, it requires a much larger upfront investment than traditional systems. This decision can be said to be in the domain of gain with high probability as explained by Kahneman and Tversky (1979) – investing in a traditional or innovative system will both generate revenue for the oil company, but the perceived riskiness can make the possibly higher revenue from the innovative system less attractive for the investing company. The drop in the oil price amplifies the effect of this, because the larger upfront investment may become harder to justify to the skeptics. This effect greatly affected the firm in question, and they are struggling to keep afloat.

The firms with pessimistic outlook on the future have all downsized, many of them more than equivalent optimistic firms. It is interesting to assess the expectations for the future in light of the initial impact of the crisis.

None of the firms that answered they were somewhat negatively affected by the crisis has a pessimistic view on the length of the crisis; they believe the worst is over or the oil price will increase by 2017. Three of these firms have not downsized due to the crisis, one firm downsized 4 percent and one downsized 23 percent. The latter is a big firm that might well have used the drop in the oil price as an opportunity for rightsizing, as it has an optimistic outlook on the future and has not been significantly negatively affected by the downturn.

Of the nine firms that had a negative or highly negative impact from the crisis, two have an optimistic outlook on the future, saying that the worst is over or nearly over. These two have downsized by 16 and 19 percent, averaging 18 percent. From table 9, we can see that five of the six firms that have a pessimistic outlook on the future have downsized by more than 30 percent – which can be said to be a significant decrease in staff. The remaining firm with a negative impact and a pessimistic outlook has downsized by 13 percent, making the average 37 percent. These firms all said in the survey that the drop in the oil price negatively or highly negatively affected them. From this, it seems reasonable to draw the conclusion that firms that were negatively impacted by the crisis and that have a pessimistic outlook on the future generally downsize more than those with a more optimistic outlook that also were negatively affected.

### **5.1.3 Labor hoarding and rightsizing**

Reallocation of employees when the original work of the employee is superfluous is present in all but two of the interviewed firms. Several of these said that employees had been or would be reallocated to developmental activities or would be put to skill enhancing activities. This indicates that labor hoarding is present in many of the firms, also the ones that are downsizing. The tendency in the firms which cut administration first to reallocate employees with core technical knowledge to more general work shows that firms in many cases want to retain their core employees even if there is slack in their normal tasks, signifying labor hoarding of this type of employee. Core employees can be those employees that perform the services the company offers, for example an engineer performing maintenance work on an oil platform.

The results from the interviews suggest that non-core employees and employees that cannot be given new work when projects are lost are the ones that are laid off first. Firms try to a large extent to retain employees that are considered crucial for continuing the core business. This indicates labor hoarding of core employees on behalf of non-core employees. Additionally, many firms see the downturn as an opportunity to make their organization more efficient by letting go employees that do not give the expected return on investment. An aspect of this is that many of the firms use this process as a way of rightsizing the company, ie making it more efficient by getting rid of those employees that are not yielding an required return. Several firms said that they cut the “deadweight” first. This is a logical consequence of the criteria that are set as well, since the criteria were based on competence and suitability for the work. By choosing competence as a

first criterion, the firm can exploit the opportunity for laying off unwanted workers, which could not be legitimated in normal business times.

## **5.2 Decision-making**

Having widely covered who is involved in decision-making in the Results section, we now turn to look more at how they are involved and what influences the decision-making process. Decision-making is done both on an overall level of what to do in the organization when a crisis occurs, and how to select which employees are affected by layoffs. These two will be discussed separately.

### **5.2.1 Overall decision-making process**

Mintzberg et al's (1976) identification phase includes the top management in most of the companies. The problem is usually identified by the numbers not being good enough, ie by statistics and use of description-based decision-making, or by sudden cancellation of projects, a sort of external shock.

In the development phase firms should ideally develop and evaluate several options. Most of the firms interviewed have tried other means of cost saving before downsizing. Several mentioned an increased focus on billable hours and pay cuts. Some also mentioned decreasing money spend on social activities such as holiday parties. These measures do not seem to be enough in many of the firms interviewed – many of them quickly turn to cuts in human capital. Mintzberg et al's (1976) hypothesis that only one solution is developed fully seems to be consistent with what is happening in the sample firms. Bounded rationality of decision-makers seems prevalent in the development phase. There is no clear information on how the oil price will develop in the time to come, as this is dependent on so many factors. The information available to decision-makers is less than ideal, and this influences the basis for which the decisions are made. This is bounded rationality in action.

In the selection phase, management screen and evaluate the possible solutions to the problem. If the solution is temporary leaves or layoffs, the authorization of the solution most commonly lays with the CEO.

Some firms initiated pay cuts, which needs to be supported by all employees to be implemented, ie unanimous authorization is needed from the organization. The selection phase here is highly colored by the political support routine – employees have to be convinced that a pay cut is necessary. In several companies this proved difficult when some employees were clearly earning the company more than others. The interviewees in these cases said it was difficult to gain understanding from all involved, but that the overall situation in the industry led those disgruntled to accept a pay cut. Since pay cuts did not solve the problems identified, the firms needed to go back to the development phase to find new solutions, iterating as predicted by Mintzberg et al (1976).

