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EFFECTS OF APPRENTICESHIP MARKETING ON EMPLOYER BRAND DIMENSIONS — A DIFFERENCE-IN-DIFFERENCES APPROACH

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Abstract:

In contrast to previous studies, this paper uses a quasi-experimental design to empirically analyze the causal effects of two frequently used recruitment measures in practice for SMEs' apprenticeship marketing—firm presentation and site visit—on pupils' perceived employer brand. Despite the great importance of apprentices in sufficient quantity and quality for the success of SMEs, little is known about effective strategies for influencing recruitment outcomes among young job seekers. Therefore, a unique panel data set was collected in cooperation with 14 craft firms and pupils from 34 schools in Germany. Using difference-in-differences analysis, the results show that the implementation of firm presentations and site visits is leading to an increase in the SMEs' employer brand evaluations. In addition, it was found that the SMEs' recruitment staff and the appeal of the recruitment measures are important as, in the worst scenario, both negatively influence the pupils' employer brand ratings.

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1 Introduction

Demographic changes with effects on the amount of available labor cause an increasing need for companies to attract enough and sufficiently qualified personnel to remain competitive (Bechmann et al., 2012). Especially for small and medium-sized enterprises (SMEs), the ability to recruit employees is "one of the most important factors influencing organizational success" (Williamson, 2000, p. 27). Particular challenges for those companies, compared with large firms, are for example limited financial resources (Kraus et al., 2010) or lower visibility to potential employees (Gruber, 2004). In this context, a positively assessed employer brand can be the decisive factor for SMEs in competing for qualified personnel (Lievens & Highhouse, 2003).

Firms adopt different recruitment strategies in order to establish or enhance their employer brand or to influence job seekers' intentions to apply (Collins & Han, 2004; Falk et al., 2013). Meaningful recruitment strategies for firms are, however, only measures that systematically contribute to the improvement of job seekers' perceptions and their behavior (Collins, 2007). With reference to their disadvantages, it is even more crucial for SMEs to be aware of recruitment channels that are effective in strengthening the employer brand.

To meet skilled labor needs, apprenticeship training has great relevance for SMEs. One benefit is that an apprentice is closely connected to the apprenticeship firm, both technically and organizationally. Furthermore, the duration of apprenticeship training could be seen as a screening phase for the firm to observe the apprentices' abilities and their organizational fit (Bellmann & Hartung, 2010; Wagner, 2012). Besides the value of apprentices, they form the group of workers in SMEs where recruiting issues occur most frequently—with 21% of all vacancies notified (Kay et al., 2010). Against this background, it seems very important for SMEs to understand how to attract young people to apprenticeship training. Given that the evaluation of a firms' employer brand is a key factor in this attraction process (Cable & Turban, 2001), this study investigates whether the commonly used recruitment channels, site visit and firm presentation, are valuable strategies in enhancing pupils' perceived employer brand toward SMEs. In this regard, the study also analyzes the role of pupils' sympathy for firm representatives and the role of pupils' liking for the recruitment measures.

Previous research has shown that SMEs frequently offer site visits (Kay et al., 2010) and attend informational events in schools (Wagner et al., 2012) as recruitment channels. Several studies, which were almost exclusively conducted in an academic context (sample with students) and primarily consider large companies as possible employers, reveal that these informal recruitment strategies induce positive recruitment effects (e.g., Breaugh, 2008; Breaugh & Starke, 2000; Collins, 2007; Dougherty et al., 1994; Lievens & Highhouse, 2003; Turban, 2001; Turban & Dougherty, 1992). Despite the importance of apprentices to SMEs, no study exists that focuses on the outcomes of SMEs' apprenticeship marketing. Although there is empirical evidence that SMEs have unique and

distinctive job attributes, e.g., a positive team climate or the early assignment of responsibilities, that are useful in terms of employer branding (Tumasjan et al., 2011) and in reducing vacancies (Backes-Gellner & Tuor, 2008; Falk et al., 2013), there is a lack of knowledge about which recruitment strategies could highlight these attributes. According to Williamson (2000), there might be a gap "in our understanding of the recruitment issues small business face and what strategies are most effective" (p. 27).

In a longitudinal study, Collins & Stevens (2002) revealed the impact of four different recruitment strategies (publicity, sponsorship, word-of-mouth endorsement, and advertising) on the job choice decisions of engineering students. Given the cross-sectional data collection, it was not possible to "determine the direction of causality for the relationship between recruitment practices, cognitions and affective reactions, and intentions" (Collins & Stevens, 2002, p. 1131). In their paper, Baum & Kabst (2011) found that the implementation of firm presentations and attendance at career fairs both strengthen the employer brand of a SME from a student's point of view. In line with these results, Collins & Stevens (2002) indicate that the interaction of two or more recruitment-related activities has a greater effect than a single activity. Nonetheless, the study contains some limitations. First, the students evaluated only one firm as a potential employer (Baum & Kabst, 2011). Thus, the results are not generalizable to a larger group of SMEs. Moreover, the students' participation in the personnel marketing activities was on a voluntary basis. Therefore, a selection bias might exist in the sample, which additionally was cross-sectional.

In contrast to these studies, which merely confirm a positive influence of recruitment practices, but give no analysis of the exact amount of the effects on recruitment outcomes, the present study examines to what extent two specific recruitment channels change the perception of young job seekers toward SMEs' employer brand. By applying the effects of the friendliness of recruiters and liking for the recruitment measures, two important factors in recruitment processes are included (e.g., Breaugh & Starke, 2000; Powell, 1984, 1991; Turban & Dougherty, 1992). Therefore, this study is embedded in the context of marketing, recruitment, and signaling literature to provide further insights into recruitment processes and their effectiveness. Compared with previous research, this study shows three benefits that should be considered: (1) the panel data set; (2) the involvement of many different companies as potential employers; and (3) the quasi-experimental design by varying recruitment activities. The panel data set used to empirically investigate the research question was collected through collaboration with 14 SMEs from the crafts sector. In total, n = 678 pupils participated in the survey, divided into treatment and control groups. Data obtained from such a quasi-experimental design allow the identification of the treatment effects of both recruitment channels for attracting potential apprentices (Shadish et al., 2002). Although the data were solely collected in the crafts sector, the involvement of multiple firms ensures a better transferability of the results to other craft SMEs.

The findings of this study highlight several implications with practical relevance. First, the results provide information on the effectiveness of two commonly used recruitment strategies in practice (firm presentation and site visit) for craft firms' employer branding among potential apprentices. Thereby, the firms are enabled to estimate their benefits from those strategies and to weight up whether further activities are useful. Second, crafts organizations that work for the improvement of their member firms' image as employers gain insights into the value of firm presentations and site visits as recruitment channels and could work on improvement or elaboration of new strategies for their members.

The paper is organized as follows. First, the underlying theory and the derivation of the hypotheses are specified. In section 3, the data set, the estimation model, and the measures are introduced in detail. The results of the difference-in-differences (DID) analysis are presented in section 4. After discussing the results and the limitations of the study in section 5, section 6 gives concluding remarks.

2 Theoretical framework and research questions

2.1 Classification of the recruitment activities

In the labor market, there is uncertainty in decision making for firms as well as for potential employees because of asymmetric information (Spence, 1973). The firm does not know about the productive capabilities or the personal attributes of a job applicant, and the candidate has no reliable information about the working conditions within a company. The latter problem is especially relevant for SMEs, which generally face low visibility to potential employees (Gruber, 2004). Therefore, to reduce the information deficits, both parties are looking for some observable attributes as signals, allowing them to make a verifiable judgment of the others' hidden characteristics (Connelly et al., 2011). Signals, for example, include work councils, apprenticeship training programs, or a high share of blue-collar workers in firms, which Backes-Gellner & Tuor (2008) found having significant effects in reducing firms' vacancy rates. Job seekers use these observable indices to get an impression of non-observable but highly valued employer characteristics such as job security, career prospects, or interesting workplaces (Backes-Gellner & Tuor, 2008).

Firms can try to convey information about their observable and non-observable characteristics through various recruitment strategies (Rynes et al., 1991). But recruitment channels differ in their ability to overcome the problem of asymmetric information. Thus, a different perception of an employer or a workplace can also result from different recruitment channels that offer different amounts of information (Saks & Uggerslev, 2010). Falk et al. (2013) investigated the factors influencing the recruitment success of German SMEs while distinguishing between recruitment situations with high (e.g., job advertisements) and low (e.g., internal job markets or employee referrals) informational asymmetry for potential employees. They found that, in cases with high informational asymmetries, job seekers rely more on observable job characteristics, such as monetary signals, to reduce the uncertainty about the employer and the job, whereas in cases with low information asymmetries, the non-observable characteristics become more relevant for their job choice decision (Falk et al., 2013).

Especially relevant to the present study, the signaling literature illustrates that firms' recruitment outcomes could be influenced by the implementation of recruitment strategies (Chapman et al., 2005). According to the classification of Falk et al. (2013), both recruitment channels investigated in this study—firm presentation and site visit—could be seen as information sources with high information asymmetries on the part of young job seekers. Indeed, pupils may obtain all relevant information about the recruiting craft firms and the different job characteristics (firm size, firm location, workplace conditions, information about the apprenticeship training program, etc.), but high uncertainty remains. Pupils can only imagine whether the employer and the job will meet their expectations. The high uncertainty, especially in the context of the employer and occupational choice

of young job seekers, is reflected in the reasons for and the extent of drop-out rates in initial apprenticeship training in the German crafts sector (Greilinger, 2013). Nevertheless, previous studies have also indicated that, particularly in the case of unknown SMEs, the usage of recruitment channels could achieve positive effects toward the employer brand—as also with recruitment sources that show high information asymmetries (Baum & Kabst, 2011; Collins, 2007; Kanar et al., 2008).

