Strengthening the employer brand image

Experimentation of proactive recruitment related activities

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Abstract

The labor market in Norway is characterized as having low unemployment and the competition for hiring is tough. This can especially be seen in engineering businesses where the businesses are all competing for the same people, in the same recruitment market, to the same potential employees. The potential employees can practically choose which company they want to work with. The competing companies mainly appear on the same media and marketing channels, as well as at the same job fairs. Recruitment related activities are important as these can contribute to maintain long-term competitive advantages. Organizations with strong brand identities are preferred to those with weak or negative brand identities.

The main objective in this study is to research and understand how advertisement and proactive recruitment activities through LinkedIn affects the employer brand image. This is investigated with the use of advertisement, different communication strategies on LinkedIn and the participant's involvement. The study is based on theory from customer-based brand equity and is integrated to theory of employer brand image.

The purpose of this study is to obtain insight in the effects of recruitment related communication through LinkedIn and through advertisement.

Findings show that there are no significant relationships when recruitment related communication through LinkedIn is used. There is a significant relationship between advertisement and the intention to apply for a job. Interestingly there are findings of involvement having a mediator effect on the intention to apply for a job.

Preface

This is my master thesis in marketing at Buskerud and Vestfold University College. There are many interesting topics to choose from within the field of marketing, so when selecting a topic for this thesis there were several topics of interest. Choosing the topic of employer branding lays close to my daily focus at my current job and is also a topic I have personal interest in. It was important for me to choose a topic that is universal in relevance and a good platform for future job opportunities and further studies. The topic is getting more and more acknowledgement both in marketing research and within Human Resource research.

I want to thank my supervisor Cathrine von Ibenfeldt. Thank you for your patience and guidance all the way through my work with the thesis. You have motivated me, pushed me, and given me a lot of valuable input. Thank you for being forward thinking and solution orientated. Eureka!

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Index

1.0 Introduction 5

1.1 Theory basis 5

1.2 Practical usage 6

1.3 Research focus 7

1.4 The structure of this paper 8

1.5 Searching for literature 8

2.0 Theory 9

2.1 Recruitment 10

2.1.1 Recruitment through social media 11

2.2 Customer based brand equity 15

2.2.1 Employer brand image 16

2.2.2 Attitude 19

2.2.3 Perceived job attributes 21

2.2.4 Intention to apply for job 22

2.3 Communication strategies 23

2.3.1 Advertisement 24

2.3.2 Elaboration Likelihood Model 25

2.3.3 Proactive recruitment strategy as involvement 27

2.3.4 Controlling variable – Involvement in seeking an employer of choice 28

3.0 Hypothesis and research model 29

4.0 Research methods 32

4.1 Research design 32

4.1.1 Method approach 34

4.1.2 Validity of experiments 36

4.1.3 Conditions for causality 37

4.2 Population and sample group 38

4.3 Measurement....40
4.3.1 Measurement models....41
4.3.2 Employer Brand Image....42
4.3.2 Recruitment related practices....45
4.3.3Proactive recruitment....45
4.3.4 Controlling variables....46
4.4 Data collection....47
4.4.1 Design of experiment....47
4.4.2. Pre-test....48
4.4.3. Distribution of the experiment....48
4.5 Research ethics....49
5.0 Analyze of experiments....51
5.1 Subjects in the experiment....51
5.2 Missing answers....52
5.3 Descriptive statistics....53
5.4 Validity and reliability....55
5.4.1 Convergent validity....57
5.4.2 Divergent validity....59
5.4.3 Reliability....60
5.5 Index of constructs....61
5.6 Discriminant validity....61
5.7 Testing of hypothesis....62
5.7.1 Assumptions for MANOVA analysis....62
5.7.2 Testing of hypothesis using MANOVA....64
5.7.3 Controlling variables....71
5.8 Additional analysis....73
5.9 Summary of analysis and testing of hypotheses....75
6.0 Discussion and implications....76

6.1. Theoretical implications 76

6.1.1 Advertisement affecting employer brand image 77

6.1.2 Proactive recruitment related activities through LinkedIn 77

6.1.3 Moderating effect 81

6.2 Practical implications 81

6.3 Limitations 81

6.4 Further research 83

References 85

Appendix 91

Tables

Table 1 - Overview of experiment 35

Table 2 - Design of study – 3X2 factorial design 36

Table 3 - Indicators – attitudes 43

Table 4 - Indicators – application intentions 44

Table 5 - Indicators – job attributes 45

Table 6 Indicators – involvement 47

Table 7 - Reliability 60

Table 8 – Index of constructs 61

Table 9 - Summary of analysis and testing of hypotheses 75

Figures

Figure 1 - AIDA 24

Figure 2 - Research model 31

1.0 Introduction

In 2012, the labor market in Norway is characterized as having low unemployment. With only 2,6% rate of unemployment in 2013 we can characterize the work market in Norway as nearly saturated (Statistisk sentralbyrå, 2014). For this reason, the competition for hiring is tough. This can especially be seen in engineering businesses where the businesses are all competing for the same people, in the same recruitment market, to the same potential employees. The potential employees can practically choose which company they want to work for. The competing companies mainly appear on the same media and marketing channels, as well as at the same job fairs.

Since there are relatively few students studying to become engineers and many businesses wanting to expand their company in the country, companies need to find ways to attract potential new employees. Companies need to find ways to differentiate and market themselves and use recruitment communication. The competition of work force within engineering in Norway is high, therefor marketers and Human Resource departments need to understand the customer behavior (customer being potential new employees) as a basis for making better strategic decisions about targeting and positioning the company for this market, as well as better tactical decisions about specific marketing mix actions (Keller, 1993a).

1.1 Theory basis

As a theoretical basis, the customer-based theory, communication strategies and branding concepts will be presented. These theories are important as they all reflect the importance of creating long-term competitive advantages for companies. The reason to focus on the

chosen concepts is because currently there is lacking research on how these concepts affect each other across one another.

Employer branding is a relatively new concept that received more attention from the practitioners than academics and therefore it can be assumed that the theoretical basis is not fully developed (Backhaus and Tikoo, 2004). Employer Branding is a growing focus area for companies and is seen as an important area for increasing the positioning of the company for recruitment purposes (Berthon et al., 2005). Focus on these areas will give companies overviews of areas to improve their communication towards target groups.

Additionally the concept of recruitment through social media is relatively new and is a concept without a lot of research (Davison et al., 2011). Communication strategies and advertisement as a way of persuasion and attitude changes (Petty et al., 1983, Keller, 1993) are topics that are widely discussed. Even so, there is little on how these effect or are affected by the use of social media for recruitment related purposes. Advertising can be particularly beneficial when consumers do not have direct experience with a brand, because it provides specific information about attributes relevant to consumers' decisions and may result in positive attitudes toward the brand (Keller, 1993b). The notion of that companies using LinkedIn as a communication channel to actively promote their brand has been little discussed earlier. Company communication through LinkedIn can be seen as a form of involvement.

I will attempt to develop theory within my research field Marketing. The result will hopefully be valuable and have some importance to the research area.

1.2 Practical usage

The practical relevance of this study lies in the usage of new media for recruitment purposes. The recruitment market is tough as there is a need for a large amount of work

force, especially within engineering businesses in Norway. The recruitment situation is changing; companies are more accustomed to people looking for employment themselves, seeking out companies for employment. The situation has changed, now employers have to use new methods to attract potential employees. For this reason companies wanting to recruit work force need to find alternative methods for increasing the attention and recognition by potential new employees. They have to seek out the channels and arenas were potential new hires are. Findings from this study may contribute theoretically to the literature on the use of social media and recruitment in general. This can give human resources, recruiters and recruitment agencies new ways of finding the right people for jobs and maintaining the desired and requested recruitment flow. Additionally finding ways of increasing the employer brand will enhance the added value. For this reason alone finding ways to enhance communication with the target group is valuable.

1.3 Research focus

According to Yin (2009) defining the research question is probably the most important step to be taken in a research study. The key is to understand that the research questions have both substance (what the study is about) and form (what research methods will be used). Although there has been a lot of research on recruitment topics, we still do not know a lot about why recruitment activities have the effects that they do (Breaugh and Starke, 2000, in Lemmink et al., 2003). The problem to be addressed in this study will be related to the challenges presented in the introduction. The problem is as follows: How can companies differentiate themselves and optimize their brand when recruiting through social media? From this problem I have chosen this approach and research question: *How does proactive recruitment communication through LinkedIn affect the employer brand image compared to well-known recruitment related communication activities?*

1.4 The structure of this paper

The structure of this paper contains six chapters. The first chapter introduces the themes that will be presented throughout this paper. Additionally, the research question is presented and includes a discussion of why this topic is interesting and how these answers can be applicable in the real world. Through chapter two a review of relevant theory will be given, and further in chapter three the hypotheses are presented. Chapter four contains the studies method. In chapter five the studies analysis will be gone through, and the last chapter, chapter six presents the findings of the study, discussion and further research.

1.5 Searching for literature

To find relevant literature to use in this paper I was encouraged to make use of Google Scholar (http://www.google.com/scholar). This is a search engine for finding professional literature on the Internet. The site provides a wide range of the main findings of literature containing the variables of interest and how these are linked together. When finding relevant literature that is interesting to explore further, I have used the college library online catalogue BIBSYS. BIBSYS will redirect to the correct database to find the requested article. Examples of these databases are Web of Science, EBSCO (Business source Elite) and ProQuest (ProQuest Psychology Journals). Literature of the relevant concepts were within the concepts of recruitment, brand equity, recruitment related practices, communication strategies, attitude, and involvement.

2.0 Theory

This study will investigate new recruitment communications towards the work force of engineers. As explained in the introduction there is practically no unemployment in Norway. Employers within engineering industries need to look at alternative and new ways to catch the attention both from potential employees that are studying to become engineers and employed engineers.

It is important to be critical when going through earlier researches and literature (Summers, 2001). In the theory section the most central concepts will be presented. These are recruitment, brand equity, recruitment related practices and communication strategies.

These topics are central to explaining how companies can optimize their brand and differentiate themselves when recruiting through social media. Earlier, these topics have been subjects for research; recruitment (see Cappelli,2001), recruitment through social media (see Davidson et al.,2011) and employer branding (see Backhaus and Tikoo, 2004, Lemmink et al.,2003). Theory on recruitment is often about how organizations should attract the right people as work force and this is essential to achieve competitive advantage. As a tool, various social media are increasingly being used by organizations to attract job applicants. Within employer branding and recruitment, it is recommended that research should investigate whether the use of employer branding leads to improved recruitment outcomes (Backhaus and Tikoo, 2004). This showing that employer branding has an effect on a number of applicants. There is also limited research on the use of social media in recruitment related communication and employer branding campaigns. I see therefore that there is a gap in the research in this area, and hopefully this study can contribute to filling this gap.

The definition of the concepts will first be described and further discussed. First a presentation the recruitment situation in Norway today, and how social media is used for recruitment related purposes. Further theory on customer based brand equity, capturing employer brand image and attitude. Recruitment related practices are presented with communication strategies and involvement as sub categories. To round this chapter up a presentation of the control variable is presented.

2.1 Recruitment

As explained in the introduction, the unemployment rate in Norway is low. The competition on getting enough hiring is big, and therefore the work being done when it comes to recruitment is important. This is important to maintain long-term competitive advantages.

As in resource based theory the main focus area is on the resources within the company, this above the company's products and/or service (Wernerfelt, 1984). These resources can be both material and immaterial, such as a brand, competent people, and technology. Attracting employees with superior skills and knowledge comprises a primary source of competitive advantage (Berthon et al., 2005). A definition of recruitment is *'those practices and activities carried on by the organization with the primary purpose of identifying and attracting potential employees'* (Barber, 1998). A core activity of recruitment, particularly in the early stages of the recruitment process, is communicating information about jobs, working conditions, expectations, values, and climate in order to persuade prospective employees to consider joining the organization (Popovich and Wanous, 1982, in Allen and Van Scotter, 2004). The recruitment function has responsibility for attracting new employees with the appropriate knowledge, skills,

abilities, and attitudes (Allen and Van Scotter, 2004) . The recruitment process not only focuses on attracting more applicants to vacant positions within the company, but also better-qualified applicants. Job candidates today need to be approached in much the same way as prospective customers: carefully identified and targeted, attracted to the company and its brand, and then sold on the job (Cappelli, 2001). According to Cappelli (2001) there are four steps in the hiring process; attracting, sorting, contacting candidates, and closing the deal. Companies seeking to improve its hiring capability should take a close look at each step, with its evolving techniques and technologies (Cappelli, 2001).

There are a lot of ways to recruit new employees. Traditionally recruitment advertisements are used to attract and inform about vacant positions, in printed media as well as online. Estimates suggest that it costs only about one-twentieth as much to hire someone online as to hire that same person through job ads in a printed form and other traditional means (Cappelli, 2001). For this reason most vacant positions can be found on web sites that provide a collection of vacant positions within a geographical area, a certain trade or business sector. According to Barber (1998) the choice of channel when recruiting is important. The use of the internet gives us the opportunities of communication using different media, also at the same time. Richer media (video, audio, visuals, text etc.) are capable of transmitting more fact-orientated information and more affective information (Allen and Van Scotter, 2004). This might be another reason why online recruitment has evolved so much the last years.

2.1.1 Recruitment through social media

Social media may play a key role in the recruitment process in terms of branding the organization to potential employees (Sivertzen et al., 2013). Social media, also called new

media or social networking web sites, focus on building online communities for people to share interests and activities, or to explore the interests and activities of others. There are many different sites established and a common attribute is they provide ways for users to interact, such as instant messaging. Social media is designed to connect users to each other and to visually display each individual's network of friends (Kluemper and Rosen, 2009). Since 2009, social networks have emerged as the primary way for active internet users to stay in contact with one another (Hutton and Fosdick, 2011). Hutton and Fosdick (2011) explain that when consumers engage socially online, they do so to meet certain needs. Those needs include the desires to (i) promote themselves, (ii) to share new experiences with others and (iii) to simply have fun or waste time. This emerging activity has proven to affect the traffic on official company and brand web sites as these sites have been losing audience since 2009. The use of social media sites for recruiting (also called social recruiting) is relatively new, but seems to be widely accepted because of its close relation to the act of posting a job advertisement on the internet (Davison et al., 2011). Employers have begun to tap into information on social media sites as a source of applicant data in an effort to improve hiring decisions. The usage of such media for recruiting is clearly growing, while empirical research on these practices is lacking (Dekay, 2009, in Davison et al., 2011). Davison et al. (2011) claim that using these sites can allow for more targeted recruiting which may result in finding more qualified applicants – both potential employees that are looking for a job and those who are not thinking about changing job or employer.

In Norway the use of social media for recruitment purposes is not fully made use of. Some companies have started using these media, but still far from all. The most used websites for finding vacant positions in Norway are on the websites www.finn.no,

government unemployment offices website www.nav.no and on companies own web and career sites. Some websites also provide "applicant pools" where employers can find potential new employees. People looking for a new job and/or employers can promote themselves with an open application and CV for potential employers to take interest in. This also applies to LinkedIn.

LinkedIn

LinkedIn is the largest business-oriented networking site in the world, with more than 150 million individuals registered users worldwide (LinkedIn, 2012). To use the free site, you have to become a member. On the site you can establish a professional profile and connect with other professionals in the network. Companies can also establish profiles and publish information about vacant positions, and what the company is as an employer. The site is a portal to keep professionals connected and members maintain an overview of the job market and discover job opportunities. LinkedIn allows connection between professionals, to market one's skills, to share knowledge and experiences, and to plan future career steps (Caers and Castelyns, 2011). Universum (2011b) reports that a majority of students in Norway use LinkedIn to build professional relations. LinkedIn is also used by students to find information about potential employers (Universum, 2011b). According to Furu (in Henriksen, 2011), it's only a matter of time before LinkedIn is the biggest channel of recruitment in Norway. She also emphasizes that companies that do not want to use social media in the recruitment work, also communicate that they let their competitors get a hold of the best candidates.

Potential new employees are both passive and active job seekers. The differences between these groups are that active job seekers are self-motivated to find information about companies and vacant positions. This could be both students as well as employed or

senior workers. Passive job-seekers are often assumed to be well-qualified, stable employees (Davison et al., 2011) and are not actively looking for alternative work or new employers. If an interesting opportunity occurs or is brought to their attention, they might consider it. They often need an extra push to trigger their interest. It is not easy to separate the target groups on LinkedIn. The majority of LinkedIn members indicated they could be contacted for career opportunities, and therefore might not be considered truly passive job-seekers (DeKay, 2009, in Davison et al, 2011). The question then that appears is if the use of sites as LinkedIn enables companies to target passive job-seekers, when there are no real passive job-seekers using these sites.

With the rise of social networking sites like LinkedIn, individuals are broadcasting information about themselves on the internet that may also be visible to companies to which they apply. Social networking sites therefore hold the risk of introducing biases into the selection process even before the first interview is held. This is something recruiters and decision makers must be aware of throughout the recruitment process and the use of social networking sites for recruitment purposes. Companies will have to work even harder in the future to establish trusting relationships with an increasingly well-informed and restless applicant pool and workforce (Cappelli, 2001). LinkedIn can be such a tool to get in contact with and build relationships with potential new employees. Once a good candidate is identified, speed is essential. With so many companies competing for the same candidates, the first company to make contact often gains a huge advantage (Cappelli, 2001). When social media is used by organizations as means of attracting potential employees it should be seen in relation to potential job seekers intention to apply for a job (Cappelli,2001).

Davison (2011) summarizes the current and potential use of social media for recruiting: 1) *Current uses* – Applicants locate job postings by organization on social networking sites, 2) *Potential uses* – Organizations engage in targeted marketing to reach the desired applicant pool, and 3) *Current state of research* – Only a small percentage of LinkedIn members were passive job seekers.

In this thesis the use of social media for recruitment related communication is treated as a proactive recruitment activity. Different degrees of contact from a company through LinkedIn will be tested. The degree that probably will create the strongest employer brand image is when a company creates direct contact with a potential employee with content that is interesting and creates a high degree of involvement of the person receiving the contact. Understanding how proactive recruitment related activities using LinkedIn will be important for the recruiting company to understand. This leads to a better understanding of how to get the attention from potential employees, and best of all, using social media and LinkedIn is a very cost effective way in reaching the recruitment audience.

2.2 Customer based brand equity

According to the definition of customer-based brand equity, no single number or measure captures brand equity. Rather, brand equity should be thought of as a multidimensional concept that depends on what knowledge structures are present in the minds of consumers, and what actions a firm can take to capitalize on the potential offered by these knowledge structures (Keller, 1993a). To understand how recruitment-related marketing and branding activities may affect job seekers' intentions and application decisions; customer-based brand equity research can be applied. Brand Equity is defined as *the added value endowed by the brand to the product* (Farquhar, 1989 in Park and Srinivasan, 1994). There are mainly two reasons for studying brand equity, one of them being to improve marketing

productivity (Keller, 1993a). In this study brand equity will be considered from a customer-based perspective. Customer-based brand equity is defined as *the differential effect of brand knowledge on consumer response to the marketing of the brand* (Keller, 1993a). This occurs when the consumer is familiar with the brand and holds some favorable, strong, and unique brand associations in memory (Keller, 1993a). Long-term success of marketing for a brand is greatly affected by the knowledge about the brand in memory that has been established by the firm's short-term marketing efforts (Keller, 1993a).

Organizations marketing mix (the marketing activities used to sell a given product or service) increases customer-based brand equity because it raises awareness, generates favorable attitudes, and strengthens associations between the brand and desirable attributes (Aker and Biel, 1993 in Collins and Stevens, 2002). Such marketing activities may be particularly important for influencing inexperienced consumers who may be unsure of what attributes to seek or how to search for and evaluate product and service information. Such consumers rely heavily on marketing activities as signals of unknown, important attributes and as a basis for their brand attitudes (Heilmann et al., 2000 in Collins and Stevens, 2003). Job attributes are evaluated in terms of attractiveness and importance, and these evaluations are combined to form an overall assessment of the job's desirability (Barber, 1998).

2.2.1 Employer brand image

Organizations that operate in tight labor markets are looking for new ways to attract highly qualified employees and are now becoming increasingly aware of the importance of their image (Lemmink et al., 2003). A definition of an image is '*An image is the set of meanings*

by which an object is known and through which people describe, remember and relate to it. That is, it is the net result of the interaction of a person's beliefs, ideas, feelings and impressions about an object' (Aaker and Myers, 1982). People can hold different images about many different entities, such as products, brands, companies, organizations, industries and countries (Lemmink et al., 2003, Dowling, 1993). An image of a company will automatically begin to form, when an individual is exposed to the company. Since image formation is a purely individual process, each stakeholder will hold a different impression of the company (Lemmink et al., 2003). A good image is seen as a valuable asset to all organizations. Lemmink et al. (2003) found it necessary to divide company image in two; corporate image and company employment image. A corporate image is then a general image of an organization, whilst a company employment image is *an image of an organization as a potential employer*. People use images for many personal decisions, including career decisions. These images are based on their perception of what the organization stands for as an employer. These images can be formed after exposure to a company's recruitment activities (Lemmink et al., 2003). A good image can generate advantages. One of these is that companies with a good image not only enables the company to attract more applicants but also better-qualified applicants (Lemmink et al., 2003). Within recruitment literature image is described in general terms, *as the way people perceive an organization and, in more specific terms as a loose structure of knowledge, beliefs and feelings about an organization* (Tom, 1971 in Barber 1998).

