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The Impact of Social Networking Sites on the Employer-Employee Relationship

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Abstract

The effects that internet-based social networking sites (SNS) have on the labour market have yet to be investigated. The purpose of this paper is to examine whether and in what way SNS are changing the nature of the relationships between employers on the one hand, and employees and job applicants on the other. By means of an online survey, information was collected about attitudes towards data security, self-marketing and career development. This study suggests that employees who use social networking sites as self-marketing tools aim to build a positive reputation and thus redress the asymmetrical information relationship with employers. The survey also shows that data security plays an important role.

Keywords: Employer-Employee Relationship, Data Security, Self-Marketing, Social Networking Sites (SNS)

1 Introduction

The Internet has led to fundamental changes in the ways people interact in both the private sphere and the business world. Online-based communication channels, such as e-mail, Internet forums and chat applications have altered entire process chains (Picot/Neuburger, 2000). Social networking sites (SNS) in particular have had a profound effect by changing the nature and efficiency of communication processes in both business and private life (Beck, 2007).

Platforms such as XING (http://www.xing.com) and Facebook (http://www.facebook.com) are increasing in popularity and gain attention in print, television and internet media. However, there has been little empirical research on whether and in what way SNS are changing the relationship between employers, employees and job applicants, or indeed how these relationships have already changed (Boyd/Ellison, 2008). Linked to this are questions such as: do job applicants and employees follow certain objectives in terms of self-marketing? If so, what are they? Is information actively disclosed and sought? How important are concerns about data security?

Being based on an empirical study the aim of this paper is to build a consistent picture of the influence of SNS on business communication channels. By means of an online survey of XING and Facebook users data in the key areas of data security, self-marketing and the application of SNS for career development purposes was collected. The perspective of the employee and/or job applicant is in the primary focus.

In this paper we first outline the theoretical framework of the subsequent empirical study. Next, research model and methodology are explained. Following this, the results of the study are presented and then discussed. The article concludes with a synthesis and we outline some opportunities for further research.

2 Theoretical Framework

2.1 Definition of Terms and Characteristics

Social networks can be defined as a web of social relations in which individual, group, collective or corporate actors are embedded (Jansen, 2010). According to this, the term social network also encompasses distant contacts, with multiple levels of interconnected members who do not necessarily know each other.

SNS create a special virtual platform through which social relations can be represented and enacted from a user-centric point of view. They can be defined as '[...] web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system' (Boyd/Ellison, 2008). The novelty of SNS is not that individual users can get to know strangers, but rather that existing contacts in the non-virtual world can be displayed in lists, and exchanged with other members/users (Haythornthwaite, 2005). This visualization of contacts and personal networks can be explained in terms of the Signaling Theory (Spence, 1973), which describes the main motivations for using SNS. These motivations can be generalized into two primary goals: (1) the desire to verify one's identity to the outside world, and (2) the desire to ensure cooperation in personal networks (Donath/Boyd, 2004).

SNS can be divided into two main groups: business networks and leisure networks. In business networks, the main focus is on professional interests; establishing and maintaining business relationships among colleagues and business partners is the primary aim. Profiles largely consist of labour market-relevant data such as the name and location of employers, work experience and qualifications. Leisure networks, by contrast, are used primarily in the private sphere focusing on the maintenance of existing friendships. With over 500 million members, Facebook is considered the

world's largest leisure network (Washington/Miller, 2009; Facebook, 2011). LinkedIn has some 90 million users, making it the most popular business network in the world, while in German-speaking countries the business network XING (10 million members) dominates (Dutta/Fraser, 2009; LinkedIn, 2011; XING, 2011).

2.2 Labour Market-Related Relationships in Social Networking Sites

There is a special kind of relationship between employers and employees and between employers and potential employees, i.e. job applicants. In this relationship, demands and obligations are diametrically opposed. The employer's demands in terms of work performance (which can simultaneously be seen as the employee's obligation) are balanced against the employee's demands for remuneration (i.e. wage and salary), for job security, self-realization, participation, as well as technical and social conditions (Dlugos et al., 1987).

These conflicting interests can be interpreted in terms of New Institutional Economics. Following on from Principal-Agent Theory, there is a relationship between principal (employer) and agent (employee) in which the employee has scope for opportunistic behaviour based on the asymmetrical distribution of information and a general uncertainty about future conditions (Jensen/Meckling, 1976).