The firm presentation and the site visit do not differ in the presented amount of information, but in the arrangement and thus the quality of this information. The firm presentation takes place in the usual environment of the school (classroom) and thus provides rather theoretical information about the employer and the job. The site visit is held at the firms' headquarters where the pupils get a theoretical introduction to the firm and the apprenticeship training to begin with. Afterwards, they participate in vocational workshops to perform typical tasks from the apprenticeship training and have a guided tour through the company site. Although the problem of asymmetric information is not solved completely, it can be assumed that, compared with the firm presentation, the site visit will allow a more verified impression of the working conditions within a craft firm. Thus, the site visit might be considered as an information channel with lower hidden information. This leads to the assumption that the recruitment activities will differ concerning their effects on the employer brand.

This assumption is confirmed by the classification of recruitment activities by Collins & Han (2004). Derived from the marketing literature, they describe low-involvement recruitment strategies as channels that "convey positive cues to job seekers through logos, pictures and visual images that require little processing effort" (Collins & Han, 2004, p. 689). Often, they are designed to enhance the awareness of an employer. Examples of low-involvement strategies are recruiting posters or sponsorship (Collins, 2007; Kanar et al., 2008). In contrast, high-involvement strategies provide job seekers with detailed information about the organization and the workplace and therefore claim higher cognitive effort (Collins & Han, 2004). Examples are job fairs or firm presentations (Baum & Kabst, 2011). An essential characteristic of a high-involvement recruitment channel is the personal interaction between the recruiter and the potential employee. Hence, they can also exchange affective information (Baum & Kabst, 2011).

Both recruitment strategies, firm presentation and site visit, can be seen as high-involvement channels and are thus supposed to have a positive effect on the pupils' employer brand perception (Chapman et al., 2005; Collins, 2007). Nevertheless, the site visit comes with a higher involvement because of its arrangement. Whereas the presentation is mostly a one-way communication from the recruiter to the pupils, the site visit is designed with greater flexibility and more possibilities for mutual exchanges and personal conversations with company representatives. Based on this line of reasoning, it can be assumed that the site visit will have a greater effect on the development of the employer brand than the firm presentation.

H_1: The implementation of a site visit will influence the pupils' perceptions concerning the employer brand of a craft firm more positively than the implementation of a firm presentation.

2.2 Employer branding in the context of recruitment

Cable & Turban (2001) developed a process model of recruitment equity. Recruitment equity can be defined as the "value of job seekers' employer knowledge, which is derived from job seekers' responses to recruiting organizations during and after the recruitment process" (Cable & Turban, 2001, p. 121). The responses of job seekers to firms are integrated in the process model with three important recruitment outcomes on which a firm has influence during the recruitment phase (Chapman et al., 2005). These recruitment outcomes are the development of the perceived employer brand and employer attractiveness as well as the development of the job seekers' application intentions. Thus, employer brand equity is one component of the recruitment equity that the process model represents (Cable & Turban, 2001).

From a general marketing perspective, brand equity is defined as "the differential effect of brand knowledge on consumer response to the marketing of the brand" (Keller, 1993, p. 1). Brands induce (potential) employees' identification with firms and distinguish firms from their competitors. Thus, they provide value to firms (Kotler, 1991). Because of the importance of brand equity in marketing processes, the concept of the employer brand has also been introduced as a major factor in the context of recruitment (Backhaus & Tikoo, 2004; Collins & Stevens, 2002; Maurer et al., 1992).

Relevant to the present study is Cable & Turban's (2001) idea of the recruitment process: Job seekers receive organizational information and thus, as a first step in the recruitment process, build up or extend their employer knowledge (Cable & Turban, 2001). The value of this employer knowledge equates to the employer brand equity of firms (Baum & Kabst, 2011; Cable & Turban, 2001; Keller, 1993; Lassar et al., 1995). The process of establishing and developing the employer brand by job seekers is denoted as employer branding. In the process model, employer branding is of considerable importance because the job seekers' evaluation of the employer brand is assumed to induce further

recruitment success such as the development of employer attractiveness and application intention (Cable & Turban, 2001). Thus, it is crucial to understand the development of the employer brand of potential employees.

The employer brand is a construct of three different facets: (1) familiarity with the employer; (2) employer reputation; and (3) particular employer and job characteristics (Cable & Turban, 2001). In several studies, these facets have been identified as important sources for the development of job seekers' application behavior (Backhaus & Tikoo, 2004; Baum & Kabst, 2011; Collins, 2007; Keller, 1993; Turban et al., 1998). Considering the development of the craft firms' employer brands by potential apprentices raises the question of which of these three facets contributes to the employer branding and which are the main drivers for the pupils' brand evaluations.

Employer familiarity is defined as the degree of awareness a potential employee has of an organization (Cable & Turban, 2001). This means that job seekers are able to "confirm prior exposure to an employer when primed with the organization's name […] or to produce an employer's name when cued with some attribute of the organization" (Williamson et al., 2002, p. 86). It is shown empirically that the more familiar a job seeker is with an employer, the more positively he reacts to that employer during the recruitment process (Gatewood et al., 1993). Besides lots of detailed information the pupils receive about the assigned craft firm through the firm presentation or the site visit, both recruitment channels also serve to concentrate pupils' attention on the firms and strengthen the firms' general visibility. Taking into account the design of the measures, it is assumed that the firm presentation and the site visit will positively influence the pupils' familiarity with the recruiting SMEs.

H_{2a}: The implementation of a firm presentation will improve the pupils' perceptions concerning the employer familiarity of a craft firm.

H_{2b}: The implementation of a site visit will improve the pupils' perceptions concerning the employer familiarity of a craft firm.

Also, the second facet of the employer brand, employer reputation, plays an important role in the recruitment process. For example, Cable & Turban (2003) found that job seekers' perceived employer reputation has an effect on their application behavior, because potential employees derive beliefs about job attributes from the reputation of the company. Given that young job seekers, as analyzed in the present study, are highly affected by the attitudes of friends and classmates (Kilduff & Krackhardt, 1994), employer reputation is defined as "a job seeker's belief about how the organization is evaluated by others" (Cable & Turban, 2001, p. 127). In this regard, it has to be taken into account that the overall image of the crafts sector is evaluated as unattractive by young people (Zentralverband des Deutschen Handwerks, 2009). This negative basic attitude of the majority of pupils is likely to spill over to the whole class when craft firms implement recruitment measures in schools. Thereby, the

spillover can already happen during the firm presentation or the site visit, or it can result from discussions between the participants and their friends or parents after the measures.

H_{3a}: The implementation of a firm presentation will adversely affect the pupils' perceptions concerning the employer reputation of a craft firm.

H_{3b}: The implementation of a site visit will adversely affect the pupils' perceptions concerning the employer reputation of a craft firm.

The last facet of the employer brand is job and company information, including the job seekers' specific knowledge about the job and organizational characteristics (Cable & Turban, 2001). As research reveals, job and organizational characteristics are crucial for the decision of employees to start work at a firm (Collins, 2007; Collins & Stevens, 2002; Tumasjan et al., 2011). This also applies to the employees' decision to stay with the firm, for example after finishing the apprenticeship training. In this context, Wagner (2012) found that "occupational enjoyment, regional proximity to the employer and job security are the most important drivers for the intention to stay with the training establishment" (p. 5). Terjesen et al. (2007) examined the variety of daily work or long-term career progression as important organizational attributes to which young job seekers are attracted.

Studies have shown that young job seekers associate unique and highly appreciated job characteristics, such as the team climate or the early assignment of responsibilities, with SMEs. The question is whether the pupils in the present study also associate these characteristics with SMEs from the crafts sector and whether the measures improve the pupils' view of the characteristics. As already mentioned, the crafts sector is mainly rated as unattractive by young people (Zentralverband des Deutschen Handwerks, 2009). Interestingly, the same study also reveals that young people have very little knowledge about firms in the crafts sector as possible employers or the sector's professions (Zentralverband des Deutschen Handwerks, 2009). This very limited information is the basis for the assumption that the recruitment measures will contribute to a reduction in the information deficit.

During the recruitment measures, information about the craft firms was given in detail, for example on working conditions, working climate, development opportunities, or job security. The firm presentation was enriched with practical examples, whereas the site visit gave direct insight into a few employer and job characteristics (e.g., working climate) of the craft firms. Thereby, it is expected that pupils will even find some of the characteristics fitting with their requirements of attractive employers. Thus, it is supposed that a firm presentation as well as a site visit will improve the pupils' perception of the craft firms' employer and job characteristics.

H_{4a}: The implementation of a firm presentation will improve the pupils' perceptions concerning the employer and the job characteristics of a craft firm.

H_{4b}: The implementation of a site visit will improve the pupils' perceptions concerning the employer and the job characteristics of a craft firm.

2.3 Effects of recruiters and the appeal of the recruitment measures on the employer brand rating

Lots of studies have examined the importance and influence of organizational representatives in recruitment processes (e.g., Breaugh & Starke, 2000; Powell, 1984, 1991; Turban & Dougherty, 1992). For example, Rynes & Miller (1983) revealed that recruiter behavior offers a distinct contribution to job seekers' perceived job desirability besides the job characteristics. Moreover, they found that recruiter characteristics act as indicators for organizational characteristics. Harris & Fink (1987) used a sample of students participating in campus interviews and found a relationship between recruiter characteristics and the students' evaluation and acceptance of jobs. They confirmed the findings of Rynes & Miller (1983) that "the impact of the recruiter appeared to extend beyond merely affecting perceived job attributes" (Harris & Fink, 1987, p. 778). However, so far, no study exists on the contribution of firm representatives to the development of the employer brand.

