ABSTRACT

Growing ventures need to hire new employees and thus enhance their human capital stock. Selecting the right employees is crucial for the firms’ success. This paper looks at the criteria used in the selection process, especially at applicant fit, competencies, and social capital. Using a policy-capturing approach on a sample of managers in the German information-technology industry, the paper provides empirical evidence of the relationship between firm age and person-organization fit in the selection process. Furthermore, it demonstrates the interaction between two sets of selection criteria: applicant competencies and applicant fit with the formal job-requirements.

INTRODUCTION

Venture growth and the enlargement of the workforce are closely connected, as employment growth is one of the main measures of venture growth (Baum, Locke, & Smith, 2001; Rauch, Frese, & Utsch, 2005). So, companies which intend to grow need to attract, recruit, and retain skilled employees, a task which is especially challenging for new ventures (Aldrich & Glinow, 1992). Entrepreneurs and small business managers seem to be aware of this challenge as they rate the successful recruitment of qualified employees as one of the key factors influencing success and business growth (Williamson, Cable, & Aldrich, 2002). At the same time, they are highly concerned about the ability to attract and retain this workforce (Hornsby & Kuratko, 2003).

Thus, staffing and recruitment are a promising field of research at the still underdeveloped junction of human resource management (HRM) and entrepreneurship (Welbourne & Katz, 2002). However, research on staffing in young ventures is still sparse and many aspects are left unclear, especially in the realm of personnel selection which received much less attention in the literature than, for example, the aspect of applicant attraction. Dunn, Mount, Barrick, and Ones (1995) point out that we lack an understanding of the decision policies used in selection and thus closer investigation of managers’ perceptions of the importance of applicant attributes is needed.

This paper aims at closing this gap by investigating the criteria managers in the German IT industry apply when selecting new members of their workforce and thus enhance the human capital of their venture. Furthermore, the paper investigates the moderating impact of firm age and size on the decision making process attempting to elaborate how the application of decision cues varies between young and more established ventures.

This paper is structured as follows. We will first introduce the underlying theory of personnel selection and generate hypotheses on the use of three groups of selection criteria that are particularly interesting.
in this context: applicant fit, applicant competencies and applicant social capital. Afterwards, we describe the policy-capturing experiment we used to test our hypotheses. We present the results and then discuss the empirical findings in the light of the theory of person-organization fit and the ongoing debate about the ‘end of the job’ (Bridges, 1994). Finally, we point to limitations of our paper and elaborate areas of future research.

**PERSONNEL SELECTION AS A DECISION MAKING PROCESS**

HR and general managers are regularly due to deal with staffing issues in order to satisfy the firm’s demand for new employees or to tackle fluctuation. **Staffing** “determines the flow of candidates into and out of an organization” (Carlson & Connerley, 2003, p. 51). It is an embracing function that comprises different subfunctions (e.g., recruitment, selection, and retention) whose number and labels vary in the literature (Snow & Snell, 1993; Ryne & Gerhart, 1990). Whereas **recruitment** deals with the attraction of talent to the organization and the creation of a pool of candidates who are interested in joining the organization, **selection** comprises choosing the right candidates out of that pool who meet the firm’s requirements (Carlson, Connerley, & Mecham, 2002; Ryne & Gerhart, 1990).

Carlson and Connerley (2003) introduce a **Staffing Cycle Framework**, which provides a structure to understand the interactions and interdependencies among the actors, contexts, and actions that comprise staffing systems. **Staffing** is a sequence of decision events, in which decisions made by individuals and by organizational decision makers alternate. In this context, the present paper deals with “the organizational decision maker’s decision regarding who will be selected to receive an offer of employment” (Carlson & Connerley, 2003, p. 55). It is antecedced by the individual’s decision to apply for a position in the particular organization and succeeded by the individual’s decision to accept or to reject the offer. This focus is rare as most papers related to staffing in SMEs focus on recruitment, rather than on selection (Cardon & Stevens, 2004).