For the present study, Hidden Characteristics, i.e. the principal's (employer's) ability to view the hidden or private characteristics of the agent (employee) in advance of making a (labour) contract, are particularly important. These characteristics can lead to additional costs or inhibit the making of a contract, but they can also be avoided by the use of Signalling and Screening tools. Signalling describes the applicant's ability to provide clear signals, for instance references and certificates, reducing information asymmetry and thus preventing the principal from selecting a less qualified candidate. Screening is defined as the attempt by the principal to reduce information asymmetry by seeking specific information and feedback about candidates.
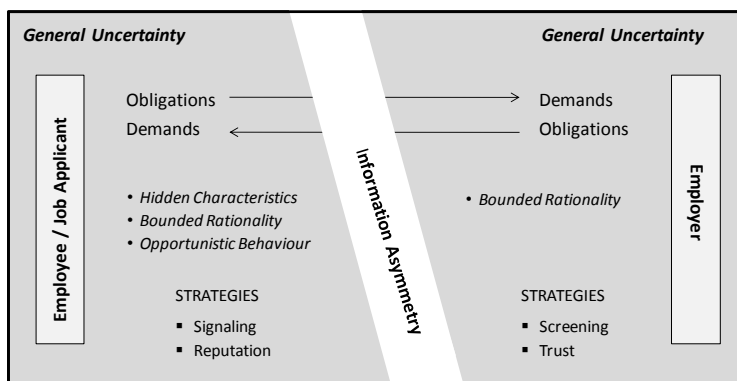

Figure 1: The employer-employee relationship (Dlugos et al., 1987)

The Transaction Cost Theory pursues the idea that market mechanisms and the making of contracts are not without costs; they involve so-called 'transaction costs' (Coase, 1937). For example, there are costs associated with negotiation, searching for information, and with making and monitoring contracts. The reasons for this can again be found in self-interested economic behaviour and the rationality of economic agents. Trust and reputation can reduce expenditure in the search for information, contract negotiations and monitoring, and they are thus important mechanisms in the reduction

of transaction costs (Williamson, 1973). Figure 1 illustrates this relationship between employers and employees.

The theories mentioned above provide important tools for developing a labour market framework for SNS. By their ability to build reputation and trust they can be considered as tools which directly reduce transaction costs. Furthermore, SNS can be used both for signalling by applicants and also screening by employers. They offer a platform for the reduction of information asymmetry between employers and employees or job applicants, and thus Hidden Characteristics. Trust-building and disclosure of personal networks play a crucial role. This helps to verify the user's identity to the outside world (Donath/Boyd, 2004).

Numerous studies confirm the increasing importance of SNS in the labour market (see Table 1 showing the main findings of several studies). According to a survey by the German Federal Ministry of Food, Agriculture and Consumer Protection, more than one quarter of the 500 companies surveyed used the possibilities offered by SNS to aid in recruitment decisions. From the companies which researched candidates on the Internet again one quarter chose not to follow up on candidates on the basis of information on the Internet. 78% of respondents who used the Internet in recruitment decisions did so even before they invited candidates to interviews (BMELV, 2009).

Table 1: Labour Market studies on SNS

Author	Year	Type	Sample	Network	Subject	Main Findings
BMELV	2009	Survey	500		Screening by employers	One in four companies uses the internet for recruitment decisions
DeKay	2009	Content-Analysis	200	LinkedIn	Passive job search	High relevance of SNS in recruitment
Hermeier/ Seng	2009	Online survey	853		Active job search	Increasing use of SNS in career development
Utz	2008	Survey	144	Hyves	Self-marketing/ data security	Relatively low relevance of self-marketing in SNS, low awareness of risk
Dwyer/ Hiltz/ Passerini	2007	Online survey	222	Facebook MySpace	Data security	One in five users experienced a breach of data security with the last year
Liu	2007	Content-analysis	127,477	MySpace	User typecasting/ self-marketing	4 personality types: Prestige, Differentiation, Authenticity, Theatrical
Madden et al.	2007	Phone survey	1,623		User typecasting/ data security	4 types: majority is not concerned about data security and takes no steps to ensure security
Gross/ Acquisti	2005	Content-analysis	4.540	Facebook	Data security	A majority gives away important information carelessly; low awareness of risk

Personnel managers use SNS specifically for the screening of job applicants. However, a content analysis of 200 profiles in LinkedIn showed that a majority of users would gladly be contacted for new career opportunities, so users count on their profiles being screened. There is a large group of *Passive Job Seekers* who are members of business networks on the Internet. They are not actively seeking jobs, but they are open to being contacted by companies and recruiters. This group is of particular importance to headhunters and recruitment consultants (DeKay, 2009).

SNS are also increasingly being used by applicants in active job-seeking and career development. A survey by Hermeier/Seng (2009) of 853 students and junior managers showed that 23% of respondents have already found specific advantages in job seeking through the use of SNS. Two-thirds expected their social network activity to benefit their professional life in the future.

