

## Important motivational factors from a construction worker's perspective

Master's Thesis of Science  
in the Master's Programme Design and Construction Project Management

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CHALMERS UNIVERSITY OF TECHNOLOGY

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Motivation from different levels where it originates from; general level, organisational level, project level and personal motivational space.

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## ABSTRACT

Due to the housing shortage in Sweden, the construction industry is experiencing a high demand, which has led to high pressure on the construction companies and their employees. At the moment there is a common notion among big construction companies to get rid of the piecework system, and traditionally there is a high focus on wage and payment system in the construction industry. According to theory however, there should be other motivational factors called intrinsic factors that should be more important than the external factors, such as wage. This thesis aims to identify the most important motivational factors from a worker's perspective within the construction industry, and also to identify potential areas of improvement. A model of origin has been created in order to identify which person at what level is affecting different motivation factors. In this study 13 interviews were performed along with a review of the previous research performed in the area of motivation in the construction industry. Previous research states that motivation cannot be created by others, however a motivating work environment can be created for the workers to utilise in order to find personal motivation. The thesis has been performed in close cooperation with a medium sized construction company called Tommy Byggare where the interviews have been executed. The results show a number of important motivational factors, wage is one of them but it is not considered to be the single most important, well-being and cohesiveness seems to have a greater impact according to latent data. Among the interviewees a certain Tommy Byggare "spirit" was described, something that has closely been investigated in order to establish what is contributing to this feeling. A number of demotivators, such as the risk of repetitive strain injuries have also been identified.

Key words: Motivation, construction industry, construction workers, Job Characteristics Model, Self-Determination Theory, intrinsic motivation and extrinsic motivation

Viktiga motivationsfaktorer från en byggnadsarbetares perspektiv

Examensarbete inom masterprogrammet Design and Construction Project Management

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## SAMMANFATTNING

På grund av bostadsbristen i Sverige upplevs en hög efterfrågan i byggbranschen. Detta har lett till ett högt tryck på både byggföretagen och deras anställda samtidigt som många av de större byggföretagen också försöker att göra sig av med ackordet. Traditionellt så finns det ett stort fokus på lön och lönesystem inom byggbranschen, men enligt de motivationsteorier som finns så ska inte pengar vara den viktigaste motiverande faktorn, utan inre motivation ska ha en större motiverande potential än yttre faktorer, så som lön. Syftet med detta examensarbete är att identifiera de viktigaste motivationsfaktorerna för arbetare inom byggbranschen, samt att identifiera områden där motivationen kan förbättras. En modell över de olika motivationsfaktorernas ursprung har tagits fram för att kunna identifiera vem på vilken nivå som påverkar de olika motivationsfaktorerna. I studien har 13 intervjuer genomförts tillsammans med en genomgång av tidigare forskning inom området motivation i byggbranschen. Tidigare forskning menar att motivation inte kan skapas hos andra, utan att endast en motiverande miljö kan skapas där arbetarna själva har förutsättningarna att uppleva personlig motivation. Uppsatsen har genomförts i nära samarbete med ett medelstort byggföretag som heter Tommy Byggare, där också intervjuerna genomförts. Resultatet visar på ett antal viktiga motivationsfaktorer, lön är en av dessa men inte den som är identifierad som den viktigaste. Trivsel och samhörighet verkar i den latent data vara de viktigaste. En särskild Tommy Byggare "anda" har också identifierats bland de intervjuade, något som ansågs viktigt att undersöka vart denna känsla kommer ifrån. Ett antal faktorer som förhindrar motivation identifierades också, så som exempelvis förslitningsskador.

Nyckelord: Motivation, byggbranschen, byggnadsarbetare, Job Characteristics Model, självbestämmande teorin, inre motivation och yttre motivation

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## **Preface**

This master thesis is the final part of our master program and hence the final part of our education at Chalmers University of Technology. To study the motivation of workers in the construction industry have been interesting and we have learnt a lot, which will be useful knowledge in our future working life. We would like to start by thanking Tommy Byggare for letting us perform our thesis in cooperation with them and providing us with a desk, breakfast and coffee at their office in Gårda. Especially thanks to Tommy Larsson who has been our supervisor at the company, and have always been available when help has been needed. We would also like to thank Mattias Samuelsson, the vice CEO at the company, who took the time to show us around at their construction sites in Gothenburg, which we greatly appreciate. We would like to thank our supervisor at Chalmers, Ingrid Svensson, who has been a great support narrowing down our large ideas to suit the time limit and to “bring us back on track” when needed. A special thanks to Per Sund, Excellent Teacher at Mälardalen University, for contributing with good advice, proposals and feedback. Finally, we would like to express our gratitude towards the interviewees participating, who provided us with data necessary to complete this thesis.

Göteborg, June 2017

Rebecca Eliasson and Simon Kastari

## **Abbreviation**

BI	Sveriges byggnadsindustrier (The Swedish construction federation)
Byggnads	Svenska byggnadsarbetareförbundet (The Swedish construction workers' union)
FS	Facilities service
JCM	Job Characteristics Model
SDT	Self-Determination Theory
SEK	The Swedish krona



# 1 Introduction

The idea for this study came when the authors were working on one of the biggest construction companies in Sweden, and they decided to go from the traditional piecework system to a fixed wage payment system. This caused massive setbacks in production since the motivation to work was gone according to the employees, which was observed by the authors. According to previous research however, money should not be the main motivational factor, but rather other intrinsic motivational factors should have a stronger effect (Rollinson, 2008). This means that it should be possible to identify other factors than money that motivates the construction workers. The construction workers will hereon be referred to as the workers. If these factors are identified it might also be possible to find ways to improve the intrinsic motivational factors. Given that background the research questions were formed to try to identify the main motivational factors for workers in the construction industry but also to identify from a worker's perspective, what can be done to enhance motivation.

After analysing previous attempts to apply existing theories to the construction industry it seems obvious that the attempts tend to be fully conceptual, and thereby not proven empirically, and the few studies including empirical data are all of quantitative survey type and the data is analysed statistically (Nave, 1968; Schrader, 1972; Haseltine, 1976; Neal, 1979; Bennis, 1972; Heneman and Schwab, 1972; Olomolaiye and Ogunlana, 1988 and Wilson, 1979). Thereby, there seems to be a gap in the studies when it comes to performing a qualitative empirical study of motivation in the construction industry. This study attempts to fill in this gap by performing a number of qualitative interviews in the construction industry and then analyse and structure the data to be able to find themes and draw conclusions from it. The data is then used to form a basic model of motivation in the construction industry, rather than just applying an existing model.

This thesis is performed in close cooperation with the medium sized construction company Tommy Byggare, which has provided supplementary background information and workers to interview in order to identify their main motivational factors. Further information about the company will follow later in this chapter.

## 1.1 Background

In Sweden there has long been a shortage of housing, according to the Swedish Board of Construction, Boverket (2016) there will be a shortage of 710 000 dwellings in total by 2025. The majority, 440 000, is estimated to be needed by 2020, which gives a required construction rate of 88 000 dwellings per year. During the last few years, construction in Sweden has increased a lot, see Figure 1. In 2016, the construction of 63 100 new apartments were started, which is an increase of 34% compared to 2015 (SCB, 2017), but still not enough according to Boverket (2016). This in turn puts a lot of pressure on the construction companies who are already experiencing a high demand.

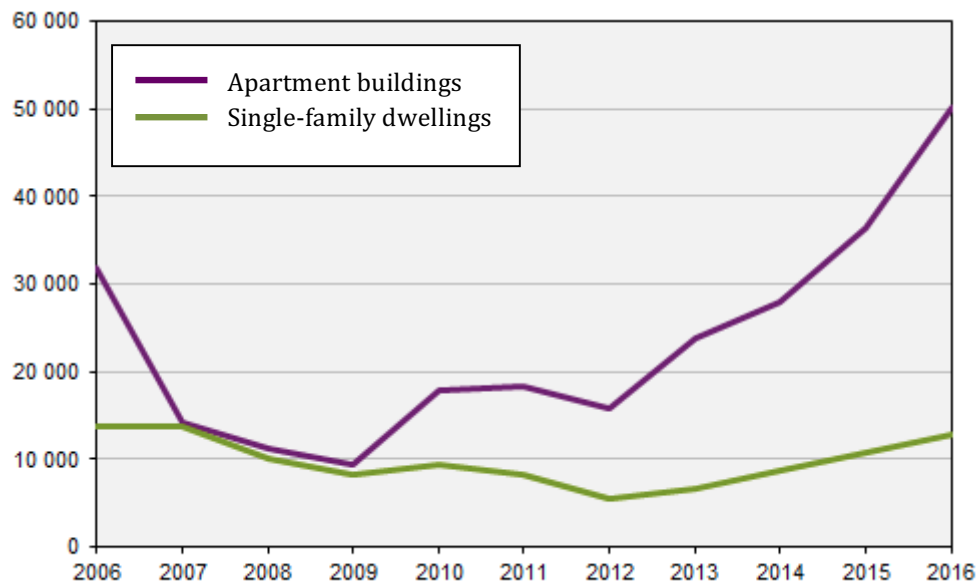


Figure 1.1 The amount of new build apartments that was started in Sweden between 2006-2016 (SCB, 2017).

Due to the high rate of construction the demand for both labour and materials is high and prices are being pushed up. According to Tommy Larsson<sup>1</sup>, the manager of human resources at Tommy Byggare, the number of employees available on all levels is low and headhunting new employees from other companies is becoming increasingly common. Therefore, it is important for companies to offer their employees satisfying working conditions and payment terms to ensure that they are motivated and that everyone will stay in the company.

In a construction company the managers and worker can be divided into three different levels:

- Top management, situated in the office
- Site management, situated on site
- Workers

In Sweden construction workers have the highest wage of all workers, including all other industries such as manufacturing and mining. The gap between workers and supervisors is however a lot smaller in the construction industry than in manufacturing. In 2014 the supervisors in the construction industry earned 38 200 SEK per month on average and the workers 29 600 SEK per month on average. That equals a gap of 29%, which can be compared with 59% in the manufacturing industry (Larsson, 2015). An explanation for this situation could be the strong union of construction workers in Sweden called Byggnads. The union will hereon be referred to as Byggnads. Byggnads has a very strong position and on bigger construction sites the workers are, according to Ola Gustafsson<sup>2</sup>, Human Resource Manager at Tommy Byggare, more or less forced to be members of the union. In an interview with

<sup>1</sup> Tommy Larsson (Human Resources Manager, Tommy Byggare) interviewed 2017-01-23.

<sup>2</sup> Ola Gustafsson (Human Resources Manager, Tommy Byggare) interviewed 2017-02-02.

Gustafsson he described a situation where workers who were not in the union had to have lunch in the material container since they did not support the union who gave the workers their lunchrooms.

According to Byggnads agreement, piecework is the standard payment system for new construction and renovation projects exceeding 900 hours (Byggnads, 2010). Piecework means that the workers will be paid based on how fast they work. When a new construction site is established the hours available to perform all the work are negotiated with the starting point in a handbook called Nybyggnads- och ombyggnadslistan (The New Construction and Renovation List). In this handbook every single work task on a construction site is specified. There are standard times for how long it should take, for instance to put up one square meter of plasterboard, with additions if the wall is higher than a certain height or if it's longer than a certain distance to carry the material etcetera. When the total time for a task is set it is then reconciled every 12 weeks to see whether the workers have done better than scheduled. According to workers at Tommy Byggare they aim to work 25-30% faster than what is scheduled. The reason this is possible according to Gustafsson, is that the handbook is from 1999 and some of the tasks have become easier since then because of new tools and equipment. According to Roger Johansson<sup>3</sup>, director of contract agreement at Byggnads, a new handbook is in the process of being made.

The piecework however, requires a lot of work. First the long negotiations when starting up between Byggnads representing the workers and Sveriges Bygginindustrier, a trade organisation representing the construction companies. This can in many cases create a lot of frustration and irritation between the workers and the company if an agreement cannot be reached. The reconciliations every 12 weeks also takes a lot of time and also creates conflicts, that's why some of the bigger companies in Sweden are trying to get rid of the piecework agreement. Johansson describes that when this happens it usually also creates a lot of tension between the companies and workers since many workers prefer the piecework system since the pay is on average 16% higher on piecework than on fixed wage.

The piecework payment system has a base wage that is paid during the 12 weeks between the reconciliations. Each percent worked in on the total calculation from the handbook gives for example an additional 1 SEK per hour worked in. If the calculation of hours is 2000 hours and the workers completes it in 1800 hours, they have worked in 10%, which will give them 10 SEK extra per hour retroactively for the whole 12-week period.

The alternative to piecework is as mentioned fixed payment terms. It is common for the fixed wage to have a small variable part as well that cannot be bigger than 6% of the hourly wage to still be considered as a fixed payment (Byggnads, 2010). At Tommy Byggare this type of payment is called incentive payment, where there are certain parameters that needs to be fulfilled to reach full incentives. Example of parameters are work environment, handover on time and cleanliness.