In order to make a selection decision, **selection professionals** (henceforth we will use this term to refer to those members of the organization that are involved in and responsible for selection decisions) have to acquire information about alternative candidates, define a set of determinant attributes to use in order to compare and evaluate candidates, and make a final choice which candidate(s) to chose (Louviere, 1988). In order to enable valid selection decisions, the information used should be able to predict future job success (Smith, 1994) which makes it necessary to define what is meant by employee success on the job (Gatewood & Feld, 1987). In line with Färber, Keim, and Weitzel (2003) we use the term **selection criteria** to describe indicators of performance in the job. The information that is available on these criteria at the time the decision is made is labelled **predictor data**. Thus, predictor data are attributes of the individual to be assessed.

Depending on the point of view, individual attributes to be used in the selection process are legion and there are many studies showing that decision makers do not only rely on those attributes that are really job-relevant but also to irrelevant attributes, like race or gender (e.g., Hitt & Barr, 1989). In this paper, we use a framework of three areas of selection criteria: applicant person-organization fit, applicant competencies, and applicant social capital.

**APPLICANT PERSON-ORGANIZATION FIT**

The first concept we look at encourages selection professionals to hire people that fit their organization as a whole rather than just a specific job (Bowen, Ledford, & Nathan, 1991). Linking staffing practices to corporate culture and values is supposed to help companies to ensure that employees have internalized the enterprise’s strategy and values (Snow & Snell, 1993). These ideas are held together by the concept of person-organization fit (P-O fit) and are often opposed to the more traditional approach of selection which focuses on the skills and characteristics immediately needed for the vacant job and is consequently labelled person-job fit (P-J fit).

P-O fit is gaining importance as a reaction to changing organizational environments. Researchers postulate that in modern organizations the traditional job with a fixed and stable set of responsibilities, embedded in a clear hierarchical structure, is dissolving. It is replaced by a flexible, project-based organization in which employees constantly change roles, tasks, and functions. New hires have to get along with this type of work organization (Bridges, 1994; Bowen et al., 1991).
Rynes and Gerhart (1990) provide a list of characteristics consistently ascribed to the concept of fit in the previous literature: It (1) goes beyond factors like knowledge, skills, and abilities (KSAs) and requirements that are immediately job-related; (2) develops its real importance only on those candidates that meet the minimal job requirements; and (3) is distinctively firm-specific and goes beyond general employability and idiosyncratic reactions of individual evaluators.

Values and culture play an important role in the definition of P-O fit, as this concept is often defined as congruence between patterns of organizational values and patterns of individual values or between individuals’ cultural preferences and the existing organizational culture (Adkins, Russell, & Werbel, 1994; Chatman, 1991; O’Reilly, Chatman, & Caldwell, 1991; Cable & Judge, 1997; Bretz & Judge, 1994). Vianen (2000) stresses that both approaches are often used synonymously. She points out that values are especially important because they are fundamental, relatively enduring, and guide individuals’ attitudes, judgements, and behaviors.

Lievens, Dehaemeyer, and De Cuyper (2001) and Schneider (1987) stress the interactionist approach to P-O fit. This idea is based on the assumption that both the individual as well as the organization make selection decisions and tend to select those counterparts who best fit their needs and preferences.

Assessment of fit is influenced by factors that are subjectively assessed, like interpersonal skills or goal orientation, rather than relying on ‘objective’ qualifications (Rynes & Gerhart, 1990). Recruiters’ judgements of P-O fit are often based on the congruence of their perceptions of applicants’ and organizations’ values (O’Reilly et al., 1991). Adkins et al. (1994) found that the congruence between the values of applicant and recruiter is far more important than that of applicant and organization. In other words, recruiters attribute a high fit to such applicants that are similar to their own values or to some universal and ideal values but not the organization’s values. Another way often used to establish P-O fit is to compare applicants’ preferences with the preferences of their recruiters, supervisors, and peers (Vianen, 2000).

In their analysis on how recruiters establish applicant fit, Bretz, Rynes, and Gerhart (1993) were able to identify 13 attributes being used as indicators of fit. In contrast to the aforementioned emphasis on P-O fit, this list did not contain any dimension with a clear organizational fit component. Most recruiters seem to stress P-J fit and universally desired characteristics rather than P-O fit. However, Bretz et al. found some indications that the concept exists but is less developed than expected. This result is consistent with Ryan and Schmit (1993) who found that P-O fit was related to performance and turnover of existing employees rather than to selection decisions.