Company employment image is created by employer branding. Employer branding is becoming an increasingly important topic for research and practice in multinational companies because it plays directly into the corporate reputation, talent management and employee engagement agendas (Martin et al., 2011). Increasingly, companies are using

employer branding to attract recruits (Backhaus and Tikoo, 2004). The concept of employer branding is found under topics within branding and Human Resources. Branding is mostly used within marketing subjects and is among a firm's most valuable asset (Backhaus and Tikoo, 2004). To understand the term 'employer branding' we need to look at what it contains. A brand is defined as '*a name, term, sign, symbol or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of* competitors' (Schneider, 2003 in Backhaus and Tikoo, 2004). An employer brand is defined as '*a generalized recognition for being known among key stakeholders for providing a high quality employment experience, and a distinctive organizational identity which employees value, engage with and feel confident and happy to promote to others'* (Martin et al., 2011). In a simplified manner employer branding is defined as *the sum of a company's efforts to communicate to existing and prospective staff that it is a desirable place to work* (Lloyd, 2002). Employer branding refers to the process by which concepts and marketing, communications and Human Resources techniques are applied to create an employer brand (Martin et al., 2011). Employer brands are developed to be consistent with the firm's product and corporate brand. There are similarities, and also two key differences; (1) the employer brand is employment specific, characterizing the firm's identity as an employer, and (2) it is directed at both internal and external audiences (Backhaus and Tikoo, 2004). Corporate brands are primarily directed at an external audience. Companies that work with employer branding have acknowledged that their employees are the biggest and most important resource for performance, showing them respect through making sure they enjoy themselves as employees in the company (Dyhre, 2011). If companies succeed in communicating this to potential new employees and also deliver on what they promise,

they will achieve a strong employer brand and competitive advantages (Backhaus and Tikoo, 2004).

When understanding what employer image is, the next step is to find out how it is related to recruitment and attraction. An employer image can influence applicant attraction directly and may also influence potential applicants' receptivity to recruitment messages. Studies of perception have shown that people often attend to what is familiar – as a result, advertisements placed by companies with a strong image may draw more attention than advertisements placed by lesser-known companies (Christie and Klein, 1995 in Barber, 1998).

To summarize employer branding, like most other professional marketing efforts employer branding aims towards changing or maintaining someone's attitude towards the company. The current recession situation in many countries has gradually changed the focus on employer branding to the focus on improving levels of employee engagement (Balain and Sparrow, 2009, in Martin et al., 2011). While the importance of talent attraction and engagement makes employer branding a serious contender for inclusion in any list of high-performance work practices, employer branding can also play a strategic role in 'future-proofing' corporate reputations (Martin et al., 2011).

2.2.2 Attitude

Attitudes change continuously, but attitudes can be strong indications of how companies are seen by its target groups. An attitude can be defined as *a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor* (Eagly and Chaiken, 1998). The concept can also be described *as favorable or unfavorable feelings directed at some object, issue or behavior* (Lutz, 1991). Additionally an attitude

consists of an average evaluation of an object from cognitive, affective and behavioral information (Maio & Haddock, 2010, Eagly and Chaiken, 1998). The cognitive contains thoughts and knowledge, the affective consists of feelings or emotions, and the behavioral implies action. Attitudes may be abstract or concrete as well as individual or collective (Eagly and Chaiken, 1998). Attitudes are learned, not something that is naturally inherited. This means that individuals do not have an attitude until they first encounter the attitude object or information about it and respond to it on an affective, cognitive, or behavioral basis (Eagly and Chaiken, 1998). Attitude can therefore be shaped.

Attitudes are interesting within recruitment and marketing. By understanding how to change attitudes, this can effect on how companies should communicate with potential new employees. According to Eagly and Chaiken (1998) attitudes can lead to behaviors. Also Cohen and Reed II (2006) document that a single unified attitude can be used to guide behavior. This view is not consistent with the one of Tybout et al. (1981). Their findings are that postulating subjective states like attitudes are not limited as causes of behavior. Behavior is explained as a consequence of not only what people think about, but how they think about it. This is a subject that is widely discussed. According to the dual attitudes perspective (Wilson et al., 2000), people may possess (simultaneously) both an implicit and an explicit attitude, even opposite in valence, toward the objects, people, and issues that are important in their lives. Attitudes as well as people are in continuous change, therefore we cannot predict behavior over time, but we are able to effect the attitude change by various communication strategies for being seen as an attractive employer.

Attitudes are interesting in this study for the reason to see if any attitude changes occur when implying different communication strategies. Attitudes change continuously and can be strong indications of how companies are seen by its target groups. If companies

are able to build up a positive attitude from the target group towards the company as an employer, this could be a competitive advantage.

2.2.3 Perceived job attributes

For today's job-seeking, people are more interested in what the future employer can do for them than what they can do for the employer (Universum, 2011a). This changes how companies affect their recruitment strategies and what message to give to potential employees, the company's employer branding customers. According to Sivertzen et. al (2013) the use of social media may be more effective if the organization focuses on the attributes that seem important for potential employees when they consider employers. Nysveen et al. (2012) present theories that imply that people don't really desire products they buy, but a satisfying experience is what they are buying. Providing a satisfying experience can become an important driving force for competitive advantages. Similar companies within the same industries can often provide similar offers to employees. To create loyal employees it is important to not only provide what is expected from an employer, but also experiences. This might give the employees a feeling that they are special and wanted. The strength of the employer branding concept is that it aims to deal with the complex task of harmonizing internal belief with the external brand message (Martin et al., 2005).

For inexperienced job seekers, it is difficult to compare the available options on the basis of the true attributes of the job and the company because many attributes are unknown or unknowable (Collins and Stevens, 2002). For this reason job seekers may rely on employer brand images for guidance in the decision making.

2.2.4 Intention to apply for job

Customer-based brand equity indicates that by creating a unique, favorable brand image in consumer's minds, organizations can increase the likelihood that their products or services will be chosen over similar products or services (Keller, 1993a). According to Cable and Turban (2001 in Collins and Stevens, 2002) similar processes may affect job seekers' decisions during recruitment so that organizations with strong brand identities would be preferred to those with weak or negative brand identities. As consumers do with products and services, job seekers form beliefs about potential employers. These beliefs provide the basis for decisions about whether to pursue or accept employment offers (Barber, 1998). People often do not have well-defined preferences, instead they may construct them on the spot when needed, such as when they must make a choice (Bettman et al., 1998). People are most likely to have well-articulated preferences when they are familiar and experienced with the preference object (Bettman et al., 1998). Choice among options depends critically on for example the goals of the decision maker, the complexity of the decision task, the context and how the choice set is represented or display (Bettman et al., 1998). Choices are made to achieve goals (Bettman et al., 1998). Brands in the consideration set are goal satisfying in that they satisfy the minimum needs of the consumer for the intended use occasion (Lehmann and Pan, 1994). Alternatives that are apparently not acceptable or not worth considering for the use of occasion would be excluded from further consideration in the choice process (Lehmann and Pan, 1994). One of the most important findings from consumer research is that the same individual may use a variety of different strategies when making decisions. Consumers have limited processing capacity; this means that they generally cannot process all of the available information in a particular situation (Bettman et al., 1998). Selectivity is necessary, therefor it is critical to understand the determinants

of the focus of attention (Bettman et al., 1998), understanding what information the consumer wants to hear that your product can deliver on.

2.3 Communication strategies

There are several theories of communication strategies. Within this topic lies information processing. Information processing can lead to changes of attitude and the attitude change that can be measured by implying a new or alternative communication strategy. Information processing theory explains consumer behavior in terms of cognitive operations (Tybout et al., 1981). According to the information processing view incoming information is represented more or less faithfully in active memory (Tybout et al., 1981). This information may stimulate the activation, called retrieval, of object-relevant thoughts that have been processed earlier. Because active memory is limited in capacity, information in active memory requires long-term storage if it is to be available for later use. It is interesting for employers that want to recruit new employees to focus on how to affect potential employees' memory of their brand and company. To strengthen the company brand, repetition of branding activities might be a solution for persuasion of message or brand attitude and for people to be able to retrieve company information in memory. This can for example be done through advertisement.

Advertisement should create desirable and positive attitude associations in consumers' minds. Advertising is messages, often professionally designed, channeled through various media, which are used to modify consumer's perceptions. According to Keller (1993a) advertising can be particularly beneficial when consumers do not have direct experience with a brand, because it provides specific information about attributes relevant to consumers' decisions and may result in positive attitudes toward the brand. A

model often used in marketing is AIDA. AIDA describes a list of events that may occur when a consumer engages with an advertisement. A for awareness – attract the attention of the customer, I for interest – raise customer interest by focusing on and demonstrating advantages and benefits, D for desire – convince customers that they want and desire the product or service and that it will satisfy their needs, and A for action – lead customers towards taking action and/or purchasing. This model can also be adapted to recruitment. Then interest is changed to consideration, and action is closer defined to application. The model shows how a potential employee needs to receive information – from not having any knowledge about a company and the job, to finally applying for a job at the company. Traditional advertisement lies within the top part of the funnel. Job postings on the other hand lie further down in the funnel. For the potential job seeker to read and take a serious interest in job postings, and to be pushed and motivated to apply for the position, they need some initial thoughts about the company. This is important both with general advertisement and recruitment related advertisement when communicating to potential new employees.

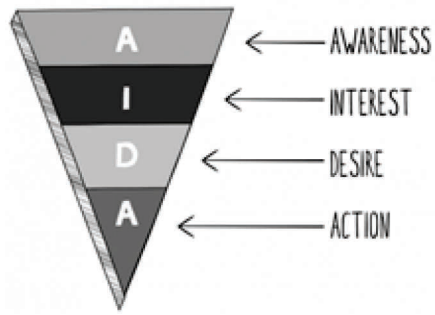


Figure 1 - AIDA

2.3.1 Advertisement

Recruitment-related practices include the set of activities that affect the decision making of potential employees. This set could be compared with a traditional marketing mix when marketing products or services. One of them is advertisement. Advertisement is used by companies to communicate with their market and target group, one of them could be for recruitment purposes. Advertisement is often conducted to inform the target groups, as

they might not be fully informed about the company or brand (Grønhaug et al., 2000). There are many studies on how an advertisement should be visually to communicate the right message and to leave the wanted attitudes after being exposed to the advertisement (Petty et al., 1983, Davis, 1997). The general findings result in the following; a person wants to buy a new mobile phone may be very concerned with the product-relevant information in the advertisement. If this information is perceived to be cogent and persuasive, this could lead to favorable attitudes, but if this information is weak and specious, the result will be unfavorable. On the other hand, persons that are not interested in buying a new phone, will not think about product-relevant arguments in the advertisement, but might focus on the attractiveness and credibility of the advertisement (Petty et al., 1983). This can be transferred to advertisement regarding vacant positions or branding of a company as an employer.

2.3.2 Elaboration Likelihood Model

Researchers and advertisers have devoted a great deal of time and effort in order to determine how to change the buyer's attitude to sell their brand. A strategy often used within marketing purposes for attitude change is the Elaboration Likelihood Model of persuasion (ELM). ELM, developed by Petty et al. (1983) is based on the idea that attitudes are important because they will lead to making decisions, and can also affect others attitudes. Attitudes are influenced by the strength of the message when the issue is personally relevant, and attitudes should be influenced by source expertise when the issue is made to seem irrelevant (Maio and Haddock, 2010). ELM is based on the notion that people are motivated to hold correct attitudes but have neither the resources nor the luxury of being able to ignore them all (Petty and Cacioppo, 1981, in Cacioppo et. al, 1986).

Persuasion variables can act as arguments, cues, or factors that affect the nature and amount of elaboration of a persuasive message (Maio and Haddock, 2010). ELM is a two-process model of response to advertising stimuli. This means that there are different degrees of responses. Under conditions of high involvement, the attitude change is processed through the central route. This is when consumers are more likely to devote a lot of effort toward and invest considerable personal involvement in forming or changing attitudes and making decisions (Hoyer and MacInnis, 2007). The central route is used to process information that the viewer finds to be important to the true qualities of a particular attitudinal position. According to Petty and Cacioppo (1979b, in Cacioppo et al., 1986) when a message is high in personal relevance, the quality of the issue-relevant arguments in the message is an important determinant of persuasion. Under conditions of low involvement attitude change is processed through the peripheral route. This is when consumers' attitudes are based on a more superficial analysis of the message, not on an effortful analysis of its true merits (Hoyer and MacInnis, 2007). When personal relevance is low, people are less motivated to engage in the considerable cognitive work necessary to evaluate the issue-relevant arguments and rely more on peripheral cues to evaluate the advocacy (Cacioppo et al., 1986). Items or brands in the low involvement product category risks being forgotten or being passed up for a similar products or brands. Involvement is a motivational construct which relies on a person's values and needs (Zaichkowsky, 1986). Involvement is defined as *a person's perceived relevance of the object based on inherent needs, values, and interests* (Zaichkowsky, 1985). Most researchers agree that the level of involvement can be understood by the degree of personal relevance or importance. According to Antil (1984) involvement is *the level of perceived personal importance and/or interest evoked by stimuli within a specific situation*. When subjects find message

information personally relevant or important, they are expected to devote considerably more attention to the message contents and to process that information at a deeper level than they would when they do not find the message information relevant (Greenwald and Leavitt, 1984 in Petty and Young, 1986). When it comes to involvement in advertising, involvement is manipulated by making the advertisement relevant: the receiver is personally affected, and then motivated, to respond to the ad (Zaichkowsky, 1985). There are two views on involvement; cognitive involvement and affective involvement. Cognitive involvement is the degree of personal relevance of message content or issue based on the brand's functional performance. Affective involvement is the degree of personal relevance of a message based on emotional or aesthetic appeals to one's motive to express an actual or ideal self-image to the outside world (Park and Young, 1986). Whether the view of advertising is primarily cognitive, affective or a combination, the mental activity and investment involved in processing any given advertisement is likely to be fragile and fleeting (Allen and Madden 1987 in Zaichkowsky, 1994).

2.3.3 Proactive recruitment strategy as involvement

A proactive recruitment strategy is used in the same way as involvement in the ELM. Proactive recruitment is a term used in this study to describe the different activities the company has done on the users LinkedIn profile. This can be seen as a form of active involvement. The attempt to understand the utility of the ELM for understanding the effectiveness of the use of communication from companies through LinkedIn, there were three treatments that were manipulated: 1) a view of the readers LinkedIn profile with no communication from company, 2) view of readers LinkedIn profile with a traces from the company that the company had seen their profile, and 3) a view of the readers LinkedIn

profile with a personal message from company, asking to get in contact with company. This is regarded as degrees of involvement from low (1) to high (3).

2.3.4 Controlling variable – Involvement in seeking an employer of choice

A potential employee's personal values and motivations effect the evaluations of companies and their products – in this study vacant jobs. Therefore it is important that for the potential employee that there is a match with the companies values with their own. The degree of involvement will therefore be reflected in the extent to which the participants consider the personal relevance to themselves. Depending on the level of involvement, individual consumers differ in the extent of their decision process and their search for information (Laurent and Kapferer, 1985), and react differently to the advertisement and proactive recruitment activities dependent on their degree of involvement – this is on if they are actively or passively involved.

The degree of involvement from the participants will be tested to control if the other relationships stand by themselves. Participants that are highly involved will be more motivated to process recruitment activities. It is likely that the participants that are highly involved will find the advertisement more interesting than the participants with low involvement. There will likely be different reactions on the advertisement depending on the level of involvement for the individual person.

3.0 Hypothesis and research model

Hypotheses are statements about reality that directly or indirectly can be tested using observations of (Ringdal, 2007). A hypothesis is a prediction about the relationship between two or more variables (Mitchell and Jolley, 2010). The hypothesis used in this thesis must enable testing, to find answers of the research question (Summers, 2001).

As with the product branding process, organizations can indirectly influence potential applicants' decisions through the effect of their recruitment mix on employer brand images, i. e. attitudes and perceived attributes (Collins and Stevens, 2002). Berthon et al. (2005) emphasis that the more attractive an employer is perceived to be by potential employees, the stronger the organization's employer brand equity is. This study will range the brand equity on the results of how strong the employer brand image is. Bearing this in mind the following hypotheses are made:

H1: *Exposure to an organizations advertisement will positively affect a) potential job seekers attitude towards the company, b) the perceived job attributes of the company, and c) potential job seekers application and intention to apply for jobs at the company.*

A factor that could change the persuasion of a brand is source credibility (Tybout et al., 1981). In this study the source or channel of communication to the target group is LinkedIn. According to the findings of Stelling (2010) LinkedIn is perceived as the most credible source for communicating employer and job information. I will investigate how a fictitious company is evaluated as a potential employer. The target group is not aware of that the company is fictitious. This is done so that there are no predetermined attitudes towards the company. The effect of each independent variable on the dependent variable is

called a main effect (Gall et al., 2007). I expect that the answers from the participants that have received advertisement and contact from the company to be higher regarding attitude than the participants that have received no advertisement nor contact from company.

H2: Proactive recruitment communication will have a moderating effect on the relationship between advertisement and a) attitude, b) intention to apply, and c) perceived job attributes.

H2.1: Exposure to the company's advertisement effects a) attitude, b) intention to apply, and c) perceived job attributes is assumed to be more positive for the participants when they are also exposed to proactive recruitment activities than not.

H2.2: Enquiry from company through LinkedIn has a stronger effect on a) attitude, b) intention to apply, and c) perceived job attributes when company sends a message to potential job seekers on their LinkedIn profile than no contact.

H2.3: Enquiry from company through LinkedIn has a stronger effect on a) attitude, b) intention to apply, and c) perceived job attributes when company leaves traces on potential job seekers LinkedIn profile than no contact.

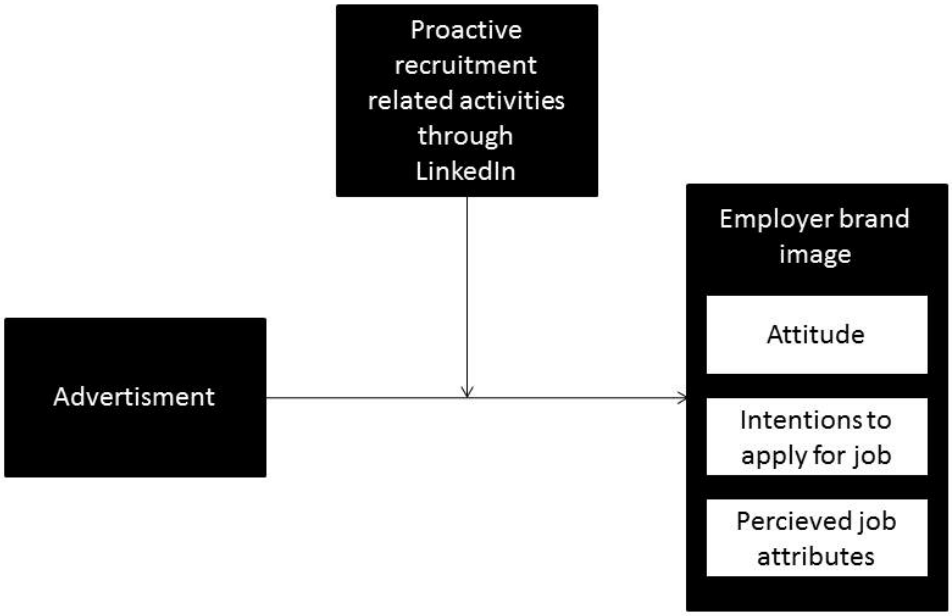


Figure 2 - Research model

4.0 Research methods

Scientific research is a useful tool to obtain answers to questions (Mitchell and Jolley, 2010). There are a lot of choices to be made and processes to follow to assure that the research is done without mistakes and so it can be called a reason for why things happen. First of all, the research question, hypothesis and model form a basis for the choice of the research method and design, who to study, selection procedures, selection of data collection methods, design and distribution of the survey, and data analysis (Grønhaug, 1985).

In this chapter I will present the research methods. To find reasoning for the hypothesis presented it will be helpful to find answers by proceeding with the research strategy and design employed, chapter 4.1. Next in 4.2, the population and sample group is discussed and chosen, the selected measurements are explained in 4.3, the data collection in 4.4, and lastly in 4.5 research etics are presented.

4.1 Research design

The research design describes how the research is conducted, and the choice of research design is primarily guided by the purpose of the study and the research model (Mitchell and Jolley, 2010).

There are mainly two approaches to research; qualitative and quantitative (Ringdal, 2013). These methods should not be viewed as rigid, distinct categories, polar opposites, or dichotomies, but a study tends to be more qualitative than quantitative or vice versa, and these can even be mixed (Creswell, 2014). Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem, while quantitative research is an approach for testing objective theories by

examining the relationship among variables. When using qualitative research few respondents are used through for example interviews and is mainly used when developing theories. Quantitative research is based on starting with a concept and is mainly used when testing theories. The use of surveys is common.

Research design is the strategies made to make sure that the information gathered is as reliable as possible to illustrate the problem of question (Grønhaug, 1985). The choice of design depends on the problem that is studies. Often the use of more than one design is used to fully explain the problem. Primarily there are three main directions of design; Explorative design, descriptive design and causal (cause – effect) design (Grønhaug, 1985). Explorative design is used when the problem is poorly defined and when you have vague ideas of what that might be the key dimensions. The design is flexible, because you might need to adapt when unexpected conditions are exposed. Explorative design can answer the "why" questions of behavior, while descriptive design will contribute in answering the "what", "who", "when" and "where" questions (Mitchell and Jolley, 2010). These questions indicate that you know what you want an answer on, what is unclear is the division of the answers (Grønhaug, 1985). The main reason for using descriptive design is to describe behavior and to investigate is variables have a relationship with each other. Although descriptive research cannot tell whether one variable causes changes in another, it may suggest cause-effect hypothesis that could further be tested using a different design (Mitchell and Jolley, 2010). The cause-effect design is the causal design. This design needs a clear problem structure and hypothesis that something leads to something else. Both within descriptive and causal design the use of quantitative research strategy are applicable since considering relationships.

4.1.1 Method approach

This study focuses on finding answers to how recruitment related communications lead to changing the strength of the employer brand image. For this reason it would be appropriate to use a causal design as a method. There are four types of causal designs: Experimental, cross-sectional, quasi-experimental and pre-experimental designs (Frankfort-Nachmias and Nachmias, 2008). Experimental research design consists of four components: comparison, manipulation, control, and generalization (Frankfort-Nachmias and Nachmias, 2008). The three first are necessary to establish that the independent and dependent variables are causally related (Frankfort-Nachmias and Nachmias, 2008). Further comparison demonstrates covariation, manipulation helps in establishing the time of order of events, control enables a determination that the observed covariation is nonspurious, and generalization concerns the extent to which the research findings can be applied to larger populations and different settings (Frankfort-Nachmias and Nachmias, 2008).