The dissemination sub-routine of communication, gaining traction for the chosen solution, seems to be widely assisted by the general crisis mode in the industry and the dire picture painted by the media.

### **5.2.2 Layoff decision-making process**

Once it has been identified that downsizing is necessary, the development phase regarding layoffs is initiated. It is in this stage the layoff criteria are developed.

In the development phase the number of layoffs needed and the criteria for selection are chosen. Some of the firms interviewed do use the search routine mentioned by Mintzberg et al (1976) by implementing similar decisions from earlier crises. For the firm that have not downsized before, the design routine is used to some extent, ie a new solution is created. Many of the firms that have downsized before have never done it on such a large scale, and therefore make a new set of decisions that is only partly influenced by previous organizational processes, but often affected by personal experiences of decision-makers. Combing logic through experience-based decision-making (criteria) with quantitative goals set through description-based decision-making (number of layoffs) is used to determine how to move forward.

In the development phase for decision-making on downsizing criteria for selection are set by the management and discussed with the relevant stakeholder representatives. Here the communication and political support routines are active, both by getting the information to the affected people and by persuading the affected parties that the decision is correct and necessary.

In the selection phase, some firms use earlier performance reviews to evaluate the employees, whereas most firms simply select whom to layoff by using the set of criteria created for this process. Meetings with the employees are then conducted to reveal any social criteria that might affect the layoff decision. This is the only phase where the employees are directly involved.

In the downsizing decision-making process, most firms follow the expected process to a large extent by going through the three decision-making phases and iterating to solve the underlying problem of a drop in demand. Both experience- and description-based decision-making are seen throughout this process. This will be discussed further in section 5.3.1.

When considering who is involved in the decision-making, most of the firms seem to follow the Systemic Bureaucracy Model (SBM) for decision-making from Shrivastava and Grant's (1985) framework, ie that organizational rules and norms are at the heart of the decision process. External stakeholders are involved through labor unions representatives where eligible. This seems to promote a feeling of fairness in the organizations. It also means that all blame will not be laid on the CEO, thus minimizing adverse effects that might arise if the decision is considered wrong later on. Sharing responsibility for decisions will reduce the risk of backlash for the CEO, making the prospect of loss smaller. Increased size of the company leads to an increase in the hierarchy, which makes the organizational structure more of a bureaucracy, necessitating involvement of several layers in the organization.

Some of the smaller firms have stronger CEOs and follow the Managerial Autocracy Model (MAM) to a noticeable extent. Two of the firms interviewed that had not downsized expressed that the decision not to downsize lay with the CEO. One firm that was downsizing had a CEO that made most of the final decisions and was by the HR responsible described as a "special" man who is adamant about cutting employees. In the non-downsizing firms, the strong position of the CEO seems to be viewed as something positive, and they are considered good leaders.

### **5.2.3 Differences in decision-making in a downturn vs upswing**

The downsizing processes in the firms would not have happened had there not been an external shock. For one, it would probably not have been necessary from a financial

standpoint. Secondly, it would have been hard for the firms to justify large-scale layoffs without an external explanation. However, some differences in hiring processes and downsizing processes were pointed out by several interview subjects, which to a certain extent can be generalized for expansions and recessions. In this stylized example hiring is an expansion activity and layoffs is a recession activity. The point that was made was that hiring decisions was delegated more to the different departments, whereas layoff decisions to a larger extent needed to involve central management. This means that when a department has gotten authorization to hire, the department manager has the most say in who is hired and simply needs approval from top management, whereas in layoff situations the selection decision process involved top management to a much larger degree. It can thus be said that decision-making is decentralized in good times and centralized in a downturn.

### **5.3 Factors affecting decision-makers**

From the previous analysis, it is clear that the impact of the downturn and the expected length of the crisis combined influences how many people are laid off in a firm. These overarching factors influence the decision-making process by constructing the frame in which the decisions have to be made. Several other factors that influence the decision-makers have been identified in the interviews. These are explored below.

#### **5.3.1 Experience-, description- and heuristic-based decisions**

From the interviews it is clear that experience play an important part in how the layoff process is carried out. Those interviewees with longer experience and previous encounters with crisis situations state that their prior involvement in such activities has made it clear to them that certain measures have to be incorporated. Those who had not downsized earlier statements on bringing what the organization learned to the next crisis highlights that the decision-makers are aware that experiences are important aspect of decision-making. Several of the decision-makers who had shorter tenure in their current company emphasized that their previous experiences affected the decision process, making it clear that experience is important.

One HR director with nearly 30 years experience in HR answered the following when asked whether he had learned a lot from earlier downsizing processes.

*“I have become more clear on that the department managers are key positions in these processes as well [downsizing]. So, I have had, in the first five years I have been here, this is my third CEO. [...] And they have all had as a common idea that HR should conduct the downsizing process. And I completely disagree.”*

- HR director in large, exploitative firm

This company was consistently utilizing department managers in the selection and implementation of the downsizing strategy, due to the HR director's logic based on experience.