Kristof-Brown (2000) concludes that P-J fit is more important in the first stages of the selection process when those applicants who do not meet the formal requirements for the job are eliminated. P-O fit, in contrast, is rather used in later stages when a decision has to be made between applicants who have already proved their qualification for the job and all remaining candidates meet the minimal job requirements (Rynes & Gerhart, 1990). This finding is in line with Jetter (2003) who suggests coexistence between both types of fit rather than an “either-or relationship”.

P-O fit gained its importance because many researchers agree on the fact that it contributes to important individual and organizational outcomes (Borman, Hanson, & Hedge, 1997). Potential benefits of P-O fit for both employee and organization include higher job involvement, greater organizational commitment, and lower turnover (Bretz et al., 1993; O’Reilly et al., 1991).

Ryan and Schmit (1993) found a positive relationship between P-O fit and individual performance as well as employee retention, but did not find any significant relationship between P-O fit and the hiring decision. This finding is in contrast with the results of Cable and Judge (1997) but partially supported by Kristof-Brown (2000). Cable and Judge’s study revealed that an applicant who was perceived to fit the organization fairly well would be 44 % more likely to receive a job offer than a candidate with an average fit. Kristof-Brown (2000) notes that P-J as well as P-O fit offer unique prediction of recruiters’ hiring recommendations.

The large body of research on P-O fit leads us to

Hypothesis 1: The level of a candidate’s P-O fit will be positively associated with the assessment of the candidate’s hirability by the selection professional.
Although the importance of P-O fit is acknowledged in general, the concept might be more important in some organizations and less in others. In particular, Heneman, Tansky, and Camp (2000) suggest that P-O fit is especially crucial for personnel selection in small and new businesses. This type of organization usually is less formalized and changes more rapidly leading employees to perform multiple or changing jobs. Schneider, Goldstein, and Smith (1995) argue that homogeneity in organizations (e.g. in personality, attitudes, and values) is beneficial in the early stages of the organizational life cycle because it contributes to enhanced cooperation and communication. However, it can also be dangerous in later stages when it might block organizational change. These theoretical thoughts are backed up by anecdotal evidence (Moehle von Hoffmannswaldau, 2005) but have not been tested empirically yet, thus we hypothesize

**Hypothesis 2:** Firm age will moderate the positive relationship between P-O fit and the candidate’s hirability such that the relationship is more positive in young than in established firms.

**APPLICANT COMPETENCIES**

Whereas the traditional selection approach was based on job-specific criteria, derived from job-analysis, competency based selection is a more person-centred approach which includes other aspects of the candidate, such as educational background, appearance, and motivation (Rees & Doran, 2001).

Although the term **competency** is frequently used, its definition is ambiguous and there is “considerable confusion surrounding the term” (Delamare Le Deist & Winterton, 2005, p. 28) part of which has to be blamed to the existence of two terms that are often mixed: competency and competence. The first concept—the US approach—deals with drivers of performance and is behavioral in nature, whereas the latter—the UK approach—deals with standards of work and is rather functional (Roberts, 1997).

Although both approaches have broadened and moved closer together (Delamare Le Deist & Winterton, 2005), we will use the US approach which seems to be more suitable for personnel selection. According to Boyatzis (1982, p. 21), a competency can be defined as “an underlying characteristic of a person which results in effective action and / or superior performance in a job.”

By definition, competencies are closely related to motives, traits, skills, self-image, social rules, and knowledge (Boyatzis, 1982). However, they are not the same as the traditional KSAs because they have a much wider horizon than the outcomes of traditional job analysis (Hooghiemstra, 1992). Knowledge, for example, is only one of several important dimensions that contribute to competency and as such only a necessary, but insufficient condition of competency (Lysaght & Altschuld, 2000; McEvoy et al., 2005). Parry (1998) separates skills and competencies by means of two aspects. Skills are combinations of nurture and nature and they tend to be situational and specific, whereas competencies are rather generic and universal. Although competencies are closely related to personality (White, 1959), the competency movement approaches the relationship with performance from the opposite direction than the personality approach. Competency goes beyond personality and cognitive ability and includes aspects like social skills. Furthermore, in contrast to personality traits and intelligence, competencies can be acquired through training and development (Delamare Le Deist & Winterton, 2005).