To find reasoning for the hypothesis presented it will be helpful to find answers by proceeding with an experiment. Experimental studies are considered to be more powerful than non-experimental designs in uncovering causal relationship among variables (Spector, 1993). A simple experiment involves two groups of participants, which are similar, and during the experiment the two groups are treated differently (Mitchell and Jolley, 2010). Often the one group receives a treatment, whereas the other group receives no treatment – so there will be one experimental group and one control group. If the results from the two groups differ significantly at the end of the experiment, we can conclude that the treatment – the only systematic difference between the groups – caused the significant difference (Mitchell and Jolley, 2010).

The main advantages of using experiments are 1) ability to control for alternative factors that could possibly explaining the effects observed in the dependent variables, 2) the ability to manipulate the independent variable, 3) the ability to make comparisons across different possible manipulations (Cook and Campbell, 1979). The conditions of causality must be fulfilled for carrying out an experiment (see 4.1.2.).

In this case I will need to use an extended experiment called a factorial experiment. A factorial experiment is an experiment in which the researcher determines the effect of two or more independent treatment variables (i.e., factors) – both singly and in interaction with each other – on a dependent variable (Gall et al., 2007). All factorial experiments must have at least two levels with two factors, but they can also have more than two (Mitchell and Jolley, 2010). It will be useful to use a 3X2 factorial design in this study. This results in 6 different treatment conditions. In this experiment the first factor has three levels (no contact from company through LinkedIn, trace of company on LinkedIn profile, enquiry from company through LinkedIn) and the second level has two (magazine with advertisement, magazine without advertisement). Each column and each row of the 3X2 factorial is like a simple experiment.

1	**No contact** from company through LinkedIn / Magazine **with** advertisement
2	**No contact** from company through LinkedIn / Magazine **without** advertisement
3	**Trace** of company on LinkedIn profile / Magazine **with** advertisement
4	**Trace** of company on LinkedIn profile / Magazine **without** advertisement
5	**Enquiry** from company through LinkedIn / Magazine **with** advertisement
6	**Enquiry** from company through LinkedIn / Magazine **without** advertisement

Table 1 - Overview of experiment

	No contact from company through LinkedIn	**Trace** of company on LinkedIn profile	**Enquiry** from company through LinkedIn
Magazine **with** advertisement	Magazine **with** advertisement + **No contact** from company through LinkedIn	Magazine **with** advertisement + **Trace** of company on LinkedIn profile	Magazine **with** advertisement + **Enquiry** from company through LinkedIn
Magazine **without** advertisement	Magazine **without** advertisement + **No contact** from company through LinkedIn	Magazine **without** advertisement + **Trace** of company on LinkedIn profile	Magazine **without** advertisement + **Enquiry** from company through LinkedIn

Table 2 - Design of study – 3X2 factorial design

In this kind of study there can be used a within-subject design or a between-subject design. Within-subject design is an experimental design in which each participant is tested under more than one level of the independent variable. The sequence in which the participants receive the treatments is usually randomly determined (Mitchell and Jolley, 2010). In between-subject design the participants only undergo one stimulus/treatment. This design should be used a generalization of the results can be compared to real-life situations, were individuals tend to get one type of stimulus, not more.

In the 3X2 between-subjects factorial experiment, each participant is randomly assigned to experience only one of the six treatment combinations.

4.1.2 Validity of experiments

Researchers would like to explain that X is the cause of Y. In reality this is not so simple, this conclusion can only be made by excluding that all other variables effect Y.

Internal validity refers to the approximate validity with which we infer that a relationship between two variables is causal or that the absence of a relationship implies the absence of the cause (Cook and Campbell, 1979). An extraneous variable is any variable other than the treatment variable that can affect the experimental outcome. There are twelve extraneous variables that can affect the internal validity (Gall et al., 2007).

External validity is the extent to which the findings of an experiment can be applied to individuals and settings beyond those that were studies (Gall et al., 2007). There are twelve factors that can affect an experiments external validity (Bracht, G. H. &Glass, G. V., 1968 in Gall et al., 2007).

4.1.3 Conditions for causality

The heart of all scientific explanation is the idea of causality; an independent variable is expected to produce a change in the dependent variable in the direction and of the theory specified in the theory (Frankfort-Nachmias and Nachmias, 2008). With that said, when the independent variable varies, the dependent variable varies too; it does not necessarily mean that a cause-and-effect relationship exists. According to Bollen (1989) in all causal designs there are necessary conditions for causality that must be satisfied. The definition of cause has three components: isolation, association, and direction of influence (Bollen, 1989). Isolation exists when all other influences on X and Y are excluded. These means that changes in Y are because of the influence of X. Isolation secures the absence of spurious and masked associations between the variables in the research model by isolating them from all other potential variables that may be associated with them (Bollen, 1989). In this study the use of controlling variable is used to eliminate the factors in the controlling variable. Also the use of a fictitious company in the experiments contributes to excluding other factors affecting the dependent variable. Association also referred to as covariation, means that two or more phenomena vary together, and there must be a relation between the independent and dependent variables (Frankfort-Nachmias and Nachmias, 2008, Bollen, 1989). In this study I will be able to point out relationships between the variables. The direction of influence, also referred to as time order, requires the researcher to demonstrate that the assumed cause occurs first or changes prior to the assumed effect (Frankfort-

Nachmias and Nachmias, 2008). The experiment is conducted only at one time, but I can indicate these changes based on prior research.

4.2 Population and sample group

The survey questions will answer questions about the population (Mitchell and Jolley, 2010). The next step is to find who, of all the people in the population, will be in the sample group (Mitchell and Jolley, 2010).

The population for this study is all potential job seekers and professionals within the discipline of engineering located in Norway. This includes both students and professionals. To gain the most accurate results that reflect "real life" the best would be to gather answers from the whole population identified. Unfortunately it is difficult and very time consuming to gather answers from all professionals and students within engineering disciplines in Norway; therefore a selection was made. There are many methods in how to make a selection. The goal is to get a sample group that is representative of the research population.

The selection of participants was limited to students that are on-going with their engineering education within technical subjects. This selection was chosen because these students are very attractive in the job markets. The selection is from universities and colleges in Norway. Collins and Stevens (2002) found it useful to use students to see how positive they are to certain organizations and their intentions to apply for jobs in these organizations. Berthon et al. (2005) also argue that students are prime candidates to use in research on employer advertising and recruitment campaigns, being that they are only months or years away from entering the job markets themselves.

One of the criteria for judging experiments is population validity (Bracht, G. H. & Glass, G. V., 1968 in Gall et al., 2007). Population validity is the extent to which the results of an experiment can be generalized from the sample that participated in it to a larger group of individuals, that is, the population from which the sample was drawn (Gall et al., 2007). To achieve good population validity that can be generalized, a selection of the sample must be randomly chosen. Also, this randomly drawn sample must be of a sufficient size to reduce the probability that the sample, has different characteristics than the population that it was drawn from (Gall et al., 2007). The homogeneity of the sample group is also important for the internal validity. In the choice of using students in the experiment, they are reckoned to be alike regarding demographic aspects (i.e. age, employment, education).

There are different ways of selecting the sample group. Basically there are two methods within quantitative research; probability sampling and nonprobability sampling (Ringdal, 2007). Within probability sampling a frequently method used is random sampling. This means that each member of the population has an equal and independent chance of being selected. The main advantage of randomly selected samples is that they yield research data that can be generalized to a larger population within margins of error that can be determined by statistical formulas (Gall et al., 2007). In this experiment convenience sampling is used which is a nonprobability sampling method. This means that the sampling group is not completely random chosen. The researcher selects a sample that suits the purposes of the study and that is convenient (Gall et al., 2007) and that is easily accessible (Mitchell and Jolley, 2010). By using this method it is not certain whether the sample represents the complete population, and therefore the findings cannot be generalized to the population (Mitchell and Jolley, 2010). This method can indicate the

results of a population. This can be due to the fact that the use of college students are not representative for the adult (professional) population in general (Gall et al., 2007). By choosing to use a convenience sampling method, it is important to be aware of this choice when analyzing the results. Some groups may be overrepresented, for example by gender or age. Most likely there will be a larger participation by men, as there are more men than women that study technical engineering subjects in Norway (Statistisk_sentralbyrå, 2013). Therefore the findings cannot be generalized to occupations that have a larger unit of women than men.

There are various opinions about the sample size that is required for having a liable sample group. The general rule in quantitative research is to use the largest sample possible (Gall et al., 2007). The larger the sample, the more likely the measured variables will be representative of the population scores. In addition to this, there are some thumb rules for determining the minimum number of participants needed for different research methods (Gall et al., 2007). According to Gall et al. (2007), in experimental research there should be at least 15 participants in each group to be compared. In addition there are three factors that must be considered in determining an optimal size; subgroup analysis, attrition, and reliability of measures (Gall et al., 2007).

4.3 Measurement

There are different ways for data collection. In this chapter I will present theory of measurement models based on Bollen's (1989) four steps in the measurement process. Further each concept used in this study with a theoretical definition and operationalization will be presented. The measures used and the form of measure will also be included.

4.3.1 Measurement models

Measure is the process by which a concept is linked to one or more latent variables, and these are linked to observed variables (Bollen, 1989). Once a concept is selected or devised, the four steps in the measurement process (Bollen, 1989) are to:

1) Give meaning to the concept. The first step is to develop a theoretical definition. *A theoretical definition explains in as simple and precise terms as possible the meaning of a concept* (Bollen, 1989). A concept is an idea that unites phenomena under a single term (Bollen, 1989). There are three reasons why this step is important for measurement process – a theoretical definition 1) couples a term and a concept by detailing the specific denotation assigned to a term, 2) clarifies the dimensions of a concept, 3) provides guidance in the selection measure.

2) Identify the dimensions and latent variables to represent it. As described in the first step the theoretical definitions clarifies the dimensions. Dimensions are distinct aspects of a concept (Bollen, 1989). There should be one latent variable for each dimension and which sets a standard by which to select measures.

3) Form measures. The third step depends on the theoretical definition, which is sometimes referred to as the operational definition. *The operational definition describes the procedures to follow to form measures of the latent variable(s) that represent a concept* (Bollen, 1989). Operational definitions must be clear, specific and concrete recipes for manipulating or measuring variables (Mitchell and Jolley, 2010). Choosing measurement scales is important as choosing the wrong scale for the latent variables can lead to misleading results. An operational definition or measure is appropriate to the extent that it

leads to an observed variable that corresponds to the meaning assigned to a concept (Bollen, 1989).

4) Specify the relation between the measures and the latent variables. The forth step is to construct the measurement model and to formalize types of errors. Ignoring measurement error leads to inconsistent estimators and to inaccurate assessment of the relations between the underlying latent variables (Bollen, 1989). *A measurement model specifies a structural model connecting latent variables to one or more measures or observed variables* (Bollen, 1989). The latent variable is the formal representation of a concept and the measurement model describes the relation between the measure and the latent variable (Bollen, 1989). Measurement errors should also be identified. There are two types of measurement errors: Bias and random errors (Mitchell and Jolley, 2010). Bias errors are systematically errors that are caused if the testing conditions, the researcher's expectations or the scoring of the test consistently favor one group (Mitchell and Jolley, 2010). Random errors are not influenced by the researcher, but by other factors. Because random measurement error, and unlike bias, does not consistently push scores in a given direction and tends to average out to zero (Mitchell and Jolley, 2010). A measurement model can be effect or causal (Bollen and Lennox, 1991). Indicators that depend on the latent variable are effect (reflective) indicators. In contrast to the effect indicators model, in the causal (formative) indicators model it is the indicators that influence the latent variable (Bollen and Lennox, 1991). It is depending on the measurement scale is how the different indicators will be used.

4.3.2 Employer Brand Image

The definition of company employment image is earlier described in chapter 2.2.1. Within this variable I have chosen to include the following dimensions: Attitudes, job seekers application intention and decisions, and perceived job attributes.

Attitudes is defined as *a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor* (Eagly and Chaiken, 1998) . I further operationalize attitudes as to what degree the consumer finds the organization positive. The four-item measure was adapted from the scale used by Collins and Stevens (2002) with a coefficient $\alpha = 0.86$. Respondents rated each item on a scale ranging from strongly disagree to strongly agree on a five-point Likert scale. One of the items in the scale was removed and this item was "Overall, this job opportunity is very attractive to me". This was done because of lack of relation with the other topics. These indicators are treated as effect indicators. Three indicators were measured, see Table 3.

Attitudes
1 - I have a favorable impression of this organization.
2 - I have high regard for this organization
3 - I would recommend this organization to others if it would not affect my chances of getting a job offer.

Table 3 - Indicators – attitudes

A concrete definition to the concept of application intentions (or intentions to apply for a job) was not found, so a definition of intentions was chosen. Intention is defined as *an act or instance of determining mentally upon some action or result*. Further I operationalize it as to what degree the job seeker is willing to apply for a job in the organization. Intention to apply for a job was measured using Highhouse et al.'s (2003) scale for intention to apply for a job. Five items were measured using a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree' on a five-point Likert scale. The coefficient $\alpha = 0.82$. These indicators are treated as effect indicators.

Application intentions
1 - I would accept a job offer from this company.
2 - I would make this company one of my first choices as an employer
3 - If this company invited me for a job interview, I would go.
4 - I would exert a great deal of effort to work for this company.
5 - I would recommend this company to a friend looking for a job.

Table 4 - Indicators – application intentions

Perceived job attributes are evaluated in terms of attractiveness and importance, and these evaluations are combined to form an overall assessment of the job's desirability (Barber, 1998). An operationalization of perceived job attributes is how important are the attributes in question when evaluating a potential employer. Perceived job attributes was measures using Collins and Stevens (2002) scale. Ten items were measured using a five-point Likert scale ranging from not important to very important. The coefficient $\alpha = 0.79$. Perceived job attributes are formative indicators (see explanation in 4.3.1). After the data collection, these indicators are added together to become one variable to describe perceived job attributes.

Perceived job attributes
1 - Salary/wage
2 - Location
3 - Advancement opportunities
4 - Opportunities of excellent training programs
5 - Good corporate culture
6 - Company reputation
7 - Company reputation
8 - Interesting work
9 - Benefits
10 - Job security

Table 5 - Indicators – job attributes

4.3.2 Recruitment related practices

Recruitment related practices is defined as the set of activities that affect the decision making of potential and actual [job] applicants (Barber, 1998). Recruitment related practice is a term that consists of different dimensions, based upon the marketing literature about marketing activities. In this study I will use advertisement. All participants are either being exposed to the advertisement or not. See appendix A.

4.3.3Proactive recruitment

The three treatments in proactive recruitment are; no action from company on users LinkedIn profile, company viewed users LinkedIn profile, and company leaving a message on users LinkedIn profile. Therefore I define proactive recruitment in this study for *the level of contact the company has engaged in to the user through LinkedIn.* This has further been determined in the experiments by the sample groups being exposed to one of the three measures. These are 1) No contact, 2) Trace of company on LinkedIn profile, and 3) Enquiry from company through LinkedIn. See appendix A.

4.3.4 Controlling variable

Control variables are used to test the possibility that an empirically observed relation between two variables has not been caused by the independent variable identified in the hypothesis. Control variables are used to ensure that there is a causal link between the variables stated in the hypothesis, and the observed relation is not based on some other factors (Frankfort-Nachmias and Nachmias, 2008). Control variables are important to have to test that there are no other explanations for the relations between variables. Under is a presentation of the control variable, which is involvement.

Involvement is defined as a person's perceived relevance of the object based on inherent needs, values, and interests (Zaichkowsky, 1985), and operationalized is to what degree does the participant find the article (with/without the advertisement from the fictitious company) important and of interest. To measure the degree of involvement the scale of Chakravarti and Janiszewaki's (2003) was employed. This scale was originally used to measure the level of interest a person had while reading a product description. I modified Chakravarti and Janiszewaki's (2003) scales from an eight, nine-point semantic differential item scale to a five-point Likert scale. From the scale I chose to take used of five of the eight items. The items that were used were: "Would you say that while reading the product description you: (1) were not interested/were very interested, and (2) skimmed the description quickly/read the description thoroughly" and "Would you say that you found the product description: (3) unimportant/important, (4) irrelevant/of concern to you, and (5) boring/interesting". These items were modified to the ones found in Table 9. The choice of modifying the scale was done to make the questionnaire more user friendly and easily understandable how to answer the questions by using the same format as in the other

questions (also with a five-point Likert item scale). These indicators are treated as effect indicators.

Involvement with the Product's Description Questions	Measures
1 –To what degree were you interested while reading the articles?	Not interested/ very interested
2 – How did you read the articles?	Skimmed the description quickly/read the description thoroughly
3 – To what degree were the articles relevant to you?	Irrelevant/of concern to you
4 – To what degree were the content of the articles important to you?	Unimportant/important
5 – To what degree were the content of the articles interesting to you?	Unimportant/important

Table 6 Indicators – involvement

4.4 Data collection

A presentation of the design of the experiment will be explained. Further a short explanation of the pre-test and finally the distribution of the experiment. The data collection process must secure the validity of the data material. This should be done with a group that represents the population most accurately.

4.4.1 Design of experiment

The experiment carried out as a survey with 45 questions included control questions, over nine pages. The experiment is divided in six different surveys. All questions were the same for all participants. The first page was description on what the survey is about, guidelines on how to answer the survey, confidentiality guarantee and contact information if any questions. Further on the second page a scenario is presented. This is done to create a setting so the participants have an idea of what mental start they should have when going

on with the survey. Following the scenario description is the two sided spread of the articles from an engineering magazine (Teknisk Ukeblad) with or without the advertisement from the fictitious company. The fictitious company is a made up company created for these testing purposes. Following was questions regarding the articles. On the sixth page the participant were presented with one of the three pictures of a LinkedIn account. The picture also has a scenario text describing that they should imagine that the account is from their own profile on LinkedIn. There are three different pictures; one with a notification that the test company has viewed their profile, one with a notification that the test company has sent them a message, and one with no contact from the test company. The next two pages were questions regarding the participant's knowledge of the test company, their participation on LinkedIn, what attributes that are important of an employer and how often they look for vacant positions. The last page was with demographical questions.

4.4.2. Pre-test

The pre-test was a testing of the survey, focusing on how participants understood the way of using the survey and that all the information was filled out. It was also a test to see how much time the participant would use to finish the survey. The pre-test uncovered a few minor adjustments to be made to the survey.

4.4.3. Distribution of the experiment

The experiment was distributed as a paper based survey. The reason for choosing to hand out paper copies of the survey, rather than gathering the information through a digital method, is based on experience that there is a likelihood that the students would take the time to answer the survey if you ask them face to face than if they have to themselves take

initiative and find the digital survey to answer. The ideal situation would be to hand out the survey to all technical students in Norway. Due to the fact that this will be quite time consuming and limited time to gather data, I have chosen to hand out the survey to students at a few selected universities, for the reason of them being easily accessible. The survey was handed out at Buskerud and Vestfold University College in Kongsberg and at Norwegian University of Science and Technology in Trondheim. Also the survey was in Norwegian. Within these limitations, I have handed out the survey randomly (see chapter 4.2 for further explanations of random sampling). The only criteria for participating were that the students were undergoing a technical engineering study in Norway. I have not limited the sample group to a certain stage in their educational timeline. I would like to gather information both from fresh students (first and second year students) and students that are more likely to have started thinking about their future job and employers.

4.5 Research ethics

In this chapter the most important guidelines for research ethics will be presented and how these can impact this study. Within research there are some considerations to be taken when it comes to ethics. Research is important in our society, because knowledge is constantly developed. This can lead to challenges when it comes to which methods to use, evaluations and values that determine limitations the research may have (De nasjonale forskningsetiske komiteene, 2014a). If the study cannot be done with ethical considerations, it shouldn't be done at all (Mitchell and Jolley, 2010). The Norwegian National Committees for Research Ethics has developed a 47 point guideline within social science (De nasjonale forskningsetiske komiteene, 2014a). I will not go through all the guidelines, but will mention a few that are relevant for this master thesis. One of the

guidelines is that researchers shall respect their subjects right to participate (De nasjonale forskningsetiske komiteene, 2014b). It is always voluntary to participate in the study and participants can withdraw if they want to at any time. The participants will receive information on what the study is about and who is responsible for the study at the beginning of the experiment. Research subjects are entitled to a guarantee that all information they provide about their private lives will be treated confidentially, stored responsibly and research material must usually be anonymous (De nasjonale forskningsetiske komiteene, 2014b). Bearing this in mind, I will destroy all data traces that can lead to any identification of individuals. In addition, it is important that the research reflects reality as far as possible (Mitchell and Jolley, 2010). I have gone through and followed the guidelines for social science in the work with this master thesis.

5.0 Analyze of experiments

In this chapter, analysis will be presented. First, missing answers, validity and reliability will be discussed, and then a presentation of the regression assumptions and finally the hypotheses are tested.

5.1 Subjects in the experiment

The experiment was only conducted on students, and the setting can be described as homogeneous. The first collection round the total amount of questionnaires made was 204, these were evenly divided between the six experiments, and a total of 34 questionnaires for each experiment were handed out. Of these there were 12 that were delivered back with no answers. The total answered questionnaires are 192. Of these there were from 30-34 subjects in each group (see appendix B). After an analysis of missing values an additional collection round was conducted (see more about missing values in 5.2). Additional 57 questionnaires were handed out. The total questionnaires gathered data from is 253. In total there were between 35-49 subjects in each group (see appendix B). Of these there were 58.9% answered by men, 39.5% by women and 1.6% missing. As described earlier this variation is as expected, but this is some higher than the gender variation of students studying technology in Norway, as there is 24% female students and 76% men (Statistisk_sentralbyrå, 2013). Most of the participants, 54.5%, were in the age group 21-25 years old, 26.1% were <20 years old, 11.9% 26-30 years old, 4.7% 31-40 years, 1.2% 41-50 and 0.4% were >50 (missing data, 1.2%). Participants came from three difference schools; Buskerud and Vestfold University College (36.8%), NTNU 56.9% and University of Agder (0.8%). 5.5% were missing data. When it comes to the level of finished education there are mainly participants that have only finished Youth College in total 76.7%. Further

there are 13.0% with a bachelor degree, 2.0% with a master degree and 2.8% with other education. 5.5% were missing data. The last demographics variable measured is work experience. Mainly the participants have no relevant work experience to their education, 51.0%. Further 22.9% have work experience from summer jobs, 4.7% have under two years relevant work experience, 9.9% have between 2-5 years of relevant work experience, 3.2% have 6-10 years' experience and 3.2% have over 10 years relevant work experience. 5.1% were missing data.