Pollard and Hotho (2006) point out that in the increasingly dynamic and changing world we live in relying on previous experience might not be the best solution. However, when it comes to downsizing, it is reasonable to believe that cumulative experiences are an advantage rather than a hindrance, since human feelings toward how they are treated probably does not change widely due to a changing environment.

Description-based decisions through statistics and numbers are being used in all the companies both when it comes to defining the problem and when it comes to how many have to be laid off. The main point here is the extensive use of budgeting and continuous updating of budgets. When deciding to downsize, most firms say that they are not affected by what other actors in the industry are doing or by the media. Several subjects said that their decisions were based on actual numbers and budgets, which is more consistent with a rational approach. It is likely, though, that the interviewees want to present themselves as rational decision-makers, thus underemphasizing the effect of outside influences. It is also possible that the decision-makers are influenced subconsciously by the pessimistic media coverage, a point several of the interviewees brought up. In addition, budgets are based on expectations for the future, and information on the future is imperfect, hindering full rationality.

A downsizing process takes time, and there is a lot of iteration in the decision process, so the use of heuristics in decisions concerning whom to lay off might be somewhat limited. The reason for this is that most companies tend to involve multiple persons in the decision-making process, and extensively discuss the repercussions of decisions. However, a big influence for the extent of downsizing is connected to the expected length of the crisis. Many firms would not downsize if they believed that their employees

would be working at full capacity soon. Remembering the graphs in the introduction and the frequent fluctuations in the oil price, it is likely that the decision-makers use heuristics for evaluating how the situation is likely to continue and base their expectations for the longitude of the crisis on this. Several subjects stated that they first thought the downturn would pass quickly, but that the expectations were updated due to movements in the market and continued low oil prices.

### 5.3.2 Motivation of survivors

A couple of firms said that they lost some of the employees they wanted to keep due to them looking for other opportunities in the labor market when the sense of job security was weakened. This is a sign of downsizing processes affecting job security and which in turn can affect turnover. This is probably to a large extent avoided in many cases in this industry, as the crisis is industry-wide, which should work in the companies' favor. One small company that had a downsizing process a few years ago did experience some poaching of valuable employees from outside the industry in that process, but there does not seem to be a transferrable effect present in the current downturn.

Many of the firms tried to counteract insecurity among employees by having a swift information process when layoffs were being conducted, so that unnecessary anxiety was avoided. This was mentioned as being important for the way the management's decisions were received amongst the employees. One firm mentioned that the employees felt that they did not get the right amount of information, which again led to more gossip and unrest among the workers. The firms that ensured to get all the necessary information to the employees therefore seem to gain better motivation for the continuation.

Many of the firms mentioned that it was important for them to make sure the process was done in a proper manner so that it was perceived as just to the remaining employees. The criteria for layoffs were therefore widely discussed with labor unions and employee representatives in addition to inter-managerially. This seems to be meant to heighten understanding and promote a feeling of fairness among the employees. It might be a problem that these criteria are developed in a time of crisis and is not something that is incorporated into the organization on an everyday basis, as this may reduce the perceived fairness of the criteria. One large company could rely on their regular performance appraisals for choosing whom to lay off, and this seemed to have helped them in gaining

understanding and upholding motivation. The director here said that they had a successful process.

The HR director who chose to go against the initial wishes of the CEO, cited earlier, argued for this partly for the effect of the department managers involvement on the motivation of the retained employees.

*“[...] the department manager becomes very visible for everyone. The person in question has the gain from this when the following work with the remaining employees begins. [...] If you are a leader, you have to be a leader in ups and downs. And we will make them strong and prepared to handle the things that are similar to a crisis. What we see is that they get a completely different standing in the organization, especially when facing the remaining employees.”*

- HR director in large, exploitative firm

One caveat of the reliability of the statements on the motivation of the remaining employees is the source of the information. Keeping in mind that the subjects are the ones that have carried out the downsizing process within the firm, there is a chance that their view of the perceptions of employees are biased. Some of the companies did mention some resistance among employees, but this was mostly from the ones that were laid off. It is not unlikely that these employees’ feelings transfer to some degree to other, retained employees. However, the downturn might dampen the effect of turnover in a downsizing process, as there are not many firms hiring, as verbalized by this HR director:

*“[we have not lost employees that we want to keep] nearly no one resigns in these times”*

- HR director, large, exploitative firm

### 5.3.3 Prospect theory

Table 12: Prospect Theory Summary, repeated

|                  | Gains   | Losses  |
|------------------|---|---|
| High probability | Risk averse: chooses to win \$100 rather than $\$200 \times 50\%$ (\$180) | Risk seeking: chooses to lose $\$200 \times 50\%$ (\$180) rather than \$100 |
| Low probability  | Risk seeking: chooses to win $\$1000 \times 5\%$ (\$50) rather than \$55  | Risk averse: chooses to lose \$55 rather than $\$1000 \times 5\%$ (\$50)    |

When the reference point is continuing with the same human capital stock, downsizing can be argued to be both in the domain of loss or gain, depending on the situation of the firm. It is in the domain of loss if the firms do not want to lose their employees, but have no other choice than to lay off. It can be in the domain of gain if the downsizing leads to saved costs or increased efficiency in the organization from getting rid of low-performing employees. Whether the probability of loss is high or low depends on the perceived length of the crisis. If a firm believes the downturn will last for a long time, the probability of high loss is high, whereas if they believe the downturn will end soon, the probability of high loss is low. If the probability of high loss is high, the firm will start downsizing sooner and to a larger extent than if the probability of high loss is low. Most firms interviewed started the downsizing process because they saw no other viable option.