In order to facilitate analysis and application of competencies, it is useful to group them into different clusters (i.e. behavioral groups of competencies), which can be done either theoretically (a priori) or empirically (Boyatzis, Goleman, & Rhee, 2000). Drawing on the work of Lenzen (1998), we grouped applicant competencies into five different clusters: social competency, personal competency, subject competency, methodological competency, and entrepreneurial competency.

**Social competency**, sometimes also labeled interpersonal competency, is the ability to interact with other people cooperatively and to communicate properly (Baron & Markman, 2003). According to Meichenbaum and Butler (1981), it implies overt behaviors, cognitive processes, and cognitive structures. Socially competent people are able to seize thoughts, emotions, and attitudes of other people, to be empathic, and to adequately communicate in different situations. This cluster includes the ability to exercise relationships and to interact with others in a rational and conscientious way, including the development of social responsibility and solidarity (Delamare Le Deist & Winterton, 2005).
Personal competency can be understood as the disposition to act considerately and deliberately. It includes the ability to reflect the own person and behavior critically and to develop as well as to modify emotions, motives, attitudes, and values (Sarges, 2000). Individuals with a high personal competency are able to develop a realistic self-conception, to show initiative, creativity and mobility, and to take responsibility. In contrast to the aforementioned interpersonal competency, personal competency always relates to the own person. It describes the willingness and ability to understand and analyze the developmental processes and changes that occur in the person’s environment. Furthermore, it includes the ability to develop one’s own skills, to act morally, as well as the assertion of a positive self-image (Delamare Le Deist & Winterton, 2005).

Subject competency, sometimes called professional, functional, or technical competency (Delamare Le Deist & Winterton, 2005; Gray, 1999; McLagan & Suhadolnik, 1989), can be obtained by education and professional experience. It is the ability to have technical knowledge and to use it appropriately. As this cluster is most closely related to job specific knowledge and the technical competencies immediately needed to perform the tasks of the job, it does very often refer to a specific job or task and thus resembles closest traditional KSAs (Bolt-Lee & Foster, 2003).

Method competency is related to cognitive competency and comprises the ability to think and act in an insightful and problem-solving way (Delamare Le Deist & Winterton, 2005). It is the knowledge of what to do when and includes the disposition to find adequate ways for resolving complex problems and situations and to use them in a resourceful manner (Sarges, 2000). Furthermore, it comprises the cognition and usage of proper methods of organizing, time-management and knowledge-management (Lenzen, 1998).

Entrepreneurial competency consists in acting efficiently and farsighted as well as to think strategically and visionary taking into account the benefits and costs of an undertaking. Bolt-Lee and Foster (2003) refer to them as “broad business perspective competencies” and include strategic and critical thinking, a strong client focus and leveraging technology to develop and enhance a broad business perspective. For employees, entrepreneurial competency is closely related to corporate entrepreneurship that expects all employees to act as if they were the entrepreneur and thus guarantee corporate success (Reich, 1987; Kuratko, Ireland, & Hornsby, 2001).

Table 1 provides an overview of the aforementioned competency clusters and the skills and abilities that represent them.