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<sup>3</sup> Roger Johansson (Director of contract agreement, Byggnads) interviewed 2017-02-02.

## 1.2 The company Tommy Byggare

Tommy Byggare was established in 1970 and is originally a small construction company from Herrljunga, 85 km northeast of Gothenburg. In later years the company has expanded and are now active all over the west coast of Sweden with their headquarter in Alingsås since the year 2000, and offices in Gothenburg, Herrljunga, Vårgårda and Trollhättan. In the end of 2016, Tommy Byggare had 194 employees, including both workers and managers, and the same year they had a turnover of 782 million SEK (AllaBolag, 2017). Their three main business areas are:

- Commercial properties
- Housing
- Facilities service

At the department of commercial properties, they are building, for instance, offices, schools and hotels. The housing department are constructing new single-family housing, semi-detached houses as well as apartment buildings. Lastly, the facilities service is generally working with smaller projects in reconstruction and new construction projects.

Even though the company is expanding in number of employees and in the size of projects they are actively working for retaining the feeling of familiarity and a sense of cohesion. The CEO, Anders Axelsson, has a big role in this task. Before Axelsson became the CEO of Tommy Byggare in 2014 he started as a carpenter in 1984 and has gone through the steps as supervisor, site manager, project manager and as Human Resources manager, at Tommy Byggare. This has resulted in a close relationship to all the employees. Axelsson<sup>4</sup> is valuing the close relationship to the employees and even though the company has about 200 employees he is known for knowing all the names of the employees and visiting the construction sites frequently asking everyone how they are and how it goes.

As stated in the beginning of this chapter, the idea for this thesis was formulated due to motivation differences depending on payment principle. Axelsson is positive to the piecework payment system and has no interest in changing the payment model. He is careful of what the workers demand and if the workers are satisfied and motivated to do a good job with piecework as payment, so is Axelsson. Many of the workers at Tommy Byggare choose to work for the company because of their positive attitude to piecework payment. There are workers who came from both bigger and smaller construction companies where they have experienced two segments within the company; management who are working to change the payment model from piecework to fixed waged, and the workers who tries to keep the piecework payment. According to Gustafsson the workers at Tommy Byggare are in general motivated, and find their jobs satisfying.

The interviewed workers are according to Gustafsson working with two different payment models, piecework payment and incentive payment. There is an additional payment model called result payment. However, it is not used, and will thereby not be included in this study. When a construction project starts the workers at Tommy Byggare are allowed to choose which payment model they want to use in the project.

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<sup>4</sup> Anders Axelsson (CEO, Tommy Byggare) interviewed 2017-03-10.



According to Gustafsson the complexity of a project is a main variable for choosing either piecework or incentive payment. When the uncertainties and complexities are low the piecework payment is more suitable for being able to save time and earn more money. If a project has high uncertainties, the workers according to Gustafsson prefer the incentive payment model.

### **1.3 Purpose and research questions**

The purpose of this study is to identify which factors that have to be met in order to create a motivating work environment from a worker's perspective. The purpose is not solely to identify what factors that could be improved, but also to find key factors among motivated workers to create a better understanding of motivation among workers in the construction industry. The study also aims to establish whether motivational theories and models derived from other industries than the construction industry are applicable in a construction context as well. If not, the aim is to formulate a model specific for the construction industry. This study will only consider motivational factors contributing to personal well-being, and aims to answer following research questions:

- What are the main motivational factors for workers in the construction industry?
- Where do the motivational factors originate from?
- What can be done to create a more motivating work environment from a worker's perspective?

### **1.4 Limitations**

There is a lot of research performed in the area of motivation, but there is very limited research on motivation in the construction industry and most of the articles found are 10-40 years old.

This study is collecting empirical data in one single medium sized construction company located in Västra Götaland, Sweden. Furthermore, this particular company has piecework as payment principle in the majority of their projects as well as all the interviewees are members of Byggnads, which might have affected the result. Because the interviews were performed in one company it gives an overview of the subject in this company, but it might not be possible to generalise the results for Sweden as a whole or for international applications. This would need further research.

This study only considers motivation from a worker's perspective; no motivation of managers is taken into account. However, how management can improve workers' motivation will be discussed in Chapter 5, and in particular Section 5.1. Additionally, this study will only consider motivational factor contributing to personal well-being and not in particular how motivation and productivity is connected.

The society today is based upon the fact that money is important. When wage is discussed in this thesis, money is discussed in the form of a motivational factor and not as a factor of survival. The basic needs for survival are considered to be fulfilled.

## **2 Methodology**

In this chapter a detailed description of the methodology used for the different parts in this thesis will be presented. It will also be argued why the different methodical choices were made and how it aims to answer the research questions formulated. The methodology used in this thesis is in general as follows:

- A literature mapping was conducted to establish what research is previously conducted within the area of motivation in the construction industry to identify a gap that this thesis aims to fill.
- A literature review of different motivational theories was conducted to establish a theoretical framework both for formulation of an interview guide as well as for the purpose of the analysis, discussion and conclusion.
- An interview study was performed with workers at Tommy Byggare in order to be able to answer the previously stated research questions.
- A careful analysis and thematisation of the material retrieved from the interviews were performed which forms the results presented in Chapter 4, of this report.
- The results are then discussed in conjunction with the findings from the literature review to be able to draw conclusions as well as make recommendations for further research.

This methodology was chosen to create an understanding of what research has previously been done and what models already exist in the area of motivation. The choice to conduct a qualitative interview study was made since the literature review showed a lack of deeper understanding in the area of motivation in the construction industry. In order to retrieve a deeper understanding of the subject, a total number of 13 interviews of approximately 45 minutes on average were conducted. This was considered to be sufficient, both considering the time restrictions and also due to a saturation discovered in the data. The previous studies made within the area of motivation in the construction industry have mainly been quantitative and deductive, applying existing theories formed in other industries or fully conceptual (Nave, 1968; Schrader, 1972; Haseltine, 1976; Neal, 1979; Bennis, 1972; Heneman and Schwab, 1972; Olomolaiye and Ogunlana, 1988 and Wilson, 1979). This is something that has received critique (Olomolaiye and Prince, 1989), and therefore it was decided to use a more open and abductive approach, going back and forth between theory and empirical data, in order to be able to receive results also outside of the existing theories.

### **2.1 Literature review**

To make sure that this thesis is not completely overlapping with previous research the first step performed was a literature mapping over what has previously been done in the area of motivation in the construction industry. It was also important to establish a solid theoretical framework in motivation theory to base the interview guide upon as well as connecting the results from the interviews back to theory in order to draw conclusions.

The literature used in this thesis is mainly scientific articles found in databases such as Google Scholar and The Chalmers Library database, called Summon. The following keywords were used:

- Construction motivation
- Deci and Ryan
- Drivers of motivation
- Extrinsic motivation
- Intrinsic motivation
- Job Characteristics Model
- Job Rotation
- Maslow's hierarchy of needs
- Motivation
- Motivation in the construction industry
- Self-Determination Theory
- Wage development of construction workers
- Wage statistics in the construction industry

The keywords used were both in Swedish and English. Some quotes were carefully translated into English by the authors who tried to make sure that the key points were undisturbed. After searching the databases, it was clear that several articles relevant for this thesis were published in the same journal called: Construction Management and Economics. This journal was also used to find additional articles relevant for the topic. Likewise, many authors were reoccurring and thereby considered important hence, all their publications were overviewed to make sure nothing important would be left out. In addition, since many of the theories in motivation are old and thereby not available online, books from both The Chalmers Library and The Library at University of Gothenburg were used as well.

## **2.2 Interview study**

In this thesis the interview was planned and performed in a qualitative approach following the seven steps suggested by Kvale and Brinkmann (2009).

### *1. Thematisation*

The purpose of this interview study is to fill in an existing gap in previous research, by performing qualitative interviews to identify the main motivational factors for workers in the construction industry.

### *2. Planning*

In the planning process, the research questions were first clearly defined and the interview questions formed in relation to these. The interview questions were based upon an already existing theory in order to make sure that all relevant aspects of work motivation potential were considered.

### *3. Interview*

13 interviews were performed on 4 different construction sites with workers and foremen. Additionally, two of the interviews were performed with workers from the facilities service. All interviews were recorded.

4. *Transcription*

All 13 interview audio files were transcribed accordingly with the model.

5. *Analysis*

The analysis was performed based on a six-phase model suggested by Braun and Clarke (2006). The process will be further described below.

6. *Verification*

The interviews in the study were performed at different sites with different types of construction workers, which increase the validity of the study. Parts of the results are confirmed by previous research, which also verifies the study. Regarding the reliability of the study, a semi-structured interview gave the interviewees the opportunity to give detailed answers put into a context, which enhances the quality of the answers. The analysis was performed separately by the authors and then compared in order to increase the reliability. In total, two pilot interviews with two different construction workers were performed, in order to ensure that the questions were comprehensible for the targeted group and providing the information needed.

7. *Reporting*

The results found in the literature study in combination with the results from the empirical data are presented in this report.

### **2.2.1 Interview planning**

Due to the previous research introduced above, which is mainly quantitative, it was as mentioned before, decided to use a qualitative method for data collection. There are two main types of qualitative interviewing approaches, unstructured and semi-structured. The unstructured approach is similar to an open conversation without any prearranged questions and the interviewee is very free to decide the direction of the interview. Due to the short time to perform this study, and the fact that a theory was used as a starting point, a semi-structure interview study was considered more suitable. The semi-structured interview is also flexible and leaves room for the interviewee to interpret the questions but has a base of questions referred to as an interview guide. The interview guide was prepared following Bryman and Bell (2011) who suggests that the following:

- (A) Order the questions in a logic way
- (B) Create questions that aim to answer the research questions
- (C) Use a relevant and easy to understand language
- (D) Avoid asking leading questions
- (E) Always record individual interviewee background information

In order to formulate the interview guide, information was gathered through background interviews and through the literature study to be able to cover important areas of motivational theory.

The first background interview performed was with Ola Gustafsson<sup>5</sup> who is Human Resource Manager for the workers at Tommy Byggare. Gustafsson is responsible for the 142 workers and is in close contact with them. He has identified a number of factors that are important for the motivation of workers, including; wage, well-being, professional pride, participation and co-workers. He also mentioned a rule of thumb; that one can almost certainly judge from the cleanliness of a construction site how well the site is doing in terms of economy.

The second background interview was performed with Roger Johansson<sup>6</sup> from Byggnads. Byggnads has a set of four core values; wage, work environment, work safety and codetermination, that is that everyone is identified as an individual and involved in decision making. Johansson also mentions a few other factors he has observed among their members as important motivational factors, including creativity, using your hands, good status of the trade and team spirit.

A common theme between the two interviews were wage, a lot of weight in the interviews were about fixed wage or piecework and the advantages and disadvantages of the two. Considering this it seems like payment principles and wages is an important factor in the construction industry why this will be something to incorporate in the interview questions. Also the other aspects discussed in the interviews were considered in the formation of the interview guide.

Considering the background interviews and also the literature review, it was decided to use the Job Characteristics Model (JCM) of Hackman and Oldham (1980) as a basis for the interview guide, since it contains a great variety of different identified motivational factors. The JCM is also easy to interpret and formulate questions around, which is an important factor considering the category of workers that are interviewed. The JCM uses a more engineering like approach, taking many concrete, measurable motivational factors into account, which can be argued to suit the purpose of the study.

Using the structure of the JCM and adding additional questions from the background interviews an interview guide was formed and then tried out in a pilot interview with a worker from a different construction company to ensure the questions were comprehensible for the targeted group and providing the information needed. The interview guide was then reformulated to a more logical structure as well as an easier language to suit the targeted group better. The questions were also revised to more directly answer the research questions. The interview guide was then tried again in a second pilot interview with another worker from a third construction company. The results from the second pilot interview were satisfying and the comments from the interviewee were that it is easy to interpret the questions. The complete interview guide can be found in Appendix 1 Intervjufrågor- Svenska and in Appendix 2 Interview questions- English.

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<sup>5</sup> Ola Gustafsson (Human Resource Manager, Tommy Byggare) interviewed 2017-02-02.

<sup>6</sup> Roger Johansson (Director of contract agreement, Byggnads) interviewed 2017-02-02.

In order to collect the main data through the 13 interviews at Tommy Byggare, a visit to four different construction sites and the office of facilities service was made to ensure that there were available workers to interview as well as explaining the purpose of our interview to some of the workers on each site. This was to ensure that they know this study will keep all the interviewees anonymous and that the purpose of our study is solely to identify and suggest methods on how to improve motivation and that the wage or other factors asked about in the interviews will not be affected regardless of their answers.

The interviews were performed, as mentioned above, at 4 different sites and at the office of facilities service on 7 different occasions and held in separate rooms behind closed doors. All interviews were recorded and the interviewees were informed beforehand about this. During the interviews, notes were also made to ensure that no important aspects were left out. The selection process was random and the workers that were available in the production process on site were interviewed, since this was the best option for the company.