With regard to different recruitment measures, for example, Falk (2013) detected the perception of organizational representatives as actually the factor with the largest impact on application decisions among student career fair visitors. Turban & Dougherty (1992) showed in the context of campus interviews that especially the interest that recruiters show in candidates strongly influences the job seekers' perceived employer attraction. However, to the author's knowledge, there is no study that investigates recruiter behavior in combination with firm presentations or site visits.

In contrast to previous research, the present paper analyzes the effects of recruiter behavior on the development of the employer brand. Moreover, with the data set, it is possible to assess the causal contribution of recruiter behavior to brand evaluations. In the present study, recruiter behavior is

specified as recruiter friendliness. As recruiter friendliness is coded as a categorical variable with high, medium, and low specifications, the effects of all three alternatives can be detected. Goltz & Giannantonio (1995) showed that recruiter friendliness has a positive influence on applicants' perceptions toward an employer. Taking into account these prior findings, it could be assumed in the present study that the contact with friendly firm representatives at the firm presentation or site visit also positively influences the pupils' brand perceptions.

H_{5a}: The perceived friendliness of firm representatives during firm presentations and site visits will positively influence the pupils' employer brand rating toward a craft firm.

Pupils who are on the first step into the labor market represent a particular group of potential employees for firms (Kay et al., 2008). On account of their age, recruitment measures have to be optimally adapted to these young job seekers to attract attention (Breaugh & Starke, 2000). Research reveals that it is important to ensure the delivery of vivid messages with correct language and personally relevant as well as slightly unexpected information, which is conveyed in face-to-face conversations (Chaiken & Stangor, 1987; Kulik & Ambrose, 1993; Tybout & Artz, 1994). These attributes were taken into account in the design and implementation of the firm presentations and site visits for the pupils. As already mentioned, the firm presentations were implemented in the usual environment of the school (classroom) and included a video movie, PowerPoint presentation, and final discussion. The site visit was at the firms' headquarters where the pupils also received a theoretical introduction with the movie and the presentation, but then participated in vocational workshops and had a guided tour through the company site.

Nonetheless, there is no information about whether the measures appeal to young people and if liking the measures has employer branding effects. To the author's knowledge, these questions have not been investigated in previous recruitment research. Thus, assumptions on the impact of the appeal of the measures were derived in accordance with recruiter behavior literature. Thereby, the same mode of action as in the case of recruiter friendliness is assumed for the pupils' general liking of the recruitment measures: It is supposed that the more a job seeker likes the recruitment channel he is confronted with, the more he is attracted and the better he evaluates the firms' employer brand.

H_{5b}: The perceived liking of firm presentations and site visits will positively influence the pupils' employer brand rating toward a craft firm.

3 Methods

3.1 Study design, sample, and procedure

This study was carried out in cooperation with 14 SMEs from the crafts sector. According to their field of activity, they belong to the branch of sanitary, heating, and air-conditioning technology firms. Considering firm size, the sample contains craft firms from all firm size categories, measured by the number of employees and suggested by the Federal Statistical Office of Germany and the Institute for SME Research (Statistisches Bundesamt, 2011; Wolter & Hauser, 2001). The distribution of the 14 craft firms in size categories is shown in Table 1. All firms are located in Bavaria, five in urban and nine in rural areas.

Table 1: Distribution of the 14 SMEs in firm size categories

Firm size category	1–4 employees	5–9 employees	10–19 employees	20–49 employees	50–249 employees	>250 employees
Number of firms per category	1	1	2	5	4	1

With the permission of the Bavarian Ministry of Education given in October 2012, 56 secondary schools were contacted in writing and afterwards by telephone to inform them about the study. 34 schools confirmed their participation with a total of 62 classes. The firm presentations and site visits were carried out by the 14 craft firms from November to December 2012. Two weeks before and after these measures, the pupils completed a written questionnaire on a voluntary basis. The pupils who served as a control group filled in the questionnaires voluntarily at the same time. All participating pupils had an identification number to match the two observations and construct the panel structure.

With 14 SMEs, the study was designed as a quasi-experimental field study (Campbell & Stanley, 1963). In contrast to laboratory experiments, field studies retain high external validity because they take place in a natural environment and in a realistic context (Huber, 2005). To achieve an equalization of the experimental conditions, the firms received obligatory guidelines for the implementation of the site visits and firm presentations (Schnell et al., 2008). Thus, both treatments show an equal design for the pupils in terms of duration, content, structure, and the given amount of information on the employer and the apprenticeship training, e.g., concerning the tasks, prospects for personal growth, working atmosphere, wages, etc. The similar conception of the treatments was essential to ensure that emerging variances in the recruitment outcomes only stem from firm differences or from differences between the pupils but not from the treatments' design (Cook & Campbell, 1979).

The firm presentation took place at school and lasted approximately one hour. The company's head, supported by a current apprentice, provided information on the firm using PowerPoint and showed a short video movie to illustrate the key aspects of the apprenticeship training. The firm presentation ended with a final discussion where the pupils could clarify outstanding issues. The site visit took place at the firms' sites and also started with an official firm presentation and the video as in the other treatment. Afterwards, the pupils were guided through the offices and work places. The next part was designed as a work experience section. Under guidance, the pupils tested their craft skills working on activities that are typical of the apprenticeship training. At the end, there was an informal get-together with snacks and the opportunity for personal discussions. The site visit was also carried out by the company's head and an apprentice and took approximately three hours. Through the involvement of a current apprentice, it was hoped that contact between job seekers and company staff of almost the same age might strengthen the job seekers' belief of fitting in with the company or the job (Cable & Judge, 1996).

In quasi-experimental designs, the participants are not randomly assigned to the treatment or to the control group on an individual level (Huber, 2005). This also applies in the current study. But the pupils were allocated randomly to a setting (firm presentation, site visit, control group) based on their class membership. Thus, they had no information about which setting they were categorized in. Furthermore, the pupils from the control group were not officially informed about the treatments for the other classes. To ensure this cycle, an agreement about not informing the pupils was made with the class teacher.

Respondents in the study were n = 678 pupils (firm presentation: n = 179, site visit: n = 228, control group: n = 271) from the eighth grade of secondary schools in Bavaria called "Mittelschule" (55.16%, n = 374) and from the ninth grade of secondary schools in Bavaria called "Realschule" (44.84%, n = 304). Pupils from both types of school still have one further school year to finish before graduation. Thus, it could be assumed that they are already searching for future prospects. For reasons of anonymity, it was not possible to collect information about the age of the pupils but, in general, the ages ranged between 13 and 16 years at this grade level. At 56.05% (n = 380), male pupils predominate slightly. 67.55% (n = 458) of the pupils are from rural areas; 32.45% (n = 220) live in urban regions.

Each pupil in the treatment group interacts with only one of the 14 SMEs, either at a firm presentation or on a site visit. The pupils in the control group had no contact with the firms but were also required to fill out questionnaires on the craft firm they were assigned to. Questionnaires were adapted to represent the corresponding firm name for each class. The structure of the pre-survey was identical for all pupils: First, there was an introductory page with general notes followed by questions about vocational interests, about the demands a preferred employer has to meet, and about the personal understanding of the vocational future. In the next part, questions about the assigned firm were asked. Finally, some socio-demographic measures were collected. The structure of the post-survey was also

identical for all groups. After an introductory page and the questions about the assigned firm, the treatment group, in contrast to the control group, had to answer a question on how much they liked the treatment and the company staff they got to know. The pre-survey questionnaire took approximately 20 minutes and the post-survey questionnaire about 15 minutes to complete.

3.2 Estimation model

To estimate the effects of both recruitment strategies on the SMEs' employer brand evaluation, a DID model was applied (Wooldridge, 2009). DID "is a version of fixed effects estimation using aggregate data" (Angrist & Pischke, 2009, p. 228). The difference of the dependent variable in the treatment group between the observations less the difference of the dependent variable in the control group between the surveys is called the "average treatment effect" or "DID estimator" (Bertrand et al., 2004). The equation below reflects the basic DID model of the present study.

$$y_{it} = \beta_0 + \beta_1 \, period_t + \beta_2 \, treatment_i + \beta_3 \, (period_t * treatment_i) + \beta_k \, X_{k,i} + e_{it}$$

The dependent variable y_{it} varies between the hypotheses tested. The equation contains one dummy variable reflecting the periods (follow-up period = 1) and another dummy variable indicating pupils from the treatment group (= 1) in contrast to the control group. β_3 represents the average treatment effect. The vector $X_{k,i}$ captures all control variables, which are explained in Table 2. An overview of the survey items of the dependent (Table A1) and independent variables (Table A2) is given in the appendix.