Connected to the use of online networks for career development is the question of deliberate image manipulation. Utz (2008) presents a study of 144 members of the Dutch leisure network Hyves which suggests that building a good reputation is the second most important motivation for users, even though it was only moderately pronounced. It was also found that members of Hyves were relatively unconcerned about the extent and control of their personal data throughout the network, and took hardly any steps to protect their privacy. When asked whether employers searched their Hyves profiles in order to build an image, only a few users thought that this would happen. There is thus a large discrepancy between the data presented by the BMELV (2009) and the expectations and behaviour of users of SNS, with respect to the fact that many employers use SNS as a tool for selecting personnel. Privacy and data security are therefore of particular relevance.

Concerns about data security are examined in a study by Jones and Soltren (2005). This study shows that using simple techniques, data from thousands of profiles can be collected within a short period, and that there is thus the possibility to exploit this information for commercial purposes. But the risks are not only technical. Often, it is the users themselves who disregard their own data security by reckless disclosure of private information without any form of data protection. In the results of a content analysis of 4,540 Facebook profiles, it was shown that 87% of the members publicly display their date of birth, half of them their address, and almost 40% display their phone numbers. The basic elements for identity theft and tracing a user's movements are thus readily available. About half of the users also provided information about sexual orientation, relationship status and political views (Gross/Acquisti, 2005).

A study by Dwyer et al. (2007) showed that violations of privacy are not only theoretically possible but also happen in practice. In an Internet survey of 222 users of MySpace and Facebook, 20% of respondents reported to have experienced a situation within the previous 12 months in which the user was concerned about his or her privacy. This included receiving unwanted spam messages, unauthorised access into personal accounts or online stalking. Only 19 of the 42 respondents whose privacy had been violated stated that they had checked or modified their data security settings (Dwyer/Hiltz, 2008).

This finding is backed by Madden et al. (2007). Using a telephone survey of 1,623 U.S. Internet users, it was shown that a majority of 43% of the respondents was not worried about the security of their personal information online and thus did not take any active measures to limit the type and amount of personal information that was available on the Internet. Only 21% were concerned about their data security and took active measures to limit the amount of personal information

To summarize, SNS can be used both by employers and by employees and job applicants for purposes of screening and signalling. Although considerable doubts about the security of data in SNS remain, few users think about or attempt to control the extent of their personal data on the web valuing the visibility of their profile (Liu,

2007). The related effects on relationships have not yet been properly explored: 'These results show that the interaction of trust and privacy concern in SNS is not yet understood to a sufficient degree to allow accurate modelling of behaviour and activity.' (Dwyer et al., 2007).

3   Research Model

The focus of this study is the relationship between employers and employees and the extent to which SNS, particularly Facebook and XING, alter the relationship between these parties. The perspective of the employee or job applicant is the central focus. First and foremost, it must be determined whether this group pursues certain objectives in terms of self-marketing, whether information is actively disclosed and sought, and how seriously concerns about data security are taken.

The following research areas have been formulated on the basis of the theoretical framework:

Dimension D_1: Active use of SNS for career development

Dimension D_2: Positive self-marketing

Dimension D_3: Perception of risk in relation to data security

Dimension D_4: Proactive data protection by restricting information

Dimension D_1 captures the objectives and motivations of employees and job applicants in the use of SNS in relation to career development. These can include active and passive job searching, and the creation and maintenance of relationships with business contacts. The theoretical basis of this is the study by Hermeier/Seng (2009) which highlights the increasing importance of SNS in proactive job searching and career planning. In accordance with the work of Utz (2008) and Liu (2007), Dimension D_2 accounts for aspects of targeted self-marketing and positive self-expression. The dimensions D_3 and D_4 group together data security issues in SNS. D_3 foregrounds risk awareness and the question of whether to encourage users to think about the safety and protection of their data. A theoretical outline of this question can be found in Madden et al. (2007), in Gross/Acquisti (2005) and in the study by Utz (2008). As a complement to this, Dimension D_4 accounts for restrictions to actively supplied data, in other words the ways in which users take steps to proactively protect their privacy, for example, by restricting access to their profile or monitoring their data. Studies by Madden et al. (2007) and Dwyer et al. (2007) contain material relating to this issue.

These four dimensions are the main categories on which the research questions are based. From these dimensions, the following seven hypotheses are derived and then empirically tested**.** On the one hand, the hypotheses include assumptions on the validity of each dimension, and on the other hand, they include statements about the relationships and dependencies of the dimensions themselves.

H_1: Employees and job applicants actively use SNS for career development purposes.

H_2: SNS are used to carry out positive self-marketing.

H_3: The risk awareness, in terms of data security, of users of SNS is low.

H_4: Users rarely take active measures to restrict personal data on SNS.