### **2.2.2 Analysing the data**

After completing all 13 interviews, the audio files were transcribed in line with the seven-step model of Kvale and Brinkmann (2009). Following this, a six-phase model of Braun and Clarke (2006) was chosen for thematic analysis of the data.

1. *Familiarising yourself with your data:* With all data transcribed the familiarisation phase was initiated. The data was read several times noting down initial ideas for codes. Significantly interesting points made were also written down and a quote bank for later use was created. The two authors each read everything separately to avoid biasing each other.
2. *Generating initial codes:* Further, the notes taken in the first step were compared and a first set of codes was identified in the data. Interesting factors, such as wage, well-being and co-workers, mentioned by all the interviews were placed into the codes by making a colouring system of the data.
3. *Searching for themes:* The codes with all relevant data were then grouped together into early themes using mind maps.
4. *Reviewing themes:* The themes were reviewed several times to ensure they reflected the first set of ideas made in Level 1 and the initial codes in Level 2, as well as to assure the themes were all at the same level.
5. *Defining and naming themes:* The data included in the different themes were continuously analysed to refine and specify the themes. Relevant names of the themes were defined and refined into final names.
6. *Producing the report:* During the analysing process there has been a continuous interaction between empirical data and theory. Bryman and Bell (2011) refers to this as an abductive way of analysing the data. The entire process was done manually using colour coding without any software for assistance.

## **2.3 Reporting of results**

In Chapter 4, the findings from the interview study are presented and organised according to a model created, which is based on the origin of the motivational factors found. The results are then discussed in conjunction with the theoretical framework in order to establish how well the results align with existing theories or whether the results suggest that the existing motivational theories are not applicable for the construction industry. In order to answer the research questions conclusions are drawn from the empirical data in combination with the theoretical framework. Recommendations for further research are made based on the findings.

Apart from the report, a presentation was held at the Tommy Byggare in order for them to utilize the results in the company. The main motivational factors that are important to keep on cultivating were presented along with the biggest obstacles for creating a motivating work environment.

### 3 Theoretical Framework

The theoretical framework in this study is based on two well-established motivational theories, the Job Characteristic Model by Hackman and Oldham and the Self-Determination Theory by Deci and Ryan, along with a literature review of previous research on motivation in the construction industry. To get familiarised with the concept of motivation a brief description of intrinsic and extrinsic motivation will be presented in the beginning of this chapter. This is followed by a review of previous research and a description of the two motivational theories, the Job Characteristic Model and the Self-Determination Theory.

#### 3.1 Motivation

The Business Dictionary define motivation as: *“internal and external factors that stimulate desire and energy in people to be continually interested and committed to a job, role or subject, or to make an effort to attain a goal”* (Business Dictionary, 2017). Deci (1975) states that people do not only have different amount of motivation towards activities but also different kinds of motivation. How much motivation a person feels or which kind of motivation that is underlying for people to do certain activities is individual. The two kinds of motivation that Deci (1975) proposes are intrinsic and extrinsic motivation, which will further be described below.

##### 3.1.1 Intrinsic motivation

Deci (1975) defines intrinsic motivation as: *“intrinsically motivated activities are ones for which there is no apparent reward except the activity itself. People seem to engage in the activities for their own sake and not because they lead to an extrinsic reward”* (p. 23). When a person is doing activities only for the enjoyment of the activity itself or for the positive feelings that the activity arises, the drive to do it comes intrinsically. Feeling autonomy and self-determination of activities play a big role in enhancing intrinsic motivation. Different individuals find different activities interesting, and according to Ryan and Deci (2000) it has been shown to increase the level of productivity, creativity and enhancing skills and knowledge when involved in activities that is valued by the individual. Therefore, it is important to identify the individual factors enhancing intrinsic motivation.

##### 3.1.2 Extrinsic motivation

In the book *Intrinsic Motivation and Self-Determination in Human Behaviour* by Deci and Ryan (1985) they describe that extrinsic motivation refers to: *“behaviour where the reason for doing it is something other than an interest in the activity itself”* (p. 35). Other interests than the activity itself may for instance refer to that one is told to do an activity or that one is doing an activity on personal initiative, which will result in receiving rewards and opportunities or avoiding punishment. Accordingly, the degree of autonomy and self-determination within extrinsic motivation can vary and studies have shown that extrinsic motivation in combination with self-determination generates a higher degree of engagement than extrinsic motivation in combination with determination by someone else (Deci and Ryan, 2000).



### 3.2 Previous research on motivation

Motivation has long been a highly researched area among social scientists and many different theories including Maslow's Hierarchy of Needs (Maslow, 1943), the Job Characteristics Model (Hackman and Oldham, 1980) and the Self-Determination Theory (Deci and Ryan, 2008b) to mention a few, have been formed over the years. Construction is also a highly researched area, yet as a subject of research it is usually more focused on investigating problems from an engineering point of view since construction researchers are considered to have limited knowledge in the field of psychology (Maloney and McFillen, 1983). In the combined area of motivation in the construction industry far less work has been done. According to Maloney and McFillen (1983) there are three main reasons for this;

- Social scientists have little or no knowledge of construction
- Inadequate funding since construction companies are not very enthusiastic of supporting social research
- Construction researchers have, as mentioned, limited knowledge of psychology

Even though there is limited research available in the area, an overview will follow.

Olomolaiye and Price (1989) have published an article called “A Review of Construction Operative Motivation” that reviews what has been done in the area of motivation in the construction industry. One of their main critiques are that many of the theories applied to the construction industry are formed in other industries and the article seeks to determine whether it is applicable to use these theories in construction settings as well. Olomolaiye and Price (1989) argue that the working environment and the job characteristics differ from other industries why they suggest that *“its workers should be separately studied if a specific knowledge of their motivation is to be acquired”*.

In the review they differentiate between the conceptual studies and the empirical studies that have been performed. Conceptual studies performed in the subject uses several theories including Maslow's hierarchy of needs and Herzberg's Two Factor Theory (Nave, 1968; Schrader, 1972; Haseltine, 1976 and Neal, 1979). Maslow's Hierarchy of Needs describes the five needs of humans. They are stated hierarchically in a pyramid and show the motivation of humans. The lowest level is the first level that motivates people, and when this is fulfilled it is the next level that is motivating; see Figure 3.1 (Maslow, 1943).

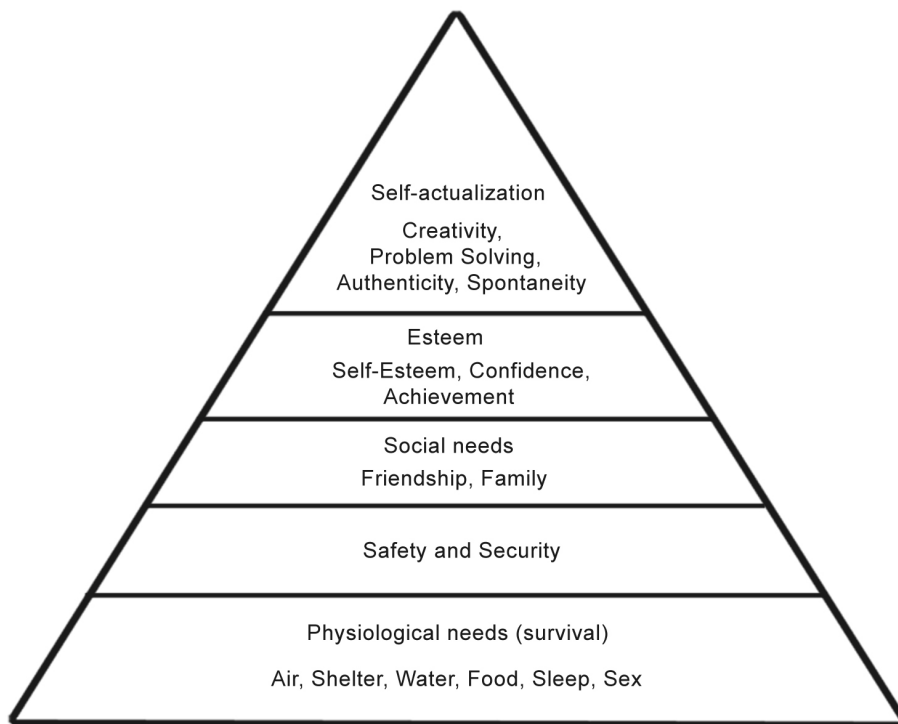


Figure 3.1 Maslow's Hierarchy of Needs (Communication Theory, 2017).

Herzberg's Two Factor Theory, however, uses a similar approach as Maslow but has divided the needs into two factors, motivations and hygiene factors, that contributes to job satisfaction at the workplace (Herzberg, 1966). Within these two factors there are several factors such as challenging work, recognition, responsibility as well as job security, wage, and working conditions.

Olomolaiye and Price (1989) argue that the studies performed do not prove or disprove anything since there is no empirical tests performed and secondly they argue that the authors have addressed construction operative motivation from their own view rather from the view of the workers.

In the attempt to apply the Expectancy Theory only financial incentives were considered to affect the motivation of construction operatives. The Expectancy Theory explains how individuals choose to behave or act in a certain way (Heneman and Schwab, 1972), and the choice of behaviour is due to the motivation of the individual, which could be calculated by multiplying three factors:

- Expectancy- if I do this, what will the result be? (Effort → performance).
- Instrumentality- what is the probability to achieve the result? (Performance → outcome).
- Valence- how much do I value the result? (Outcome → reward).

According to Olomolaiye and Price (1989) the Expectancy theory *"is holistic and it is not possible to single out a motivator"*.

The empirical studies reviewed by Olomolaiye and Price (1989) includes two studies by Wilson (1979) and Olomolaiye and Ogunlana (1988), which the first one studies motivation in the construction industry on different levels in the UK and the second

with a similar approach studying motivation in the construction industry in Nigeria. The results from the empirical studies are then tied both to Maslow's Hierarchy of Needs as well as Herzberg's Two Factor Theory. The results show that the economic development of a country might affect the level of motivators that are most important in Maslow's Hierarchy of Needs (Olomolaiye and Prince, 1989).

In an empirical study on satisfaction a hypothesis that *"satisfactions come about because each workman was, through his individual efforts, producing a high visible physical structure. In effect, construction on the site appeared to have a built-in 'superordinate goal'"* was stated (Borcherding and Oglesby, 1974). This can be related to what is known as intrinsic motivation. The article also states that in opposite, dissatisfaction is created by poor management, which leads to error in planning and material procurement, which in its turn leads to hindered production pace. The study uses 650 interviews but receives critique from Olomolaiye and Price (1989), since the sampling was not random. Only highly productive workers were chosen (Borcherding and Oglesby, 1974).

Another empirical study by Maloney and McFillen (1985) uses a more random sampling of 703 workers where they asked workers to rank the importance and their satisfaction with different factors of their work. From their results it can be concluded that intrinsic motivation is an important factor in the subject of construction worker motivation, which is in line with the study of Borcherding and Oglesby (1974). Maloney and McFillen (1986) also used the same sample in another study where they applied the Job Characteristics Model by Hackman and Oldham (1980) to explain workers' motivation. However, they have selected 650 out of the 703 workers, but the authors do not give an explanation why. Maloney and McFillen (1986) use a quantitative approach analysing the data statistically and concludes that workers do not see their jobs as enriched and that restructuring is needed to make the job itself more interesting. Olomolaiye and Price (1989) states that this contradict what is concluded in previous studies and indicates that further research is needed.

Even though the existing motivational theories have been applied to the construction sector, there is still no attempt made to formulate a specific theory for the construction industry. According to Olomolaiye and Price (1989) empirical studies offer more insight to worker motivation in construction than conceptual studies does, yet many empirical studies end up leaning towards the existing theories. In this study, the Job Characteristics Model is used as a basis for the interview questions, however the main difference compared to previous research is that this study is qualitative rather than quantitative. The Job Characteristics Model will be further described below.

### **3.3 Job Characteristics Model**

The Job Characteristics Model (JCM) by Hackman and Oldham (1980) is not solely used as a basis for the interview guide, but also as a part of the theoretical framework for the discussion and conclusion. The model is divided into two main categories, Core job characteristics and Moderating variables. The main categories include several subcategories, which will be further explained below.

The original version of the JCM was the Job Characteristics Theory developed by Greg R. Oldham and J. Richard Hackman in 1975 (Hackman and Oldham, 1980). The

theory was further developed and published in a book called Work Redesign in 1980. However, the theory is well established and used in more recent studies as well (Cardoso et al., 2015). Hackman and Oldham (1980) argue that “*when people are well matched with their jobs, it's rarely necessary to force coerce, bribe or trick them into working hard and trying to perform the job well. Instead they try to perform well because it's satisfying to do so*” (p. 71). This means that instead of increasing external motivators like pay or bonuses, the job should be designed to be motivating in itself. Hackman and Oldham (1980) calls this internal motivation. Internal motivation can be increased by fulfilling three critical psychological states:

- *Experienced meaningfulness of the work*: It must have a value that “*counts in one's own system of values*” (p. 73).
- *Experience responsibility for outcomes of the work*: The worker should feel personally accountable for the result in order to be proud of a good result and as well feeling guilty of a bad result.
- *Knowledge of the actual results of the work activities*: A person needs to have feedback on how the job is done, whether it is performed well and the worker should feel happy about it, or if the result is unsatisfying and the worker should feel disappointed. The authors call this “*the self-perpetuating cycle of positive work motivation*” (p. 72).