<table>
<thead>
<tr>
<th>Social</th>
<th>Personal</th>
<th>Subject</th>
<th>Method</th>
<th>Entrepreneurial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>Learning attitude</td>
<td>Education</td>
<td>Decisiveness</td>
<td>Strategic thinking</td>
</tr>
<tr>
<td>Cooperativeness</td>
<td>Flexibility</td>
<td>Work experience</td>
<td>Ability to abstract</td>
<td>Responsibility</td>
</tr>
<tr>
<td>Ability to work in teams</td>
<td>Mobility</td>
<td>Specialized skills</td>
<td>Organizing skills</td>
<td>Identification with the firm</td>
</tr>
<tr>
<td>Empathy</td>
<td>Charisma</td>
<td>Foreign languages</td>
<td>Problem-solving skills</td>
<td></td>
</tr>
<tr>
<td>Analytical skills</td>
<td>Creativity</td>
<td></td>
<td></td>
<td>Analytical skills</td>
</tr>
</tbody>
</table>

Source: compiled by the authors, based on Lenzen (1998)

Table 1: Contents of the Competency Clusters

Regarding these competencies, we hypothesize the following:

Hypothesis 3: The level of a candidate’s (a) social competency, (b) personal competency, (c) subject competency, (d) methodological competency, and (e) entrepreneurial competency will each be positively associated with the assessment of the candidate’s hirability by the selection professional.

While we have elucidated that person-oriented approaches like P-O fit as well as applicant competencies are more suitable for staffing rapidly changing organizations, we do believe that traditional, job
based criteria are still taken into consideration in selection decisions. We define P-J fit as the applicant’s congruence with the formal requirements of the job that are most often expressed in the job description and job advertisement. Taking into account that we are focusing on final selection decisions rather than on first screenings and that specifically job-related criteria dominate the first phase of the process (Kristof-Brown, 2000), we think that in the later stages P-J fit will have a moderating influence on the importance of other, person-oriented criteria rather than a direct impact on the selection decision.

This leads us to

*Hypothesis 4:* The candidate’s P-J-fit will moderate the positive relationship between the candidate’s competencies (a) subject competency, (b) social competency, (c) personal competency, (d) method competency, and (e) entrepreneurial competency and the assessment of the candidate’s hirability by the selection professional such that the relationship is more positive if the candidate’s P-J-fit is high than if it is low.

**APPLICANT SOCIAL CAPITAL**

Network relations are linked to the recruitment of new employees in a twofold manner. On the one hand, the network of the founder is an important source of recruitment especially for very young ventures. On the other hand, the existing networks of new employees are themselves a valuable resource for the firm.

The founder’s existing networks, like friends and relations, contacts from university and former employments, or the existing workforce are an important source of employees for young ventures. Through these relationships, founders can find early hires whom they can trust implicitly, and who can be counted on to take responsibility. Moreover, recruiting through networks is at far lower cost compared to other sources of recruitment like newspaper advertisements (Aldrich & Langton, 1997). Zellner and Fornahl (2002) suggest that informal as well as formal contacts can determine where a firm searches for potential employees and whom it eventually hires. In addition to this, Rynes, Colbert, and Brown (2002) mention another beneficial effect of employee referrals: Job applicants attracted through job advertisements are likely to have higher turnover than those referred by other employees (Decker & Cornelius, 1979).

On the other hand, Zellner and Fornahl (2002) suggest that new hires do not only embody knowledge as such (“know how”) but also “know who”. That is, they import an established network of contacts and relationships as a remainder of preceding jobs and their previous career.

The role of social capital (Bourdieu, 1986), i.e. the ability to establish and maintain networks, is considered as important for young ventures (e.g. Yli-Renko, Autio, & Sapienza, 2001). The particular value of a network is routed in its ability to allow its members to access its embedded social resources (Flo-rin, Lubatkin, & Schulze, 2003; Bourdieu, 1986). However, despite the generally accepted importance of a firm’s social capital for firm growth and success, most studies do concentrate on the existing social capital that is embodied in the founder, the top management team, or the existing workforce (e.g. Florin et al., 2003; Davidsson & Honig, 2003). So far, little attention has been given to the possibility of extending the firm’s social capital by adding the network relations of new hires. However, the ‘know who’ of new employees can help the new employer to solve scientific or technological problems as well as establish new formal cooperation among the firm and other external actors (Zellner & Fornahl, 2002). Thus, Zellner and Fornahl argue that the potential employees’ “degree of network access should be considered important in the decision-making processes involved in hiring new employees.” (p. 196) This leads to

*Hypothesis 5:* The degree of the candidate’s existing network relations to clients, colleagues, and others will be positively related to the likelihood of receiving a job offer.