Table 2: Description of control variables

Variable	Description	Mean	SD
Company characteristics			
Firm size	Establishment size in 6 categories; Reference category: "Firm size (1–4 employees)"	4.19	1.14
Firm location	Dummy = 1 if location is in an urban region, 0 otherwise	0.32	.47
Pupil characteristics			
School	Dummy = 1 if type of school is "Mittelschule", 0 otherwise ("Realschule")	0.55	.50
Vocational interest craft	Interest in tasks that can be attributed to the crafts sector; Variable aggregated from 10 items measured on a five-point Likert scale (1 = I am not interested; 5 = I am very interested) from Bergmann & Eder (2005)	2.68	.85
Apprenticeship	Dummy = 1 if intention to do an apprenticeship after school, 0 otherwise	0.47	.50
Career craft	Dummy = 1 if preferred job is in crafts sector, 0 otherwise	0.59	.49
Pre-firm awareness	Dummy = 1 if firm is familiar before treatment, 0 otherwise	0.60	.49
Grade point average	Grade point average in last school report	2.52	.67
Additional information	Dummy = 1 if pupil gets additional information on the firm or apprenticeship training between treatment and second survey, 0 otherwise	0.14	.35
Sex	Dummy = 1 if pupil is female, 0 otherwise	0.44	.50
Distance to firm	Distance to work in 6 categories; Reference category: "Distance to firm (≤15 min)"	2.19	1.29

All numbers are based on the sample of pupils from the firm presentation: n = 179, the site visit: n = 228, and the control group: n = 271

Schank (2011) found that firm size is a relevant factor for potential apprentices in choosing their apprenticeship firm. With growing firm size, the apprentices attribute a higher attraction. Furthermore, they ascribe specific strengths and weaknesses to firms with different sizes. Whereas SMEs have a better working atmosphere in their perception, large firms provide better opportunities for further training. Because the 14 firms that supported this study differ in size, a control variable for the firm size was inserted into the regression.

Böhme (2007) analyzed the regional mobility of young Bavarian apprentices and figured out that firm location[4] and the distance to the workplace also play important roles in the recruitment process and decision to undertake apprenticeship training. In urban regions, educational behavior after leaving school differs from that in rural areas. Urban regions offer young people more options besides starting apprenticeship training. This leads to a lower average number of urban applicants showing interest in apprenticeship training. Moreover, for young job seekers, the distance to the workplace is also relevant. In Bavaria, for one third of all apprentices, the workplace corresponds with the place of

[4] In this study, the firm is located in the same urban or rural area where the pupils live.

residence. Also, in regions with less availability of apprenticeships, the apprentices do not have significantly longer distances to cover (Bogai et al., 2008). Thus, differences in perceived employer attractiveness that are not triggered by the treatment itself, but by the firm location and the distance to the firm, have to be considered as a control variable.

Chapman et al. (2005) identified the job seekers' perceived alternatives as one predictor of the attraction of an organization and of the job choice during the recruitment process. Thereby, many perceived opportunities "are thought to have a negative effect on attraction to any specific opportunity" (Chapman et al., 2005, p. 930). Given that the perceived alternatives vary with educational attainment and with the school leaving certificate, which reflects the level of formal education (Wydra-Somaggio et al., 2010), the grade point average from the last school report and the type of school the pupils attended were taken into account as control variables.

Furthermore, applicants are looking for their fit with the company (person-organization fit) and with the job (person-job fit) as a basis for their attraction (e.g., Cable & Judge, 1996, 1997; Judge & Bretz, 1992; Kristof, 1996). Therefore, the pupils' interest in tasks that can typically be allocated to the crafts sector served as a further control variable (Bergmann & Eder, 2005). In addition, Cable & Turban (2001) proposed in their process model of recruitment equity that the job seekers' values and needs have to be taken into account. In a broader sense, this also implies the pupils' ideas about their professional future. Therefore, it was included as a control variable whether pupils actually intend to start apprenticeship training after school and if they even prefer a job in the crafts sector.

Gatewood et al. (1993) found that the available amount of information to potential employees influences the perceived image toward the recruiting organization which, in turn, affects the job choice decision. Although the pupils gained the same amount of information from the treatments of the 14 firms, their previous knowledge of their assigned firm can differ. Besides, they can seek further information about the company after the treatment, for example via the firms' web sites, which have been proven as a potent tool in attracting job seekers (Allen et al., 2007). Thus, the model has to be controlled for pre-firm awareness as well as for additional information the pupils may collect between the recruitment activities and the post-survey.

The Federal Ministry of Education and Research (2013) showed in their annual report that young workers have preferred apprenticeship jobs that differ by gender. While female pupils predominantly take up commercial training or professions in the health sector, young men mainly start apprenticeship training in mechanical and technical professions with plant mechanic for sanitary, heating, and air conditioning systems in fifth position. Thus, it can be assumed that the reactions to the personnel marketing activities of the 14 SMEs from the crafts sector, which promote their mechanical and technical apprenticeship training, differ between female and male pupils (Lievens et al., 2005). Therefore, it is necessary to consider the pupils' gender as a control variable.

3.3 Measures

Employer familiarity and *employer reputation*. The dependent variables employer familiarity and employer reputation were each measured with three items drawn from Collins's scale (Collins, 2007) that Baum & Kabst (2011) translated into German. Respondents rated the items on a Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. An exemplary item for measuring employer reputation is "I think my friends have a favorable impression of this company as an employer". Each of the scales showed good reliability (employer familiarity, $\alpha = .85$; employer reputation, $\alpha = .87$).

Employer and job characteristics. Pupils indicated their agreement with employer and job characteristics using 19 items, again measured on a 6-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. The relevance of the employer and job attributes for the job search of young people and for characterizing SMEs as employers was derived from previous research (e.g., Boswell et al., 2003; Cable & Graham, 2000; Cable & Judge, 1996; Collins, 2007; Lievens et al., 2001; Lievens & Highhouse, 2003; Nadler et al., 2010; Tumasjan et al., 2011). A sample item is "At this company I have good opportunities for career advancement". Reliability analysis showed excellent item convergence ($\alpha = .95$).

Employer brand. Based on the model of Cable & Turban (2001), the employer brand consists of the constructs employer familiarity, employer reputation as well as the employer and job characteristics. To test this assumption, an exploratory factor analysis was conducted. For this, the data were mean centered so that the factor analysis was carried out with Z-scores (Backhaus et al., 2003). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to determine whether the data were suitable for exploratory factor analysis. With KMO = .97, they showed marvelous adequacy. The principal components analysis yielded three factors with eigenvalues above 1.0 (factor 1 = 12.77; factor 2 = 1.91; factor 3 = 1.09). Because each item has its major load on factor 1 and also because the scree test indicates only the first factor as being relevant (Cattell, 1966), the three constructs of employer familiarity, employer reputation as well as employer and job characteristics were integrated into the variable "employer brand". The reliability analysis revealed excellent item convergence ($\alpha = .96$).

Vocational interest craft. The control variable was measured with 10 items adapted from Bergmann & Eder (2005). The pupils were asked to respond to the listed activities using a 5-point Likert scale from 1 = *I am not interested in* to 5 = *I am very interested in*. A sample item is "Working on a building site". The scale reliability coefficient was good ($\alpha = .83$).

4 Results

4.1 Summary statistics

Table A3 in the appendix presents the means, standard deviations, and correlations between all dependent (lines 1–4) and independent variables (lines 5–25). Please note that dependent variables are not used in the same regression analysis simultaneously. Thus, the partially high correlations do not have to be considered with regard to multicollinearity problems. The correlations between the independent variables showed moderate coefficients that do not rise above the critical value of .70 (Anderson et al., 1996).

4.2 Hypotheses tests

Hypothesis 1 predicted that the site visit influences pupils' perception concerning the employer brand of a craft firm more positively than the implementation of a firm presentation. DID regression in Table 3 shows that both personnel marketing activities have significant and positive treatment effects (firm presentation: $\beta = .558$, $p<.01$; site visit: $\beta = .523$, $p<.01$). As the coefficients do not differ appreciably, on the sole basis of the regression outputs, it is not possible to conclude which recruitment channel is more effective. Thus, the regression coefficients were compared using the seemingly unrelated postestimation procedure (SUEST). Dealing with simultaneous results reveals that the average treatment effect of the site visit and the firm presentation do not differ significantly (chi2 = .08, p = .77). The same was found using the Mann-Whitney U test comparing the employer brand ratings between the groups. Mann-Whitney U is a nonparametric test "of great importance in testing, for instance, the effect of treatments on some measurement" (Mann & Whitney, 1947, p. 50). Table A4 (column 4) in the appendix shows the results, which suggest that there is no statistically significant difference in the underlying distributions of the employer brand scores between the pupils from the presentation group and the pupils from the site visit group in both periods. Hence, the assumption that the site visit shows a greater effect on the development of the employer brand rating than the firm presentation was not supported.

Table 4 presents the results of the DID regression model predicting the effects on the three dimensions of the employer brand. Thereby, columns 1–3 represent the results for the implementation of the firm presentation, and columns 4–6 illustrate the results for the implementation of the site visit. In line with *Hypothesis 2a* and *Hypothesis 2b*, which assumed that the pupils' employer familiarity with the craft firms could be sustained by both recruitment measures, the firm presentation ($\beta = .494$, $p<.01$) as well as a site visit ($\beta = .493$, $p<.01$) showed positive contributions. Thus, Hypotheses 2a and 2b were confirmed.

With *Hypotheses 3a and 3b*, a negative impact of both recruitment measures on pupils' perceived employer reputation was expected. Contrary to the assumption, the analysis reveals that the firm presentation ($\beta = .364$, $p<.05$) and the site visit ($\beta = .405$, $p<.01$) influence the perceived employer reputation positively. Thus, Hypotheses 3a and 3b have to be rejected, as it is particularly positive that the recruitment channels even succeed in improving the SMEs' employer reputations among young job seekers.

Hypotheses 4a and 4b dealt with the last component of the firms' employer brand, the employer and job characteristics. Because of the detailed information the pupils received during the recruitment measures, it was assumed that their perception concerning the employer and job characteristics would increase. For both recruitment measures, the results showed an improvement (firm presentation: $\beta = .817$, $p<.01$; site visit: $\beta = .671$, $p<.01$) in the pupils' evaluation of the employer and job characteristics. Thus, Hypotheses 4a and 4b were confirmed.