H₅: The use of career development and targeted self-marketing are positively correlated.

H₆: The stronger the assumption that SNS will be used for career development, the higher the risk awareness of users.

H₇: The higher the risk awareness, the more likely it is that active measures to limit data will be taken.
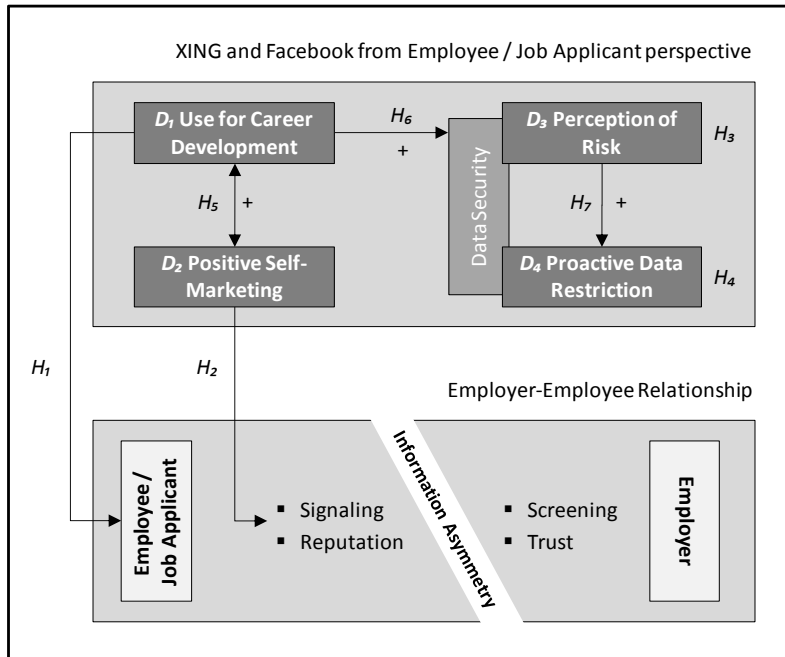

Figure 2: Research Model

Figure 2 provides an overview of how hypotheses H_1 to H_7 are connected to the research dimensions with respect to the employer-employee relationship.

4 Methodological Foundations

To test the hypotheses, a survey with 18 sets of questions was developed. Because all questions were related to the use of SNS, the questionnaire was made available online. Online surveys are subject to limitations (see Conclusion), but these were backgrounded due to the specifics of the research question and associated target respondents. As part of a pre-test an early version of the questionnaire was tested with six participants.

The survey consisted primarily of multiple-choice questions. These were supplemented in part by (semi-)open free-text responses, allowing for qualitative data to be collected. A total of eight items made up the four question dimensions on a five-point Likert scale, with two questions distinguishing between Facebook and XING. The scale ranged from 1 (strongly disagree) to 5 (strongly agree). General attitudes towards data security as well as the main motivations and search behaviours of users were explored by means of additional questions.

The questionnaire was available online from 20/07/2009 to 17/08/2009. The distribution channels for the survey were mainly Facebook and XING where a link to the survey was distributed using status messages.

5 Results

The results of the empirical study are presented below. The structure of this section matches the hierarchical structure of hypotheses H_1 to H_7.

H_1: Employees and job applicants actively use SNS for career development purposes

I believe that SNS can be used as career enhancing tools was the central question related to hypothesis H_1. 63.8% of respondents agreed with this statement (n=376, μ=3.64, σ=0.82). The mean value of responses of users who used only Facebook was far lower than the mean response of users who used only XING (n=123, μ=3.46, σ=0.83 for Facebook users and n=45; μ=3.76, σ=0.77 for XING users). The surveyed XING users' responses were more consistent with the statement that SNS can be used as career development tools than those of Facebook users.

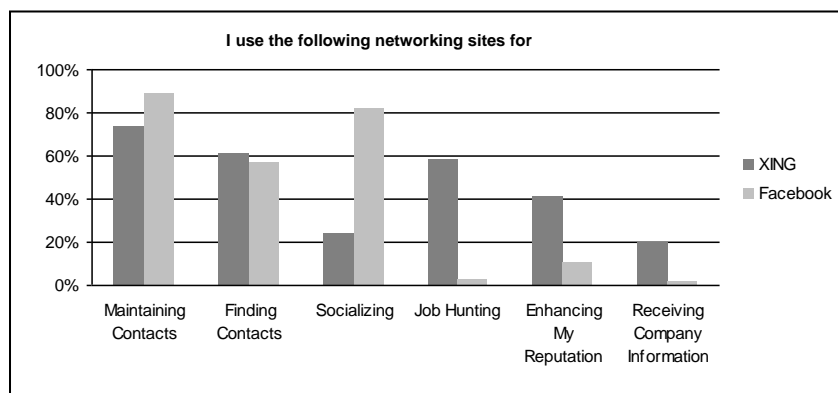Figure 3 provides an overview of members' primary motivations for use.