Critical psychological states are something personal and cannot be changed. However, the properties of the job itself are possible to modify in order to foster a motivating work environment (Hackman and Oldham, 1980). Hackman and Oldham (1980) call these properties of the job, the Core job characteristics. The complete model can be seen in Figure 3.2.

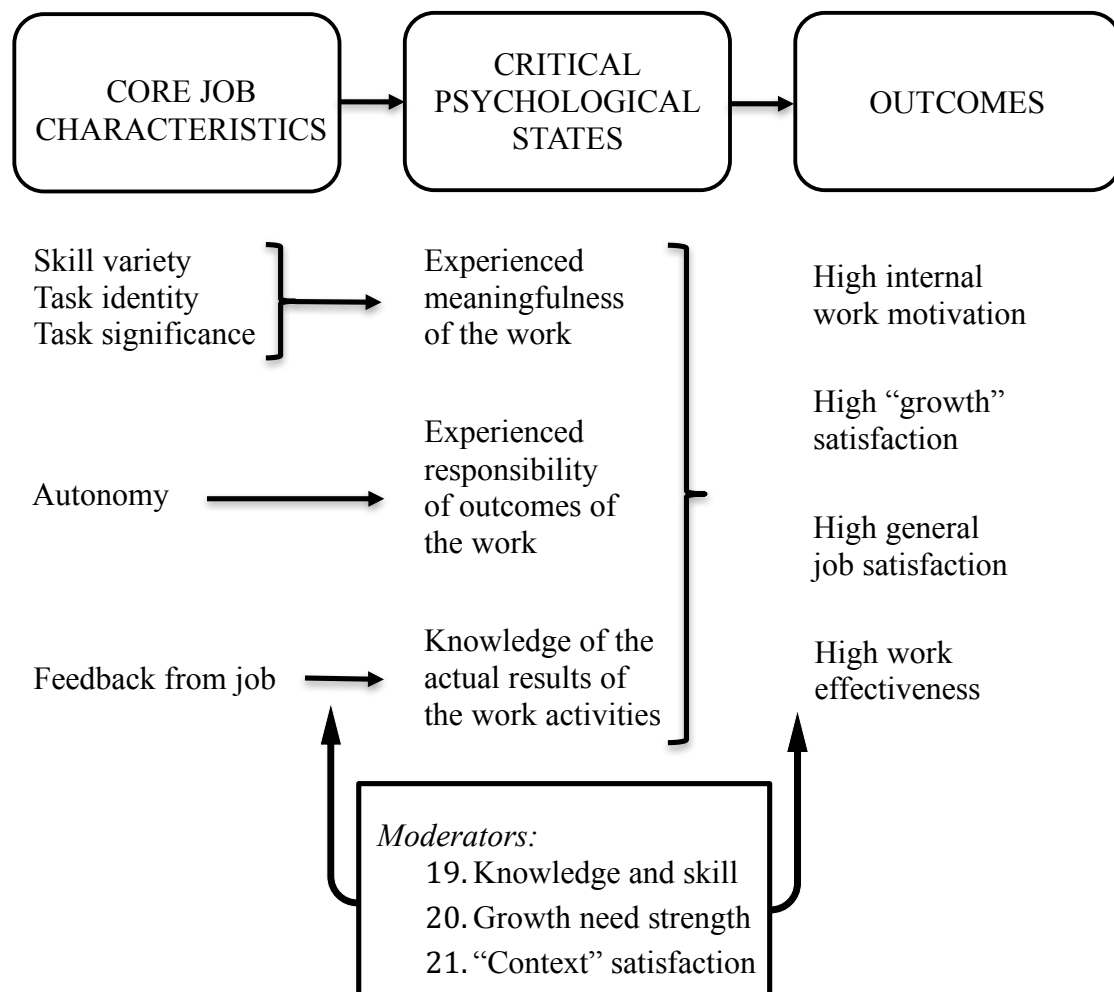


Figure 3.2 The Job Characteristics Model (Hackman and Oldham, 1980).

### 3.3.1 Core job characteristics

As can be seen in Figure 3.2 three of the Core job characteristics, Skill variety, Task identity and Task significance, are connected to experienced meaningfulness. Autonomy fosters an experienced responsibility for the outcome of the work. The last one, Feedback from job, gives knowledge of the actual result of the work activity. Each individual job characteristic will be further described below (Hackman and Oldham, 1980, pp. 78-81).

#### Skill variety

Skill variety refers to the variation in the work, whether it is monotonous or whether a worker can utilize a great variety of skills. If a variety of skills are required, it is believed to increase the motivating potential of a job since the worker experiences a greater meaningfulness than for a solely routine job.

#### Task identity

Task identity refers to whether a worker can see the finished result of a piece of work they are doing. A job with a visible outcome in the end leads to greater meaningfulness rather than just doing a small part of a job.

### **Task significance**

The effect the job has on someone else's life, is called Task significance. A job that has a greater effect on someone else gives greater meaningfulness than a job with limited impact on other people.

### **Autonomy**

Autonomy refers to the degree which a worker is able to control the work in terms of scheduling and choosing procedures over solely getting orders from a superior. The worker should also have independence and a discretion, which will foster a greater feeling of responsibility of the result.

### **Feedback from job**

Feedback is important to better understand the actual result of a work activity. Feedback from job refers to whether a worker can tell by the job itself if they have succeeded or not.

## **3.3.2 Moderating variables**

The job characteristics on their own will not create an internal motivation among workers. They are creating a motivating work environment, which is up to the workers to utilise. According to Hackman and Oldham (1980) there are however characteristics that are important in how people will respond to well designed jobs. These factors are called moderating variables and consists of three subcategories, Knowledge and skill, Growth need strength and Contextual factors. This section will evolve around what is meant with each of the categories (Hackman and Oldham, 1980, pp. 82-88).

### **Knowledge and skill**

According to the model in Figure 3.2 it is important to have sufficient knowledge and skill to complete a task. If a person has insufficient knowledge to complete a task it might lead to stress and frustration. On the other hand, if a worker has sufficient knowledge and skills he or she might feel superior at the task, which increases the motivation. This is according to the authors what they call "*the essential property of internal work motivation*" (p. 84); that good performance fosters positive feelings and the opposite. People tend to withdraw from tasks that bring more frustration than satisfaction, why this is an important point.

### **Growth need strength**

Growth Need Strength refers to a worker's personal need for development. People with high growth need strength will respond more positively to work that is high in motivating potential, than people with less growth need strength. As can be seen in Figure 3.2 the moderating variables affect a person in two different steps of the model. The first step is how strong a worker will experience the different psychological states. The second step is how strongly the worker will respond to this psychological state with internal work motivation. Some individuals with low growth need strength might respond by feeling under pressure with too complex and varying tasks.

## Contextual factors

The two previous moderating variables are on a more personal level; contextual factors however take the effect of the working context into account. Contextual factors do not have a direct impact on motivation on their own, but if a worker is dissatisfied with the contextual factors this will attract attention and reduce the effect of motivating efforts in the job design. There are a number of factors that Hackman and Oldham (1980) mention in the model including:

- *Pay*
- *Job Security*
- *Co-workers*
- *Supervision*

However, this model is developed in a non-construction context why it was decided to introduce an additional factor, Cleanliness. This was in the background interviews, mentioned as an important indicator on how well the site is doing economically, and that it also affects the productivity on site. It was also decided to leave out the job security factor, since there are laws in Sweden protecting employees and regulating who can get fired (Riksdagen, 1982). This was thereby considered to have a very small or no impact on motivation and was thereby left out. The contextual factors used were:

- *Pay*
- *Co-workers*
- *Supervision*
- *Cleanliness*

As mentioned earlier the JCM was used as a basis for the interview guide as well as a part of the theoretical framework for the discussion and the conclusions. Apart from the JCM another theory used in the same chapters is the Self Determination Theory by Deci and Ryan (1985).

## 3.4 Self-Determination Theory

The Self-Determination Theory (SDT) was formed as early as the year 1970 by two researchers, Edward Deci and Richard Ryan, but was not formally accepted as an empirical theory until 1985. However, it was not until the beginning of the 21<sup>st</sup> century it had its breakthrough and was extensively used and applied into research. The fundamental question in SDT is the difference between autonomous motivation and controlled motivation (Gagné and Deci, 2005). Deci and Ryan (2008a) define the two motivations as “*Autonomous motivation involves behaving with a full sense of volition and choice, whereas controlled motivation involves behaving with the experience of pressure and demand toward specific outcomes that comes from forces perceived to be external to the self*”.

By nature, humans are being active, self-motivated, curious and interested (Deci and Ryan, 2008a; Pink, 2009). This however, is not what all people radiate. In different situations, such as at home or at work, people can behave passive and demotivated, which is also recognised in the SDT. These different behaviours are according to the SDT created by the interaction between the nature of people and the social

environment (Deci and Ryan, 2008a). The social environment has a great effect on people's behaviour and motivation, it also has the ability to encourage or counteract the nature of humans. According to Deci and Ryan (2008a) the feeling of being competent, autonomous and related to others are the three main pillars of the SDT. These three pillars are suggested to be the underlying elements for people to be able to attain natural behaviour, see Figure 3.3. These three pillars will be further described below.

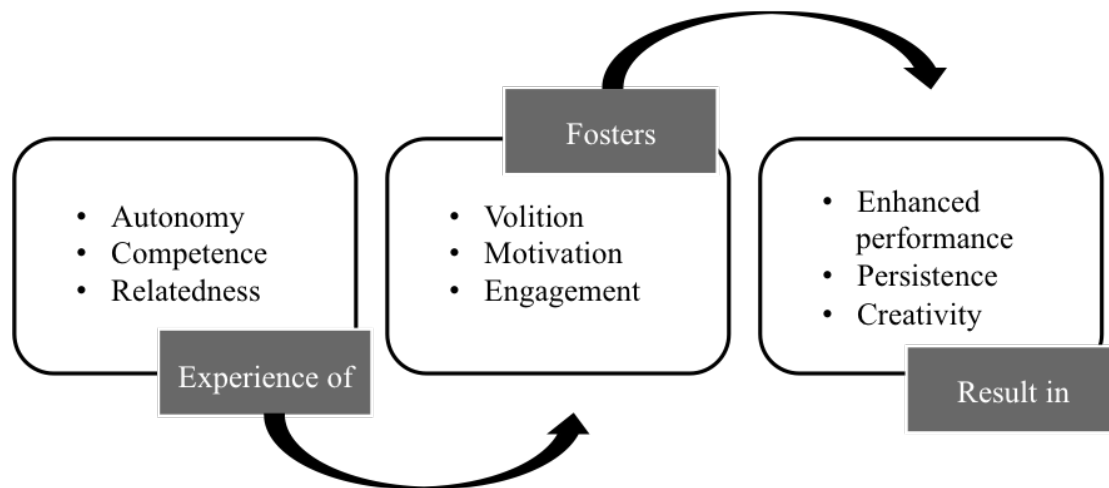


Figure 3.3 The Self-Determination Theory (Deci and Ryan, 1985).

### 3.4.1 Autonomy

A person's behaviour and performance depends largely on the sense of autonomy (Pink, 2009). The meaning of autonomy is that people feel they have the possibility to make their own decisions and actions; having self-determination, which increases the psychological well-being. In a study made by Deci et al. (1989), they investigated how autonomy affected employees at work. From the investigation they concluded that workplaces that supported autonomy had a higher amount of employees who were satisfied with their jobs, as well as feeling trust towards the management. This has been verified in additional studies made by Deci and Ryan (Deci and Ryan, 2008a).

Further these studies have shown that autonomy enhances the workers intrinsic job satisfaction, which also increases the productivity, persistence and creativity of the workers, which favour both the employees and management. Pink (2009) describes one of the potential reasons for autonomy not being enhanced in companies, as the leadership. Usually the perception of leadership is that leaders assume workers need to be rewarded or punished in order to achieve results. If not, the workers will stay immovable. Further the leadership assumes that workers need to be guided in the right direction as soon as they are in movement. This kind of leadership inhibits the feeling of autonomy (Pink, 2009). As mentioned earlier people are inherently motivated and in need of leadership that cultivates this motivation.



### 3.4.2 Competence

The second pillar in SDT is the need for competence. According to Deci and Ryan (2008a), humans have an inherent desire to feel competent. Having the right competence for a task creates satisfaction within the person performing it, which also increases the motivation to further develop one's skills. Contrary, not having the right competences tends to cause frustration and demotivation. Broeck et al. (2010) refers to competence as: *“an affective experience of effectiveness, which results from mastering a task”*. Competence and mastery are two related words in this context, where the latter is defined as the desire to all the time develop and increase one's competence in areas that the person values as important (Pink, 2009). According to Pink (2009) mastery can only be fulfilled through engagement in a task, but also that mastery is ruled by three laws, which are briefly described below:

**Mastery is an approach:** People's own thoughts about themselves, what they think are their limits and abilities will affect what they actually will achieve.