Remembering the findings on impact of the crisis, expected length of the downturn and that the majority of the companies interviewed make most of their business project-based, some thought experiments can be initiated. Some of these are expanded below.

1. First, companies that are not highly negatively impacted by the downturn are considered. For these firms, the organizational consequences for downsizing in the current state of the business cycle are not overwhelming; there is an abundance of available labor should the firm need to scale up operations, and because the external conditions provide management with a reason for downsizing (or rightsizing). The prospect of loss from downsizing is probably marginal, given that the least necessary employees are laid off. It can thus be assumed that the firms are in a domain of gain. There does seem to be tendencies for this type of behavior in some of the larger firms interviewed – several mentioned that the current environment created an opportunity for making the firm more efficient and streamlined.

2. If a firm that has been impacted negatively knows that it will not receive any new projects in the near future, it is in a domain of loss with certainty when it comes to retaining idle employees. They should then be risk seeking, and will layoff many employees to cut losses. This seems to fit with the actions of several of the firms that have a pessimistic outlook on the future. One firm said that they had already made efficient their company before the crisis hit, so they had to cut employees they really

wanted to keep due to the downturn. This firm still had some ongoing projects, but the basis for revenue has dramatically decreased. They are in a domain of loss with high probability, and thus cut many. Other firms tended to use temporary leaves in hope that new projects would come, but had to turn to layoffs when the temporary leaves exceeded the legal time constraints. They thus postponed the loss, but did not avoid it.

3. A firm that has lost some projects, but still has a lot of employees working on other projects, might see the risk of losing another project, or not getting new projects in the future, with a probability of so-and-so. If this probability of loss were high, the firm would be risk seeking and cut many employees. If the probability of loss were low, the firm would be risk averse and keep as many employees as possible. The latter effect is to some extent seen in the small companies that have not downsized. They have enough projects as of now, but there is a risk that they will not get new work. However, from the interviews it seems like the firms believe this risk to be small, and they keep all their employees.

4. A firm is struggling, but it may receive a big project in three months with a 5 percent probability. By choosing to layoff the people needed for this possible project, there is a certain gain from lower costs after the three months of the notice period where salary is due. If the project would have been tendered and the company got it, they would have gotten a high gain from retaining the people and winning the project. In this situation, according to prospect theory, the firm should choose to retain the employees to due to the opportunity to win the big project. In the interview sample here, most firms do not seem to follow this train of thought. This might be due to a lack of belief that new projects will come along, or simply that the financial reserves have been worn out and continuing to hope for a new big project is impossible. The firms might not be able to make the choices prospect theory predicts due to lack of financial freedom.

As explained in section 5.1.2, for explorative firms the impact of prospects for customer firms can also impact the amount of projects the innovative firms win. This perception of being in the domain of gain with high probability for a higher gain in turn affects decision-making in the explorative firm, because they cannot keep their employees busy. The investing firm perceives the decision to be in the domain of gain with high probability, and the gain from the innovative solution has a higher expected return.

However, due to the prospect of not gaining the higher return, especially in a time with an especially low oil price, the innovative solution of the explorative firm will not be chosen.

#### 5.3.4 Contagion effects and herd behavior

##### **Media**

None of the interviewees said that the media explicitly affects decisions, but some suggested that it might affect how they perceive the future, as the expectations for the duration of the downturn have changed from earlier. Many firms mentioned that it was easier to gain understanding in the organization for why temporary leaves and layoffs are happening. This may also be an indicator that some firms use the downturn as a way of rightsizing the company, because they see an opportunity for it.

One large firm was adamant that it was crucial for them to not end up in the media due to the layoffs, and they tried their best to avoid this in the layoff process. This point was also brought up in Dahl and Nesheim's (1998) study of Norwegian firms in downsizing processes – they wish to stay away from the spotlight in such a process. This does then seem to impact how the downsizing process is carried out in some of the firms. This can be seen by the meticulous way the downsizing process is carried out – these firms try to follow rules and regulations precisely to avoid getting negative publicity.