Although the control variable "firm size" plays a minor role within the site visit, it appears to be important in the firm presentation. Compared with companies with 1–4 employees (reference category), SMEs with more than 250 employees have significantly higher scores in the perceived familiarity ($\beta = .738$, $p<.01$), the employer reputation ($\beta = .903$, $p<.01$), and the employer and job characteristics ($\beta = .553$, $p<.01$) in the firm presentation setting. Concerning the employer and job characteristics in the firm presentation setting, almost all company sizes have higher scores compared with the reference category. However, in this context, the small number of firms for which these results were obtained has to be considered.

Furthermore, the company location has an effect on the perception of a potential employer. In contrast to firms with rural locations, pupils ascribe firms based in urban regions significantly higher familiarity ($\beta = .187$, $p<.05$) and significantly better employer and job characteristics ($\beta = .261$, $p<.01$; $\beta = .270$, $p<.01$). In all models, the pupils' interest in tasks from the crafts sector, the firm awareness before the first survey, and the access to further information after the treatment have a positive effect on the pupils' perception concerning the three employer brand dimensions. In addition, the regression shows a gender effect on the employer brand components. Surprisingly, female respondents rate the employer reputation and the employer and job characteristics better than their male classmates.

To test *Hypotheses 5a and 5b*, an additional DID regression was implemented by modifying the basic estimation model $y_{it} = \beta_0 + \beta_1 \text{period}_t + \beta_2 \text{treatment}_i + \beta_3 (\text{period}_t * \text{treatment}_i) + \beta_k X_{k,i} + e_{it}$. Therefore, the independent variable "treatment", which serves as a dummy to indicate all differences between the treated pupils (= 1) and the control group, was replaced by two proxies: A categorical variable measuring how much the treated people liked the company staff ("Like staff") they got to know during the recruitment activities (for Hypothesis 5a) and a categorical variable measuring how much the treated people liked the recruiting activities ("Like treatment") (for Hypothesis 5b). The variables "Like staff" and "Like treatment" were each measured with one item based on the

assumptions of Napolitan & Goethals (1979). Respondents answered on a Likert scale ranging from 1 = *not a bit* to 6 = *very much*. The answers were clustered into three groups each. In the case of the variable "Like treatment", the clusters range for example from "Like treatment: low" (answers 1 and 2) to "Like treatment: medium" (answers 3 and 4), and finally to "Like treatment: high" (answers 5 and 6). All three categories were included in the regression and have to be interpreted compared with pupils without any contact with the firms (control group).

Table 5 shows the results of the regression analysis. With Hypothesis 5a, it was assumed that the perceived sympathy of the firm representatives positively influences the pupils' employer brand rating toward the recruiting craft firms. For both treatments, the firm presentation as well as the site visit, Hypothesis 5a was not confirmed. Whereas firm representatives who are perceived as very friendly (category "Like staff: high") contribute significantly to strengthen their firms' employer brands, in the case of staff rated as average (category "Like staff: medium"), no significant effects on the employer brand could be detected. Another interesting finding is that staff perceived as not very likeable (category "Like staff: low") impaired the rating of their firms' employer brands among pupils.

Regression analysis for Hypothesis 5b can also be found in Table 5 (columns 3 and 4). It reveals a similar pattern: The Hypothesis that the perceived liking of the recruitment measures positively influences the pupils' employer brand ratings was not confirmed. A significantly positive effect in the firm presentation and in the site visit setting was found if the pupils enjoyed the treatment very much (category "Like treatment: high"). But in contrast to this, recruitment measures perceived as less appealing by pupils showed significantly negative effects on the craft firms' employer brand ratings.

Table 3: DID regressions predicting perceived employer brand

	Firm presentation	Site visit
	(1)	(2)
Dependent variables:	Brand	Brand
Period	-0.133	-0.133
	(0.073)	(0.072)
Treatment: Firm presentation	0.171**	
	(0.085)	
Impact firm presentation	**0.558*** **	
	(0.116)	
Treatment: Site visit		0.109
		(0.079)
Impact site visit		**0.523*** **
		(0.107)
Firm size (5–9 employees)	0.032	-0.367
	(0.175)	(0.214)
Firm size (10–19 employees)	-0.194	-0.548**
	(0.183)	(0.216)
Firm size (20–49 employees)	0.269**	-0.152
	(0.134)	(0.185)
Firm size (50–249 employees)	0.273	0.066
	(0.141)	(0.187)
Firm size (250+ employees)	0.731***	0.146
	(0.156)	(0.200)
Firm location	0.173**	0.171***
	(0.073)	(0.065)
School	0.027	0.045
	(0.071)	(0.062)
Vocational interest craft	0.314***	0.322***
	(0.046)	(0.044)
Apprenticeship	-0.075	-0.063
	(0.064)	(0.060)
Career craft	0.046	0.007
	(0.073)	(0.070)
Pre-firm awareness	0.219***	0.337***
	(0.066)	(0.061)
Grade point average	0.008	0.032
	(0.045)	(0.042)
Additional information	0.788***	0.613***
	(0.096)	(0.092)
Sex	0.196***	0.208***
	(0.075)	(0.071)
Distance to firm (≤30 min)	-0.049	-0.047
	(0.073)	(0.067)
Distance to firm (≤45 min)	-0.154	-0.177**
	(0.094)	(0.085)
Distance to firm (≤1 hour)	-0.307***	-0.058
	(0.116)	(0.114)
Distance to firm (≤1.5 hours)	-0.243	-0.200
	(0.141)	(0.156)
Distance to firm (>1.5 hours)	-0.350**	-0.364**
	(0.154)	(0.173)
Constant	1.475***	1.672***
	(0.234)	(0.256)
Observations[a]	900	998
R-squared	0.320	0.287

DID regression, standard errors in parentheses
All models are significant (p<.00); *** p<.01, ** p<.05
[a] Time-series cross-sectional data with firm presentation: n = 179, site visit: n = 228, control group: n = 271

Table 4: DID regressions predicting perceived employer familiarity, reputation, and characteristics

	Firm presentation			Site visit		
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variables:	Familiarity	Reputation	Characteristics	Familiarity	Reputation	Characteristics
Period	0.097	-0.161	-0.335***	0.097	-0.161	-0.335***
	(0.090)	(0.099)	(0.082)	(0.088)	(0.098)	(0.078)
Treatment: Firm presentation	0.210**	0.256**	0.047			
	(0.104)	(0.115)	(0.096)			
Impact firm presentation	**0.494*** **	**0.364** **	**0.817*** **			
	(0.142)	(0.157)	(0.130)			
Treatment: Site visit				0.189**	0.084	0.054
				(0.096)	(0.107)	(0.085)
Impact site visit				**0.493*** **	**0.405*** **	**0.671*** **
				(0.131)	(0.145)	(0.115)
Firm size (5–9 employees)	-0.130	-0.271	0.498**	-0.397	-0.466	-0.237
	(0.214)	(0.237)	(0.197)	(0.261)	(0.290)	(0.229)
Firm size (10–19 employees)	-0.250	0.086	-0.419**	-0.615**	-0.400	-0.631***
	(0.224)	(0.247)	(0.205)	(0.263)	(0.292)	(0.231)
Firm size (20–49 employees)	0.100	0.385**	0.321**	-0.277	-0.065	-0.113
	(0.164)	(0.181)	(0.151)	(0.226)	(0.251)	(0.198)
Firm size (50–249 employees)	0.127	0.225	0.466***	-0.022	0.036	0.182
	(0.172)	(0.190)	(0.158)	(0.228)	(0.253)	(0.200)
Firm size (250+ employees)	0.738***	0.903***	0.553***	-0.028	0.355	0.113
	(0.191)	(0.211)	(0.176)	(0.243)	(0.271)	(0.214)
Firm location	0.187**	0.069	0.261***	0.148	0.094	0.270***
	(0.090)	(0.099)	(0.083)	(0.079)	(0.088)	(0.070)
School	0.077	-0.044	0.046	0.110	0.002	0.022
	(0.086)	(0.095)	(0.079)	(0.076)	(0.084)	(0.067)
Vocational interest craft	0.348***	0.295***	0.300***	0.292***	0.365***	0.309***
	(0.056)	(0.062)	(0.052)	(0.054)	(0.060)	(0.048)
Apprenticeship	-0.058	-0.078	-0.090	-0.093	-0.058	-0.037
	(0.078)	(0.086)	(0.072)	(0.073)	(0.081)	(0.064)
Career craft	0.077	0.045	0.015	0.116	-0.066	-0.030
	(0.089)	(0.098)	(0.082)	(0.085)	(0.095)	(0.075)
Pre-firm awareness	0.213***	0.183**	0.262***	0.306***	0.372***	0.331***
	(0.081)	(0.089)	(0.074)	(0.074)	(0.083)	(0.065)
Grade point average	-0.016	0.027	0.012	0.001	0.043	0.052
	(0.055)	(0.061)	(0.051)	(0.052)	(0.057)	(0.045)
Additional information	0.902***	0.777***	0.684***	0.821***	0.567***	0.451***
	(0.117)	(0.129)	(0.108)	(0.112)	(0.124)	(0.098)
Sex	0.018	0.316***	0.255***	-0.132	0.429***	0.327***
	(0.092)	(0.102)	(0.085)	(0.086)	(0.096)	(0.076)
Distance to firm (≤30 min)	-0.054	-0.190	0.097	-0.105	-0.098	0.063
	(0.090)	(0.099)	(0.082)	(0.081)	(0.090)	(0.072)
Distance to firm (≤45 min)	-0.183	-0.239	-0.040	-0.176	-0.207	-0.149
	(0.115)	(0.127)	(0.105)	(0.103)	(0.115)	(0.091)
Distance to firm (≤1 hour)	-0.351**	-0.215	-0.355***	-0.113	0.121	-0.184
	(0.142)	(0.158)	(0.131)	(0.139)	(0.154)	(0.122)
Distance to firm (≤1.5 hours)	-0.146	-0.422**	-0.160	-0.217	-0.407	0.024
	(0.173)	(0.191)	(0.159)	(0.190)	(0.211)	(0.167)
Distance to firm (>1.5 hours)	-0.241	-0.600***	-0.208	-0.347	-0.418	-0.328
	(0.188)	(0.208)	(0.173)	(0.210)	(0.234)	(0.185)
Constant	0.707**	1.765***	1.952***	1.148***	1.703***	2.165***
	(0.286)	(0.317)	(0.263)	(0.312)	(0.347)	(0.275)
Observations[a]	900	900	900	998	998	998
R-squared	0.303	0.209	0.256	0.285	0.180	0.243