5.2 Missing answers

An analysis of missing answers was conducted resulting in some interesting findings. In total there are 46 indicators (questions) in the experiments (See Appendix A). To find the total number of response possibilities, you can multiply the number of indicators with the number of respondents. After the first round of data collection there was a total of 8832 questions (46 questions x 192 answered questionnaires) asked in these experiments and the total number of missing answers was 1423 (see appendix B). This is a large number of missing answers. The missing answers are mainly from the questions regarding *attitude*, *intentions to apply for vacant positions* and *the content of the contact from company through LinkedIn*. The reasoning for the lack of answers within these subjects can be that the participants they had no knowledge of the imaginary company and didn't feel they could answer these questions that were about the company. Although the information given to the students were to answer all questions, a lot of students didn't answer these. Because this value is so large, and missing especially within the experiments without the advertisement, a second round of data collection was conducted. This was done to try to gather data with less missing values to balance the large number of missing values. The

total of the two data collections was 11’638 questions (46 questions x 253 answered questionnaires) and the total of missing values was 1441.

According to Hem (2000) the most normal procedure to solve the problem with missing answers is to (1) remove the forms with missing answers, this is called listwise deletion, (2) use parwise deletion in the calculation of covariance or correlations, or (3) calculate a value that can replace the missing observations. By using listwise deletion of forms with missing information, a risk of losing more than necessary information is possible. In the use of parwise deletion all available indicators are used in parwise calculations of correlations. Both listwise deletion and parwise deletion build on the presumption of that the cause of the lack of answers is due to coincidences.

A total of 81 questionnaires were discarded due to a lot of missing values, leaving 172 answered questionnaires to use in further analysis.

5.3 Descriptive statistics

Descriptive statistics are mathematical techniques for organizing, summarizing, and displaying a set of numerical data (Gall et al., 2007). Descriptive statistics is done to control the general quality of the data according to normal distribution by analyzing mean, frequency distribution, standard deviation, skewness and kurtosis. The data of the variables should look like a bell-shaped density curve with a single peak around the mean for normal distributed data.

Mean is an average calculated by adding up all the scores and then dividing by the number of scores. Mean is the most important measure for central tendency (Frankfort-Nachmias and Nachmias, 2008).

Standard deviation is a measure of the extent to which individual scores deviate from the mean (Mitchell and Jolley, 2010). The more scores vary from each other, the larger the standard deviation will be. If all the scores are the same as the mean, the standard deviation would be 0. The standard deviation is the most commonly used measure for validity because it is stable (Gall et al., 2007). The mean and standard deviation, taken together, usually provide a good description of how members of a sample scored on a particular measure (Gall et al., 2007). A frequency distribution of the data will create a normal distribution curve. When data are perfectly normally distributed the density curve is perfectly symmetrical meaning that the data are distributed equally on both sides of the mean, and the curve is neither too narrowly nor too broadly peaked (Frankfort-Nachmias and Nachmias, 2008). Skewness refers to the symmetry of the distribution curve. There can be more extreme cases in one direction of the distribution than in the other. The curve will then lean to either side. Kurtosis on the other hand refers to how peak the curve is. If the distribution is normal, the value for skewness and kurtosis should be 0, but according to Pallant (2007) this is not normal in social science. The limit for skewness is set to -2 and 2. The limit for kurtosis is set to -3 to 3 (Balanda and MacGillivray, 1988). This should not be of any treat to the normal curve. If the skewness and kurtosis values are over or under the accepted values then this could affect the reliability of the analysis.

An analysis of descriptive statistics show that there are only 3 indicators that are larger than 1 when it comes to standard deviation. This indicates that the variation in the answers given on the indicators is limited and most answers are close to the mean. This shows that only a few values from the item are taken use of. These items are left as is for further analysis.

When it comes to skewness all the values are within the requirement, for kurtosis there are only one item that exceeds the value of 3, which is the item ‘ job_att_learning’. The item exceeding the accepted values is removed from further analysis. Looking at the minimum and maximum values, it is clear that there are no wrongly submitted values.

See appendix C for more details.

5.4 Validity and reliability

Validity and reliability are two basic characteristics of measures. Validity addresses issues of the direct correspondence between a measure and a concept (Bollen, 1989). This means that what is wanted to be measure is actually measured; if not there can be misguiding results of what is actually true and not. According to Cook and Campbell (1979) validity can be explained by four categories: 1) construct validity, 2) statistical conclusion validity, 3) internal validity and 4) external validity.

1) Construct validity, assesses whether a measure related to other observed variables in a way that is consistent with theoretically derived predictions (Bollen, 1989). Bollen (1989) explains that if we examine the relation between a measure of one construct to other observed variables indicating other constructs, we expect their empirical association to parallel the theoretically specified associations. To the extent that they do, construct validity exists. Reve (1985) believes that validity is a necessary condition for the results to be meaningful, interpretable and possible to generalize. The construct validity is explored by investigating its relationship with other constructs, both related (convergent validity), and unrelated (discriminant validity) (Pallant, 2007).
   Convergent validity asks whether the measurement is related to variables to which it

should be related if the instrument were valid. Divergent validity asks whether the measurement is unrelated to variables to which it should be unrelated if the instrument were valid. Additionally construct validity is explained through face validity and nomological validity. Face validity refers to the immediate compliance between the theoretical and operational definition of a variable. A simple test of face validity is to ask for somebody else interpretation of the chosen operationalization (Reve, 1985). Nomological validity refers to the degree that the summated scale makes accurate predictions of other concepts in a theoretically based model. It determines whether the scale demonstrates the relationship shown to exist based on theory or prior research (Hair et al., 2010).

2) Statistical conclusion validity is the degree to which conclusions about the relationship among variables based on the data are correct. Two types of errors can occur: finding a difference or correlation when none exists, and finding no difference when one exists (Reve, 1985). Statistical conclusion validity concerns the qualities of the study that make these types of errors more likely. Statistical conclusion validity involves ensuring the use of adequate sampling procedures, appropriate statistical tests, and reliable measurement procedures(Cook and Campbell, 1979).
3) Internal validity (explained in 4.1.2 Validity of experiments)
4) External validity refers to the approximate validity with which we can infer that the presumed causal relationship can be generalized to and across alternate measures of the cause and effect and across different types of persons, settings, and times (Cook and Campbell, 1979). As described earlier there are twelve factors that can affect an experiments external validity, these are divided between population validity (explained in 4.2) and ecological validity. Ecological validity concerns the extent to which the

results of an experiment can be generalized from the set of environmental conditions. If the treatment can be obtained only under a limited set of conditions or only by the original researcher, the experimental findings are said to have low ecological validity (Gall et al., 2007).

5.4.1 Convergent validity

To be sure that a measure is measuring a certain construct, evidence for its convergent validity should be obtained. Convergent validity is the extent to which a measure correlates with other indicators of the construct (Mitchell and Jolley, 2010). The idea of this is that the measure correlates with other indicators because they all are measuring the same – the construct. Factor analyzes are used to investigate convergent validity. Factor analysis is an interdependence technique whose primary purpose is to define the underlying structure among the variables in the analysis (Hair et al., 2010). The purpose of the factor analysis is to reduce the number of questions to a smaller set of factors that denote the representative of the term. Campbell and Fiske (1979 in Bollen, 1989) require that the correlations of the different measures of the same trait should be statistically significant and sufficiently large. There is little agreement concerning how large a sample should be, but the general rule is: the larger, the better (Pallant, 2007). In smaller sample groups, e.g. 150 cases, the values should be above 0.80 (Pallant, 2007). Values from 0.60 to 0.70 are mediocre, 0.70 to 0.80 are middling and 0.80 and above is meritorious. If there are no substantial number of correlations greater than 0.30 the factor analysis is probably inappropriate (Pallant, 2007). If these criteria are fulfilled, the scale can be used. If not, it is possible to remove the measures that are low. A factor loading shows how much of the variance of the measure is described by the factor.

To analyze the convergent validity factor analysis was conducted. To be sure that the results of the factor analysis is satisfying and is measuring the concept that is analyzed, a factor loading of >0.3 is set. This is according to the recommended degree (Kim and Mueller, 1978). Additionally two statistically analysis can be done to help assess the factorability of the data. These are Bartlett's test of sphericity, and Kaiser-Meyer-Olkin measure of Sampling Adequacy. Bartlett's test of sphericity should be significant ($p < .05$) for the factor analysis to be considered appropriate (Pallant, 2007). Kaiser-Meyer-Olkin is a statistic that indicates the proportion of variance in your variables that might be caused by underlying factors. High values (close to 1) generally indicate that a factor analysis may be useful with your data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful. I have also chosen to use maximum likelihood, this is the method that gives the most correct statistical answers (Pallant, 2007). I have chosen to use Principal Component as a factor extraction method. Principal Component can be used when there are few indicators.

The dimensions of ad and LinkedIn did not undergo these analyses, due to only having one item describing the concepts. Also 'Perceived job attributes' didn't undergo this analysis since this variable is formed by formative indicators, it will not be validated in a factor analysis.

The results from the convergent validity analysis show that the three dimensions with their indicators are within the requirement values and have good convergent attributes. These factors are further being analyzed for divergent validity. See appendix D for more detailed information of the factor analysis for convergent validity.

5.4.2 Divergent validity

Divergent validity refers to the degree a construct differs from another construct. According to Reve (1985) the operationalized measure of construct A must differ from an operationalized measure of construct B, and confounding must be avoided. The indicators that measure different construct must therefore correlate at a minimum or not at all. An analysis is conduced to find the indicators that are loading on factors other than what was intended. Seldom all indicators associated a concept load only on one factor and don't cross-load with other concepts. When a variable is found to have more than one significant loading, it is termed a cross-loading. The requirement for cross-loadings is that they should not be greater than 0.4, as they could then indicate that a variable is related to more than one factor. If there are cross-loadings, the variance from other concepts should be greater than 0.1 (Frankfort-Nachmias and Nachmias, 2008). All values <0.3 will be removed. In this analysis I have chosen to use Principal Component as the method with Direct Oblimin rotation, which is a method, used when factors are allowed to be correlated and makes the factors easier to interpret.

The results of the analysis of divergent validity show that the items load on three factors. Some of the items of 'intention to apply for job' were removed due to low cross-loadings and loadings on same factor as attitude. In the final analysis the dimension of intention_apply_job had only two factors, and there has to be at least three items to describe a dimension (Kim and Mueller, 1978). Since there are not multiple items to describe the dimension, I chose to depend on the item with the largest loading, and therefore 'intention_apply_job3' is left as the item to describe the dimension. All values are over 0.6 and can therefore be used on in further analysis. The results can be seen in appendix E.

5.4.3 Reliability

Reliability refers to the extent to which a measuring instrument contains variable errors, errors that appear inconsistently between observations either during any one measurement procedure or each time a given variable is measured by the same instrument (Frankfort-Nachmias and Nachmias, 2008). Easily explained reliability is different from validity because it doesn't relate to what should be measured, but instead it focuses on how it is measures. It is important in reliability tests that the answer is the same, time after time. Reliability assesses the consistency of a measure, regardless of whether it is valid (Bollen, 1989). A test of reliability can uncover random measurement errors in the study. One of the most commonly used indicators of internal consistency is Cronbach's alpha coefficient. The measure varies on a scale from 0 to 1, having the value 0 when the measure displays nothing but error, and the value 1 when the measurement displays no variable error at all (Frankfort-Nachmias and Nachmias, 2008). Ideally the Cronbach's alpha coefficient of a scale should be above 0.7 (DeVellis, 2003 in Pallant, 2007). Only the indicators that were approved by the validity analysis conducted in the convergent and divergent analysis will be tested in the Cronbach's alpha analysis.

Dimension	Items	Cronbach's alpha	N
Attitude	3	0.937	169
Involvement	4	0.872	171

Table 7 - Reliability

The requirement of a value above 0.7 according to Cronbach's alpha is achieved for the dimensions. This shows that there is little random error of measurements.

5.5 Index of constructs

After gathered information from the validity and reliability analysis, an index of the constructs can be constructed to be used in the further testing of the hypothesis. By indexing the indicators, lifting the data from an indicator level to a variable level, now the variables for the study are determined. There are different ways to index a construct. In this study an averaged summed rating scale was used. In this scale only indicators that have passed the criteria for the normal distribution analysis, convergent validity, divergent validity and reliability analysis are included.

Construct	**Name of variable**	
Ad	Ad	Ad
LinkedIn	LinkedIn	LinkedIn
Attitude	EBI_attitude	(attitude1 + attitude2 + attitude3)/3
Intentions to apply for job	EBI_intention	intentions_applyjob3
Perceived job attributes	EBI_job_att	(job_att_salary + job_att_location + job_att_promotion + job_att_training + job_att_culture + job_att_reputation + job_att_interesting_tasks + job_att_benefits + job_att_secure_job)/9
Involvement	Involvement	(involvement1 + involvement3 + involvement4 + involvement5) /4

Table 8 – Index of constructs

5.6 Discriminant validity

Discriminant validity is a term often regarded as interchangeable with divergent validity. Discriminant validity is the extent to which a construct is truly distinct from other constructs. High discriminant validity provides evidence that a construct is unique and captures some phenomenon other measures do not (Hair et al., 2010). It is established by

showing that the measure does not correlate with measures of unrelated constructs and does not correlate too highly with measures of related constructs (Mitchell and Jolley, 2010). The requirement for discriminant validity is that the correlation values should ideally be below 0.6, but values closer to 0.8 may also be accepted (Hair et al., 2010).

From a correlation analysis the results between the indexed terms has satisfactory values proving discriminant validity. As seen in the results (see appendix F) there are no correlations above 0.6. The highest correlation is between EBI_intention and EBI attitude. Further analysis can be conducted.

5.7 Testing of hypothesis

After conducting validity analysis, reliability analysis and assumptions analysis, the next phase is to conduct test the hypothesis. The hypotheses of this study were formulated in chapter 3, and were based on the study's research problem and review of the literature theory in chapter 2. This study has three dependent variables, and to test the hypothesis of these MANOVA analyses will be used. Multivariate analysis of variance (MANOVA) is used to determine whether groups differ on more than one dependent variable, and indicates whether there is a statistically significant difference between the groups in the experiment. MANOVA has certain assumptions, which should be complied with in order to obtain suitable results. The results of the analysis and discussion of these will take place in chapter 6.

5.7.1 Assumptions for MANOVA analysis

The assumptions for MANOVA analysis are 1) Sample size, 2) normality, 3) outliers, 4) linearity, 5) homogeneity in regression, 6) multicollinearity and singularity, and 7) homogeneity (equality) of variances-covariance matrices. Although these assumptions

should be complied, Hair et al. (1998) says that only three conditions needs to be met for the results to be valid: the observations must be independent, variance-covariance matrices must be equal for all manipulations, and the set of p-dependent variables must follow a multivariate normal distribution. Under is presented the most important assumptions. See appendix G results of these assumptions.

Independence of observations. The assumption of lack of independence among observations implies that the participants did not give their input/response independently of others (Hair et al., 2010). This goes for before or during the experiments. A violation of this assumption is the most serious one, and different effects can affect the results by creating dependence between the groups. The two most common violations are time-ordered effects occurring if measures are taken over time, and gathering information in group setting were the participants are influenced by the setting (Hair et al., 2010).In this study the respondents were given the surveys either in a class room setting or face-to-face with the distributor. The surveys were answered separately with no communication between the participants. Also the experiments were randomized, meaning that the participants located together weren't necessarily undergoing the same experiment at the same time. Therefore the likelihood of respondents being influences by each other is limited. More information about randomization, see 4.2.

*Homogeneity (equality) of variances-covariance matrices.*Analysis of variance assumes that the variance of the dependent variable is homogeneous across all of the cells formed by the independent variable. To check this assumption the Box's Test of Equality of Covariance Matrics will tell whether the data violates the assumption of homogeneity of variance-covariance matrices. If the significant value is larger than 0.001, there is no violation of the assumption. Results of the Homogeneity (equality) of variances-covariance

matrices for ad show that the significant value is 0.001. This means the assumption is violated. This result is right on the boarder and therefore I choose to continue analysis using this result. According to Tabachnick and Fidell (2007) the results from Box's M can tend to be too strict when it comes to large sample sizes. Results of the Box's test on LinkedIn shows a significant value of 0.099. This means the assumption is not violated. With these results I continue the analysis and regard the assumption of homogeneity (equality) of variances-covariance to be fulfilled.

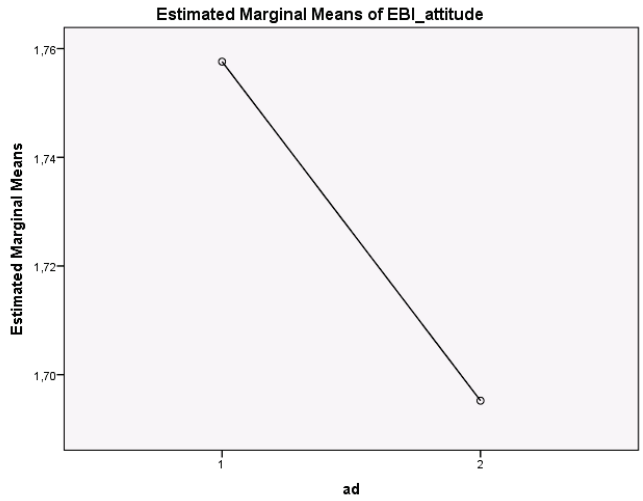
Normality. The assumption of normality indicates that the results are normally distributed around the mean. This is called the normal distribution of error. Moderate violations of normality are usually not critical (Howell, 2013). According to Pallant (2007) as long as there are more than 30 subjects in each cell, any violation of normality of variance that exist will not matter much. As seen in appendix C none of the variables have signs of skewness or kurtosis as the values do not exceed the required values. Also there are more than 30 subjects in each group. This indicates that the variables are normally distributed, fulfilling the assumption of normality.

5.7.2 Testing of hypothesis using MANOVA

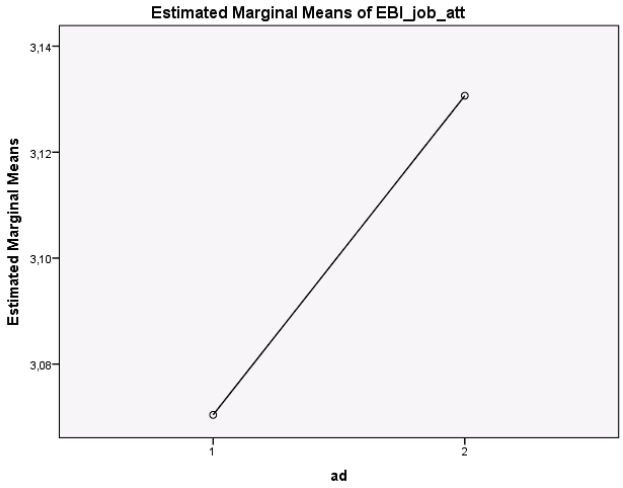
When the assumptions are fulfilled tests of the hypothesis can be done. The analysis of MANOVA indicates whether there is a statistically significant difference between the groups in the experiment. Each hypothesis presented in sequence, with the associated table and graph where applicable.

The purpose of hypothesis 1 is to test if exposure of an organizations advertisement will affect the potential job seekers attitude towards the company. The results for H1a shows that there is not a significant relationship between advertisement and attitude (F=

0.285 p>0.1). The graph shows that no advertisement (ad1=1.758) is higher on the scale of attitude than exposure to advertisement (ad2=1.695). This shows that the attitude of the subjects is considered more positive to the fictitious company when they don't receive advertisement from the company, than when they receive it. The hypothesis is not supported on the direction and H1a not supported.

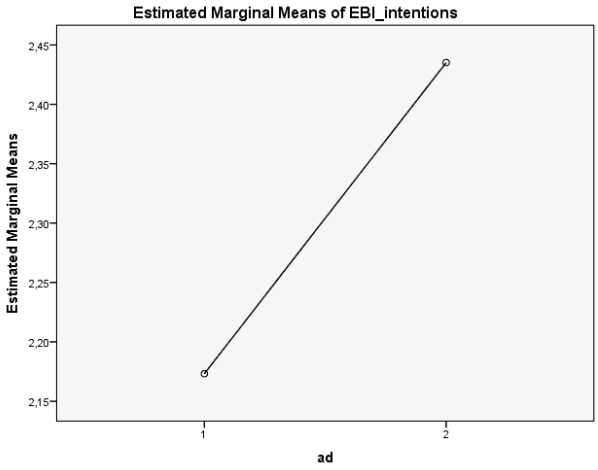


The results for H1b does not show significant between the subjects receiving advertisement and not on the perceived attributes of the company (F=1.249 p>0.1). The graph shows that no advertisement (ad1=3.070) has a lower value than the exposure to advertisement on perceived job attributes (ad2=3.131). This shows that the perceived job attributes are considered more positive when the participants receives the advertisement than when they don't. The analysis show that the direction is as predicted, but the hypothesis is not supported due to the significant level. H1b is not supported.



The results for H1c shows a significant level between the subjects receiving advertisement and not on the intentions to apply for a job in the company (F=3.700 p<0.1).

The graph shows that no advertisement (ad1=2.173) has a lower value than the exposure to advertisement on the intentions to apply for a job (ad2=2.435). This shows that the intentions to apply for a job are considered more positive when the participant receives the advertisement than when they don't. This hypothesis is supported on the direction and H1c supported.