**Mastery is hard to attain:** To achieve mastery one has to be hardworking with long-term goals.

**Mastery is an asymptote:** Mastery can be visualised with an asymptote; it is impossible to completely achieve mastery but one can come really close to it.

Beyond these three rules of mastery flow has to be present. Flow is the highest level of satisfaction people can feel, this can be reached when there is a perfect equilibrium between what a person *has* to do and what he or she *can* do (Pink, 2009). The feeling of being in a flow makes people highly concentrated and satisfied in the present, which commonly makes people forget about the time and space. However, placing this in a working context, one of the reasons for flow not being reached by the employees is that they do not have the right competences to perform their job or that the tasks are too easy and no effort is needed. To avoid this, collaboration and communication between employees and management is necessary (Pink, 2009). Feedback, and particularly positive feedback enhances internal motivation, since it confirms the competence (Deci and Ryan, 2008a). Negative feedback, however, has the opposite effect and decreases people's motivation. Having the right competence for being able to feel flow is necessary to create mastery.

### 3.4.3 Relatedness

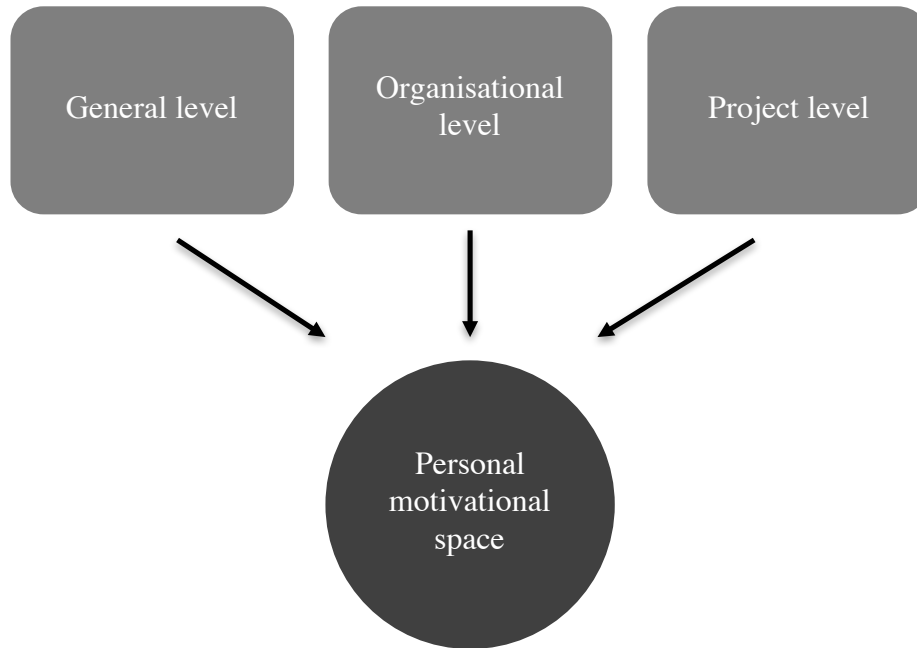
The last pillar in SDT is the need for relatedness or belongingness, which has to be included in order to put the other two pillars into a context. People who have a higher purpose of their work are likely to achieve greater results, since they are generally the most motivated (Pink, 2009). Unlike people only standing on the other two pillars, autonomy and competence, adding relatedness will create a meaning towards the effort they put in. In a working environment where the employees have a feeling of belongingness or are included in a team, they will have a better opportunity to satisfy their need of relatedness (Broeck et al., 2010).

To conclude, the SDT tries to analyse which kind of motivation people have rather than how much motivation they have. Motivation is something that only the

individual can affect; it is not possible to make other people motivated but to create an environment with the right conditions for people to become motivated autonomously (Söderfjell, 2012). A manager asking the question: How can I motivate other people? should instead ask: How can I create conditions where people can motivate themselves?

## 4 Analysis and result

In the analysis of the empirical data the motivational factors found were identified to originate from several different levels both in and outside of the organisation. Due to the way construction companies are organised with different levels, it was decided to divide the themes by the identified level of origin, see Figure 4.1. These levels of origin will be used as a structure for the presentation of the results.



*Figure 4.1 Motivation from different levels where it originates from; general level, organisational level, project level and personal motivational space.*

Accordingly with the analysis of the data, the interviewees have a high focus on the wage and the payment system. The payment system is as earlier mentioned controlled strictly by Byggnads, and since Byggnads is also spanning the entire Swedish construction industry, it is considered that the payment systems are controlled from a general level. It was also clear among the interviewees that the company has a certain “spirit”, something that was identified as a motivational factor. It was thereby considered important to identify where this “spirit” originates from in order to create a better understanding for why workers are motivated by the organisation itself. This level is called the Organisational level. As it seems the “spirit” originates from the higher management who is not involved in production, and many of the factors identified as important concerns what happens at the construction site, it is argued that the site management also has a key role, since they control many of these factors within a project. This level is called Project level. However, motivation cannot be created by management but, they can provide the workers with the right conditions to create a motivating work environment. This environment will be referred to as the personal motivational space.

## 4.1 General level

A common factor among all the workers is the volition to have the opportunity to affect their wage. On a general level, it is clear that the type of payment system has an effect on motivation. In the interviews it was possible to identify differences between workers working with different payment principles. The workers working with piecework payment described the fixed payment workers as lazy and as they drag their feet behind themselves, while the fixed payment workers consider the piecework payment workers as stressed and inaccurate. There is a clear we-and-them-feeling between these workers. More about piecework payment, incentive payment and Byggnads will follow.

### 4.1.1 Piecework payment

According to the interviewees working with piecework payment they experience that their own engagement increases, since they are able to affect how much they will earn above the base wage. This engagement to earn more money, according to the interviewees, makes the workers plan their daily job in a better way and have better communication with the supervisors who are ordering materials and tools. Everyone, including the management, are working towards the most efficient construction process possible, which contributes to a team spirit. One of the interviews states: *“If you are working on piecework payment system and get paid after what you do during the days you make sure that you get the right tools and materials, and you put pressure on the supervisors to make sure you get what you need. If you would have a fixed wage the engagement would not be the same”*.

There is also a high level of humility between the workers working in teams with piecework payment. Even though the age, experience, strength and endurance differ among them, the piecework payment workers divide the total wage equally without reflecting over that in other industries the older workers usually earns more. The workers argue that the younger workers have the ability to work faster and harder while the older people have the experience of how the work should be done. Further, they argue that everyone has been or will be in the same situation, as well as it would have been unfair to work in a team with individual wages. Questions such as *“why should I help him? He earns more than me”* could be asked.

Some of the interviewees' states that working with piecework payment make everyone push themselves harder to earn more money, which may be one of the reasons that few of the workers are able to work until retirement at the age of 65. It is stated in the interviews that they sacrifice their bodies in order to earn more money. To make the processes as efficient as possible the foremen places the same workers to always do the same construction tasks, for example putting up gypsum boards in the apartments, which is a heavy job. According to one of the foremen that was interviewed, they are at the current site he is working at trying to use a schedule for job rotation. He states *“usually you get to know your task very well and then prefer to stick to it, since you will become good at it and thereby be able to perform it faster and make more money to the piecework”*. However, the interviewee argues that it is not good to stick to only one task for too long, it creates repetitive strain injuries to do the same thing for a long time.

### 4.1.2 Incentive payment

The workers interviewed working with incentive payment agree that the incentives are too easy to fulfil. Beyond the base wage to workers has the possibility to earn up to 18 SEK/h, which they always do even though the construction project is running behind or the criterias are not fulfilled according to the workers. As one of the interviewees said *“What they (edn. management) should change with the incentives payment model is that I think they should be a bit harder with some things there. Author: So you usually get full incentives? Yes, that's how it is. Instead of us having to show we deserve the money, they are just rolling in”*. The motivation seems to increase when the possibility to affect the wage exists. Even if it results in that fully incentives will not be paid all the time.

### 4.1.3 The culture of Byggnads

As mentioned in the introduction of this chapter, there is a high focus on wage. It is stated in the interviews that Byggnads, has a main focus on driving wages. In the interviews the interviewees were asked to rank the top five motivators for them and one of the interviewees states that *“The most important factor is the wage; you can't argue with that”*. That undoubtedly states the importance of the wage. However, the same interviewee also stated *“I don't want to earn a lot of money and completely dislike my job. Then I would rather find a different job with less pay”*. It is obvious that there might be other reasons for prioritising the wage first, rather than what they personally think. The wage is on the surface the most important motivational factor but when the interviewees gets the opportunity to describe and analyse different working situations that they have been exposed to, the answers shifts more to the intrinsic motivators. Furthermore, on the individual level the intrinsic motivational factors are weighing higher than the wage but as a team and a member of Byggnads the focus seems to lie on the wage and the extrinsic motivational factors.

## 4.2 Organisational level

On an organisational level, several motivational factors have been identified. Some of the interviewees stated that the company has a certain Tommy Byggare “spirit”. This spirit, according to the interviewees, includes a sense of familiarity in the company and an important motivational factor, according to the interviewees, is the group cohesiveness between workers and management. This factor pervades throughout the whole organisation of Tommy Byggare, from the CEO to the workers. This feeling is according to the workers a strong reason for working at Tommy Byggare and also a reason to stay in the company. The management has a big role of creating this feeling, and the CEO is doing a great work trying to retain it by genuinely showing appreciation, engagement and listening to the workers. One of the interviewees stated *“You can go to Anders (edn. the CEO), or he will come here. He is here maybe once a month and comes out here talking to us, asking if anyone wants to bring up something they don't feel good about”*. The CEO acts to make sure that the workers are satisfied with factors such as payment terms and working conditions. The CEO, the board of directors and the workers are all on the same side regarding the piecework payment system. Tommy Byggare has their own union representative, representing Byggnads in piecework negotiations for the whole company, which is something that according to Gustafsson is uncommon. Other companies have representatives for specific

projects but not for the whole organisation. The foreman who has this responsibility is one of the interviewees in the study and states that he believes that this is one of the reasons for the strong cohesion in the organisation. He states that they are on the same side of the table rather than the opposite, and instead of arguing they are trying to find the best solution for both parties.

One of the workers' stated that *"a construction worker's goal is to earn as much money as possible and the goal of the site manager is to keep the costs as low as possible. If we are efficient and fast the expenses decrease and we get higher wage. Win-win"*. This highly indicates that the organisation has understood the benefit of everyone at all levels working together. Like one of the interviewees said *"it is important to work from the same position as well, not only towards the same goal"*. Even if there is a strong cohesion described in the interviews, more engagement from the middle managers at the construction sites is requested from the interviewees.

### **4.3 Project level**

On a project level the interviewees have stated several factors that have to function in order to cultivate motivation in a project. Flow, is according to the interviewees an important factor when it comes to feeling motivated by the work. The cohesion of the group, piecework, cleanliness and good planning are factors that contribute to good flow. One interviewee states *"You lose the motivation to work if you have to run around looking for things, especially when you are on a piecework system. It's important that you can find a flow"*.

#### **4.3.1 Planning**

When the main contractor, in this case Tommy Byggare, wins a tender, the workers have felt that the company is in too much of a hurry to start the construction, even though the planning is not finished and there is a lack of completed blueprints. The interviewed workers that mention this as an issue agrees that it cause ambiguities. Usually in such circumstance the workers start working from the review documents and they have seen that these usually gets readjusted, which can result in demolition of new built elements. This planning issue, according to the interviewees, depends on diffuse decision making by the supervisors. Not too seldom the supervisor is young and inexperienced and gets the responsibility to manage the workers in situations like above where they do not have the ability to make thoughtful decisions. According to the interviewees experienced supervisors gives confidence as well as it is easier for the supervisor to be a few steps ahead in the planning and give clear directives to the workers, which causes a better flow. These ambiguities are by the workers considered to be a demotivating factor, especially in the starting up of new construction site, since there is a lot of confusion as well as a risk of having to redo work that has already been done. Further discussion about the lack of experienced supervisors will follow in Chapter 5, and in particular in Section 5.1.2.

Another important part of planning is clear communication between the site management and the workers as well as between site management and subcontractors. According to the interviewees, there is room for improvement. Some of the interviewees' request work preparation meetings in order to plan the following work task. These meetings should include both site management and the workers who will

perform the task to make sure everyone knows what material is needed, what the risks are as well as when the task should be done. This would help to create a better flow. Such meeting is also an excellent opportunity for knowledge reversal between the workers and management to avoid doing the same mistakes twice. According to the interviewees it is motivating for them when their knowledge is utilized and they can also affect the planning process. Markus Engström<sup>7</sup>, group executive of commercial properties at Tommy Byggare, who is currently working on creating a template for the company to use, confirms the necessity of these meetings.