DID regression, standard errors in parentheses

All models are significant (p<.00); *** p<.01, ** p<.05

[a] Time-series cross-sectional data with firm presentation: n = 179, site visit: n = 228, control group: n = 271

Table 5: DID regressions predicting the influence of pupils' liking of the personnel marketing activities and the company staff

	Firm presentation	Site visit	Firm presentation	Site visit
	(1)	(2)	(3)	(4)
Dependent variables:	Brand	Brand	Brand	Brand
Period	-0.133	-0.133	-0.133	-0.133
	(0.071)	(0.070)	(0.071)	(0.069)
Like staff: low	-0.703***	-0.609***		
	(0.141)	(0.142)		
Like staff: medium	0.159	-0.087		
	(0.114)	(0.098)		
Like staff: high	0.397***	0.354***		
	(0.091)	(0.085)		
Like treatment: low			-0.433***	-0.459***
			(0.145)	(0.127)
Like treatment: medium			0.039	-0.114
			(0.100)	(0.088)
Like treatment: high			0.493***	0.543***
			(0.098)	(0.089)
Impact firm presentation	**0.558*** **		**0.558*** **	
	(0.112)		(0.113)	
Impact site visit		**0.523*** **		**0.523*** **
		(0.104)		(0.103)
Firm size (5–9 employees)	-0.103	-0.317	-0.049	-0.296
	(0.170)	(0.209)	(0.172)	(0.205)
Firm size (10–19 employees)	-0.300	-0.440**	-0.245	-0.519**
	(0.177)	(0.211)	(0.178)	(0.207)
Firm size (20–49 employees)	0.088	-0.099	0.170	-0.112
	(0.132)	(0.180)	(0.132)	(0.177)
Firm size (50–249 employees)	0.109	0.069	0.165	0.018
	(0.138)	(0.182)	(0.138)	(0.179)
Firm size (250+ employees)	0.482***	0.207	0.556***	0.151
	(0.155)	(0.194)	(0.155)	(0.191)
Firm location	0.134	0.085	0.180**	0.092
	(0.071)	(0.064)	(0.072)	(0.063)
School	0.044	0.033	0.033	0.004
	(0.068)	(0.061)	(0.069)	(0.060)
Vocational interest craft	0.300***	0.286***	0.276***	0.303***
	(0.045)	(0.043)	(0.045)	(0.043)
Apprenticeship	-0.092	-0.056	-0.106	-0.055
	(0.062)	(0.058)	(0.062)	(0.058)
Career craft	0.053	0.051	0.068	-0.001
	(0.070)	(0.068)	(0.071)	(0.067)
Pre-firm awareness	0.217***	0.283***	0.245***	0.314***
	(0.064)	(0.060)	(0.065)	(0.059)
Grade point average	-0.008	0.040	0.003	0.033
	(0.044)	(0.041)	(0.044)	(0.041)
Additional information	0.679***	0.551***	0.683***	0.482***
	(0.094)	(0.090)	(0.095)	(0.089)
Sex	0.164**	0.208***	0.173**	0.250***
	(0.073)	(0.068)	(0.074)	(0.068)
Distance to firm (≤30 min)	-0.037	-0.060	-0.032	-0.048
	(0.071)	(0.065)	(0.072)	(0.064)
Distance to firm (≤45 min)	-0.173	-0.192**	-0.175	-0.217***
	(0.091)	(0.083)	(0.092)	(0.081)
Distance to firm (≤1 hour)	-0.203	-0.026	-0.260**	-0.034
	(0.113)	(0.111)	(0.115)	(0.109)
Distance to firm (≤1.5 hours)	-0.194	-0.170	-0.191	-0.154
	(0.137)	(0.152)	(0.138)	(0.149)
Distance to firm (>1.5 hours)	-0.255	-0.348**	-0.256	-0.352**
	(0.149)	(0.168)	(0.151)	(0.165)
Constant	1.729***	1.744***	1.672***	1.757***
	(0.229)	(0.249)	(0.231)	(0.245)
Observations[a]	900	998	900	998
R-squared	0.365	0.329	0.355	0.349

DID regression, standard errors in parentheses

All models are significant (p<.00); *** p<.01, ** p<.05

[a] Time-series cross-sectional data with firm presentation: n = 179, site visit: n = 228, control group: n = 271

5 Discussion

The aim of the present study was to examine the effects of two recruitment strategies for apprenticeship marketing in SMEs, especially the development of the craft firms' employer brand ratings. Therefore, it was analyzed whether the firm presentation and the site visit are comparable with regard to their employer branding effects. This is an important issue, as SMEs have limited resources and are thus reliant on the more effective strategy (Kraus et al., 2010). Because of the different arrangement of the two personnel marketing activities, which goes along with a higher involvement of the pupils in the site visit setting, the site visit was predicted to have greater effects on the employer brand ratings (Collins & Han, 2004). However, the results show that pupils from the site visit and from the firm presentation group do not differ in their employer brand scores, so that the assumption could not be supported.

Furthermore, it was analyzed whether there are drivers among the employer brand dimensions. Based on previous research, it was assumed that the implementation of a firm presentation and a site visit positively influences the perceived employer familiarity and the perceived employer and job characteristics (Baum & Kabst, 2011; Collins, 2007; Kanar et al., 2008). Moreover, the influence on the third dimension of the SMEs' employer brand, employer reputation, was assumed to be negative because of the craft sectors' poor image as an employer among young job seekers (Zentralverband des Deutschen Handwerks, 2009). In contrast to the assumption, the findings of the DID analysis reveal that the firm presentation as well as the site visit enhance the employer reputation ratings among pupils. Furthermore, in line with the Hypotheses, both measures strengthen the evaluation of the familiarity with the firms as well as the evaluation of the employer and job characteristics. Thereby, the treatments show roughly similar effects on the three employer brand dimensions.

Overall, with the firm presentation and the site visit, two helpful recruitment channels have been detected for the employer branding of craft firms. Given that the crafts sector has a predominantly poor image as an employer among young job seekers (Zentralverband des Deutschen Handwerks, 2009), it is all the more positive that, with a firm presentation or a site visit, unpopular SMEs can succeed in enhancing pupils' perceptions concerning employer familiarity, employer reputation, as well as employer and job characteristics.

Compared with previous findings (e.g., Falk, 2013), the results of the present study opened a new perspective on the importance of firms' recruitment staff and on the quality or, rather, the optimal adaptation of the recruitment measures to the target group. In both cases, a positive effect was found on the pupils' employer brand assessment, but only when the company staff were classified as very friendly or the recruitment activities were very well received by the pupils. If the company staffs' friendliness or the recruitment measures themselves do not stand out (category "Like staff: medium", "Like treatment: medium"), no effects on the employer brand rating could be achieved. What is more

important is that firm representatives and recruitment measures, which are perceived as not likeable or not appealing, are negatively affecting the pupils' employer brand evaluations. For the SMEs' recruitment strategies, it could be surmised that measures should be well planned because only good performers will be rewarded.

Across all regression analyses, single firm size categories showed significant effects. On the one hand, this is in contrast to the results from Falk et al. (2013), who found no relevance of firm size in the recruitment success. Compared with Falk et al. (2013), it is possible that the findings of the present study are driven by the limited number of firms who supported this study. This might cause a greater dependency on the recruitment performance of a single firm. Hence, the findings of the present study regarding firm size effects should be treated with caution. Nevertheless, the findings are in line with other studies that found the establishment size to be an important factor in the decision to stay with the apprenticeship firm after the apprenticeship training (Wolf, 2012).

The firm location also turned out to have significant effects on the recruitment process for young job seekers. Surprisingly, firms from urban areas were rated more positively than their competitors from rural regions in terms of familiarity, their employer and job characteristics, and their perceived employer brand. Indeed, urban areas offer more job alternatives, so that the crafts sector has to compete more strongly for potential apprentices. But compared with rural areas, urban firms might attract pupils more by symbolic or intangible attributes (e.g., innovativeness, competence, prestige, modernity), which Lievens & Highhouse (2003) found to be relevant factors for the differentiation of organizations in the same sector. As the present study has not controlled for these aspects, this could be taken on for future research.

The regression analysis shows the pupils' vocational interest toward craft-related tasks, pre-firm awareness before the treatments, and further information that the pupils collect after the personnel marketing activities to be significant factors influencing the employer brand ratings and all single components of the employer brand. Furthermore, in the present study, young women differ from their male classmates in their employer brand ratings. Surprisingly, they show better employer brand evaluations. On the one hand, this is not in line with previous findings which identified technical-handicraft apprenticeship training as predominantly chosen by male school graduates (Federal Ministry of Education and Research, 2013). On the other hand, these findings are consistent with the model of recruitment equity from Cable & Turban (2001), which assumes that job seekers determine their employer brand ratings independently from individual values and needs. If the values and needs of the job seekers are involved, then this subjective evaluation of an employer results in the job seekers' perceived employer attractiveness and finally triggers the job seekers' application intention and behavior.