Figure 3: User motivations on XING and Facebook

Contact maintenance was the main motivation for use on both Facebook and XING (89.3%, n=319 on Facebook and 73.9%, n=241 at XING). About 80% of Facebook users used the platform for *Socializing*, compared to only 24.6% of XING users. The distribution of users motivated by searching for contacts was similarly pronounced. There were significant differences, however, in labour market-related motives. 58.3% of users of XING gave *Job Hunting* as a reason for use, compared to only 3.1% of Facebook users. Similarly pronounced differences in distribution were found between items *Enhancing my reputation* and *Receiving internal company information*.

Table 2 shows the search behaviour of users, represented by the proportion of yes responses to the question *Have you ever looked up information about the following groups on SNS*?

Table 2: Search behaviour on XING and Facebook

	XING	**Facebook**
Current colleagues	82.8 %	69.6 %
Potential colleagues	62.0 %	34.2 %
Current employers	53.7 %	23.2 %
Potential employers	51.0 %	16.6 %
Job opportunities	61.4 %	8.2 %

In the area of passive use of SNS, 44.9% of respondents claimed to have received a job offer or an invitation for a job interview via SNS. While two-thirds of the respondents who used only XING (30 of n=45) had received a job offer on XING at least once, only 17% of respondents who used only Facebook (21 of n=123) had received one.

It was highly desired among users of XING to be actively sought by companies and headhunters. 40.8% of surveyed users of XING (n=240) stated that they want to attract potential employers and headhunters with their profile. A correspondence analysis demonstrated that this had a significant correlation with the item *My profile is as accurate as possible (e.g. career data)* ($p<0.01$). 65.4% of surveyed XING users answered this with *Yes*.

The results of the listed items suggest that hypothesis H_1 must be considered separately. The data supports the claim that XING is clearly used for career development, whereas on Facebook social motivations play a greater role. As can be seen in the low representation of labour market related motivations, Facebook is hardly used in career development. This finding is confirmed by the results related to active search behaviour. Hypothesis H_1 can therefore be confirmed for XING, but cannot be considered confirmed in case of Facebook.

H_2: SNS are used to carry out positive self-marketing

228 respondents (60.7%) agreed with the following statement: *The Internet enables me to present myself the way I want to* (n=376, $\mu=3.59$, $\sigma=0.78$). Further questions concerning targeted self-marketing once again showed a significant difference between Facebook and XING ($p<0.01$). While three-quarters of XING users stated that they portrayed themselves in a positive light, only 60.8% of the Facebook members made the same claim. The mean values confirmed this difference (n=255, $\mu=3.97$, $\sigma=0.90$ for XING users and n=326, $\mu=3.59$, $\sigma=0.93$ for Facebook users). Nevertheless, both response mean values are above the scale average of 3, which suggests that self-marketing probably has a fairly important role in both networks.

Agreement with the item *I would like to impress my working colleagues and my (potential) employer with my profile*, however, was lower than the previous issue of positive self-marketing. More than half the users of XING (53.6%) would like to impress colleagues and (potential) employers (n=261, $\mu=3.38$, $\sigma=1.12$). On the other hand, only 36 Facebook users (= 11.2%) aimed to do this. Moreover, the mean response value was $\mu=2.4$ and thus below the scale average (n=324, $\sigma=0.92$). Again, there was a significant difference between the respective mean values ($p<0.01$).

Hypothesis H_2 must therefore be evaluated differentially. While it seems that active self-marketing is important in a business network like XING, in leisure networks it is less significant. In the free-text question of why users actively promote themselves, labour market relevant responses were clearly linked with XING: 'Because it may be a first screening of candidates. I also experienced that my XING profile can be a substitute for a proper resume.' Facebook was seen by most participants as more personal: 'I use Facebook for private purposes only. I do not expect my employer to see my profile, and if my colleagues look at it, they do it on a private level.' Hence, hypothesis H_2 can be accepted for XING and needs to be considered rejected for Facebook.

Additional information relating to demographic differences was obtained by regression analysis. Four items that measured the degree of self-marketing were combined into one factor ($\alpha=0.63$). The regression analysis between this factor and the age of the respondents showed that there was a significant negative correlation between the degree of self-marketing and the respondents' ages ($\beta=-0.24$, $p<0.01$), i.e. the younger the participants of the survey were, the higher their level of self-marketing.