### 4.3.2 Cleanliness

A motivational obstacle mentioned by the interviewees is the lack of cleanliness at many construction sites. The lack of cleanliness contributes to irritation among the workers and disturbs the flow when tools and materials are not placed where they should be and time has to be spent searching for it. Hence, this does not only affect the production on the site but also psychological well-being of the workers, because of the experienced frustration. This can thereby be considered an obstacle that not only hinders motivation in general, but especially the flow.

All the interviewees prefer a clean construction site and are aware that cleaning is a part of their job. However, they find it difficult due to the shared workspace with other professions and subcontractors. If one worker ignores to clean up after him or herself, no one else will do it either. One of the interviewees stated that *"No one wants to clean up another person's mess"*. Further, since there are several different professions and subcontractors sharing the workspace, it is hard for the main contractor to prove whom of the subcontractors that are breaching the contract and not cleaning up after themselves. According to the interviewees there are many empty threats of using penalties but with little or no effect. This is consequently utilised by the workers and subcontractors on site. The interviewees argue that it is the main contractor, in this case Tommy Byggare, that sets the level of cleanliness since they have the management on site and usually have the largest workforce. Hence, the site management should be responsible for the communication regarding cleanliness with the subcontractors, which is also confirmed by Engström, who states that there are clear guidelines for cleanliness at the sites from the higher management. Seemingly, the communication between the site management and the subcontractors is deficient since the interviewees agree that this area could be improved. They also agree that solving this issue would contribute to creating a more motivating working environment and a better flow.

Additionally, the safety on the site decreases when rubbish and leftover materials is in the way. As one of the interviewees stated *"it is not possible to have safety inspection when there is stuff everywhere, it is like made to create accidents"*. This issue can have unfortunate consequences. As soon as the site starts to lose its order it is hard to re-establish it without strict orders from the management. Safety and the risk of hurting oneself is something that the interviewees mention as a strong demotivator. Something that will be further evolved around below.

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<sup>7</sup> Markus Engström (Group executive of commercial properties, Tommy Byggare) interviewed 2017-04-04.

### 4.3.3 Safety

The profession as a construction worker is for most of the workers hard on the body, resulting in strain injuries. As mentioned earlier, several of the interviewees have stated that it is very few of the workers that are able to work until retirement at the age of 65. According to the interviewees noise, heavy lifting, dust and dirt are some of the biggest obstacles for creating a motivating environment in the profession. Even though the workers have access to safety equipment they do not always use it; *“sometimes I’m a bit careless and do not use my hearing protectors, thinking: it is just two holes to drill with the drill hammer”*. This indicates that the workers themselves might also carry some of the responsibility to use the protective equipment that is available. However, the older workers that have been in the industry for many years have experienced improvements in form of new equipment to facilitate heavy lifting for instance. There has also been an increased use and harder requirements for safety equipment, which both decreases the impact on the body and, according to the interviewees, increases the motivating potential of the profession.

## 4.4 Personal motivational space

The last level of motivational factors are factors on a personal level, which is named Personal motivational space. Several of the interviewees stated that the decision to become a construction worker was made at an early age, usually due to the background of their parents and grandparents. However, there are many motives for why they have decided to stay in the construction industry; the variety of tasks, the freedom and responsibility for their work, as well as the possibility to be creative and solve problems in their own way. These motivational factors will be further elaborated on below.

### 4.4.1 Professional pride

Professional pride is a commonly used expression among the interviews and one of the interviewees stated *“Whatever I do at work, I should be able to write my name on it when I leave”*. According to the workers interviewed, this professional pride is the quality insurance when working on either piecework payment or incentive payment. The professional pride was also observed when old stories of working experiences were told by the interviewees. High excitement could be seen towards certain previous projects where the workers found satisfaction in the result. One interviewee stated that *“it’s more enjoyable to have built something a bit more high-end than just standard”*. Some of the interviewees also stated that when they feel proud of a project, they take their families there to show them. It is obvious that this pride contributes to the motivation of staying in the industry and also to the motivation of doing a good job.

### 4.4.2 Freedom under responsibility

A quote stated in several interviews is *“Freedom under responsibility”*, which highlights the importance of freedom, creativity and the possibility to choose your own solutions. All of the interviewees state that they have the right knowledge to perform the job, and if not, there is always someone to ask. One of the workers stated *“There are as many ways of doing a task as there are workers”*. Evidently, there is a



need for being able to affect and influence the result and feeling proudness and responsibility of the outcome. Another worker, previously working at a company using a handbook which states exactly how different steps in the construction process should be performed, stated that *“Everyone is supposed to do things the same way, which is a good thought, but you lose the opportunity to be creative”*. This shows the importance of this motivational factor, which allows the workers to take own initiative and challenge themselves.

#### **4.4.3 View result**

Another motivational factor is that there is a visible result in the end of the day. One of the interviewees stated that *“In the morning I’m going into an empty space and when I’m going home in the evening it is suddenly an apartment, that’s kind of fascinating. I can see what happens during the day”*. This indicates the importance of being able to view the result of the work and can hence be considered as an important intrinsic motivator. The interviewees stated that, when they are done with a task it is easy for them to see whether the result is good or not. However, the interviewees stated that they are rarely allowed to see the finished result of the completed project. The reason is that there are only a few workers staying until the very end of a project. A suggestion on how to give all workers a better view of the finished result and thereby increase motivation, is presented in Chapter 5, and in particular Section 5.1.3.

#### **4.4.4 Development**

Most of the interviewees agree that there is an opportunity for personal development at Tommy Byggare. They agree that there are no problems for the company to provide internal educations if the employees ask for it. Different drivers licences to operate construction equipment are example of what is provided by the company. There is also an option for the workers to become supervisors. However, some of the interviewees find this challenging due to lacking competences in computer knowledge. This makes the supervisor position difficult and even though the company is willing to provide such educations there are other arguments from the interviewees against becoming supervisors. As an interviewee stated: *“the supervisor don’t earn a lot more than I do but have more responsibilities. Personally it seems totally idiotic to take a job like that, to work over time. I can go home at 4pm and don’t care. The supervisor has to work afterwards as well. He is responsible to make sure I have got the materials I need and to make sure there is a flow in the work, which means he might have to do some over time. If he makes 3000 SEK (edn. per month) more than I do, I really don’t care. That’s totally fine with me.”* The salary of supervisors is in fact sometimes less than the workers but they have much more responsibility. As the quote above indicates, as a worker it is not motivated to put in the extra effort that is necessary to go further in the hierarchy. Additional reasons for becoming a supervisor will be discussed in Chapter 5, and in particular Section 5.1.1 and Section 5.1.2.

Some of the interviewees have stated that they feel satisfied with their working situation and are not interested in personal development. However, they state that they are satisfied that the opportunity exists. The workers are not very motivated on taking on additional responsibility either. In an interview with Engström he described that he as a manager is not allowed to raise the wage of a single worker even though he or she is doing a great job or taking on a greater responsibility. This can be an explanation to

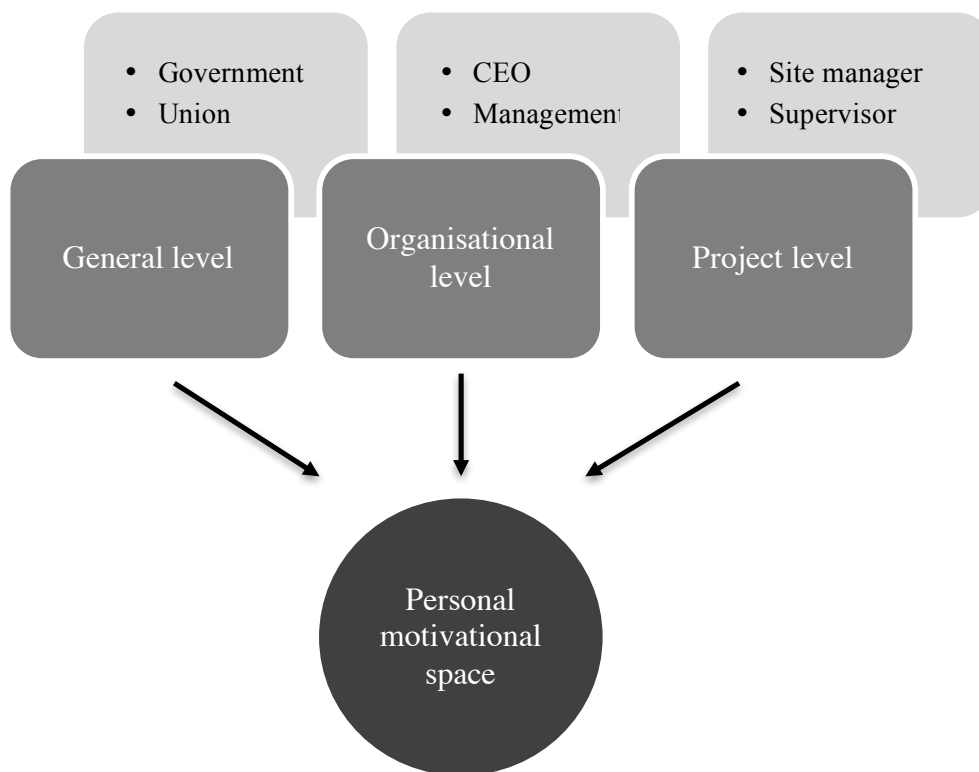
why the workers do not feel motivated towards personal development; they do not get paid for it. As Engström explains, the reason for not being able to raise the wages of talented and engaged workers is due to the rules of Byggnads. They argue that everyone on the construction site should earn the same, even though some workers take on a greater responsibility.

## 5 Discussion

In the first part of this chapter, some of the issues presented in the result will be discussed and potential solutions to presented problems will be described. This part also offers more hands on proposals for solutions to motivational problems in the company studied. In the second part a more theoretical discussion is held. The theoretical framework is discussed in conjunction with the results from the empirical data to establish supporting arguments as well as contradictions for the theories presented in Chapter 3. In the second part the model developed in this study is also discussed.

### 5.1 Discussion of result

In the interviews, a number of issues affecting the personal motivational space were identified as presented in Chapter 4. The personal motivational space are feelings among the workers and are affected by different people at different levels, therefore it is important to identify the responsible person or group of people at each level in order to enhance the personal motivational space, see Figure 5.1.



*Figure 5.1 Motivation from different levels where it originates from; general level, organisational level, project level and personal motivational space. The responsible of the levels are stated as well.*

On a general level the union and the government is considered to have an impact on the motivation of the workers. The union through the strong culture as well as their control over payment systems along with other factors. The Government through rules and laws concerning the workers. On an organisational level, the CEO at Tommy

Byggare has a very important role in affecting the motivation of the workers, it is thereby considered that this could be the case at other companies as well. It was also identified that the middle managers have an affect on the motivation of the workers. On a project level both the site manager and the supervisors have a very important role creating a motivating working environment for the workers.

In this section some solutions, both presented by some of the interviewees as well as own ideas for solutions, will be discussed along with the level of the issue. With the help of the extended model the responsible group of people or person will also be identified.

### **5.1.1 Preventing repetitive strain injuries**

As mentioned in Chapter 4, and in particular Section 4.1.1, few of the workers are able to work until the age of 65 and that it is common that they do the same task for a long time to earn as much money as possible, which increases the risk of repetitive strain injuries. This can be seen as a problem on both a general level, since Byggnads has the piecework system as a mandatory payment principle, but also on a project level since there are possible solutions to the problem on that level. One of the interviewed foremen stated that he was going to implement a job rotation schedule to reduce the strain on the body and also to increase stimulation. This job rotation schedule could be applied within all projects and could be set as a standard from the CEO and the higher management, implemented by the site management.

Another potential solution for the problem would be to recruit more of the older workers to become supervisors after a short education. The older workers are the ones with knowledge and experience, and workers becoming supervisors should be both of organisational interest as the competence of the workers utilises and of self-interest to avoid that strain injuries occur. This inherently leads to another problem described in Chapter 4, and in particular Section 4.3.1, lack of experienced supervisors. Many of the supervisors are young and inexperienced, which affects the motivation of the workers. Further discussion will follow below.

### **5.1.2 Inexperienced supervisors**

At a general level, it could be argued that there is a systematic error regarding the wage distribution in the construction industry. Many of the workers earn more money than the lowest level of supervisors, even though some of the supervisors have 3-5 years' university educations. After completing university studies, the supervisors have, not only forfeited years of salary, but has also taken a loan to pay for the studies, which has to be paid back. When a supervisor then enters the work-market and earns less than a worker, it is obvious that the supervisor will try to develop as quickly as possible and reach higher positions in the company. This fact leads to a high turnover of supervisors, and many of the ones holding the position are young and inexperienced.