##### **Herd behavior**

None of the interview subjects said that they were affected by what competitors were doing. Looking at the industry trends and what the firms interviewed are doing in this downturn, it is clear that managers do make very similar decisions. This is expected considering the nature of a downturn, but it might also be because very few dare to go against the grain and act countercyclical. They all pretty much do the same things, so it is hard to decisively say that herd behavior is not present in the sample firms. Also here there is a problem when the interview subjects are the ones making the decisions – leaders rarely want to admit that they act according to what others are doing. By analyzing what the different firms do, there are clear patterns across all sizes and strategies – downsizing is prominent. The 60 percent drop in the oil price has seriously diminished these firms' basis for revenue, and it is likely that downsizing is inevitable for many of the companies. However, the firms that could be in a position to hire now might be worried to do this because so few others are doing it. The company that did

this intentionally was family owned and had a very strong CEO/owner, which makes it easier for him to go against the herd, as he is in a leadership role in the company and only has to answer to himself and his family for why he chooses to make certain decisions.

In a downturn, it can be beneficial to act countercyclical, go against the herd, and hire talent at a lower price than in a period of high demand for labor. Of the firms interviewed that had downsized very few had hired, and most of those who had seemed apologetic of it. One firm who had not downsized due to the drop in the oil price was exploiting the opportunities that arose in the labor market and was eager regarding the larger pool of talent they could choose from. For most of the firms, though, it seems that there is not enough demand for them to hire currently.

#### 5.4 Summing up analysis

Summing up, it seems that the initial perceived impact of the crisis and the following outlook on the future impacts the relative size of the downsizing process in the firms, with those who are negatively impacted and have a pessimistic outlook downsizing more. There seems to be some indication that some firms are using the downturn strategically to rid the company of employees that are not performing in the wanted way, ie rightsizing. Core employees are in many firms hoarded at the expense of non-core employees, as these are vital to the direct business of the firms.

From the analysis it is clear that the firms follow similar decision-making paths and that the same type of people are part of the decision-making process. Some smaller firms have a stronger influence from the CEO than in other larger firms. There does seem to be some differences in where in the organization decisions are made regarding layoffs and hiring – which can be generalized to a certain extent for recessions and expansions. This indicates that decision-making in downturns is more centralized than in upswings.

It seems like the factors that influence decision-makers beyond the impact on the firm and the expectation for the future are organizational and personal experiences, numbers and budgets, the want to maintain motivation in the remaining employees and, to a certain extent, contagion effects and following the herd, even though the two latter are downplayed by the interviewees. In addition, heuristics from assessing the length of the

crisis affect the expected longevity of the downturn, which in turn might affect how many are laid off. These factors influence human capital investments in the firm.

Having analyzed the most important findings this study, the coming section, Conclusion, will sum up how these findings answer the four research questions.

## 6. Conclusion

The purpose of this study has been to gather data on which employees are laid off in a downturn and how the decision-processes surrounding this downsizing unfolds. The baseline for this research has been an ongoing project at S T O P at NHH that examines and investigates what happens within firms during recessions, headed by Lasse Lien and Eirik Knudsen.

### 6.1 Main findings

In this section the main findings are summarized in relation to the research questions. The paragraph explaining the thought behind the questions from section 1, Introduction, is repeated below for the convenience of the reader.

The first question is meant to uncover which type of employee is laid off in a downturn and why these are the ones to be cut. The research in this area expects employees with low adjustment costs if new hiring becomes necessary to be laid off first, and it is investigated whether this rings true for the firms interviewed. The second question is aimed to find which persons are involved in the decision-making process when a downturn is ongoing. The third question then follows up on the second question, and should be answered with how the actual decision process is carried out when it comes to time of involvement and degree of influence from different people in the organization. The fourth and final question is meant to supplement the second and third questions by looking into which factors impact the main decision-makers in the decision-making process.

#### 6.1.1 Who is laid off in a downturn and why are they chosen?

In a downturn two main tendencies are that non-core personnel in support functions are cut first or that the company downsizes in all departments. From the interviews it became clear that there is not a great deal of firm specific knowledge in the labor stock, but rather industry specific knowledge. Most employees can easily do a similar job in a competing company. The firms that cut administration first likely find that the adjustment cost for rehiring such employees are lower than the adjustment costs from rehiring core employees. In firms that cut across the board the costs of labor hoarding are deemed to be too high considering the expected length of the downturn.

When deciding whom to lay off, nearly all of the firms interviewed stated that they choose based on four main criteria: formal competence, suitability for the job, seniority and other social factors. In addition, many firms also put emphasis on the expected use of the employees in the foreseeable future, depending on which type of projects the company had and which type of projects it expects to get. This supports the notion that core employees are labor hoarded.

### **6.1.2 Who is involved in the decision-making process?**

The involved parties in the decision-making vary across differences in firm characteristics such as size and the degree of unionized employees. In small firms, there is a smaller group in charge of decisions, often mainly the CEO. Except in the small firms mentioned, the management team is the driving force for decisions in most companies interviewed. In some firms the CEO is the only decision-maker, but mostly there are discussions between several managers. In the larger firms with several layers, direct managers to the affected employees are usually involved. In companies where labor unions are necessary to involve in the decision-making process, these are often consulted when the criteria for layoffs are being decided.

Owners are usually not directly involved in the decision-making, except when they are part of the management. Some firms mentioned that pressure from the owners forced them to initiate cost-saving measures that would not have happened at that time otherwise. Employees are rarely involved in the decision-making process at all, save for when social criteria are being assessed by managers. In meeting regarding this the employee can shed light on aspects that the managers does not necessarily know about their private life, and in that sense impact the final decision-making.