H$_3$: The risk awareness, in terms of data security, of users of SNS is low

Almost two-thirds of respondents stated that they were concerned about the confidentiality of their personal data on SNS. The mean was $\mu=3.69$, significantly above the scale average (n=375, $\sigma=0.94$). Thus, the hypothesis that users of SNS have low risk awareness with respect to data security cannot be considered confirmed. Only 15.7% of Facebook users and 25.3% of XING users claimed that they did not need to be concerned about the security of data (n=319 and n=241).

Furthermore, respondents expect that (potential) employers will form opinions about them based on data in SNS. 59.1% of the respondents felt that existing or potential new employers were actively seeking information about them in SNS. Only 17.9% did not (n=374; $\mu=3.53$, $\sigma=0.98$). This was also reflected in responses to the statement *I think it's wrong if (potential) employers looked up my profile*, which was confirmed by 27.3% of Facebook users (n=319). From numerous free text responses the following attitude emerged: '[...] it is only natural if my potential employer looks at my profile in order to get more information about me.'

H$_4$: Users rarely take active measures to restrict personal data on SNS

A large majority of respondents (85.1%) agreed with the statement that they actively restrict their personal data and its accessibility in SNS, more than half strongly agreed. The mean response value was $\mu=4.17$ and thus far above the scale average (n=376, $\sigma=0.83$). Based on the descriptive analysis of these results, hypothesis H$_4$ must be rejected.

The question of what kind of personal data users restrict was also explored. About two-thirds of users of both Facebook and XING review their personal information and their profile regularly (68.8%, n=321 for Facebook and 66.7%, n=240 for XING). However, the profiles of 39.4% of XING users and 44.2% of Facebook users can be found simply by using the search engine Google. Additionally, only 16.7% of surveyed XING users concealed their contacts. Providing false information in profiles did not seem to be one of the strategies for data restriction. Only 14 users of Facebook and two XING users said they consciously provide false information (4.4% and 0.8%).

H$_5$: The use of career development and targeted self-marketing are positively correlated

To determine whether and to what extent a dependency exists between the degree of self-marketing and the use of SNS in career development, the questions concerning self-marketing were condensed to a single factor. A linear regression was then performed. This showed that the degree of self-marketing is dependent on the use of SNS for career development purposes ($\beta=0.39$, $p<0.01$). According to the data, the higher the degree of positive self-marketing, the stronger the assumption that SNS can be used for career development. Hypothesis H$_5$ was accepted accordingly.

H_6: The stronger the assumption that SNS can be used for career development, the higher the risk awareness of users

The hypothesis that the degree of risk awareness depends on the use of SNS for career development was not confirmed. A regression analysis of the central questions found a significance level of p=0.73 and a correlation of β=0.02. Interestingly, however, a positive correlation was found between the propositions *I believe that social networking sites can be used as career enhancing tools* and *I assume that my current employer / the companies I am applying for actively research information about me via social networking sites* (β=0.28, p<0.01).

H_7: The higher the risk awareness, the more likely it is that active measures to limit data will be taken

In order to test hypothesis H_7, another regression analysis was carried out between the dimensions of risk awareness (D_3) and Active Data Restriction (D_4). This led to β=0.28, a significant dependence (p<0.01) of active data restriction on concern over data security: the higher the awareness of risk, the higher the degree of active restriction of data. Hypothesis H_7 can therefore be regarded as confirmed.

6 Discussion

The survey results show a significant difference between Facebook and XING both in the field of self-marketing and in the use of SNS for career development purposes. XING is used both actively and passively in career development. The results of the studies by DeKay (2009) and Hermeier/Seng (2009) were thus confirmed. This study suggests that Facebook is used to a lesser extent for career development and that the degree of self-marketing is less pronounced with Facebook than with XING users. The finding that leisure networks are only moderately used for the purpose of self-marketing concurs with the study by Utz (2008).

There were some striking results in the area of data security. The expected low risk-awareness was not found. The idea that users rarely take active measures to limit data also had to be discarded. These findings run contrary to American studies by Madden et al. (2007) and Dwyer et al. (2007), both of which state that a majority of users do not worry about the security of their data on the Internet and take no measures to restrict the amount of personal information available. A possible explanation for the divergent results could be the geographical differences of the samples. On the other hand, the conflicting data could also indicate that a higher awareness of data security among users has emerged over time.

The results of the study also supported the statement that members of SNS do believe that (potential) employers carry out research on the Internet and that users behave accordingly. This finding complements the results of the BMELV (2009) study by including the perspective of employees and job applicants. The influence of SNS on labour market relationships can therefore be considered confirmed. A correlation analysis supported the proposition that the more likely job applicants or employees were to believe that employers do personnel research using SNS, the greater the assumption that SNS can be used for career advancement.