If workers were educated to become supervisors they may not feel the same need for further development and might potentially stay in the position longer, which would be beneficial from both a worker's perspective and also from a managerial perspective. With experienced supervisors the probability for the project to work well increases,

which is economically beneficial for the organisation. On a project level, the older workers possess experience of the work from day one and will have a better understanding of the work that has to be done, which according to the interviewees is a motivating factor, since it leads to less errors and better planning.

However, on a personal level, as can be seen in the result, the difference in wage between a worker and a supervisor is so small that it is not considered by many of the workers as being worth the extra responsibility. Aside from the monetary argument, the argument that the workers would receive physically easier work tasks with less risk of strain injuries and thereby might be able to stay in the industry until retirement should make it more attractive for the workers to become supervisors.

Another potential reason on a general level for remaining workers is that if workers change position from a worker to a supervisor they will also change union. As mentioned before the construction worker union, Byggnads, is very strong and it could be argued that leaving the union is probably hard for many of the workers, since they most likely could be seen as betrayers. A solution for this could be for Byggnads to allow workers who change position to stay in the worker union.

### **5.1.3 Establishing a better connection to the result**

In Chapter 4, and in particular Section 4.4.3, the importance of seeing the results of what you are doing and how it contributes to motivation, is stated by one of the interviewees. It has been identified as an important area of improvement and a suggestion for how it could be connected more to the finished result is to let the workers look at the finished house in virtual reality when the house is fully furnished and functional. This could increase motivation since not all workers will be working on the project until completion and according to the workers it is appreciated to see the result, which is also in line with the JCM and task identity (Hackman and Oldham, 1980). The problem could be argued to be on an organisational level since it would be up to the company to provide such an opportunity. The effect of having a better connection would however, be on a personal level of the workers and could potentially enhance the motivation.

### **5.1.4 Harder requirements for incentive payment workers**

As presented in Chapter 4, and in particular Section 4.1.2, the workers agree that the incentives are too easy to fulfil. They argue that if the full incentive is paid every time, even if the result of each parameter is not satisfactory fulfilled, the motivation to do a good job decreases. On a personal level the ability to affect the wage seems important, and if the incentives are fully paid there is nothing for the workers to strive for. This is an organisational problem, that more time should be spent by managers evaluating the results of the different parameters in the incentive. If this is not done, the idea of the incentive seems rather pointless.

### **5.1.5 Engagement from middle managers**

Like mentioned in Chapter 4, and in particular Section 4.2, there is a strong cohesion in the organisation of Tommy Byggare. However, more engagement from the middle managers at the construction sites is requested from the interviewees. Short visits to check how the work is going, to show appreciation, give the workers opportunity to

ask questions individually and to listen as well as giving feedback is important according to the interviewees. Appreciation in form of “fika” is also appreciated by the workers, it's not the bun itself that matters according to them, more the act of doing it. They also mention that doing something every now and then outside of the working environment is important. For example, to have dinner and a beer together. According to the workers this is something that sustains a strong cohesiveness on all levels, which is a motivational factor for the workers. Such activities could be considered both on an organisational level and on a project level.

## **5.2 Discussion of relation to theory**

This section aims to tie the results presented in Chapter 4 to the theoretical framework presented in Chapter 3, by discussing how the empirical data collected in this study supports or contradict previous research as well as the theory used in the theoretical framework. The validity of the study will also be discussed as well as the model created in the study.

### **5.2.1 Supporting arguments**

Feedback is a part of both the SDT as well as the JCM, in the JCM the feedback referred to is the one received from the job itself, and according to all the interviewees it is easy for them to see whether they have done a good job or not. This according to the interviewees, is also related to the professional pride and the fact that you want to be proud of what you have accomplished. The feedback in SDT refers more to the feedback, and especially positive feedback, from other people like co-workers or supervisors. According to the interviewees the feedback is mostly of positive kind but the need for feedback is varying among the interviewees. Some state that the appreciation in form of “fika” on Fridays is more important than what the supervisors tell you, but the majority agrees that some form of positive feedback is motivating.

The second pillar in SDT, competence, can be connected to one of the moderating variables in the JCM, Knowledge and skills. Competence refers to having the right knowledge to perform a task. Knowledge and skill also refers to the feeling of being superior and also the opposite, that the lack of proper knowledge fosters frustration. All the interviewees states that they have the right knowledge to perform their job in a good way and that when there are tasks unknown to them there is always someone to ask, either a colleague or a supervisor. Hence, it seems in the like this moderating variable is fulfilled and will thereby not act as a demotivator according to theory.

An important motivating factor mentioned under competence in the SDT is flow. This is something the majority of the workers refer to as one of the main motivators. As can be seen in the result, the workers' states that the supervisor needs to order all the material and make sure the right tools are at site to minimise interruptions. Cleanliness is also mentioned as important in order to minimise time spent searching for material and tools. The communication between the workers and management is also important. The main purpose of enhancing these motivational factors is to create a flow in the work. It could be argued that this flow is partly desired not only for the intrinsic feeling of flow, but for the most part in order to earn more money to the piecework. In this context, flow is thereby important since it seems to contribute to both intrinsic and extrinsic motivation.

In the article by Borcharding and Oglesby (1974) presented in Chapter 3, and in particular Section 3.2, it is stated that dissatisfaction is created by poor management, which leads to error in planning and material procurement. This in its turn leads to hindered production pace, which is also supported by the data collected in this study. The interviewees state that good management is important in order to create flow, which as earlier mentioned can be seen as both an intrinsic, but also an extrinsic motivator.

According to Deci and Ryan (2000), the degree of autonomy and self-determination within extrinsic motivation can vary and studies have shown that extrinsic motivation in combination with self-determination generates a higher degree of engagement. In this study the data has shown that the piecework is something that to a great extent contributes to better engagement according to the interviewees. The interviewees also agree that the level of autonomy is high within the industry and that there is an opportunity to choose whether they want to use a piecework system or a fixed wage. To use the piecework system, according to the interviewees increases the extrinsic motivation since there is an opportunity to earn more money. Deci and Ryan (2000) also concludes that workplaces that support autonomy have a higher amount of employees who are satisfied with their jobs. As mentioned above, this study shows that there is a high level of autonomy, and the data also shows a high level of job satisfaction among the interviewees, which supports the conclusion by Deci and Ryan (2000).

Pink (2009) states that people are inherently motivated and in the need of leadership that cultivates this motivation. Some of the interviewees were, as mentioned before, previously working at a company where a handbook specifying each work task was used in order to establish that all the tasks were performed correctly. The interviewee stated that this kills the creativity, and the rest of the data also shows a high appreciation for freedom and creativity. The hypothesis stated by Pink (2009) is hence supported by this study as well.

### **5.2.2 Contradictions**

In the JCM, Hackman and Oldham (1980) states that task significance is an important motivator in the job. This also aligns with the SDT and specifically relatedness, which states that unlike people only standing on the other two pillars, autonomy and competence, adding relatedness will create a meaning and a higher purpose towards the effort they put in (Pink, 2009). In the interviews however, the interviewees states that they rarely reflect on how they are contributing to a higher purpose; that they are actually creating value for a customer and contributing to the society. They state that seeing a higher purpose is not an important motivational factor, which is contradictory to both JCM and SDT. However, relatedness also includes the feeling of being in a team and according to the interviewees, the Tommy Byggare “spirit”, piece work, and the fact that everyone have equal pay is strongly contributing to a team spirit at the work site.

Skill variety should also have a positive impact on motivation according to Hackman and Oldham (1980). The workers however are questioning why they would want to change the task that they are doing. They state that it would probably be possible, but are questioning the reason why they would do it. They argue that someone else has to

do that job instead, and that it would not be fair. It seems thereby that skill variety is not very important to the workers either, which contradicts the theory of Hackman and Oldham (1980).

According to Hackman and Oldham (1980) people with a high growth need should respond more positively to jobs high on motivation. A majority of the interviewees states that they do not feel a high growth need. However, many of them appreciate the autonomy and the responsibilities of the job, which is slightly contradictory to what Hackman and Oldham (1980) states.

### **5.2.3 Validity of the study**

This section will discuss the reasons and implications why this study has been performed. Potential biases of the study will also be mentioned.

The Job Characteristic Model and the Self- Determination Theory was chosen to be the foundation of the theoretical framework and the interview questions were based on the Job Characteristic model; this may have biased the questions and further the analysis.

Olomolaiye and Price (1989) have stated the following about workers in the construction industry *“its workers should be separately studied if a specific knowledge of their motivation is to be acquired”*. This shows the validity of the chosen way of executing this study and also supports the reason to formulate a model derived from a construction industry context. Olomolaiye and Price (1989) also argue that there are authors who have addressed construction operative motivation from their own view rather from the view of the workers, why the view of the workers was chosen for this study.

Maloney and McFillen (1986) conclude that construction workers do not see their jobs as enriched and that restructuring is needed to make the job itself more interesting. Olomolaiye and Price (1989) states that this contradict what is concluded in previous studies and indicates that further research is needed. This study contradicts the fact that restructuring is needed since the main focus in the interviews has been on how to improve the contextual factors, which indicates a limited importance of the job characteristics. Thereby the previous studies are supported. The indication that further research is necessary made by Olomolaiye and Price (1989), also supports the validity of the study.

### **5.2.4 Modelling of the results**

Judging by the implications from previous research, that there is a need to study the construction industry separately and since a similar approach has not been identified in earlier studies, it was decided to form a model specifically for the construction industry. This might be due to the fact that previous research (Nave, 1968; Schrader, 1972; Haseltine, 1976; Neal, 1979; Bennis, 1972; Heneman and Schwab, 1972; Olomolaiye and Ogunlana, 1988 and Wilson, 1979) are only applying motivational theories that are, as earlier mentioned, not derived from a construction industry context. This model however, is derived from a construction industry context and is solely considering the motivational factors identified within the industry. The factors



are then grouped together by each of their origins to create an understanding for which factors, at what level, is creating the settings for a motivating work environment.

## 6 Conclusion

The purpose of this study was to identify which factors that have to be met in order to create a motivating work environment from a worker's perspective. The purpose was also to establish whether existing motivational theories are applicable on the construction industry. Since this is something that has received a lot of critique in previous research it was decided to form a new model specifically for the construction industry. In this study a number of important motivational factors have been identified and grouped together based on their origin to create a motivational model for the construction industry. This model is focusing on making the origin of the motivational factors clear in order to create working conditions where the workers can motivate themselves. The following research questions will be answered below:

- What are the main motivational factors for workers in the construction industry?
- Where do the motivational factors originate from?
- What can be done to enhance motivation from a worker's perspective?

### 6.1 Main motivational factors

The origins of the different motivational factors are identified to be four different levels, general level, organisational level, project level and personal level. The first three levels establish a motivating work environment and then it is up to each individual to utilise it on the personal level, in the personal motivational space. The following factors have been identified:

General level:

- Wage is an important motivational factor, but it is not the single most important factor. Well-being at the workplace seems to be valued higher considering the latent data.

Organisational level:

- The focus in the interviews has been on the contextual factors. It thereby seems like effort should be made to ensure the workers are satisfied with the contextual factors in order to shift more importance to the core job characteristics and job enlargement.
- The fact that the interviewed workers in the organisation of Tommy Byggare agrees about the piecework system creates cohesion among the different levels in the company and also contributes to the Tommy Byggare "spirit" earlier described. The CEO of the company also strongly contributes to this spirit.

Project level:

- To ensure the work is not interrupted and that there is feeling of flow, factors such as planning, cleanliness and experienced supervisors are important.

Personal level:

- On a personal level, factors such as feeling professional pride, responsibility, autonomy and to be able to view the final result of their own work, has been mentioned as important motivational factors.

- Important demotivators identified are the risk of repetitive strain injuries as well as the dusty and dirty working environment.

To focus on increasing the intrinsic motivators through job enlargement should be of interest for the organisation since no money is directly involved. Also, according to SDT productivity and persistence of the workers should increase with increased intrinsic motivation, why it should be of interest for the company to increase motivation among the workers. Short proposals on how this could be done will follow below.

## **6.2 Short proposals for solutions**

The interviewed workers at Tommy Byggare seem to be satisfied with their job. However, there are potential areas of improvement identified, to increase motivation and personal well-being. Below the origin of the issues will be presented accordingly with the model, see Figure 6.1, to visualise which persons at what level are responsible for solving these problems.

General level:

- Allowing workers becoming supervisors to stay in the workers' union could make it easier for the workers to change position.
- Instead of only using a monetary argument to motivate workers to become supervisors, the argument of physically easier work tasks could be used in order for workers to be able to stay in the industry longer. This should be of interest both on a general level and on an organisational level.

Organisational level:

- The construction workers interviewed which works with the incentive payment model agrees that the incentives are too easy to fulfil and that harder incentives would increase motivation.
- The workers all agree that more engagement from the middle management would increase their motivation.
- To establish a better connection to the results, which has been described as a motivational factor, virtual reality could be used.

Project level:

- Specific attention has to be given to the fact that all the workers are individuals with different preferences and different views regarding motivational factors.
- Another solution to reduce repetitive strain injuries is job rotation, which decreases the demotivational factor that the work is hard on the body.