### **6.1.3 How does the decision-process unfold?**

The decision-making process in a downturn involves problem identification, development and evaluation of different solutions. Usually other measures than downsizing are initiated first due to management's hope that the crisis will subdue quickly. As the expectations for the future become more pessimistic, the firms turn to layoffs. The expectation for the future seems to be partly based on cancellation of current or lack of new tendered projects and partly on the decision-makers' previous experiences with fluctuations in the oil price. In addition, what is portrayed in the media might adversely impact the expectations the firms have for the future.

Partly due to the uncertainty connected to the length of the crisis, the basis on which the decision-makers form their decisions is of bounded rationality. It does not necessarily have to do with the limited cognitive ability of the decision-makers, but the sheer number of different factors in the environment create such an uncertain future that decisions are made based on inexact information.

#### **6.1.4 Which factors influence decision-making?**

The impact of the crisis and the expected length of the downturn are the overarching factors that lead to the downsizing process being initiated. Several other factors affecting decision-making are prevalent in the firms interviewed. Personal experiences of the management team impact how the decisions are made in the companies in different ways. Experience-based decisions are widespread. One person changed the layoff procedures of the firm, which would not have happened without the previous experiences of the person in question. Another stated that he had learned that downsizing does not go to plan, and he had the firm adjust the approach to downsizing accordingly. Generally, the firms have gone through downsizing before, and they take with them experience from earlier and apply it to the current situation.

The decision-making process involves many people and the measures are discussed at length. This wide usage of logic and statistics reduces the use of heuristics, but in some instances the use of such rules of thumb and common sense occurs. One type of heuristic that might be seen in play is experience with difficult times previously. The oil price has fluctuated before, and decision-makers take with them knowledge from earlier into forming expectations on how long the crisis will last and thus the number of layoffs needed to survive until better times. Having a fair and transparent process was important to all the firms that downsized, to maintain a good reputation in the industry and to make sure remaining employees were motivated for the future.

Lastly, it is clear that the Norwegian Work Environment Act is a major influence on decision-making when it comes to layoffs. This is no surprise, as not acting according to the law can lead to legal proceedings and layoffs being ruled invalid.

## 6.2 Limitations

As mentioned earlier, the qualitative nature of this study makes it difficult to generalize the findings. This study only examines firms in the oil and gas industry in Norway. Norwegian laws on downsizing are more rigid than in many other countries, and results may not be easily transferable to other environments (Dahl & Nesheim, 1998). The study has not explored in-depth how the companies with international presence handle downsizing in other countries. Due to time limitations only a certain amount of firms could be interviewed.

## 6.3 Implications

These results are meant to support and aid the ongoing research at Center for Strategy Organization and Performance (S T O P) at NHH. Several papers on how firms' investments change during recessions have been carried out, and this thesis has explored areas that had not been studied; how decision-making processes play out in recessions. By understanding the decision-making processes surrounding layoffs in a downturn, a more rounded understanding for the mechanisms in firms during recessions can be obtained.

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# Appendix

## Interview guide

### Informasjon som gis før intervjuet starter

1. Informasjon om masteroppgaven og kort om oss
2. Informasjon om tema og problemstilling
3. Kort om hensikten med intervjuet
4. Informasjon om konfidensialitet og anonymitet
5. Informasjon om gjennomføring av intervju med henhold til varighet
6. Spørre om det er ok at vi bruker lydopptaker
7. Informere om at vedkommende kan velge å la være å svare på spørsmål om ønskelig, og intervjuet stoppes dersom respondenten ønsker dette.
8. Sørg for at alt er klart for respondenten før vi setter i gang

### Generelt om intervjuobjektet

9. Hva er din rolle i bedriften?
10. Hvor lenge har du vært i bedriften?
11. Hvilken bakgrunn har du? Har du vært i andre bransjer tidligere?
12. Hva er viktigst for deg i jobben din?

### Del 1: Karakteristika ved bedriften

13. Hvordan var den økonomiske situasjonen for bedriften før nedgangen i oljeprisen?
  - a. Var dere inne i en periode med nyansettelser eller nedbemanning?
  - b. Bedriftens finansielle stilling før krisen?
  - c. Kapasitetsutnyttelse?
  - d. Forventninger om fremtiden?
  - e. Fokus på FoU?
  - f. Hvis utenlandskeid: Mye kontakt med hovedkontoret?

### Del 2: Effekter av nedgang

14. Hvor hardt har dere blitt rammet av nedgangen?
15. Når merket dere effekten av nedgangen?
16. På hvilken måte har dere blitt rammet av nedgangen i oljeprisen?
  - a. Nedgang i etterspørsel? Mangel på kapital?