H2.1a Attitude - Advertisement with no recruitment related activities

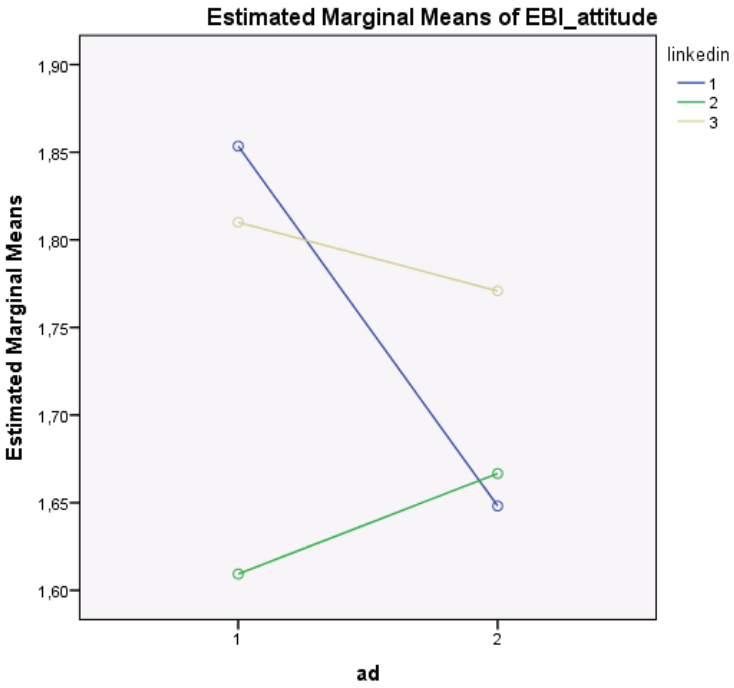
Subject that did not receive the proactive recruitment activity had a lower attitude towards the company when receiving the advertisement (ad2*linkedin1=1.648) than participant not receiving the advertisement (ad1*linkedin1=1.853). This shows that participant will have a stronger positive attitude towards the company when only receiving advertisement, and lower when not receiving neither advertisement nor proactive recruitment activities.

H2.2a Attitude - Advertisement with company leaving traces on LinkedIn profile

Subject that received the proactive recruitment activity in form of company leaving traces on their LinkedIn profile had a more positive attitude when they received the advertisement (ad2*linkedin2=1.667) than participant not receiving the advertisement (ad1*linkedin2=1.609). This indicates that receiving both advertisement for the company and seeing that the company has looked at your LinkedIn profile will lead to a more positive attitude than not receiving the advertisement, only receiving traces from company on LinkedIn profile. The direction is supported.

H2.3a Attitude - Advertisement with company contacting participant through LinkedIn

Subject that received the proactive recruitment activity in form of company contacting participant on LinkedIn had a more negative attitude when they received the advertisement (ad2*linkedin3=1.771) than participant not receiving the advertisement (ad1*linkedin3=1.810). This indicates that receiving both advertisement for the company and receiving a direct message from the company through LinkedIn will lead to a less positive attitude than not receiving the advertisement but receiving a direct message from the company on through LinkedIn. The direction is not supported.



H2.1b Intentions to apply for job - Advertisement with no recruitment related activities

Subject that did not receive the proactive recruitment activity had a higher intention to apply for job when receiving the advertisement (ad2*linkedin1=2.389) than participant not receiving the advertisement (ad1*linkedin1=2.069). This shows that participant will have a higher intention to apply for job with company when only receiving advertisement, and lower when not receiving neither advertisement nor proactive recruitment activities.

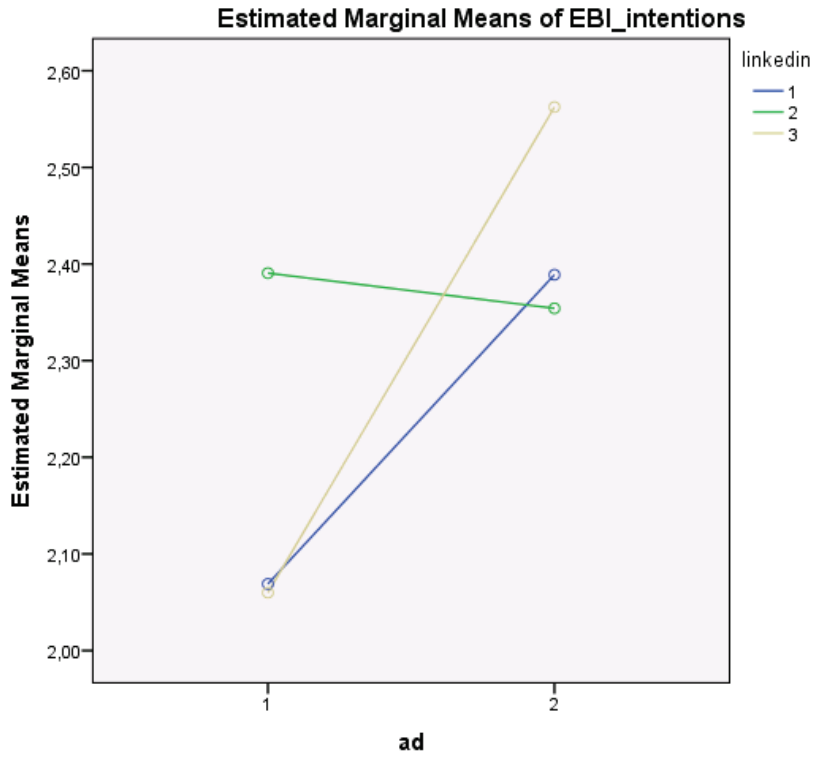
H2.2b Intentions to apply for job - Advertisement with company leaving traces on LinkedIn profile

Subject that received the proactive recruitment activity in form of company leaving traces on their LinkedIn profile had a higher intention to apply for job when receiving the advertisement (ad2*linkedin2=2.354) than participant not receiving the advertisement (ad1*linkedin2=2.391). This indicates that receiving both advertisement for the company and seeing that the company has looked at your LinkedIn profile will lead to a lower

intention to apply for job than not receiving the advertisement, only receiving traces from company on LinkedIn profile. The direction is not supported.

H2.3b Intentions to apply for job - Advertisement with company contacting participant through LinkedIn

Subject that received the proactive recruitment activity in form of company contacting participant on LinkedIn had a higher intention to apply for job when receiving the advertisement (ad2*linkedin3=2.563) than participant not receiving the advertisement (ad1*linkedin3=2.060). This indicates that receiving both advertisement for the company and receiving a direct message from the company through LinkedIn will lead to a higher intention to apply for job than not receiving the advertisement, only receiving a direct message from the company on through LinkedIn. The direction is supported.



H2.1c Perceived job attributes- Advertisement with no recruitment related activities

Subject that did not receive the proactive recruitment activity had a more positive perception of job attributes when receiving the advertisement (ad2*linkedin1=3.160) than participant not receiving the advertisement (ad1*linkedin1=3.000). This shows that the job attributes are perceived to be more positive when only receiving advertisement, and lower when not receiving advertisement or proactive recruitment activities.

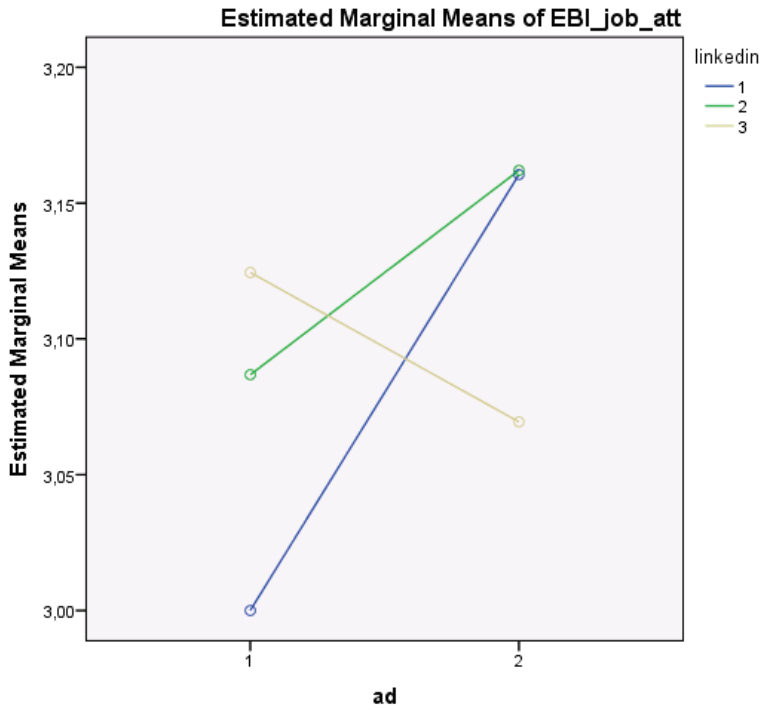
H2.2c Perceived job attributes - Advertisement with company leaving traces on LinkedIn profile

Subject that received the proactive recruitment activity in form of company leaving traces on their LinkedIn profile had a more positive perception of job attributes when receiving the advertisement (ad2*linkedin2=3.162) than participant not receiving the advertisement (ad1*linkedin2=3.087). This indicates that receiving both advertisement for the company and seeing that the company has looked at your LinkedIn profile will lead to a more positive perception of job attributes than not receiving the advertisement, only receiving traces from company on LinkedIn profile. The direction is supported.

H2.3c Perceived job attributes - Advertisement with company contacting participant through LinkedIn

Subject that received the proactive recruitment activity in form of company contacting participant on LinkedIn had a less positive perception of job attributes when receiving the advertisement (ad2*linkedin3=3.069) than participant not receiving the advertisement (ad1*linkedin3=3.124). This indicates that receiving both advertisement for the company and receiving a direct message from the company through LinkedIn will lead to a more

negative perception of job attributes than not receiving the advertisement, only receiving a direct message from the company on through LinkedIn. The direction is not supported.



5.7.3 Controlling variables

Controlling variables are used to check it the requirement of isolation is satisfied (see 4.1.3). A controlling variable is a variable that could affect the results, and there is a suspicion that his variable could do so. It is important to run analysis to see it the initial relationship still exists and is not influenced by the controlling variable.

In this study I am using involvement as a controlling variable. By running a MANCOVA, an extension of MANOVA where the controlling variables – covariates – are required, more significant finding are discovered, also some directions of relationships are altered. See appendix I.

I will go through the results for the altered findings of hypothesis. First, the significant level of the relationship between advertisement and intentions to apply for job

(EBI_intentions) has become stronger. Otherwise there are no relationships altered from the MANOVA analysis.

Second, the direction of the relationship between advertisement and the proactive recruitment activity in form of company contacting participant on LinkedIn, on attitude is altered. The subject that received the proactive recruitment activity in form of company contacting participant on LinkedIn had a more positive attitude when they received the advertisement (ad2*linkedin3=1.824) than participant not receiving the advertisement (ad1*linkedin3=1.797).

Third, the direction of the relationship between advertisement and the proactive recruitment activity in form of company leaving traces on their LinkedIn profile, on the intention to apply for job is altered. Subject that received the proactive recruitment activity in form of company leaving traces on their LinkedIn profile had a higher intention to apply for job when receiving the advertisement (ad2*linkedin2=2.410) than participant not receiving the advertisement (ad1*linkedin2=2.347).

Involvement

The controlling variable involvement is analyzed having a main effect on the dependent variables. Involvement is affecting attitude. The results show that there is not a significant relationship between involvement and attitude ($F= 4.262$ $p>0.1$). Involvement is affecting intention to apply for job. The results show that there is a significant relationship between involvement and intention to apply for job ($F=8.632$ $p<0.05$). Involvement effecting perceived job attributes. The results show that there is a significant relationship between involvement and perceived job attributes ($F=3.601$ $p<0.1$).

5.8 Additional analysis

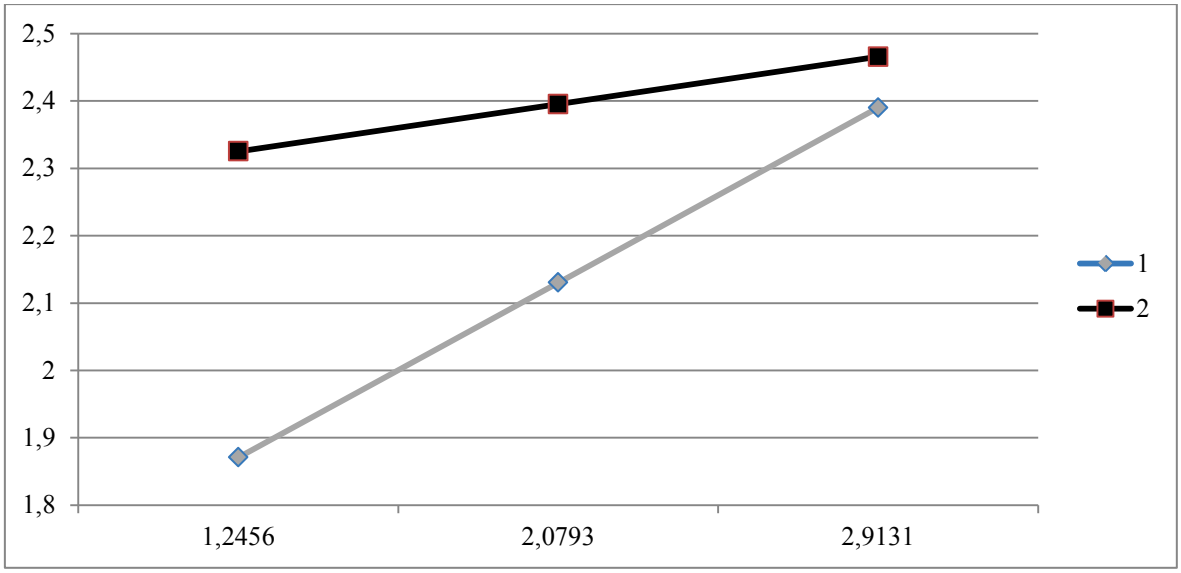
As the MANOVA and MANCOVA clearly states, the variable of LinkedIn has little to no effect on any of the other variables in this study. Also due to the findings that involvement has a larger effect on the dependent variables than theoretical implied, it would be interesting to run some additional analysis. It would be interesting to see if involvement has a large effect on the dependent variables when it operates as a mediating variable. For this I use conditional process analysis, using Hayes' (2014) PROCESS. PROCESS is a macro for SPSS that is used to conduct the analysis.

The model that will be analyzed is shown in appendix J. This is categorized as model 1 (Hayes, 2013). This model is a moderation model, like the initial research model. I have chosen to only investigate the relationships between the effects from ad on the dependent variable of 'intentions to apply for job' as this was the only effect from the MANCOVA that received significant value. The moderator effect has been changed from 'proactive recruitment practices through LinkedIn' (LinkedIn) to involvement. I will also add a hypothesis:

H3: Involvement has a moderating effect on the relationship between advertisement and intentions to apply for job.

Results show that there is a main effect from advertisement (ad) to intentions to apply for job (EBI_inte) ($p<0.1$). Also there is an effect between involvement (involvem) and the dependent variable ($p<0.1$). These results are as expected, as the MANCOVA showed the same significant results. Although there are significant findings of the main effect on the dependent variable, there is not a significant value on an interaction effect of advertisement

and involvement (p>0.1). Interesting from this analysis shows that there are significant values of the interaction effect up to a certain level of involvement, see appendix J). The significant value ceases at the involvement value of 2.2294, using the Johnson-Neyman (JN) Technique (Hayes, 2013). Rather than finding *p* for a given value of *t* (e.g. indexing a continuous variable into high and low levels of the moderator), JN derives the region of significance of the effect of X on Y. All values when not being exposed to the advertisement all values are significant. It is only on the value when being exposed to the advertisement that the moderating effect of involvement stops at a certain value.



5.9 Summary of analysis and testing of hypotheses

Hypothesis	Direction	F-value	Sig.value	Conclusion
H1a (ad→EBI_attitude)	-	0.285	p>0.1	Not supported
H1b (ad→EBI_job_att)	+	1.249	p>0.1	Not supported*
H1c (ad→EBI_intentions)	+	3.700	p<0.1	Supported
H2.1a (ad*linkedin→EBI_attitude)	-	0.449	p>0.1	Not supported
H2.2a (ad*linkedin→EBI_attitude)	+			Not supported*
H2.3a (ad*linkedin→EBI_attitude)	-			Not supported
H2.1b (ad*linkedin→EBI_intentions)	+	1.337		Not supported
H2.2b (ad*linkedin→EBI_intentions)	-			Not supported
H2.3b (ad*linkedin→EBI_intentions)	+			Not supported*
H2.1c (ad*linkedin→EBI_job_att)	+	1.319		Not supported*
H2.2c (ad*linkedin→EBI_job_att)	+			Not supported*
H2.3c (ad*linkedin→EBI_job_att)	-			Not supported
H.3 (involvement*ad→EBI_intentions)	+	1,8527	p<0.1 (0-2.2294) p>0.1 (2.2294-)	Not supported[1]

*The relationship is not supported, only the direction of the relationship.
[1] The significant values are valid up to the involvement value of 2.2294.

Table 9 - Summary of analysis and testing of hypotheses

Only three of the thirteen hypotheses are supported on a 10% level, while four additional hypotheses are supported in direction. Results of MANCOVA indicate that some values increase and decrease, and but no relationships change to become significant or not. The controlling value 'involvement' turns out to have several influences; significant relationship is uncovered between controlling variable and two of the dependent variables.

Results will be discussed in chapter 6, together with implications of the findings, limitations of the study, as well as suggestions for further research.

6.0 Discussion and implications

In this study an investigation of the relations between the dimensions in employer brand image, use of proactive recruitment activities through LinkedIn, and advertisement in order to identify important factors in which organizations should focus on in their work within employer branding. Results will be discussed in this chapter, along with implications of the findings, limitations of the study, as well as suggestions for further research. The discussions in this chapter will focus on answering the research question: *How does proactive recruitment communication through LinkedIn affect the employer brand image compared to well-known recruitment related communication activities?*

From the research question some hypothesis where established and tested using regression analysis. There are few studies carried out that has investigated the different ways of communicating through LinkedIn and how this communication methods affect the employer brand image. The main objective with this study is to understand the effect proactive recruitment relates activities and communication through LinkedIn affect the employer brand image. In addition to having knowledge of the factors that lead to a strong employer brand image, organizations need to have knowledge of how this may affect the recruitment outcome. Results from the hypothesis analysis show that there is only support for H1c in which is an effect between advertisement and intentions to apply for job. The other hypothesis' where not supported.

6.1. Theoretical implications

There are three results from the study that will be discussed.

6.1.1 Advertisement affecting employer brand image

The first is the relationship between advertisement and employer brand image. The intention is to study how the employer brand image is affected by advertisement. Three dimensions measure employer brand image; attitude, intentions to apply for a job, and perceived job attributes. According to Heilmann et al. (in Collins and Stevens, 2002) students rely heavily on marketing activities as signals of unknown, important attributes and as a basis for their brand attitudes. Collins and Stevens (2002) found that positive attitudes to organizations affect intentions to apply for jobs in these organizations.

The results show that there is only one main effect that is significant – the relationship between advertisement and intentions to apply for a job. When it comes to results on attitude changes, this study indicates that advertisement alone will not change job seekers attitude towards an unknown company. Although there is no significant main affect here, the direction is interesting. Participants have more positive attitude towards the company when they didn't receive the advertisement, then the participants that did receive it. The perceived job attributes are also not affected by being exposed to the advertisement.

Media advertising is an obvious source of image, both forming and building a brand gestalt (Biel, 1993). According to Biel (1993) some markets treat advertising as the sole source of brand image. Among other sources one mentioned is direct response. This could be contact with company through social media.

6.1.2 Proactive recruitment related activities through LinkedIn

The main focus in this study was to investigate the use of proactive recruitment activities through LinkedIn to see if these affect the relationship between advertisement and employer brand image. There is little research one this matter that I have come across. There are rapports on than students and other job seekers use this media get to know

potential employers and that LinkedIn is perceived to be effective as a recruitment channel (see Caers and Castelyns, 2011, Universum, 2011b, Henriksen 2011). Communication thorough LinkedIn can be seen as a way of marketing a company. Companies having an updated profile can function as a company home page. The difference is that the content should only contain recruitment and career opportunities, as LinkedIn is a portal for career purposes.

Interestingly, the results from this study show that recruitment related practices through LinkedIn has no significant effect on employer brand image, neither as an interaction with advertisement. Even though the relationship is not significant, the indicating directions of the relationship are interesting. Repetition of advertisement leads to either a decrease in liking, or an initial increase, then decrease in liking. Repeated exposure provides more opportunity to learn about the stimulus; this learning is presumably rewarding and leads to increased liking for the stimulus (Cacioppo and Petty, 1979). Therefore an assumption is that being exposed to the company brand twice would strengthen the employer brand image. The estimation of this study is that there will be a more positive towards the company when being exposed to the brand multiplies times.

The results show that the analysis of interaction effect of advertisement and LinkedIn on attitude, show that the assumption of receiving communication on LinkedIn profile is as assumed when the participant has already received the advertisement. This isn't so when participants have not received the advertisement. The participants that do not receive the advertisement, and do not receive communication on LinkedIn have a higher attitude towards the company than the participants that receive communication on LinkedIn. This value is actually higher than any of the other attitude values. This indicates that the participant that did not receive any visual signs of the brand has a higher attitude

towards the brand than the participants that received visuals of the brand. The participants that did receive the advertisement, but not the LinkedIn contact has a lower attitude towards the company than any other of the attitude values. Another interesting direction is the one of the participants that received the personal message through LinkedIn. They have a higher attitude towards the company when not receiving the advertisement, than the participants that received it. This could indicate that companies sending out personal messages through LinkedIn create a more negative attitude towards the company than just advertising. Even though the differences in values aren't large, this is still an interesting direction.

The same results are shown for the interaction of advertisement and LinkedIn on the perceived job attributes. Here the participants have a higher perception of the job attributes when not receiving the advertisement, than when they do. This is when a personal message is given through LinkedIn. Another interesting result from this relationship is when there is no communication through LinkedIn. The values climb almost as high as the values for the second LinkedIn manipulation (company leaving traces on LinkedIn profile) when also receiving advertisement. This indicated the effect of only the advertisement alone, seen once.

The result from the interaction effect on intentions to apply for job is the only one with a positive value when it comes to the manipulation three on LinkedIn (personal message on LinkedIn). The value is the strongest one of the manipulations then also receiving the advertisement. In these findings, the manipulation one (no communication through LinkedIn) also is stronger when also receiving the advertisement. This is more alike the initial assumption of directions although the second manipulation of LinkedIn in on intentions to apply for job is slightly negative.