## **6.3 Recommendations for further research**

In this study, a number of interesting areas for further research were discovered. A few of which will be mentioned below.

One interesting area of research would be to interview workers who have decided to become supervisors and ask why they decided to take this step. This would be

interesting, not only within the area of motivation, but in general in order for the workers to keep on working until retirement, at the age of 65.

As stated in the discussion, this study does not make any difference between workers working with or without piecework payment. An interesting approach would be to conduct a comparative study between the two groups of workers to see whether their motivations are inherently different or if the motivation to work is shared between the two groups of workers.

As stated, the interviewed workers at Tommy Byggare generally seem rather motivated. It would thereby be of interest to find workers that do not possess the same motivation to be able to identify their demotivating factors. In this study the case has been rather the opposite, identifying what factors makes already motivated workers motivated.

## Reference list

- Allabolag (2017) *Tommy Byggare AB*. <https://goo.gl/jxXVLI> (2017-04-18).
- Bennis, W.G. (1972) *Chairman mac in perspective*. Boston: Harvard Business Review.
- Borcherding, J.D. and Oglesby, C.H. (1974) Construction productivity and job satisfaction. *Journal of Construction Division ASCE*, vol. 100, no. 3, pp. 413-431.
- Boverket (2016) *Reviderad prognos över behovet av nya bostäder till 2025*. <https://goo.gl/CbBvC8> (2017-04-19).
- Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77-101.
- Broeck, A., Vansteenkiste, M., Witte, H., Soenens, B. and Lens, W. (2010) Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*, vol. 83, no. 4, pp. 981-1002.
- Bryman, A. and Bell, E. (2011) *Business research methods*. 3th edn. Oxford: Oxford University Press.
- Business Dictionary (2017) *Motivation*. <https://goo.gl/vGi1C1> (2017-04-30).
- Byggnads (2010) *BYGGAVTALET 2010 Kollektivavtal mellan Sveriges Byggindustrier och Svenska Byggnadsarbetareförbundet*. <https://goo.gl/4NCy2u> (2017-04-18).
- Cardoso, P., Dominguez, C. and Paiva, A. (2015) Hints to Improve Motivation in Construction Companies, *Procedia Computer Science*, vol. 64, pp. 1200-1207.
- Communication Theory (2017) *Maslow's Heirarchy of Needs*. <https://goo.gl/8oA2s9> (2017-05-18)
- Deci, E.L. (1975) *Intrinsic Motivation*. Boston: Springer US.
- Deci, E.L., Connell, J.P. and Ryan, R.M. (1989) Self-Determination in a Work Organization. *Journal of Applied Psychology*, vol. 74, no. 4, pp. 580-590.
- Deci, E.L. and Ryan, R.M. (1985) *Intrinsic Motivation and Self-Determination in Human Behavior*. 1st edn. Boston: Springer US.
- Deci, E.L. and Ryan, R.M. (2008a) Facilitating Optimal Motivation and Psychological Well-Being Across Life's Domains. *Canadian Psychology/Psychologie canadienne*, vol. 49, no. 1, pp. 14-23.
- Deci, E.L. and Ryan, R.M. (2008b) Self-Determination Theory: A Macrotheory of Human Motivation, Development, and Health. *Canadian Psychology/Psychologie canadienne*, vol. 49, no. 3, pp. 182-185.
- Gagné, M. and Deci, E.L. (2005) Self-Determination Theory and Work Motivation. *Journal of Organizational Behavior*, vol. 26, no. 4, pp. 331-362.
- Hackman, J.R. and Oldham, G.R. (1980) *Work Redesign*. Reading: Addison-Wesley.
- Haseltine, C.S. (1976) Motivation of construction workers. *Journal of Construction Division ASCE*, vol. 102, pp. 497-509.
- Heneman, H.G. and Schwab, D.P. (1972) Evaluation of research on expectancy theory predictions of employee performance. *Psychological Bulletin*, vol. 78, no. 1, pp. 1-9.
- Herzberg, F. (1966) *Work and the Nature of Man*. Cleveland: World Publishing.
- Kvale, S. and Brinkmann, S. (2009) *Den kvalitativa forskningsintervjun*. 2nd edn. Lund: Studentlitteratur.
- Larsson, M. (2015) Lönerapport 2015 Löner och löneutveckling år 1913–2014 efter klass och kön. *LO*. <https://goo.gl/WvN5mm> (2017-04-18).

- Maloney, W.F. and McFillen, J.M. (1983) Research Needs in Construction Worker Performance. *Journal of Construction Engineering and Management*, vol. 109, no. 2, pp. 245-254.
- Maloney, W.F. and McFillen, J.M. (1985) Valence of and Satisfaction with Job Outcomes. *Journal of Construction Engineering and Management*, vol. 111, no. 1, pp. 53-73.
- Maloney, W.F. and McFillen, J.M. (1986) Motivational Implications of Construction Work. *Journal of Construction Engineering and Management*, vol. 112, no. 1, pp. 137-151.
- Maslow, A.H. (1943) A theory of human motivation. *Psychological Review*, vol. 50, no. 4, pp. 370-396.
- Nave, H.J. (1968) Construction personnel management. *Journal of Construction Division ASCE*, vol. 94, pp. 95-105.
- Neal, R.H. (1979) Motivation of construction workers; theory and practice. *CIOB site management information service*, No. 78.
- Olomolaiye, P.O. and Ogunlana, S.O. (1988) A survey of construction operative motivation on selected sites in Nigeria. *Building and Environment*, vol. 23, no. 3, pp. 179-185.
- Olomolaiye, P.O. and Price, A.D.F. (1989) A review of construction operative motivation. *Building and Environment*, vol. 24, no. 3, pp. 279-287.
- Pink, D.H. (2009) *Drive: the surprising truth about what motivates us*. New York: Riverhead Books.
- Riksdagen (1982) *Lag (1982:80) om anställningsskydd*. <https://goo.gl/ITyEvK> (2017-04-28).
- Rollinson, D. (2008) *Organizational Behaviour and Analysis: An Integrated Approach*. Harlow: Prentice Hall.
- Ryan, R.M. and Deci, E.L. (2000) Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, vol. 25, no. 1, pp. 54-67.
- SCB (2017) *Över 60 000 lägenheter påbörjade under 2016*. <https://goo.gl/3TKjOS> (2017-04-19).
- Schrader, C.R. (1972) Motivation of construction craftsmen. *Journal of Construction Division ASCE*, vol. 98, pp. 257-273.
- Wilson, A.J. (1979) *Need-important and need-satisfaction for construction operatives*. Loughborough: Loughborough University of Technology. (MSc project report).
- Söderfjell, S. (2012) *Behovsanpassat ledarskap – att skapa förutsättningar för motivation, prestation och välbefinnande*. Visby: Nomen förlag.

## **Oral reference list**

- Axelsson, A. (CEO, Tommy Byggare) (2017-03-10) Oral reference. Interviewed at the office of Tommy Byggare in Gårda, Göteborg.
- Engström, M. (Group executive of commercial properties, Tommy Byggare) (2017-04-04) Oral reference. Interviewed at the office of Tommy Byggare in Gårda, Göteborg.
- Gustafsson, O. (Human Resources Manager, Tommy Byggare) (2017-02-02) Oral reference. Interviewed at the office of Tommy Byggare in Gårda, Göteborg.
- Johansson, R. (Director of contract agreement, Byggnads) (2017-02-02) Oral reference. Interviewed at the office of Tommy Byggare in Gårda, Göteborg.
- Larsson, T. (Human Resources Manager, Tommy Byggare) (2017-01-23) Oral reference. Interviewed at the office of Tommy Byggare in Gårda, Göteborg.

# Appendix

## Appendix 1 Intervjufrågor - Svenska

### Generellt

1. Berätta lite om hur du hamnade i byggbranschen.
2. Hur länge har du jobbat i byggbranschen?
3. Hur länge har du jobbat på Tommy Byggare?
4. Berätta lite mer om ditt jobb:
  - a. Vad gör du på jobbet just nu?
  - b. Vad är motivation för dig?
  - c. Vad är det som motiverar dig till att gå till jobbet?
  - d. Är du nöjd med ditt jobb?
  - e. Vad är viktigt för att det ska funka bra?
5. Vad är mindre bra med ditt jobb?
  - a. Hur kan det bli bättre?

### Job Characteristics Model

#### *Core job characteristics*

##### Autonomy

6. Har du möjlighet att vara med och påverka hur ni arbetar?
  - a. Skulle du vilja ha mer ansvar? Varför?
  - b. Om du tilldelas ansvaret för en uppgift, exempelvis att slutföra en lägenhet, hur skulle det påverka dig/resultatet?
  - c. Tycker du att du får instruktioner om vad det är du ska göra eller hur du ska göra en uppgift?

##### Skill variety

7. Känner du att du ges möjlighet att använda dig av flera olika typer av kunskap och erfarenhet i ditt arbete?

##### Task identity

8. Har du möjlighet att slutföra ett jobb och se slutresultatet?
  - a. Hur skulle det påverka dig att få träffa kunden som ska bo i lägenheterna?

##### Task significance

9. Känner du att du förstår varför det du gör är viktigt? Att du är med och utvecklar samhället.
10. Vem anser du att du jobbar för?

##### Feedback from job

11. På vilket sätt får du feedback när du utfört ett arbete?
  - a. Kan du själv se om du gjort ett gott jobb?



### *Moderating variables*

#### Knowledge and skill

12. Känner du att du har tillräckligt med kunskap för att göra ditt jobb på ett bra sätt?

#### Growth need strength

13. Hur ser du på dina utvecklingsmöjligheter?

#### Contextual factor (Arbetsledning)

14. Hur påverkar arbetsledningen din motivation?
  - a. Tycker du att ni jobbar mot samma mål?
  - b. Vad kan arbetsledningen göra annorlunda för att öka motivationen hos dig?

#### Contextual factor (Kollegor)

15. Hur fungerar samarbetet med andra yrkesgrupper?
  - a. Hur påverkar det dig?

#### Contextual factor (Städning)

16. Påverkar ordningen på arbetsplatsen din motivation?
  - a. Hur skapas bättre ordning på arbetsplatsen?

#### Contextual factor (Lön)

17. Hur påverkar lönen din motivation?
  - a. Hur påverkar lönesystemet motivationen hos dig?
    - i. Vad påverkas av lönesystemet? *Arbetsmiljö, kvalite?*
  - b. Beskriv fördelarna och nackdelarna med att gå på ackord.
    - i. Vilken löneform föredrar du?
18. Vad förutom lönen är viktigt?

### **Övrigt**

19. Vilka är de 5 viktigaste faktorerna som motiverar dig? Rangordna dem.
20. Något du skulle vilja tillägga?

## Appendix 2 Interview questions - English

### In general

1. Tell us about how you got into the construction industry?
2. For how long have you been working in the construction industry?
3. For how long have you been working at Tommy Byggare?
4. Tell us a bit more about your job:
  - a. What are you doing at work at the moment?
  - b. What is motivation to you?
  - c. What is motivating you to go to work?
  - d. Are you satisfied with your job?
  - e. What is the most important factor for your job to work well?
5. What is less satisfactory with your job?
  - a. How could this be improved?

### Job Characteristics Model

#### *Core job characteristics*

##### Autonomy

6. Do you have the opportunity to affect how you are working?
  - a. Would you like to have more responsibilities? Why?
  - b. If you were assigned the responsibility for a certain task, for example the completion of an apartment, how would it affect you/the result?
  - c. Do you get instructions on what you should do or how you should do it?

##### Skill variety

7. Do you feel like you get the opportunity to utilise a variety of skills and experiences in your work?

##### Task identity

8. Do you have the opportunity to finish a task and to see the result of it?
  - a. How would it affect you to meet the customers who will live in the apartments?

##### Task significance

9. Do you feel like you know why the work you do is important? That you are contributing to the society?
10. Who do you consider yourself to work for?

#### Feedback from job

11. In what way do you receive feedback when you have performed a task?
  - a. Can you see for yourself if you have done a good job?

#### *Moderating variables*

##### Knowledge and skill

12. Do you feel that you have sufficient knowledge to perform your work in a good way?

Growth need strength

13. What do you consider about your opportunities for personal development?

Contextual factor (Supervision)

14. How does the supervisor's affect your motivation?
- a. Do you think you are working towards the same goal?
  - b. What could the supervisors do differently to increase your motivation?

Contextual factor (Co-workers)

15. How does the cooperation with sub-contractors work?
- a. How does it affect you?

Contextual factor (Cleanliness)

16. Does the cleanliness of a construction site affect your motivation?
- a. How could better order be established on a construction site?

Contextual factor (Pay)

17. How does wage affect your motivation?
- a. How does the payment system affect your motivation?
    - i. What is affected by the payment system? *Working environment, quality?*
  - b. Describe the advantages and disadvantages of working with a piecework system.
    - i. What payment system do you prefer?
18. What except the wage is important to you?

### **Others**

19. What are the 5 most important factors motivating you? Rank them.
20. Is there anything you want to add?