Based on these findings two conclusions can be drawn. First: SNS are used for signalling and screening and thus offer a platform to reduce information asymmetry

between employers and employees (Principle-Agent Theory is applicable). In addition, SNS can be considered as tools which directly reduce transaction costs by helping members to build reputation and trust (Transaction Cost Theory is applicable, too). It remains to be seen, however, why such a high number of profiles of XING and Facebook users could be found using Google, while a majority of more than 85% of respondents claimed that they restricted private data on SNS. While active data restriction was shown to be determined by risk awareness, the causal relationship between these two dimensions remains unclear.

With one exception, no correlations with specific demographic data were detected in any of the hypotheses or research dimensions. The exception was the degree of self-marketing, which was inversely dependent on the age of the respondents.

7 Conclusion and Outlook

With respect to the research question and the theoretical premise of this study, it can be stated that SNS in fact influence the employer-employee relationship. Table 3 presents the hypotheses investigated in the survey.

Hypothesis	Confirmed	
	XING	**Facebook**
H_1: Employees and job applicants actively use SNS for career development purposes	Yes	No
H_2: SNS are used to carry out positive self-marketing	Yes	No
H_3: The risk awareness, in terms of data security, of users of SNS is low	No	
H_4: Users rarely take active measures to restrict personal data on SNS	No	
H_5: The use of career development and targeted self-marketing are positively correlated	Yes	
H_6: The stronger the assumption that SNS can be used for career development, the higher the risk awareness of users .	No	
H_7: The higher the risk awareness, the more likely it is that active measures to limit data will be taken.	Yes	

Table 3: Hypotheses

Through targeted self-marketing, employees and candidates try to build a certain reputation. Using business networks like XING they carry out signalling on the Internet in order to reduce their Hidden Characteristics for the employer. Leisure networks like Facebook are rarely used for the purpose of signalling. It can be stated, therefore, that Facebook is less likely to be used for career development and that the degree of self-marketing for Facebook users is less pronounced than it is for XING users.

On the part of employers, they can use screening on SNS to actively reduce information asymmetry. It is doubtful whether this screening process is limited only to professional business networks. But depending on the degree of risk awareness and active data restriction by the user, an employer will only find those signals that are sent intentionally by the user.

Since findings of online surveys cannot be regarded as entirely representative, the present study is lacking with respect to external validity (Hollaus, 2007). Following Bortz/Döring (2003), online surveys, however, are valid methods for evaluating network services. Since the questionnaire was closely linked to the theoretical framework, which was derived in turn from findings of existing studies and from

theoretical approaches of New Institutional Economics, a high content validity can be assumed for the study. The most important aspects of self-marketing, career development use, risk awareness and active data restriction were fully accounted for. Objectivity with computer-processed electronic surveys can also be assumed (Hollaus, 2007).

Further research questions should be directed in particular to the employer's perspective on the employer-employee relationship. Brecht et al. (2011) marked the start by exploring how SNS are used for employer branding purposes. Besides this, studies of how companies deal with the amount of data from SNS and how they verify information should be carried out. In addition, the costs and benefits associated with SNS should be measured in terms of the Transaction Cost and the Principal-Agent Theory. The causal relationship between the degree of risk awareness and the level of active data restriction also needs to be explored further. Additionally, the question arises of how users ought to protect their data in leisure networks against potential screening by employers.

References

- **Books**

Hollaus, M. (2007). Der Einsatz von Online-Befragungen in der empirischen Sozialforschung. Aachen: Shaker Verlag.

Bortz, J. & Döring, N. (2003). Forschungsmethoden und Evaluation für Human- und Sozialwissenschaftler. Berlin: Springer.

Jansen, D. (2010). Soziales Netzwerk. In B. Schäfers & J. Kopp (Eds.), Grundbegriffe der Soziologie (209-214). Wiesbaden: Verlag für Sozialwissenschaften.

Dlugos, G., Dorow, W. & Danesy, F. (1987). Die Arbeitgeber-Arbeitnehmer-Beziehung in betriebswirtschaftlich-politischer Sicht. In H. Glaubrecht & D. Wagner (Eds.), Humanität und Rationalität in Personalpolitik und Personalführung. Beiträge zum 60. Geburtstag von E. Zander (119-133). Freiburg i. Brsg.: Haufe.

Utz, S. (2008). (Selbst)marketing auf Hyves. In P. Alpar & S. Blaschke (Eds.), Web 2.0 − Eine empirische Bestandsaufnahme (233-258). Wiesbaden: Vieweg+Teubner.

Washington, K. & Miller, R.K. (2009). In R.K. Miller (Ed.), Consumer Behavior 2010 Social Networking (69-72).