- b. Har dere blitt mindre likvide?
17. Hvilke tiltak har dere tatt som følge av nedgangen?
18. Har dere nedbemannet som følge av nedgangen i oljeprisen?
- a. Hvor mange har blitt sagt opp?
  - b. Har noen ansatte blitt permittert? Hvor mange?
  - c. Hvilke stillinger besitter de som nedbemannes og permitteres?
19. Har dere mistet ansatte som dere egentlig ønsket å beholde?
- a. Hvordan formidler man avgjørelsen til den ansatte?
20. Er det noen dere bevisst har beholdt?
- a. Hva kjennetegner disse?
21. Har dere ansatt nye personer i løpet av perioden?
- a. Hvorfor? Og til hvilke stillinger?
22. Har dere allokert ansatte med ledig kapasitet til andre avdelinger/stillinger/prosjekt som følge av nedgangen?
- a. Hvor mange? Eksempler? Mye utbredt?
  - b. (Har dere økt investeringer i opplæring og utviklingsprogram for ansatte?
  - c. Hva med organisasjonsutviklingsprogram? )
23. Hvilke konsekvenser har nedgangen fått for beslutningene om de ansatte?
- a. Har oljeprisfallet presset dere til å bli mer kortsiktige?
  - b. Ville dere gjort noe annerledes om dere hadde større finansielle reserver tilgjengelig?
24. Har forventningene om fremtiden endret seg?
- a. Hvilke forventninger har dere til varigheten av oljeprisnedgangen?

### **Del 3: Beslutninger og beslutningsprosessen om de ansatte under resesjoner**

25. Hvor i bedriften blir beslutninger om de ansatte tatt, og hvem er inkludert i beslutningsprosessen? Hvordan varierer dette ved ulike typer nedbemanning, ulike deler av organisasjonen?
- a. Oppsigelser/permitteringer?
  - b. (Er beslutningsmyndigheten sentralisert eller desentralisert?)
  - c. Kan de ulike avdelingene påvirke denne prosessen?
  - d. Hvem tar initiativ til og setter i gang prosessen?
  - e. På bakgrunn av hvilke kriterier blir beslutningen tatt? (kompetanse, osv..)
  - f. På bakgrunn av hvilken informasjon?

- g. Hvor stor kjennskap har de som tar beslutningene til de ansatte som beslutningene omhandler?
26. Er det fokus på å beholde de dyktigste eller si opp de som ikke er strengt nødvendige?
27. Følger beslutningsprosessen en fast prosedyre og/eller faste kriterier?
- a. Hvem har utarbeidet denne prosedyren/disse kriteriene?
  - b. Finnes det prosedyrer som sikrer at ledere ikke må si opp ansatte de kjenner?
  - c. Finnes det prosedyrer som sikrer at de som tar beslutningene ikke lar seg påvirke av følelser/skjønn/vennskap/egeninteresse?
28. Evaluerer dere beslutningsprosessen og beslutningene som tas?
- a. Opplever du at beslutningsprosessen gjennomføres på en tilfredsstillende måte? (Hvorfor/hvorfor ikke?)
29. Er beslutningsprosessen forskjellig mellom ansettelse og oppsigelser?
30. Var disse prosessene annerledes før nedgangsperioden?
31. Blir det ansatt og sagt opp i samme avdeling?
- a. Hvordan legitimeres det?
32. Når beslutninger om oppsigelser er tatt, hvordan informeres de ansatte?
33. Har du tatt avgjørelser om hvem som skal sies opp?
- a. Hvordan foretrekker du å informere dem?

### **Erfaring fra tidligere**

34. Har erfaringer fra tidligere kriser påvirket beslutninger og håndtering av denne nedgangen?

### **Del 4: Bedriftens omgivelser**

#### **Maktforhold i bransjen**

35. Baseres beslutninger på hva andre aktører i bransjen gjør/ønsker? Hvordan?
- a. Kunder, leverandører, konkurrenter
36. Hvordan er konkurransesituasjonen for din bedrift?
- a. Er det mange som utfører de samme aktivitetene?
  - b. Er det mange som leverer de samme produktene/tjenestene?
37. Opplever dere at andre aktører er avhengige av deres bedrift?

38. Vil nedbemanninger kunne gå utover kvaliteten på produktene og tjenestene dere leverer?

a. Hvordan jobber dere for å unngå dette?

### **Fagforeninger**

39. Hvor mange av de ansatte i din bedrift er organisert i fagforeninger?

a. Er det én fagforening som står spesielt sterkt i deres bedrift?

40. Har fagforeningene innflytelse i nedbemanningsprosessen?

a. I hvilken grad og på hvilken måte?

b. Hva er fagforeningens viktigste interesse?

c. Har fagforeningene noe å si for hvem som må gå og hvem som får bli?

d. Ansiennitetsprinsippet?

41. Samsvarer interessene til fagforening(e) og bedriften?

a. Ville dere tatt andre beslutninger dersom fagforeningene var mindre tilstedeværende?

b. Etterkommer bedriften krav fra fagforeningene som går på bekostning av andre mål for bedriften?

c. Fører motstand fra fagforeningene til at dere bruker lenger tid på å fatte beslutninger om de ansatte?

42. Opplever dere at fagforeningene er mer/mindre villige enn før nedgangen?

## **Del 5: Bedriftens interne forhold**

### **Organisasjonsstruktur**

43. Hvilken organisasjonsstruktur har bedriften?

a. Er de ulike divisjonene klart separerte fra hverandre?