This study contributes to the marketing and recruitment literature in several ways. To the author's knowledge, no other study exists that focuses on pupils as future skilled workers in

combination with SMEs as potential employers. Furthermore, the design of this study is quasi-experimental and thus allows deeper insights into the actual effects of recruitment activities on recruitment outcomes. Other studies examine only indirect relationships between recruitment efforts and outcomes, for example the perception of firm characteristics on the pre-hire outcomes (Allen et al., 2004) or the employer brand dimensions on the application intentions and decisions (Baum & Kabst, 2011; Collins, 2007).

Despite the consistency of the findings, this study has some limitations. The implementation of the recruitment channels in schools or in the firms' headquarters and the regional distribution of firms to schools are based on the effort to give a realistic representation of the recruitment processes in the apprenticeship market. Nevertheless, no within-subject design was included as, for example, Collins (2007), Collins & Stevens (2002) or Falk & Mohnen (2011) used in their studies. In the present study, the participants only evaluated one possible employer and not several employers in comparison with each other. Also, it was designed as a field study, whereby possible disruption factors cannot be excluded (Huber, 2005).

Furthermore, the limitations constrain the generalizability of the results. Because of the cooperation with firms from the sanitary, heating, and air-conditioning technology sector, which belong to the crafts sector, the findings have to be verified on a broader sample of SMEs from different sectors. The number of firms also has to be enlarged above 14 SMEs. Similarly, the present study was supported by firms on a voluntary basis. Thus, there might be a selection bias. On the one hand, the firms seemed to be generally good performers and attractive employers with no problems in finding suitable apprentices and therefore offered their participation. On the other hand, firms with difficulties were attracted to the study and used their participation to change their situation. Also, pupils took part in the survey voluntarily. It could be assumed that only motivated pupils completed both questionnaires. Thus, the sample might include predominantly job seekers with a high information processing motivation, which does not reflect the typical recruitment situation among pupils.

Also worth discussion is the robustness of the results to changes in certain study details. The present study was carried out with 14 firms from the sanitary, heating, and air-conditioning technology sector. This sector is a progressive branch which offers professions with excellent future prospects. Thus, "plant mechanic for sanitary, heating, and air conditioning systems" is a popular profession among the apprenticeship occupations of the crafts sector (Federal Ministry of Education and Research, 2013). SMEs in and outside the crafts sector, but with similar popular as well as sustainable occupations, are similar likely to induce employer branding effects among pupils with firm presentations or site visits. Thereby, it could be assumed that the results are not country-specific and are robust to an expansion to pupils beyond Bavaria. Nevertheless, pupils from the secondary school called "Gymnasium", who gain university entrance qualifications, are not included in the present study. Thus, no information on the effectiveness of both measures for employer branding purposes of

craft firms among this group of pupils could be obtained. However, as this formal education offers more alternatives, it could be assumed that the pupils are more difficult to attract to one specific opportunity (Chapman et al., 2005).

6 Concluding remarks

In sum, this study provides evidence for the effectiveness of firm presentations and site visits for the employer branding of SMEs from the sanitary, heating, and air-conditioning technology sector. Thus, the recruitment channels are helpful in predominantly enhancing the general perceptions of young job seekers toward an apprenticeship firm. In this context, the firm representatives, who implement the recruitment measures, are of great importance. Whereas firm representatives perceived as being very friendly can positively contribute to the perception of their firms' employer brand, recruitment staff perceived as not very likeable have a negative effect on the pupils' employer brand ratings. Thus, the selection of the "right" employees for involvement in recruiting issues is crucial. Furthermore, the same was found concerning the quality of the recruitment measures from the pupils' view. How much the pupils like the recruitment events is important because very good performance results in higher and bad performance in significantly lower employer brand ratings.

Future research could analyze whether large companies are more effective in their employer branding efforts compared with SMEs. Because they might have a greater pre-firm awareness among pupils, greater effects are conceivable. Further research might also deal with a detailed investigation of single employer and job characteristics and their change in pupils' perception through recruitment activities, as the focus of the present study was on a rather macrolevel. Moreover, of interest in this context is whether firms' negative pre-perceptions are changeable from the pupils' point of view (Kanar et al., 2008).

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Appendix

Table A1: Survey items underlying the dependent variables

All following items were rated on a Likert scale (1 = strongly disagree, 6 = strongly agree).	
Employer familiarity	
How familiar is the firm XY from the crafts sector to you? Original text in German: Wie vertraut bist Du mit dem Handwerksbetrieb XY?	
Variable	*Survey item*
Reproduction	*This company is one of the first which comes into my mind when I think of possible employers.* Original item in German: Diese Firma kommt mir als eines der ersten Unternehmen in den Sinn, wenn ich an mögliche Arbeitgeber denke.
General familiarity	*I am very familiar with this company as a possible employer.* Original item in German: Ich bin sehr vertraut mit dieser Firma als möglichen Arbeitgeber.
Recognition/Discrimination	*I can distinguish this company from other employers because of certain characteristics (e.g., firm size, firm location, ...).* Original item in German: Ich kann diese Firma durch bestimmte Merkmale (z. B. Firmengröße, Standort, ...) von anderen Arbeitgebern unterscheiden.
Employer reputation	
Imagine that your parents, friends and classmates know the crafts firm XY. What would they think of this firm? Original text in German: Stell dir vor, Deine Eltern, Freunde und Klassenkameraden würden die Firma XY kennen. Was würden sie von der Firma halten?	
Variable	*Survey item*
Reputation friends	*I think my friends have a favorable impression of this company as an employer.* Original item in German: Ich glaube, dass meine Freunde ein positives Bild von dieser Firma als Arbeitgeber haben.
Reputation parents	*I think this company is highly respected by my parents.* Original item in German: Ich glaube, bei meinen Eltern ist diese Firma sehr angesehen.
Reputation classmates	*I think my classmates have a high regard for this company as an employer.* Original item in German: Ich glaube, dass meine Klassenkameraden diese Firma als exzellenten Arbeitgeber ansehen.

Table A1: Survey items underlying the dependent variables (continued)

Employer and job characteristics	
How do you envision an apprenticeship at the firm XY from the crafts sector? *At the firm XY …* Original text in German: Wie stellst du Dir eine Ausbildung in dem Handwerksbetrieb XY vor? Beim Handwerksbetrieb XY ...	
Variable	*Survey item*
Personal development	*… I can grow and develop myself personally* Original item in German: … kann ich mich persönlich entwickeln und entfalten
Firm location	*… I can work at an attractive location (e.g., near to home, easy to reach via public transport, etc.)* Original item in German: … kann ich an einem attraktiven Standort arbeiten (z. B. Nähe zum Heimatort, gut mit öffentlichen Verkehrsmitteln erreichbar, etc.)
Career advancement	*… I have good opportunities for career advancement* Original item in German: … habe ich gute Aufstiegs- bzw. Karrierechancen
Spare time	*… I have enough spare time in addition to work* Original item in German: … bleibt mir neben der Arbeit genügend Zeit für Freizeit
Working hours	*… I can arrange my working hours independently (flexible working hours)* Original item in German: … kann ich mir meine Arbeitszeit selbst einteilen (flexible Arbeitszeit)
Work tasks	*… I can handle interesting, challenging work tasks* Original item in German: … kann ich interessante, herausfordernde Aufgaben erledigen
Task variety	*… my work tasks are multifaceted and varied* Original item in German: … ist die Arbeit vielseitig und abwechslungsreich
Independence	*… I can work independently and self-reliant* Original item in German: … kann ich selbstständig und eigenverantwortlich arbeiten
Physically demanding tasks	*… I have to fulfill exhausting and physically demanding work tasks* Original item in German: … muss ich anstrengende und körperlich belastende Arbeiten machen

Table A1: Survey items underlying the dependent variables (continued)

Friendly employees	*… work kind and friendly employees* Original item in German: … arbeiten nette, freundliche Mitarbeiter
Relationship to supervisors	*… there is a good relationship to supervisors* Original item in German: … herrscht ein gutes Verhältnis zum Vorgesetzten
Teamwork	*… there is plenty of teamwork* Original item in German: … wird viel in Teams gearbeitet
Training payment	*… I receive a high apprenticeship wage* Original item in German: … bekomme ich einen hohen Ausbildungslohn
Payment after apprenticeship	*… I will receive a high wage even after the apprenticeship* Original item in German: … bekomme ich auch nach der Ausbildung einen hohen Lohn
Fringe benefits	*… I get attractive fringe benefits (e.g., employee conditions, mobile phone, holiday allowance, …)* Original item in German: … bekomme ich attraktive betriebliche Vergünstigungen (z. B. Mitarbeiterkonditionen, Handy, Urlaubsgeld, …)
Contract after apprenticeship	*… I have a good chance to get a contract after completing the apprenticeship* Original item in German: … habe ich eine hohe Chance, nach der Ausbildung übernommen zu werden
Further training	*… employees regularly get further training* Original item in German: **...** werden die Mitarbeiter regelmäßig weitergebildet
Preperation self-employment	*… I get prepared for a possible professional self-employment* Original item in German: … werde ich auf eine mögliche berufliche Selbstständigkeit vorbereitet
Success and future prospects	*…is an economically successful company with good future prospects* Original item in German: … handelt es sich um ein Unternehmen mit wirtschaftlichem Erfolg und guten Zukunftschancen