There can be different reasons for the findings of the effects of advertisement and from LinkedIn. One of possible explanations for the findings might be that students are not as familiar to LinkedIn as assumed. Universum (2011b) reports that a majority of students in Norway use LinkedIn to build professional relations and students use LinkedIn as a tool for professional communication and networking. In this study it is clear that only 34.4% of the students asked had a LinkedIn account. Also 5.5% have been contacted by potential employer through LinkedIn (see appendix K). This might be because mainly the students in this study are first or second year students, and still have some years left at school before starting working. They therefore might not have started thinking about a job, let alone look up, discover and evaluate potential employees. This is a notion that is interesting for employees that employ students directly when finishing their diploma, or spend time and resources communicating their employer brand. The reach through LinkedIn is smaller that first assumed, or might

mainly be for graduates.

Another possibility is the fact that in this study the use of a totally unknown brand and company was used as advertisement sender. This company was in fact not real – it doesn't exist. This can have affected the way the students read the advertisement and answered the questions given.

Also it is presumed that the manipulation where there is left a personal message to the participant on their LinkedIn profile has a higher value than only leaving traces on LinkedIn profile and no communication through LinkedIn. None of the interaction effects are quite as assumed. Also a main concern of the results is the fact that the participant haven't been exposed to the brand more than tops two times – some even did see any get any other indications about the company other than being asked questions about having

been exposed to it. A theory of advertisement is the hierarchy of effects – also called the hammer and nail notion (Biel, 1993). This means that advertisement is there to hammer messages in to people's head, hence the emphasis on repetition. A more significant assumption about the effects of advertisement is that advertisement progresses people from one stage to another – indicating that the perception about a brand may change by being exposed to the brand, directly or indirectly.

6.1.3 Moderating effect

In the study involvement was used as a controlling variable. Results showed that there were significant values when including this variable. The results show that involvement as a moderating variable between advertisement and intentions to apply for job gave significant values up to a certain level. This was when participants were exposed to the advertisement. It was significant on all levels to participants that were not exposed to the advertisement. This is an interesting finding and which means that up to a certain degree of involvement the advertisement has a positive effect on the intention to apply for a job. In this study it is clear that involvement moderates the relationship and generally shows that this is explained in the ELM.

6.2 Practical implications

The results show that there is support for the relationship between advertisement and the intention to apply for jobs. From these findings a recommendation to companies to use advertisement as a way to affect the potential employee's intentions to apply for jobs.

6.3 Limitations

This study has some limitations. First, there are some limitations regarding the choice of using students to participate in the experiments. Engineering students were chosen because

they are very attractive in the Norwegian labor market, as there is a lack of workers within these fields. There are both positive and negative sides to using students when developing theories. It has been suggested that the use of student subjects threatens the external validity and generalizability of findings due to the non-representativeness and unique characteristics of the population (Wells, 1993 in Berthon et al., 2005). The use of students as sample group may influence the results in that they have attributes that are specific to this group and not for another segment. Also each subject has personal preferences and individual characteristics (Frankfort-Nachmias and Nachmias, 2008).

A large part of the sample group answered that they are not active job seekers. Only 30% say they are active job seekers and of these only about 30% say that they regularly look for vacant positions. Very few say they have been contacted by potential employees for information about job opportunities within their company. This could be because there was no specific age or what grade the students needed to participate in this study. The population is inexperienced in the labor market and therefore might not know what to expect or want in an employer. Marketing activities may be particularly important for influencing inexperienced consumers who may be unsure of what attributes to seek or how to search for and evaluate product and service information. Such consumers rely heavily on marketing activities as signals of unknown, important attributes and as a basis for their brand attitudes.

Secondly the scales where translated from English to Norwegian. Although I have had this checked my several people and confirmed that the content is the same as the original, some might still misunderstand it.

There was a large amount of missing answers in the collected data. A lot of the answers had to be removed due to unanswered questions. Some participants might have

misunderstood parts of the survey or not interpreted that all questions needed to be answered.

The use of a fictitious brand and company will not make the participants create a preference or impression of the company and this might be the reason for little variance in data. With no presumptions or predetermined association from the participants, the answers given are likely to be real regarding their attitude and further decisions of the brand. Additionally the brand was only exposed up to two times. The results of little variance were somewhat expected. I reckon that the data would give, if not the same answers, stronger effects if the same experiments were conducted using well-known brands.

And lastly, the experiment might have given other results if conducted through the real program of LinkedIn and not just a screen shot of the media. This was difficult to do though, due to the isolation requirements (see 4.1.3), personal protection and requirement that participants are informed about being a part of an experiment. Also, by conduction the experiment through LinkedIn, a company would have to be used and registered in LinkedIn. The participants that would receive contact from the company would also need some follow-up if they decided to reply on the enquiry.

An experiment methodical limitation. The strengths of the strict requirements of causality and internal validity can also be a weakness. Internal validity is prioritized on the expense of external validity and generalizability.

6.4 Further research

The study has several possible topics for further research. Mainly it would be interesting to repeat this study but using real brands and companies. The results could further be

compared to the findings in this study with a fictitious company. This would be interesting mainly to see if there are any changes to the effects of the proactive recruitment activities affecting the employer brand image. Also it would be interesting to compare companies that are perceived as ideal employer's compared to less attractive employers to see if the results are altered much. Using their actual LinkedIn accounts and contacting potential employees. This would give more genuine results than could more likely be generalized.

The additional analysis show significant values of involvement on the intention to apply for jobs. This result can be further investigated to see what kind of involvement and how to create involvement to strengthen this relationship.

It would also be interesting to investigate this with more focus on the content of the advertisement. The ELM shows two distinct routes to attitude change; central route and peripheral route. These routes can be compared with cognitive involvement and affective involvement. The cognitive/affective distinction becomes most important when an advertisement scores high on cognitive involvement and low on affective involvement or vice versa (Zaichkowsky, 1994). In marketing it is desired that the viewer's evaluate advertisement through the central route instead of the peripheral route. Through the central route the information and message will be remembered longer and make a bigger impression, because the viewer is more involved in evaluating the information (Cacioppo et al., 1986). This can be applied when creating the messaging in an advertisement, giving different results based on the chosen route to a chosen audience. The same experiment could be conducted, but also manipulating the messaging in the advertisement.

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Appendix

Appendix A – Survey 92

Appendix B - Subjects in experiments and missing values 104

Appendix C - Descriptive statistics 108

Appendix D - Convergent validity 109

Appendix E - Divergent validity 111

Appendix F - Discriminant validity 114

Appendix G - Assumptions for MANOVA analysis 115

Appendix H - Testing of hypothesis using MANOVA 117

Appendix I – Testing of hypothesis using MANCOVA 119

Appendix J – Additional analysis – Hayes model 1 121

Appendix K – Additional descriptive statistics 124

Appendix A – Survey

Spørreundersøkelse

Informasjon

Denne spørreundersøkelsen er en del av min masteravhandling ved Høgskolen i Buskerud innen markedsføring. Det er frivllig å delta i undersøkelsen og du kan avbryte dersom du ønsker det. Jeg sette stor pris på om du vil ta deg tid til å svare på alle spørsmålene, da det styrker resultatene.

Alle opplysningene vil bli behandlet konfidensielt. Behandlingsinstitusjonen for prosjektet er Høgskolen i Buskerud og Vestfold, avdeling Hønefoss. Forventet prosjektslutt er mars 2014, da vil alle data være anonymisert.

Tenk gjennom hvert spørsmål. Det svaralternativet du først tenker på er ofte det alternativet som passer deg best. Spørreundersøkelsen tar omtrent 5 minutter.

Vennlig hilsen
Nicole Stroop Donnelly

Dersom du har spørsmål, ta gjerne kontakt med meg eller min veileder.

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1

Forestill deg at du har hatt en lang og slitsom dag på skolen. Du har akkurat kommet hjem fra eksamen. Det er snart jul og du må snart begynne å tenke på hva du skal gjøre etter endt utdannelse. Du trenger å koble av litt og tar opp den nyeste utgaven av Teknisk Ukeblad. Akkurat denne artikkelen fanget din interesse, og du bestemmer deg for å lese den.

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Like før jul avslørte Teknisk Ukeblad at det har oppstått en spent situasjon mellom Oljedirektoratet (OD) og partnerne i Edvard Grieg-utbyggingen med operatør Lundin i spissen.

Årsaken til konflikten er elektrifisering av Edvard Grieg-plattformen på Utsirahøyden. Etter hva Teknisk Ukeblad kjenner til, kan denne saken være så betent at tradisjonen om at uoverensstemmelser mellom myndigheter og oljeselskap blir løst gjennom dialog, kan ha blitt satt på prøve.

I et møtereferat, ført i pennen av OD etter et møte mellom Lundin og OD, datert 15. november, kommer det frem at partnerskapet i Edvard Grieg-lisensen skal ha satt myndighetene «i en vanskelig situasjon».

ALL KRAFT FRA LAND

Ifølge referatet er problemet at Lundin skal ha trosset Stortingets vedtak om å tilrettelegge for at plattformen skal kunne få alt sitt kraftbehov dekket gjennom kraft fra land, dersom en slik løsning skulle bli tilgjengelig. Dette skal det ikke ha blitt tilrettelagt for.

Siden Edvard Grieg skal i produksjon før de andre feltene på Utsirahøyden, har partnerskapet fått lov til å benytte seg av to gassturbiner frem til en eventuell kraft fra land-løsning er på plass. Da utbyggingsplanen for Edvard Grieg ble godkjent, het det følgende i brevet fra Olje- og energidepartementet:

«Dersom departementet finner at en samordnet kraft fra land-løsning for den sørlige delen av Utsirahøydens skal realiseres, skal Edvard Grieg-feltet tilknyttes en slik løsning og legge til rette for og dekke hele sitt kraftbehov med kraft fra land, med mindre departementet av særskilte grunner bestemmer noe annet.»

Mangler løsningar: Edvard Grieg-plattformen er i dag prosjektert med to gassturbiner som skal generere varme, men mangler løsninger for å omdanne kraft fra land til varme. ILL.: LUNDIN

– VILLE IKKE FORSTYRRE FREMDRIFT

Men, dersom møtereferatet fra Oljedirektoratet stemmer, skal Lundin i lengre tid – omkring halvannet år – ha vært klar over at designen for plattformen ikke ville tilfredsstille vilkåret om at alt kraftbehov skal dekkes gjennom kraft fra land.

I referatet heter det blant annet:

«Lundin så, etter at de mottok godkjenningsbrevet fra OED 29.6. 2012, at vilkåret om at EG (Edvard Grieg, red. anm) skal dekke hele sitt kraftbehov med kraft fra land, ville måtte føre til noe redesign av innretningen. Lundin valgte å beholde den design som lå til grunn ved PUD, og utsatte å finne en løsning på hvordan de skulle tilfredsstille dette vilkåret.»

Videre står det:

«OD spurte hvorfor operatøren ikke hadde tatt opp dette med myndighetene på et tidlig tidspunkt. Lundin svarte at dette var for ikke å forstyrre fremdriften i prosjektet.»

KAN BLI KOSTBART

Lundin har, ifølge referatet, bedt Aker om å finne mulige løsninger på hvordan myndighetenes vilkår om all kraft fra land til Edvard Grieg kan oppfylles. To løsninger blir vurdert:

Alternativ A er en delelektrifisering av installasjonen der en av de to gassturbinene fortsatt må drives etter at et eventuelt kraftkabelanlegg er i drift. Løsningen vil ikke oppfylle vilkåret om at all kraften skal komme fra land.

Det andre alternativet kan oppfylle kravet – men kan også bli kostbart. Alternativ B innebærer å installere en kjel som erstatning for en varmegjenvinningsenhet som drives av turbinene. Utfordringen er plassmangel på installasjonen.

– Det nærmer seg at man har brukt opp ledig vekt- og plasskapasitet på Edvard Grieg. Ved å installere en gassfyrt kjel, vil dette mest sannsynlig gå på bekostning av ekte utvinningsprosjekt og fremtidig tredjepartsinnfasing til Edvard Grieg, heter det i referatet.

Løsningen kan også bli kostbar, der som referatet stemmer overens med virkeligheten.

– Studien viser at selv ved å fjerne varmegjenvinningsenheten på den ene turbinen, er det 50 prosent sjanse for at man ikke har nok vektkapasitet tilgjengelig til en kjel, og at man da eventuelt måtte demontere en turbin i tillegg. Lundin påpekte også at denne studien ikke er detaljert nok til at man kan være sikker på at det ikke kommer ytterligere kostnads- og vektøkninger, heter det.

OD STÅR PÅ SITT

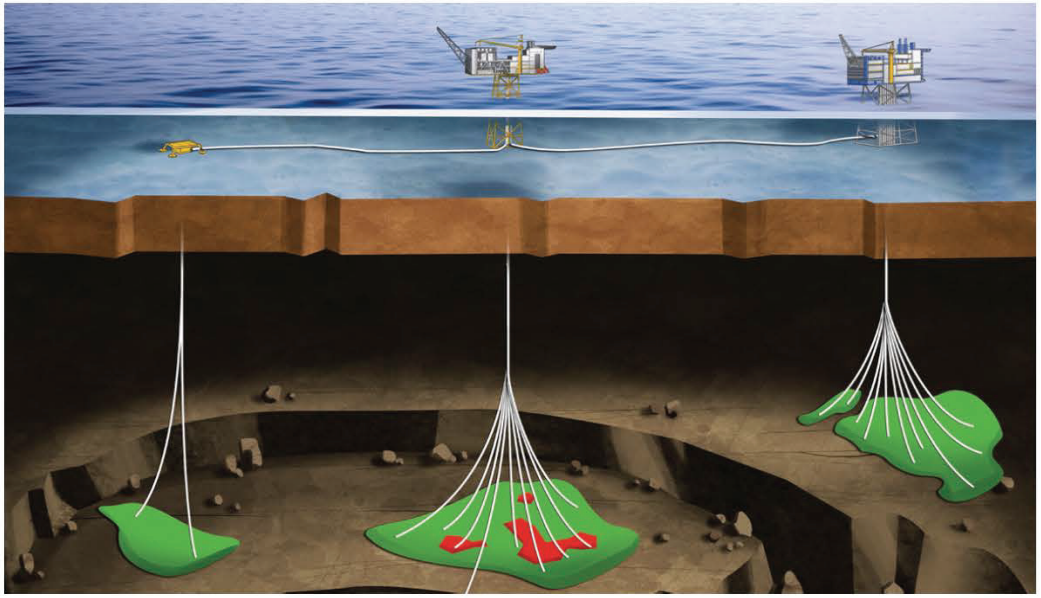
Videre fortalte Lundin, ifølge referatet, at en eventuell gassfyrt kjel vil kunne installeres rimeligst under revisjonsstans i 2019, og at valg av konsept da kan vente til sommeren 2016.

– Lundin foreslo at alternativ A skal ligge som basecase frem til det. OD slo fast at alternativ B er basecase i forhold til PUD-vilkåret, heter det.

Oljedirektoratet mener Lundin og de øvrige lisenspartnerne har skapt vanskeligheter for myndighetene fordi kravet om all kraft fra land nå vil bli svært dyrt.

– OD kommenterte at rettighetshaverne har satt myndighetene i en vanskelig situasjon ved at den eneste mulige løsningen nå for å tilfredsstille vilkåret blir veldig kostbar, og i tillegg vil kunne hindre god ressursutnyttelse i området rundt Edvard Grieg og Ivar Aasen, står det i referatet.

Oljedirektoratet har ikke ønsket å kommentere saken utover det som står i referatet. OD mener for øvrig at referatet medfører riktighet og beskriver innholdet i møtet presist. ▶



Stridens kjerne: Edvard Grieg (i midten) fikk godkjent sin utbyggingsplan under forutsetning av at plattformen skulle klargjøres for å kunne få dekket alt sitt kraftbehov med kraft fra land. OD mener dette ikke har blitt gjort. ILLUSTRASJONSFOTO: NORSKE

TU.NO
Les mer om Edvard-Grieg-utbyggingen på vår nettside.

ELEKTRIFISERING AV UTSIRAHØYDEN

- Utsirahøyden i Nordsjøen består foreløpig av fire felt som er under planlegging og utbygging; Ivar Aasen, Edvard Grieg, Gina Krogh og Johan Sverdrup
- Det har vært et uttalt ønske fra politikerne om at området skal få dekket all sin kraft fra land. Det foregår for øyeblikket et arbeid, ledet av Statoil, som skal utrede en felles elektrifiseringsløsning for alle feltene.
- Edvard Grieg er første feltet som går i produksjon, og vil trenge lokal kraft gjennom gassturbiner før en eventuell felles elektrifiseringsløsning er på plass.
- Konseptvalget for elektrifiseringsløsningen skulle etter planen ha blitt tatt i løpet av 4. kvartal 2013. Det skjedde etter alle solemerker ikke.


Edvard Grieg-plattform ikke forberedt på elektrifisering tross krav fra myndighetene

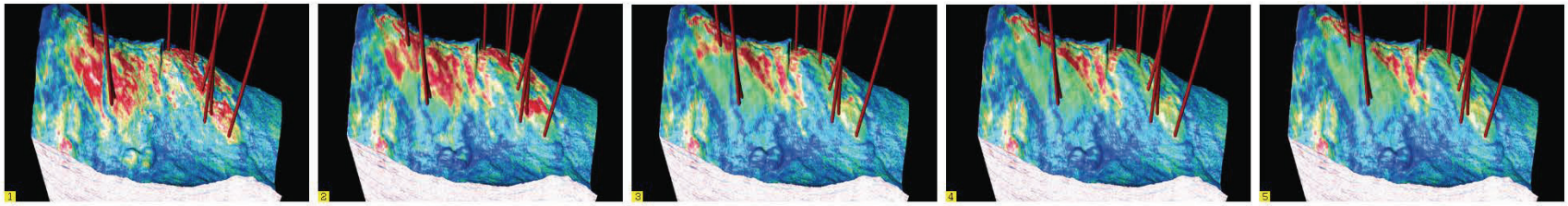
Sentrale politikere var skeptiske til Lundins design av Edvard Grieg-plattformen

– Plattformen er 100 prosent klar til å kjøre på strøm fra land

Arbeiderpartist utfordrer Tord Lien om Edvard Grieg

Ambisjonen om å starte Johan Sverdrup-produksjonen i 2018 ryker

FAKSIMILER FRA TU.NO 17., 19. OG 20 DESEMBER 2013



Forandrer seg: Med kontinuerlig overvåkning kan Shell med sin nye teknologi danne seg et bilde av hvordan et reservoar forandrer seg. I denne bildeserien kan man tydelig se forandringene som skjer over tid. FOTO: SHELL

SHELL SATSER PÅ HELT NY SEISMIKK-TEKNOLOGI

For å finne ting som andre ikke klarer å finne.

Siden 2007 har Shell kartlagt havbunnen rundt nesten alle sine produserende felt i Mexicogulfen. Det har de gjort ved å plassere noder på havbunnen som sender tilbake tredimensjonale bilder av hva som skjer der nede.

Nodene blir plassert ut i intervaller på alt mellom seks måneder til ett år. Dette betyr at overvåkingen av havbunnen skjer kontinuerlig, noe som skal gi bedre forståelse av reservoarene.

Den kontinuerlige overvåkingen gjøres ved at man sammenstiller alle 3D-bildene som blir tatt over tid, noe Shell kaller i4D-teknologi. Teknologien gjør det mulig å holde oppsyn med spesielle områder som er av interesse i reservoaret.

BEDRE OPPLØSNING

Bakgrunnen er at bildene får dramatisk høyere oppløsning og gir mer detaljerte beskrivelser av reservoarene, noe som skal gjøre det lettere å tolke om det kan være mer olje og gass igjen.

Dette er per i dag dyrt, så for å få ned kostnadene gjør selskapet undersøkelser på spesifikke deler av feltet der de forventer forandringer, som rundt injeksjonsbrønner.

– Foreløpig er vi ganske alene om dette, men det er i vår interesse at flere bruker denne teknologien. Hvis man holder dette for seg selv, klarer man ikke å få ned kostnadene. Derfor vil vi at mange skal bruke dette, sier Shells teknologidirektør Gerald Schotman til Teknisk Ukeblad.

– Jeg tror dette blir det nye store i oljeindustrien. Man har noder i stedet for kabler, og det er interessant nok i seg selv. Men denne måten å se reservoar på er meget, meget interessant, sier han.

Har tro: Shells teknologidirektør Gerald Schotman og Anne Mette Hilmen, sjef for Shell Technology Norway, tror Shells nye 4D-teknologi blir det neste store i oljeindustrien. FOTO: PEDER QVALE

KONTINUERLIG

Shell gjorde for eksempel et forsøk der de så på forandringene i nærheten av en injeksjonsbrønn. Vanninjeksjon kan nemlig gi trykkforandringer og gi andre geomekaniske effekter hvis vann blir pumpet inn i de ikke-produserende lagene.

Slike forandringer kan forkorte levetiden eller i verste fall gå utover integriteten til reservoarene og feltene. Derfor er det viktig å holde dem under kontinuerlig oppsyn. Den spesifikke brønnen Shell så på ble målt i 54 dagers sykluser mellom større overvåkninger.

Resultatet var at forskerne så at området rundt hadde forandret seg så mye at de bestemte seg for å stenge ned injeksjonsbrønnen.

DYRT

Teknologien kan altså bety en hel del, men det er fremdeles dyrt med kontinuerlig overvåking.

– Dette har store tekniske fordeler, sier Madhu Kohli i Shells geofysikkavdeling.

– Men det er også utfordringer med dette. Den ene er åpenbar: Dette er dyrere en konvensjonell teknologi. Vi ser likevel at det er verdt å satse på dette, sier hun.

PEDER QVALE peder.qvale@tu.no

I forbindelse med artiklene fra Teknisk Ukeblad har vi noen spørsmål. Kryss av for alternativet som passer for deg.