44. Består bedriften av flere enheter med geografisk spredning?

a. Hvor er hovedkontoret? Hvilke funksjoner og arbeidsoppgaver gjennomføres av hovedkontoret?

b. Er de ulike enhetene like store/mektige/innflytelsesrike?

45. Hvordan påvirker organisasjonsstrukturen beslutningsprosessen?

### **Organisasjonskultur**

46. Hvordan vil du beskrive bedriftens organisasjonskultur?

- a. Har bedriften definerte verdier og normer?
  - b. Opplever du at det eksisterer uskrevne normer og praksiser i bedriften som påvirker de ansattes handlinger og holdninger?
47. Får nyansatte i bedriften opplæring i bedriftens historie og verdier?
48. I hvilken grad har bedriften møtt motstand fra ansatte ved omstillingen som følge av oljeprisnedgangen?
49. I hvilken grad er de ansatte involvert i omstillingsprosessen?
- a. Har ansatte mulighet til å komme med innspill?
  - b. Har de noen form for innflytelse over beslutningene?

### **Myndigheter**

50. Har det blitt mer gunstig for bedriften å permittere enn å si opp ansatte som følge av de nye permitteringsreglene?
- a. Får dette noen konsekvenser i deres bedrift? Blir flere permittert enn tidligere?
51. Opplever dere at lovgivningen om oppsigelser og permittering er rimelig?
- a. Ville mer gunstige permitteringsregler ført til færre oppsigelser?
52. Hvilke forventninger har dere til at myndighetene iverksetter støttende tiltak som følge av nedgangen i oljebransjen?
- a. Hvilke tiltak mener dere i så fall at myndighetene burde iverksette?

### **Samfunnsansvar**

53. På hvilken måte ivaretar dere CSR?
- a. Markedsfører dere samfunnsansvar som noe som er viktig for bedriften?
  - b. Er deres fokus på samfunnsansvar synlig for publikum?
54. Har CSR-hensyn påvirket beslutningsprosessene om de ansatte? Hvordan?
- a. Lokalsamfunn...
55. Opplever dere at omgivelsene har forventninger til hvilke beslutninger dere bør ta om de ansatte?
- a. Hvilke forventninger har omgivelsene?
  - b. Tar dere hensyn til disse forventningene?
  - c. Har det blitt lettere å nedbemanne etterhvert som flere bedrifter har nedbemannet?
  - d. Dersom man ser at konkurrenter ansetter, reevaluerer man da sin taktikk?
56. Har medieoppslag om nedgangen påvirkning på hvordan dere handler?

57. Har (potensielle) medieoppslag noen innflytelse over hva bedriften gjør med de ansatte?

- a. Medieoppslag om bedriften

### **Helse, miljø og sikkerhet**

58. Har dere en egen HMS-avdeling?

- a. Hvor mange er ansatt der?
- b. Dersom ikke HMS-avdeling: hvem jobber med HMS?

59. Har HMS-hensyn påvirket beslutninger om de ansatte?

- a. Hvordan?

60. Har det blitt/vil det bli gjort nedbemanninger av ansatte som jobber innenfor HMS?

### **Avsluttende spørsmål**

61. Er det noe du vil tilføye som berører de temaene vi har vært innom?

62. Kan vi kontakte deg ved en senere anledning om vi skulle behøve mer informasjon?

63. TUSEN TAKK FOR HJELPEN

## Email to companies

Hei

Takk for hyggelig samtale i dag! Jeg sender som lovet en oppfølgingsmail.

Intervjuet vil ta mellom 45 minutter og en time. All informasjon som fremkommer av intervjuet vil bli holdt konfidensielt, og informasjonen vil bli slettet med en gang prosjektet er ferdigstilt.

### Litt info om prosjektet:

Jeg er en masterstudent ved NHH som arbeider som forskningsassistent i forbindelse med min masteroppgave ved Center for Strategy, Organization and Performance (S T O P) ved NHH. Forskningsprosjektet utføres i tett samarbeid med professor Lasse B. Lien og førsteamanuensis Eirik Sjøholm Knudsen.

Tema for prosjektet knytter seg til oljeprisfallet høsten 2014, som skapte en rekke utfordringer for bedrifter i norsk olje- og gassektor. En av disse utfordringene knytter seg til hva bedrifter velger å gjøre med de ansatte under vanskelige perioder. Vi ønsker å se nærmere på hvordan denne utfordringen håndteres, og hvordan dette varierer mellom ulike bedrifter.

Formålet med forskningsprosjektet er å kartlegge sammenhengene mellom nedgangsperioden og tiltak bedriftene iverksetter, for videre å kunne studere hvordan dette påvirker bedrifters konkurransevne på kort og lang sikt. Dette vil kunne bidra til å gjøre bedrifter bedre rustet ved fremtidige nedgangstider.

Ta gjerne kontakt dersom du har noen spørsmål.

Med vennlig hilsen

Karen Kristin Wie