- **Proceedings from conferences**

Brecht, F., Koroleva, K. & Guenther, O. (2011). Increasing Global Reach: Using Social Network Sites for Employer Branding. In Proceedings of Wirtschaftinformatik 2011, 16/02/2011-18/02/2011, Paper 17. Retrieved 02/05/2011 from http://aisel.aisnet.org/wi2011/17.

Dwyer, C. and Hiltz, S.R. (2008). Designing Privacy Into Online Communities. In Proceedings of Internet Research 9.0. Retrieved 03/02/2010 from http://ssrn.com/abstract=1305278.

Dwyer, C., Hiltz, S.R. & Passerini, K. (2007). Trust and privacy concern within social networking sites: A comparison of Facebook and MySpace. In: Proceedings of the Thirteenth Americas Conference on Information Systems, 09/08/2007-

12/08/2007. Retrieved 03/02/2010 from http://csis.pace.edu/~dwyer/research/ DwyerAMCIS2007.pdf.

Gross, R. & Acquisti, A. (2005). Information Revelation and Privacy in Online Social Networks. In Proceedings of the 2005 ACM Workshop on Privacy in the Electronic Society, 07/11/2005 (71-80). New York City, AMC.

- **Journal Articles**

Beck, A. (2007). Web 2.0: Konzepte, Technologie, Anwendungen. HMD – Praxis der Wirtschaftsinformatik. 44 (255), 5-16.

Boyd, D.M. & Ellison, N.B. (2008). Social Network Sites: Definition, History, and Scholarship. J Compur-Mediat Comm. 2008 (13), 210-230.

Coase, R.H. (1937). The Nature of the Firm. Economica, 1937 (4), 386-405.

DeKay, S. (2009). Are Business-Oriented Social Networking Web Sites Useful Resources for Locating Passive Jobseekers? Results of a Recent Study. Business Communication Quarterly. 72, 101-105.

Donath, J. & Boyd, D.M. (2004). Public displays of connection. BT Technology Journal. 2004 (22), 71-82.

Dutta, S. & Fraser, M. (2009). When Job Seekers Invade Facebook. McKinsey Quarterly, 2009 (3), 16-17.

Haythornthwaite, C. (2005). Social Networks and Internet Connectivity Effects. Information, Communication & Society. 2005 (8), 125-147.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. J Financ Econ. 1976 (3), 305-360.

Liu, H. (2007). Social Network Profiles as Taste Performances. J Comp-Mediat Comm. 2007 (13), 252-275.

Picot, A. & Neuburger, R. (2000). Internet-Ökonomie. Wirtschaftsdienst – Zeitschrift für Wirtschaftspolitik. Sonderdruck 10 (80), 591-606.

Spence, M. (1973). Job Market Signaling. The Quarterly Journal of Economics. 87 (3), 355-374.

Williamson, O.E. (1973). Markets and Hierarchies: Some Elementary Considerations. Am Econ Rev. 63, 316-325.

- **Web pages**

BMELV (2009). Umfrage zu Haltung und Ausmaß der Internetnutzung von Unternehmen zur Vorauswahl bei Personalentscheidungen des Bundesministeriums für Ernährung, Landwirtschaft und Verbraucherschutz. Retrieved 03/02/2010 from http://www.bmelv.de/cae/servlet/contentblob/641322/ publicationFile/36232/InterInternetnutzungVorauswahlPersonalentscheid.pdf.

Facebook (2011). Statistics, Website of Facebook. Retrieved 07/02/2011 from http://www.facebook.com/press/info.php?statistics.

Hermeier, B. & Seng, A. (2009). Ergebnisbericht FOM Netzwerkumfrage 2009 – Relevanz von internetbasierten Netzwerken für die berufliche Entwicklung.

Retrieved 03/02/2010 from http://www.fom.de/fileadmin/fom/downloads/ forschungsberichte/Tabellenband_Netzwerkumfrage2009.pdf.

Jones, H. & Soltren, J.H. (2005). Facebook: Threats to Privacy. Retrieved 03/02/2010 from http://groups.csail.mit.edu/mac/classes/6.805/student-papers/fall05-papers/ facebook.pdf.

LinkedIn (2011). About us, Website of LinkedIn. Retrieved 07/02/2011 from http://press.linkedin.com/about/.

Madden, M., Fox, S., Smith, A. & Vitak, J. (2007). Digital Footprints – Online Identity Management and Search in the Age of Transparency. Pew Internet Research Center. Retrieved 03/02/2010 from http://www.pewinternet.org/Reports/2007/ Digital-Footprints.aspx.

XING (2011). Company, Website of XING. Retrieved 07/02/2011 from http://corporate.xing.com/english/company/.