I hvilken grad var du interessert når du leste artiklene?				
Ikke interessert	Lite interessert	Hverken eller	Noe interessert	Veldig interessert

Hvordan leste du artiklene?				
Skummet artiklene raskt	Skummet artiklene	Hverken eller	Leste artiklene	Leste artiklene grundig

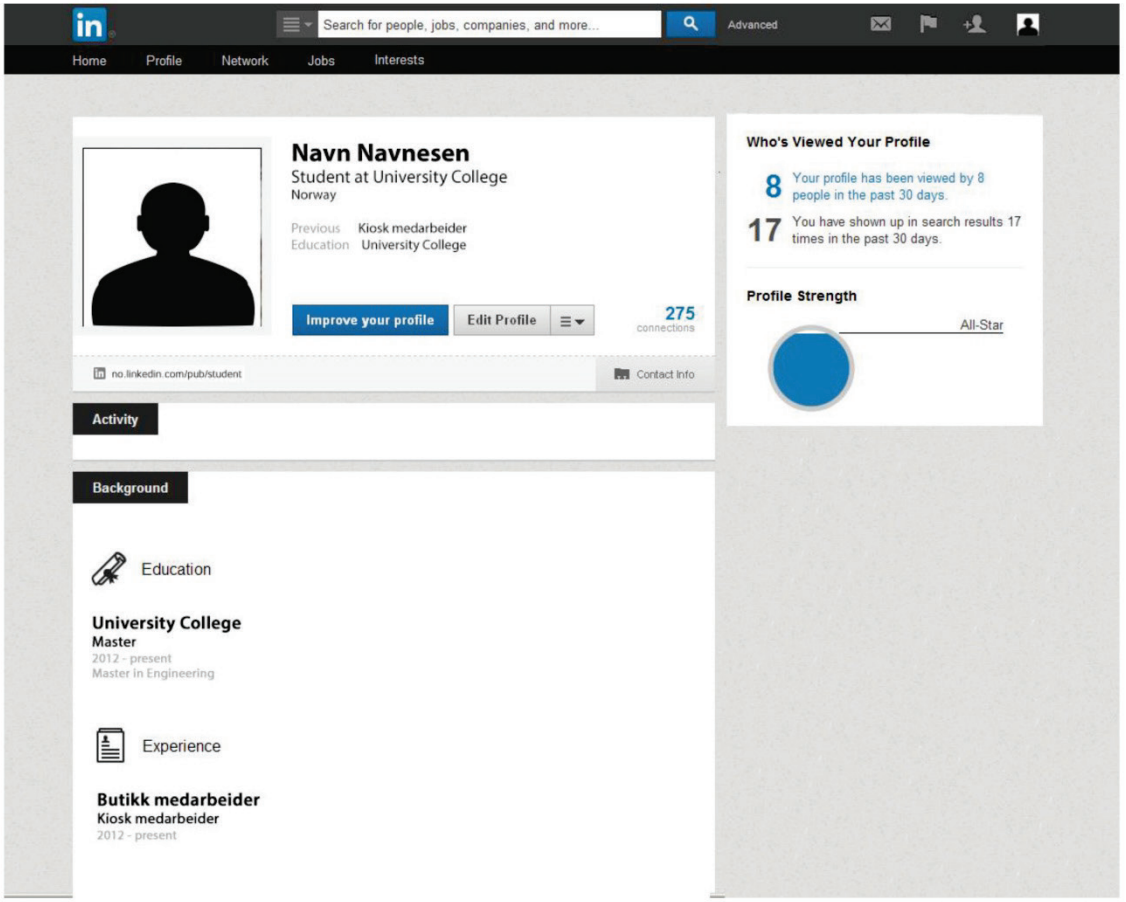
I hvilken grad var innholdet i artiklene relevant for deg?				
Ikke relevant	Lite relevant	Noe relevant	Relevant	Veldig relevant

I hvilken grad var innholdet i artiklene viktig for deg?				
Ikke viktig	Lite viktig	Hverken eller	Viktig	Veldig viktig

I hvilken grad var innholdet i artiklene interessant for deg?				
Ikke interessant	Lite interessant	Hverken eller	Interresant	Veldig interessant

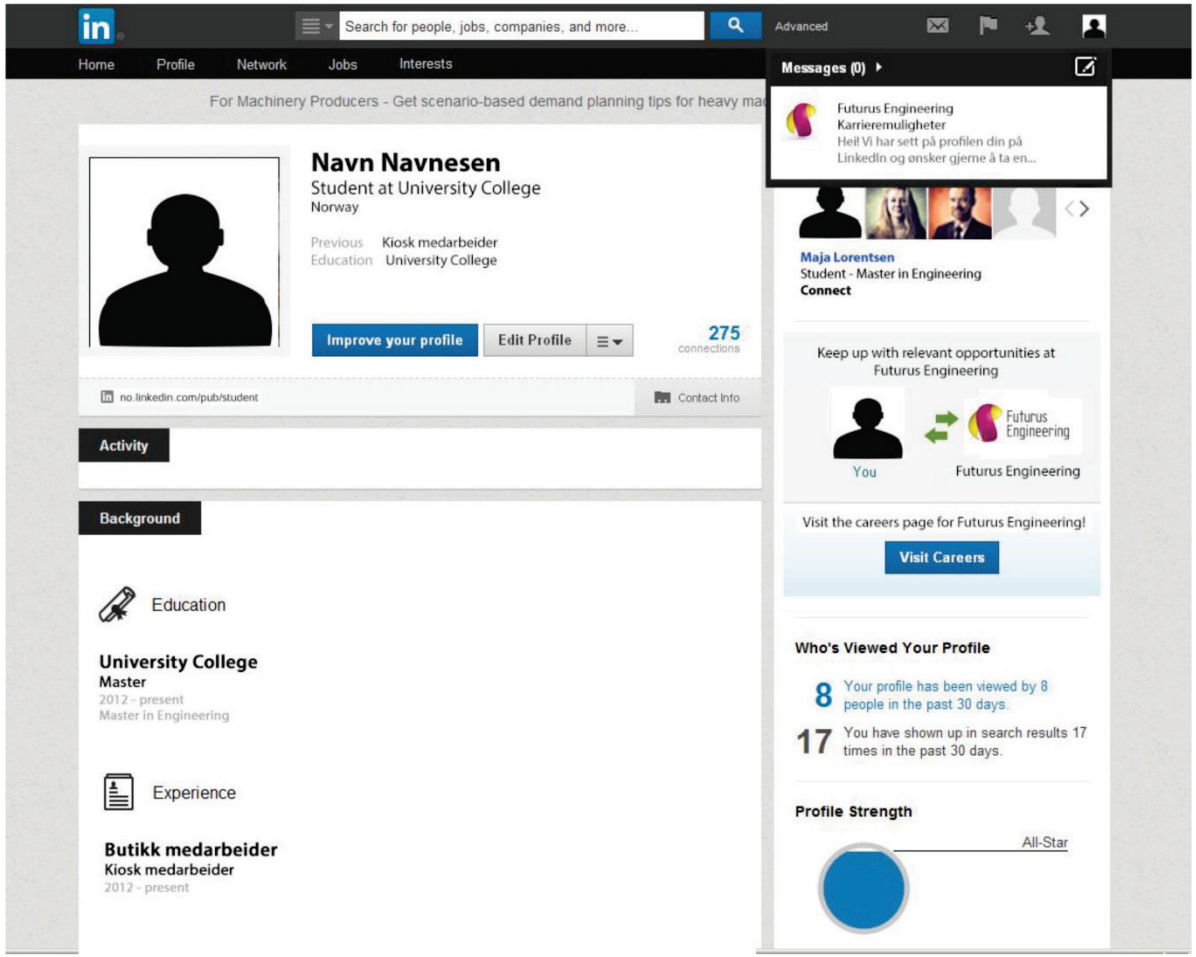
Etter at du har lest magasinet, finner du fram dataen og surfer litt på nettet. Samtidig sjekker du LinkedIn-kontoen din.

Forestill deg at følgende bilde er fra din LinkedIn konto.



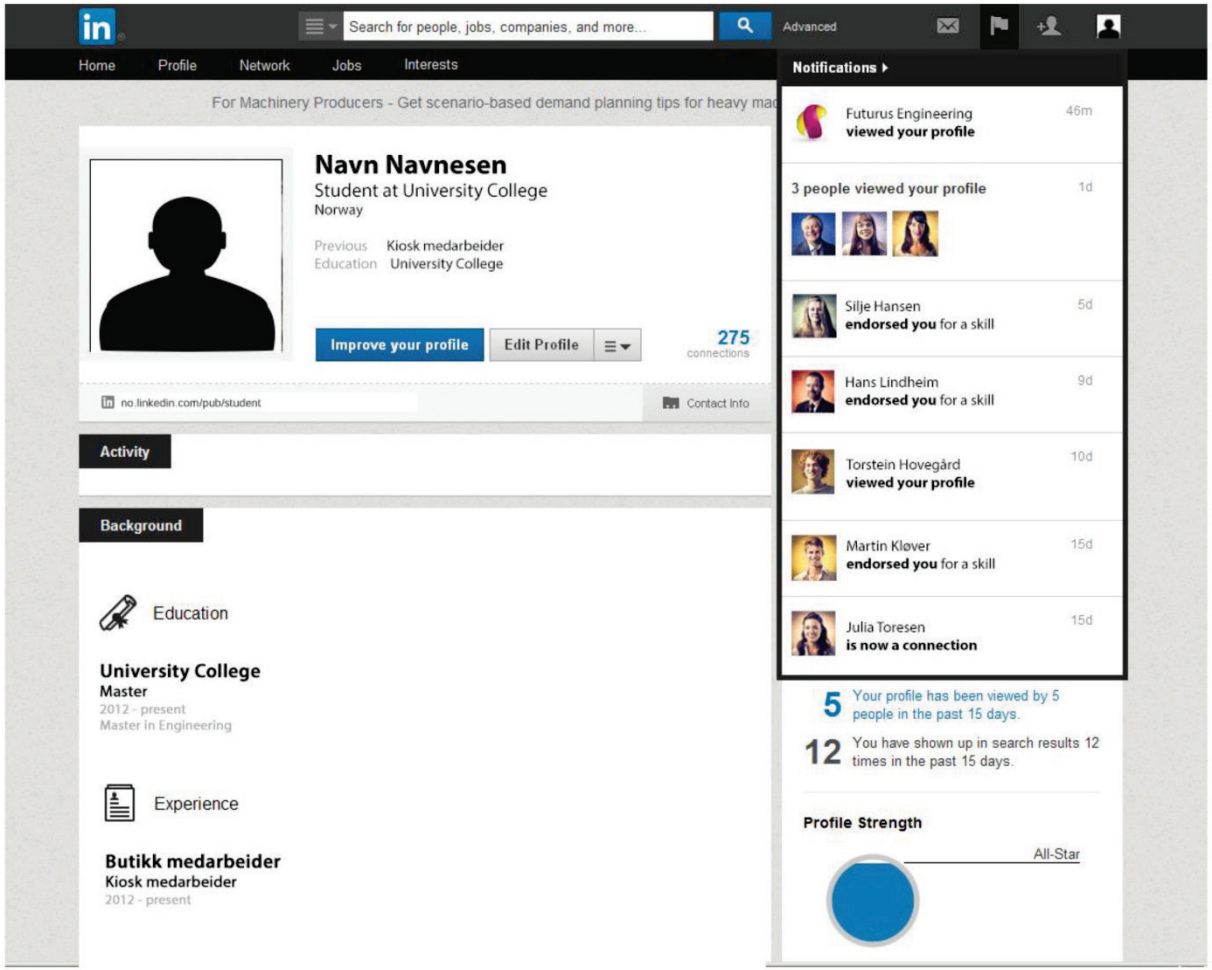
Etter at du har lest magasinet, finner du fram dataen og surfer litt på nettet. Samtidig sjekker du LinkedIn-kontoen din, og blir oppmerksom på at en bedrift har lagt igjen en beskjed til deg.

Forestill deg at følgende bilde er fra din LinkedIn konto.



Etter at du har lest magasinet, finner du fram dataen og surfer litt på nettet. Samtidig sjekker du LinkedIn-kontoen din, og blir oppmerksom på at en bedrift har vært inne på profilen din og lest om deg.

Forestill deg at følgende bilde er fra din LinkedIn konto.



Vennligst besvar følgende spørsmål

I hvilken grad har du kjennskap til Futurus Engineering?				
Ingen kjennskap	Lite kjennskap	Noe kjennskap	God kjennskap	Veldig god kjennskap

Under finner du en rekke spørsmål om Futurus Engineering. Kryss av på det svaret du mener stemmer med hvordan du kjenner bedriften.					
	Stemmer svært dårlig	Stemmer dårlig	Verken eller	Stemmer godt	Stemmer svært godt
Toppledere fra Futurus Engineering (eks. Administrerende direktør) blir ofte sitert i aviser og fagtidsskrifter					
Jeg har sett nyhetssaker om Futurus Engineering (f.eks. på TV eller i aviser)					
Jeg har sett Futurus Engineering på rangeringer som "beste arbeidsplasser" eller "beste arbeidsgiver"					
Studenter som har begynt å jobbe hos Futurus Engineering har hatt gode opplevelser					
Ingeniørfakultetet ved skolen min mener Futurus Engineering er et bra sted å jobbe					
Jeg kjenner noen som jobber for Futurus Engineering					
Jeg har sett reklame om ledige jobber hos Futurus Engineering på sosiale medier.					
Futurus Engineerings rekrutteringsbrosjyrer eller hjemmeside ga meg detaljert informasjon om jobbmuligeter					
Rekrutteringsbrosjyren til Futurus Engineering fanget interessen min					
Stillingsannonser ga meg detaljert informasjon om ledige stillinger som Futurus Engineering rekrutterer til					
Jeg har et godt inntrykk av Futurus Engineering som arbeidsgiver					
Jeg har stor respekt for Futurus Engineering					
Jeg ville anbefalt Futurus Engineering til andre om dette ikke gikk utover mine sjanser for å få et jobbtilbud					
Jeg ville akseptert et jobbtilbud fra Futurus Engineering					
Futurus Engineering er mitt førstevalg som arbeidsgiver					
Dersom Futurus Engineering ville invitert meg til et jobbintervju, ville jeg gått					
Jeg vil gjøre en stor innsats for å kunne jobbe hos Futurus Engineering					
Jeg ville anbefalt Futurus Engineering til en venn som søkte etter jobb					

Har du en LinkedIn profil?

☐ Ja ☐ Nei

Har du noen gang blitt kontaktet av en potensiell arbeidsgiver på LinkedIn?

☐ Ja ☐ Nei

Hva var temaet for kontakten?

☐ Jobbtilbud

☐ Informasjon om bedriften

☐ Informasjon om hvordan å søke på en stilling i bedriften

☐ Ledige stillinger som passet til mine utdannelser og erfaringer

☐ Invitasjon til en karrieredag

☐ Invitasjon til intervju

☐ Annet , spesifiser:

Hvor viktige er følgende for deg når du vurderer en arbeidsgiver?					
	Ikke viktig	Mindre viktig	Verken eller	Viktig	Veldig viktig
Lønn					
Bedriftens beliggenhet					
Muligheter for forfremmelse					
Gode læringsmuligheter					
Gode opplæringsprogram					
God bedriftskultur					
Rykte					
Interessante arbeidsoppgaver					
Gode betingelser og fordeler					
En sikker jobb					

Er du en aktiv jobbsøker?

☐ Ja ☐ Nei

Hvor ofte ser du etter aktuelle ledige stillinger?				
Aldri	Sjeldent	Hver måned	Hver uke	Hver dag

Kjønn

☐ Mann ☐ Kvinne

Alder

☐ >20
☐ 21-25
☐ 26-30
☐ 31-40
☐ 41-50
☐ <50

Hvilken skole studerer du ved?

☐ Høgskolen i Bergen
☐ Høgskolen Buskerud-Vestfold
☐ Høgskolen i Gjøvik
☐ Høgskolen i Narvik
☐ Høgskolen i Nasna
☐ Høgskolen i Oslo og Akershus
☐ Høgskolen Stord/Haugesund
☐ Høgskolen i Sør-Trøndelag
☐ Høgskolen i Telemark
☐ Høgskolen i Østfold
☐ Høgskolen i Ålesund
☐ Høgskulen i Sogn og Fjordane
☐ Norges teknisk-naturvitenskapelige universitet
☐ Universitetet i Agder
☐ Universitetet i Bergen
☐ Universitetet i Oslo
☐ Universitetet i Stavanger
☐ Universitetet i Tromsø
☐ Universitetet for miljø- og biovitenskap
☐ Annet, spesifiser:

Hva er din høyeste gjennomførte utdannelse?

☐ Videregående skole
☐ Bachelor
☐ Master
☐ Annet, spesifiser:

Arbeidserfaring – hvor mye relevant arbeidserfaring for ingeniørstudiene har du?

☐ Ingen
☐ Kun sommerjobber
☐ Under 2 år
☐ 2-5 år
☐ 6-10 år
☐ Over 10 år

Kommentarer til undersøkelsen?

Takk for hjelpen!

Kjønn

☐ Mann ☐ Kvinne

Alder

☐ >20
☐ 21-25
☐ 26-30
☐ 31-40
☐ 41-50
☐ <50

Hvilken skole studerer du ved?

☐ Høgskolen i Bergen
☐ Høgskolen Buskerud-Vestfold
☐ Høgskolen i Gjøvik
☐ Høgskolen i Narvik
☐ Høgskolen i Nasna
☐ Høgskolen i Oslo og Akershus
☐ Høgskolen Stord/Haugesund
☐ Høgskolen i Sør-Trøndelag
☐ Høgskolen i Telemark
☐ Høgskolen i Østfold
☐ Høgskolen i Ålesund
☐ Høgskulen i Sogn og Fjordane
☐ Norges teknisk-naturvitenskapelige universitet
☐ Universitetet i Agder
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Hva er din høyeste gjennomførte utdannelse?

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☐ Master
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Arbeidserfaring – hvor mye relevant arbeidserfaring for ingeniørstudiene har du?

☐ Ingen
☐ Kun sommerjobber
☐ Under 2 år
☐ 2-5 år
☐ 6-10 år
☐ Over 10 år

Kommentarer til undersøkelsen?

Takk for hjelpen!

Appendix B - Subjects in experiments and missing values

Subjects in experiments, first data collection; 192 subjects in 6 experiments

ad_linkedin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ad0_linkedin0	33	17,2	17,2	17,2
	ad0_linkedin1	32	16,7	16,7	33,9
	as0_linkedin2	31	16,1	16,1	50,0
	ad1_linkedin0	34	17,7	17,7	67,7
	ad1_linkedin1	30	15,6	15,6	83,3
	ad1_linkedin2	32	16,7	16,7	100,0
	Total	192	100,0	100,0	

Subjects in experiments, second data collection; 253 subjects in 6 experiments

ad_linkedin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ad0_linkedin0	48	19,0	19,0	19,0
	ad0_linkedin1	49	19,4	19,4	38,3
	as0_linkedin2	44	17,4	17,4	55,7
	ad1_linkedin0	38	15,0	15,0	70,8
	ad1_linkedin1	35	13,8	13,8	84,6
	ad1_linkedin2	39	15,4	15,4	100,0
	Total	253	100,0	100,0	

Univariate Statistics

	N	Missing	
		Count	Percent
involvement1	248	5	2,0
involvement2	248	5	2,0
involvement3	247	6	2,4
involvement4	248	5	2,0
involvement5	246	7	2,8
Knowledge_FE	249	4	1,6
Leaders_news	185	68	26,9
Seen_news_FE	196	57	22,5
rankings	191	62	24,5
wom1_students_good_experience	178	75	29,6
wom2_engfaculty_FE_goodemployer	177	76	30,0
wom3_know_employee_FE	188	65	25,7
ad_jobopp1_vacantjob_FEsocialmedia	191	62	24,5
ad_jobopp2_FEbrochureWeb_good_jobinfo	178	75	29,6
ad_jobopp3_FEbrochure_caught_interest	178	75	29,6
ad_jobopp4_jobad_goodinfo_vacantjobsFE	178	75	29,6
attitude1_good_impression_FE_as_employer	178	75	29,6
attitude2_great_respect_FE	179	74	29,2
attitude3_recommend_FE_if_not_spoil_own_chances	177	76	30,0

intentions_applyjob1_accept_joboffer	179	74	29,2
intentions_applyjob2_FE_firstchoice_employer	179	74	29,2
intentions_applyjob3_FE_jobinterview_accepted	179	74	29,2
intentions_applyjob4_effort_work_FE	178	75	29,6
intentions_applyjob5_recommend_FE_friend_jobsearch	178	75	29,6
LinkedIn_profil	246	7	2,8
contacted_potential_employer_LinkedIn	239	14	5,5
job_att_salary	250	3	1,2
job_att_location	246	7	2,8
job_att_promotion	250	3	1,2
job_att_learning	250	3	1,2
job_att_training	247	6	2,4
job_att_culture	250	3	1,2
job_att_reputation	247	6	2,4
job_att_interesting_tasks	248	5	2,0
job_att_benefits	248	5	2,0
job_att_secure_job	248	5	2,0
active_jobseeker	246	7	2,8
reading_vacant_pos	239	14	5,5
sex	249	4	1,6
age	250	3	1,2
school	253	0	,0
education	239	14	5,5
work_experience	240	13	5,1

After removing the 81 items that had a lot of missing values, a frequencies analysis was conducted to make sure there were enough items in each experiment to go on with further analysis. The number of items in each experiment ranges from 27-33.These numbers are valid to go on, more information about number of participants in experiments, see 4.2.