Table A2: Survey items underlying the independent variables

Vocational interest craft	
The following items were rated on a Likert scale (1 = I am not interested in, 5 = I am interested in). *What is your professional interest?* Original text in German: Wo liegen Deine beruflichen Interessen?	
Variable	*Survey item*
Machines/technical devices	*Working with machines and technical devices* Original item in German: Mit Maschinen oder technischen Geräten arbeiten
Analysing	*Analysing how something works* Original item in German: untersuchen, wie etwas funktioniert
Metal/Wood	*Handling metal/wood, manufacturing something with metal/wood* Original item in German: Metall/Holz bearbeiten, etwas aus Metall/Holz herstellen
Physical demand	*Fulfilling tasks which are physically exhausting* Original item in German: Arbeiten verrichten, bei denen man sich körperlich anstrengen muss
Computers	*Installing new parts in computers* Original item in German: in einen Computer neue Teile einbauen
Construction plans	*Drawing construction plans* Original item in German: Konstruktionspläne zeichnen
Electrical devices	*Producing electrical devices or systems* Original item in German: elektrische Geräte oder Anlagen bauen
Building sites	*Working on a building site* Original item in German: auf einer Baustelle arbeiten
Service tasks	*Fulfilling service tasks (cleaning, maintaining, repairing)* Original item in German: Servicearbeiten durchführen (reinigen, instandhalten, reparieren)
Production according plan	*Producing something according to a plan or a sketch* Original item in German: etwas nach einem Plan oder einer Skizze anfertigen

Table A2: Survey items underlying the independent variables (continued)

Apprenticeship	
How do you imagine your professional future? Original text in German: Wie stellst Du dir Deine berufliche Zukunft vor? (Interviewees answered with yes/no)	
Variable	*Survey item*
Starting apprenticeship	*I intend to start an apprenticeship training after leaving school.*
Career craft	
Is one out of your three most preferred jobs in the crafts sector? Survey item in German: Zählst Du einen handwerklichen Beruf zu Deinen drei Wunschberufen? (Interviewees answered with yes/no)	
Pre-firm awareness	
Do you know this crafts firm XY even though only by name? Survey item in German: Kennst Du den Handwerksbetrieb XY, wenn auch nur dem Namen nach? (Interviewees answered with yes/no)	
Additional information	
Have you collected further information regarding the crafts firm XY after the recruitment activity? Survey item in German: Hast Du Dich über den Handwerksbetrieb XY, nachdem Du ihn im Rahmen der schulischen Berufsorientierung näher kennengelernt hast, noch zusätzlich anderweitig informiert? (Interviewees answered with yes/no)	
Like treatment	
The following items were rated on a Likert scale (1 = not at all, 6 = very much). *How much did you like the recruitment activity of the crafts firm XY?* Original item in German: Wie gut hat Dir die Berufsorientierungsmaßnahme der Firma XY gefallen?	
Like staff	
The following items were rated on a Likert scale (1 = not at all, 6 = very much). *How much did you like the company staff you got to know during the recruitment activities?* Original item in German: Wie sympathisch waren Dir die Mitarbeiter der Firma XY, die Du bei der Berufsorientierungsmaßnahme kennengelernt hast?	

Table A3: Descriptive statistics for study variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Dependent variables:															
1. Familiarity	2.34	1.24	1												
2. Reputation	3.27	1.27	.60*	1											
3. Characteristics	3.61	1.06	.59*	.61*	1										
4. Brand	3.07	1.02	.86*	.87*	.84*	1									
Control variables:															
5. Firm size (1–4 employees)	.04	.19	-.05	-.08*	-.10*	-.08*	1								
6. Firm size (5–9 employees)	.06	.23	-.05	-.11*	-.03	-.07*	-.05	1							
7. Firm size (10–19 employees)	.07	.25	-.02	-.03	-.09*	-.05*	-.05	-.06*	1						
8. Firm size (20–49 employees)	.48	.50	-.06*	.02	-.03	-.03	-.19*	-.23*	-.25*	1					
9. Firm size (50–249 employees)	.25	.43	.00	-.04	.05	.00	-.12*	-.14*	-.15*	-.56*	1				
10. Firm size (250+ employees)	.11	.32	.18*	.18*	.12*	.19*	-.07*	-.09*	-.09*	-.34*	-.21*	1			
11. Firm location	.32	.47	.00	.00	.06*	.02	-.14*	-.17*	.33*	.04	.10*	-.25*	1		
12. School	.55	.50	.08*	.06*	.03	.07*	.18*	.05	.24*	-.10*	-.19*	.09*	-.11*	1	
13. Vocational interest craft	2.68	.85	.33*	.18*	.22*	.28*	-.03	.06*	-.04	-.09*	-.01	.17*	-.07*	.02	1
14. Apprenticeship	.47	.50	.11*	.03	.04	.07*	.04	.04	.07*	-.07*	-.11*	.16*	-.04	.13*	.26*
15. Career craft	.59	.49	.22*	.09	.10*	.16*	.03	.08*	.08*	-.10*	-.09*	.16*	-.11*	.20*	.53*
16. Pre-firm awareness	.60	.49	.25*	.23*	.23*	.28*	-.12*	-.15*	.03	.08*	-.14*	.21*	-.08*	.16*	.19*
17. Grade point average	2.52	.67	.01	-.02	.00	.00	.03	.11*	.00	-.05*	.05	-.08*	.02	.15	.02
18. Additional information	.14	.35	.32*	.24*	.25*	.32*	.00	.07*	.06*	-.06*	-.05	.07*	-.05	.06*	.15*
19. Sex	.44	.50	-.21*	-.02	-.06*	-.11*	.01	.00	.08*	.10*	-.08*	-.11*	.07*	.06*	-.60*
20. Distance to firm (≤15 min)	.36	.48	.12*	.12*	.06*	.12*	-.05*	-.05	.06*	.12*	-.21*	.11*	-.03	.26*	.08*
21. Distance to firm (≤30 min)	.33	.47	-.02	-.03	.06*	.00	.02	.00	-.03	-.08*	.11*	-.01	.01	-.10*	-.04
22. Distance to firm (≤45 min)	.16	.37	-.06*	-.06*	-.06*	-.07*	.00	.02	-.02	-.01	.06*	-.07*	.06*	-.20*	-.08*
23. Distance to firm (≤1 hour)	.07	.26	-.06*	-.01	-.08*	-.05*	-.03	.03	-.03	.01	.02	-.03	-.01	-.02	-.02
24. Distance to firm (≤1.5 hours)	.04	.19	-.05*	-.07*	-.05	-.07*	.00	.02	-.05	.02	.01	-.02	-.04	-.06*	.00
25. Distance to firm (>1.5 hours)	.03	.18	-.01	-.05	-.03	-.03	.13*	.03	.04	-.15*	.12*	-.07*	-.03	.07*	.07*

Table A3: Descriptive statistics for study variables (continued)

Variable	Mean	SD	14	15	16	17	18	19	20	21	22	23	24	25
14. Apprenticeship	.47	.50	1											
15. Career craft	.59	.49	.36*	1										
16. Pre-firm awareness	.60	.49	.08*	.20*	1									
17. Grade point average	2.52	.67	.03	.11*	-.09*	1								
18. Additional information	.14	.35	.07*	.11*	.13*	.01	1							
19. Sex	.44	.50	-.32*	-.38*	-.10*	-.10*	-.09*	1						
20. Distance to firm (≤15 min)	.36	.48	.10*	.12*	.23*	-.05	-.01	-.05	1					
21. Distance to firm (≤30 min)	.33	.47	-.01	-.01	-.02	.02	-.02	.04	-.53*	1				
22. Distance to firm (≤45 min)	.16	.37	-.10*	-.11*	-.14*	-.05	.06*	.02	-.33*	-.31*	1			
23. Distance to firm (≤1 hour)	.07	.26	-.03	-.06*	-.08*	.09*	-.05	.03	-.21*	-.20*	-.12*	1		
24. Distance to firm (≤1.5 hours)	.04	.19	-.03	-.03	-.08*	.00	-.06*	.02	-.15*	-.14*	-.09*	-.06*	1	
25. Distance to firm (>1.5 hours)	.03	.18	.04	.03	-.08*	.06*	.09*	-.08*	-.14*	-.13*	-.08*	-.05	-.04	1

Means, standard deviations, and pairwise correlation coefficients for all variables
Time-series cross-sectional data with firm presentation: n = 179, site visit: n = 228, control group: n = 271
* p<.05

Table A4: Comparison of the employer brand ratings between groups

	Groups			Groups compared		
	Presentation	Tour	Control	Presentation/ Tour	Presentation/ Control	Tour/ Control
	(1)	(2)	(3)	(4)	(5)	(6)
Baseline	3.116	3.093	2.791	-.066	3.293***	3.714***
(period t=0)	(1.017)	(.929)	(.880)	{.947}	{.001}	{.000}
Follow-up	3.542	3.483	2.658	-.832	8.547***	8.748***
(period t=1)	(1.070)	(1.006)	(.944)	{.405}	{.000}	{.000}

Notes: Columns 1–3 tabulate, by group, the means and standard deviations (in parentheses) of the employer brand ratings in the two periods, columns 4–6 the Mann-Whitney U and p-values (in braces) for the differences between the groups. Group sizes are 179 (firm presentation) respectively 228 (site visit) for the treatment, and 271 for the control group.
"Baseline" refers to first data collection before, "follow-up" to the second data collection after the treatment. The control group completed each questionnaire at the same time than the treatment group.
*** p<.01.