Statistics

ad_linkedin

N	Valid	172
	Missing	0

ad_linkedin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ad0_linkedin0	30	17,4	17,4	17,4
	ad0_linkedin1	33	19,2	19,2	36,6
	as0_linkedin2	27	15,7	15,7	52,3
	ad1_linkedin0	28	16,3	16,3	68,6
	ad1_linkedin1	27	15,7	15,7	84,3
	ad1_linkedin2	27	15,7	15,7	100,0
	Total	172	100,0	100,0	

Appendix C - Descriptive statistics

		Min.	Max.	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Std. Error	Stat.	Std. Error
attitude1	71	0	3	1,67	,860	,739	-1,110	,186	,179	,369
attitude2	71	0	3	1,68	,850	,723	-1,201	,186	,347	,369
attitude3	69	0	3	1,64	,869	,756	-1,096	,187	-,007	,371
intentions_applyjob1	71	0	4	1,92	,871	,758	-,760	,186	1,160	,369
intentions_applyjob2	69	0	2	1,12	,956	,914	-,240	,187	-1,877	,371
intentions_applyjob3	69	0	4	2,64	1,093	1,195	-,695	,187	,255	,371
intentions_applyjob4	69	0	4	1,72	,888	,788	-,649	,187	,476	,371
intentions_applyjob5	69	0	3	1,74	,750	,563	-1,501	,187	1,489	,371
job_att_salary	72	1	4	2,79	,651	,424	-,921	,185	1,422	,368
job_att_location	72	0	4	2,95	,926	,857	-1,328	,185	2,187	,368
job_att_promotion	72	1	4	3,03	,679	,461	-,149	,185	-,447	,368
job_att_learning	72	0	4	3,50	,617	,380	-1,439	,185	**4,733**	,368
job_att_training	71	2	4	3,42	,572	,328	-,352	,186	-,777	,369
job_att_culture	72	1	4	3,37	,611	,374	-,562	,185	,251	,368
job_att_reputation	70	1	4	2,61	,778	,606	-,569	,186	-,081	,370
job_att_interesting_tasks	70	2	4	3,61	,514	,264	-,701	,186	-,912	,370
job_att_benefits	70	1	4	2,91	,682	,464	-,221	,186	-,001	,370
job_att_secure_job	70	1	4	3,22	,675	,455	-,526	,186	,207	,370
ad	72	1	2	1,48	,501	,251	,094	,185	-2,015	,368
linkedin	72	1	3	1,98	,809	,654	,043	,185	-1,470	,368
involvement1	72	0	4	2,38	1,072	1,149	-,745	,185	-,431	,368
involvement2	72	0	4	1,53	1,167	1,362	,320	,185	-1,111	,368
involvement3	72	0	4	1,95	,942	,887	,178	,185	-,567	,368
involvement4	72	0	3	1,61	,888	,789	-,111	,185	-,701	,368
involvement5	71	0	4	2,36	,975	950	-,899	,186	,379	,369
Valid N (listwise)	58									

Appendix D - Convergent validity

D.1 Attitude

The attitude dimension has three items. The KMO measure to a value over 0.5 (0.770) and the Bartlett's Test shows that the test is significant. Here the Principal Components is used. The factor loading all load on one factor and are all over 0.941 (0.941-0.946). These values are classifies as meritorious, which is high and they have little variance, which is very good.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,770
Bartlett's Test of Sphericity	Approx. Chi-Square	432,049
	df	3
	Sig.	,000

Component Matrix[a]

	Component
	1
attitude1	,941
attitude2	,946
attitude3	,941

D.2 Intention to apply

Intention to apply has five items. The KMO measure to a value over 0.5 (0.693) and the Bartlett's Test shows that it is significant. The factor loading all load on one factor and are all over 0.618 (0.618-0.843). These values are classifies as mediocre-meritorious. An analysis were item 'intention_applyjob2' is removed, because it is much lower than the second lowest value, shows no major variance in the numbers. For this reason it is kept for further analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,693
Bartlett's Test of Sphericity	Approx. Chi-Square	335,665
	df	10
	Sig.	,000

Component Matrix[a]

	Component
	1
intentions_applyjob1	,785
intentions_applyjob2	,618
intentions_applyjob3	,701
intentions_applyjob4	,839
intentions_applyjob5	,843

Extraction Method: Principal Component Analysis.[a]

a. 1 components extracted.

D.3 Involvement

The dimension of 'involvement' has five items. The factor loading all load on one factor, but one item (involvement2) is below the required 0.6 (0.562). This item is removed and the analysis is run again. In the second analysis the KMO test is measured to a value over 0.5 (0.802) and the Bartlett's Test shows that it is significant. The factor loading all load on one factor and are all over 0.808 (0.808-0.906). All of these values are classifies as meritorious.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,802
Bartlett's Test of Sphericity	Approx. Chi-Square	353,034
	df	6
	Sig.	,000

Component Matrix[a]

	Component
	1
involvement1	,862
involvement3	,824
involvement4	,808
involvement5	,906

Extraction Method: Principal Component Analysis.[a]
a. 1 components extracted.

Appendix E - Divergent validity

The analysis of divergent validity is based on three concepts; attitude and intentions to apply, and the controlling concept involvement. In total 12 indicators where tested. The first analysis shows that there are loadings on three factors. 'Intention_applyjob2' is the item with the lowest loading, and is loading on the same factor as attitude. This item is removed to see it the other factors that load on same factor as attitude changes. Further 'intention_apply_job4' loads on two factors, and has values <0.60 which is a result under mediocre, and is therefore removed. 'intention_apply_job5' is loading on the same factor as attitude, and is therefore removed. In the final divergent analysis there are three clear factors, meaning there are no cross-loadings. The dimension of intention_apply_job has only two factors, and there has to be at least three items to describe a dimension (KILDE). Since there are not multiple items to describe the dimension, I chose to depend on the item with the largest loading, and therefore 'intention_apply_job3' is left as the item to describe the dimension. All values are over 0.6 and can therefore be used on in further analysis.

1.

Pattern Matrix[a]

	Component		
	1	2	3
attitude1	,883		
attitude2	,832		
attitude3	,899		
intentions_applyjob1			,705
intentions_applyjob2	,669		
intentions_applyjob3			,935
intentions_applyjob4	,698		
intentions_applyjob5	,738		
involvement1		,880	
involvement3		,822	
involvement4		,797	
involvement5		,910	

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.[a]
a. Rotation converged in 5 iterations.

2.

Pattern Matrix[a]

	Component		
	1	2	3
attitude1	,963		
attitude2	,914		
attitude3	,978		
intentions_applyjob1			,795
intentions_applyjob3			,936
intentions_applyjob4	,543		,336
intentions_applyjob5	,733		
involvement1		,882	
involvement3		,823	
involvement4		,808	
involvement5		,902	

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.[a]
a. Rotation converged in 5 iterations.

3.

Pattern Matrix[a]

	Component		
	1	2	3
attitude1	,957		
attitude2	,910		
attitude3	,973		
intentions_applyjob1			,814
intentions_applyjob3			,939
intentions_applyjob5	,726		
involvement1		,880	
involvement3		,827	
involvement4		,809	
involvement5		,901	

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.[a]
a. Rotation converged in 4 iterations.

4.

Pattern Matrix[a]

	Component		
	1	2	3
attitude1	,944		
attitude2	,904		
attitude3	,968		
intentions_applyjob1			,825
intentions_applyjob3			,943
involvement1		,878	
involvement3		,830	
involvement4		,810	
involvement5		,900	

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.[a]
a. Rotation converged in 4 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,780
Bartlett's Test of Sphericity	Approx. Chi-Square	945,121
	df	36
	Sig.	,000

Appendix F - Discriminant validity

Corralations

		ad	linkedin	EBI_attitude	EBI_intention	EBI_job_att	Involvement
ad	Pearson Correlation	1	,013	-,086	,102	,078	-,199
	Sig. (2-tailed)		,865	,267	,186	,317	,009
	N	172	172	169	169	167	171
linkedin	Pearson Correlation	,013	1	-,003	,040	,037	-,139
	Sig. (2-tailed)	,865		,969	,610	,637	,070
	N	172	172	169	169	167	171
EBI_attitude	Pearson Correlation	-,086	-,003	1	,386*	,140	,081
	Sig. (2-tailed)	,267	,969		,000	,074	,299
	N	169	169	169	166	164	168
EBI_intention	Pearson Correlation	,102	,040	,386**	1	,186	,106
	Sig. (2-tailed)	,186	,610	,000		,017	,171
	N	169	169	166	169	164	168
EBI_job_att	Pearson Correlation	,078	,037	,140	,186*	1	,128
	Sig. (2-tailed)	,317	,637	,074	,017		,101
	N	167	167	164	164	167	166
Involvement	Pearson Correlation	-,199**	-,139	,081	,106	,128**	1
	Sig. (2-tailed)	,009	,070	,299	,171	,101	
	N	171	171	168	168	166	171

Appendix G - Assumptions for MANOVA analysis

G.1 Sample size

Between-Subjects Factors

		N
ad	1	85
	2	75
linkedin	1	55
	2	56
	3	49

There has to be more subjects than dependent variables. There are only three dependent variables in this study, so assumption 1 is regarded as approved.

G.2 Normality

Descriptive Statistics

	N	Min.	Max.	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Std. Error	Stat.	Std. Error
ad	172	1	2	1,48	,501	,251	,094	,185	-2,015	,368
linkedin	172	1	3	1,98	,809	,654	,043	,185	-1,470	,368
EBI_attitude	169	,00	3,00	1,6686	,80548	,649	-1,260	,187	,390	,371
EBI_intention	169	,00	4,00	2,6450	1,09299	1,195	-,695	,187	,255	,371
EBI_job_att	167	2,33	4,00	3,0958	,33929	,115	,280	,188	-,317	,374
Involvement	171	,00	3,75	2,0789	,82537	,681	-,620	,186	,024	,369
Valid N (listwise)	160									

As the table shows none of the variables have signs of skewness or kurtosis that exceed the required values. This indicates that the variables are normally distributed, fulfilling the assumption of normality.

G.3 Homogeneity of variances

G.3.1 Ad

Box's Test of Equality of Covariance Matrices[a]

Box's M	23,000
F	3,754
df1	6
df2	174162,811
Sig.	,001

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.[a]

a. Design: Intercept + ad

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
EBI_attitude	1,537	1	159	,217
EBI_intentions	10,859	1	159	,001
EBI_job_att	3,927	1	159	,049

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + ad

G.3.2 Linkedin

Box's Test of Equality of Covariance Matrices[a]

Box's M	19,128
F	1,550
df1	12
df2	116587,443
Sig.	,099

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.[a]

a. Design: Intercept + linkedin

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
EBI_attitude	2,049	2	158	,132
EBI_intentions	,135	2	158	,874
EBI_job_att	,796	2	158	,453

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + linkedin

Appendix H - Testing of hypothesis using MANOVA

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	EBI_attitude	1,378[a]	5	,276	,507	,771[a]
	EBI_intentions	5,188[b]	5	1,038	1,405	,225[b]
	EBI_job_att	,523[c]	5	,105	,905	,479[c]
Intercept	EBI_attitude	474,553	1	474,553	872,318	,000
	EBI_intentions	845,343	1	845,343	1144,833	,000
	EBI_job_att	1530,629	1	1530,629	13231,611	,000
ad	EBI_attitude	,155	1	,155	,285	,594
	EBI_intentions	2,732	1	2,732	3,700	**,056**
	EBI_job_att	,144	1	,144	1,249	,266
linkedin	EBI_attitude	,662	2	,331	,608	,546
	EBI_intentions	,574	2	,287	,389	,678
	EBI_job_att	,055	2	,027	,238	,789
ad * linkedin	EBI_attitude	,488	2	,244	,449	,639
	EBI_intentions	1,974	2	,987	1,337	,266
	EBI_job_att	,305	2	,153	1,319	,270
Error	EBI_attitude	84,322	155	,544		
	EBI_intentions	114,452	155	,738		
	EBI_job_att	17,930	155	,116		
Total	EBI_attitude	564,000	161			
	EBI_intentions	972,250	161			
	EBI_job_att	1563,667	161			
Corrected Total	EBI_attitude	85,700	160			
	EBI_intentions	119,640	160			
	EBI_job_att	18,454	160			

a. R Squared = ,016 (Adjusted R Squared = -,016)
b. R Squared = ,043 (Adjusted R Squared = ,013)
c. R Squared = ,028 (Adjusted R Squared = -,003)

Ad

Estimates

Dependent Variable	ad	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
EBI_attitude	1	1,758	,080	1,600	1,916
	2	1,695	,085	1,527	1,864
EBI_intentions	1	2,173	,093	1,989	2,357
	2	2,435	,099	2,239	2,631
EBI_job_att	1	3,070	,037	2,998	3,143
	2	3,131	,039	3,053	3,208

Ad * linkedin

Dependent Variable	ad	linkedin	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
EBI_attitude	1	1	1,853	,137	1,583	2,124
		2	1,609	,130	1,352	1,867
		3	1,810	,148	1,519	2,101
	2	1	1,648	,142	1,368	1,929
		2	1,667	,151	1,369	1,964
		3	1,771	,151	1,473	2,068
EBI_intentions	1	1	2,069	,160	1,754	2,384
		2	2,391	,152	2,091	2,691
		3	2,060	,172	1,721	2,399
	2	1	2,389	,165	2,062	2,716
		2	2,354	,175	2,008	2,701
		3	2,563	,175	2,216	2,909
EBI_job_att	1	1	3,000	,063	2,875	3,125
		2	3,087	,060	2,968	3,206
		3	3,124	,068	2,990	3,259
	2	1	3,160	,065	3,031	3,290
		2	3,162	,069	3,025	3,299
		3	3,069	,069	2,932	3,207

Appendix I – Testing of hypothesis using MANCOVA

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	EBI_attitude	2,533[a]	6	,422	,782	,585[a]
	EBI_intentions	11,443[b]	6	1,907	2,698	,016[b]
	EBI_job_att	,992[c]	6	,165	1,454	,198[c]
Intercept	EBI_attitude	47,985	1	47,985	88,925	,000
	EBI_intentions	70,416	1	70,416	99,610	,000
	EBI_job_att	190,242	1	190,242	1672,279	,000
Involvement	EBI_attitude	1,329	1	1,329	2,462	,119
	EBI_intentions	6,102	1	6,102	8,632	**,004**
	EBI_job_att	,410	1	,410	3,601	**,060**
ad	EBI_attitude	,008	1	,008	,014	,906
	EBI_intentions	4,731	1	4,731	6,692	**,011**
	EBI_job_att	,284	1	,284	2,496	,116
linkedin	EBI_attitude	,739	2	,370	,685	,506
	EBI_intentions	1,170	2	,585	,828	,439
	EBI_job_att	,105	2	,053	,463	,630
ad * linkedin	EBI_attitude	,550	2	,275	,510	,602
	EBI_intentions	2,190	2	1,095	1,549	,216
	EBI_job_att	,247	2	,123	1,085	,340
Error	EBI_attitude	82,560	153	,540		
	EBI_intentions	108,157	153	,707		
	EBI_job_att	17,406	153	,114		
Total	EBI_attitude	557,750	160			
	EBI_intentions	966,000	160			
	EBI_job_att	1552,556	160			
Corrected Total	EBI_attitude	85,094	159			
	EBI_intentions	119,600	159			
	EBI_job_att	18,398	159			

a. R Squared = ,030 (Adjusted R Squared = -,008)
b. R Squared = ,096 (Adjusted R Squared = ,060)
c. R Squared = ,054 (Adjusted R Squared = ,017)

Ad

Estimates

Dependent Variable	ad	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
EBI_attitude	1	1,732[a]	,081	1,572	1,892
	2	1,718[a]	,086	1,547	1,888
EBI_intentions	1	2,129[a]	,093	1,946	2,312
	2	2,483[a]	,099	2,288	2,678
EBI_job_att	1	3,056[a]	,037	2,983	3,130
	2	3,143[a]	,040	3,065	3,221

a. Covariates appearing in the model are evaluated at the following values: Involvement = 2,0625.

Linkedin

Estimates

Dependent Variable	linkedin	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
EBI_attitude	1	1,723[a]	,100	1,526	1,920
	2	1,641[a]	,099	1,445	1,837
	3	1,810[a]	,106	1,601	2,019
EBI_intentions	1	2,186[a]	,114	1,961	2,411
	2	2,378[a]	,114	2,154	2,603
	3	2,354[a]	,121	2,115	2,593
EBI_job_att	1	3,065[a]	,046	2,975	3,156
	2	3,126[a]	,046	3,036	3,216
	3	3,108[a]	,049	3,012	3,204

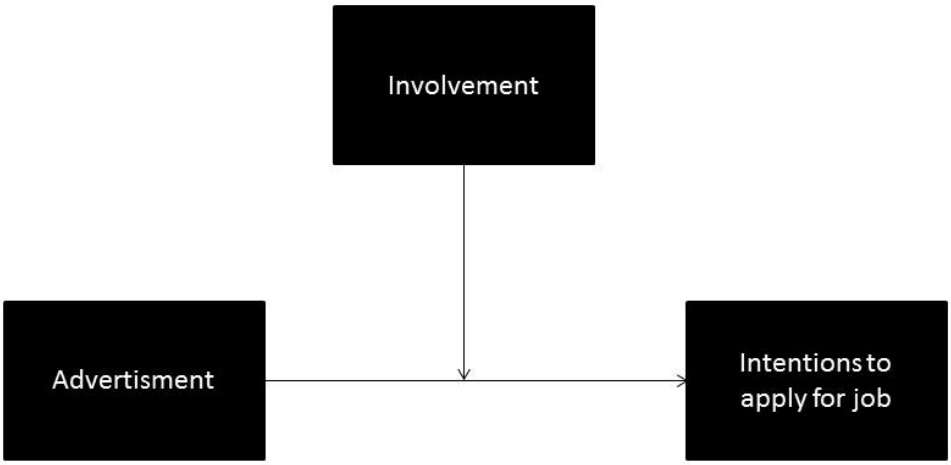
a. Covariates appearing in the model are evaluated at the following values: Involvement = 2,0625.

ad * linkedin

Dependent Variable	ad	linkedin	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
EBI_attitude	1	1	1,809[a]	,139	1,534	2,085
		2	1,589[a]	,130	1,331	1,847
		3	1,797[a]	,147	1,506	2,087
	2	1	1,636[a]	,142	1,357	1,916
		2	1,693[a]	,151	1,395	1,991
		3	1,824[a]	,154	1,520	2,127
EBI_intentions	1	1	2,008[a]	,160	1,693	2,324
		2	2,347[a]	,149	2,052	2,642
		3	2,032[a]	,168	1,699	2,364
	2	1	2,364[a]	,162	2,044	2,684
		2	2,410[a]	,173	2,068	2,751
		3	2,676[a]	,176	2,328	3,023
EBI_job_att	1	1	2,976[a]	,064	2,850	3,103
		2	3,076[a]	,060	2,957	3,194
		3	3,117[a]	,068	2,984	3,251
	2	1	3,154[a]	,065	3,026	3,282
		2	3,176[a]	,069	3,040	3,313
		3	3,099[a]	,071	2,959	3,238

a. Covariates appearing in the model are evaluated at the following values: Involvement = 2,0625.

Appendix J – Additional analysis – Hayes model 1



Figur 1 - Hayes model 1 - Advertisement - intentions to apply for job - involvement

```
Model = 1
   Y = EBI_inte
   X = ad
   M = Involvem

Sample size
        167

**************************************************************************
Outcome: EBI_inte

Model Summary
R       R-sq    F         df1       df2          p
 ,2287  ,0523   2,9978   3,0000   163,0000     ,0324


Model
coeff         se         t         p       LLCI       ULCI
constant     ,7455     ,6350    1,1739     ,2421    -,3050    1,7960
Involvem     ,5386     ,2742    1,9643     ,0512     ,0850     ,9922
ad           ,7374     ,3757    1,9629     ,0514     ,1159    1,3588
int_1        -,2272     ,1669   -1,3611     ,1754    -,5034     ,0489

Interactions:
```

int_1 ad X Involvem

R-square increase due to interaction(s):

	R2-chng	F	df1	df2	p
int_1	,0108	1,8527	1,0000	163,0000	,1754

Conditional effect of X on Y at values of the moderator(s)

Involvem	Effect	se	t	p	LLCI	ULCI
1,2456	,4544	,1975	2,3007	,0227	,1277	,7810
2,0793	,2649	,1377	1,9239	,0561	,0371	,4927
2,9131	,0755	,1941	,3889	,6979	-,2456	,3965

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

JOHNSON-NEYMAN TECHNIQUE
Moderator value(s) defining Johnson-Neyman significance region(s) 2,2294
Conditional effect of X on Y at values of the moderator (M)

Involvem	Effect	se	t	p	LLCI	ULCI
,0000	,7374	,3757	1,9629	,0514	,1159	1,3588
,1875	,6948	,3467	2,0038	,0467	,1212	1,2684
,3750	,6522	,3183	2,0493	,0420	,1257	1,1786
,5625	,6096	,2903	2,0995	,0373	,1293	1,0899
,7500	,5670	,2632	2,1541	,0327	,1316	1,0024
,9375	,5244	,2371	2,2116	,0284	,1322	,9166
1,1250	,4818	,2124	2,2683	,0246	,1304	,8331
1,3125	,4392	,1896	2,3157	,0218	,1254	,7529
1,5000	,3966	,1696	2,3375	,0206	,1159	,6772
1,6875	,3539	,1535	2,3063	,0224	,1001	,6078
1,8750	,3113	,1424	2,1859	,0303	,0757	,5470
2,0625	,2687	,1378	1,9506	,0528	,0408	,4966
2,2294	,2308	,1395	1,6543	,1000	,0000	,4616
2,2500	,2261	,1401	1,6138	,1085	-,0057	,4579
2,4375	,1835	,1492	1,2304	,2203	-,0632	,4303
2,6250	,1409	,1638	,8605	,3908	-,1300	,4118
2,8125	,0983	,1826	,5384	,5911	-,2038	,4004
3,0000	,0557	,2046	,2723	,7857	-,2827	,3941
3,1875	,0131	,2287	,0573	,9544	-,3652	,3914
3,3750	-,0295	,2544	-,1160	,9078	-,4503	,3913
3,5625	-,0721	,2812	-,2564	,7979	-,5373	,3931
3,7500	-,1147	,3089	-,3714	,7108	-,6257	,3962

****

Model = 1
Y = EBI_inte
X = Involvem
M = ad

Sample size
167

Conditional effect of X on Y at values of the moderator(s)

ad	Effect	se	t	p	LLCI	ULCI
1,0000	,3114	,1256	2,4795	,0142	,1036	,5192
2,0000	,0842	,1100	,7654	,4451	-,0978	,2661

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

Appendix K – Additional descriptive statistics

LinkedIn_profil

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	159	62,8	64,6	64,6
	yes	87	34,4	35,4	100,0
	Total	246	97,2	100,0	
Missing	999	7	2,8		
Total		253	100,0		

contacted_potential_employer_LinkedIn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	225	88,9	94,1	94,1
	yes	14	5,5	5,9	100,0
	Total	239	94,5	100,0	
Missing	999	13	5,1		
	System	1	,4		
	Total	14	5,5		
Total		253	100,0		