Figure 1 summarizes our decision model for the selection of IT-professionals, i.e. the impact of the candidate’s P-O fit, social capital, and competencies on selection professionals’ decision to hire, and the interactionist relationship of candidate’s P-J fit, competencies, and hirability.

**METHODOLOGY**

We use a web-based policy-capturing experiment, a special form of conjoint analysis (Priem & Harrison, 1994), to gain insight in the decision making processes of selection professionals in the IT-industry.
Conjoint analysis provides a powerful tool for representing an individual’s decision making structure. It has been used in a variety of disciplines on judgement and decision making ranging from marketing to psychology, strategic management, and expert judgement (Green & Srinivasan, 1990; Gustafsson, Herrmann, & Huber, 2000; Bruns, 2004). Furthermore, conjoint analysis has been applied both in entrepreneurship (Choi & Shepherd, 2004; Shepherd, 1999; Shepherd & Zacharakis, 1997) as well as in the context of personnel selection decisions (Dunn et al., 1995; Kristof-Brown, Jansen, & Colbert, 2002; Moy & Lam, 2004).

Figure 1: Research Model for the Selection of IT Professionals

SAMPLE

We tested our hypotheses using a sample of managers in the IT-industry that are responsible for the selection of IT-professionals. We have chosen this industry because of its particularly interesting recent labor market history. In the late 1990s, IT firms faced dramatic labor shortage leading to fierce competition for skilled employees (Witt & Burke, 2002; Gardner, 2005). While the burst of the new economy ‘bubble’ in 2000 and the following recession certainly changed the situation on the labor market in favor of the industry, there are signs that the market has tightened again (Mikosch, 2004). Amaram (2005) states demographic as well as behavioral reasons for a future lack of IT professionals: The pool of the knowledge-based workforce will shrink in the next years and the members of this workforce show an increased tendency to job-hopping and less organizational loyalty. This rollercoaster-like development as well as the existence of many young firms makes the IT-industry a particularly interesting research setting.

As there is neither an exhaustive list of this type of managers nor a complete directory of all IT-firms in Germany, the basic population for our sample was difficult to establish. We combined several sources to compile our sample: In Germany two large trade associations represent the IT-industry: Bitkom and BVDW. We used the freely accessible registers of members of these nationwide associations as well as that of one regional association in southwest Germany (bwcon) to comprise a first list of potential participants. Additionally, we extracted the addresses of firms that matched the industry codes for software-development and IT-consulting from a large company database (the Hoppenstedt-directory of large and mid-sized firms). Furthermore, we included firms that had posted vacancies of the relevant type in the two largest online recruitment websites (monster.de and jobpilot.de). These sources lead to a preliminary population of 3,967 potential firms which we believe to be a representative cross-section of the German IT-industry.
However, this list had to be adjusted for duplicate entries, i.e., firms that were listed in more than one source, and firms that did not belong to the target population for one of the following reasons: (1) they did not exist anymore or had no web-page providing at least minimal contact information, (2) they employed less than ten employees (we assumed that managers of those firms will most likely lack the necessary experience with personnel selection), or (3) they were not active in the IT-sector (to our surprise, many members of the three trade associations were lawyers, tax advisors, and the like rather than IT companies).

The adjusted population included 673 firms which we contacted by telephone asking for the manager in charge of selecting IT staff. Provided that the company showed interest in the project, an executive summary of the project was sent by e-mail including a link to the start-page of the online survey.

Out of the 673 firms initially contacted, we received 73 fully completed and usable online surveys, yielding a response rate of 11%. All participants were involved in personnel selection decisions in their daily business. The final sample consisted of 27 women and 46 men with a mean age of 37.8 years (SD 6.57) and an average experience in personnel selection of 7.75 years (SD 5.61). About one third of the participants (33.8%) belonged to their company’s executive management. 14.9% were senior HR managers, 36.5% junior HR managers, and 14.9% were line managers responsible for personnel selection in their realm. The high percentage of executive managers does certainly account for the proportion of young ventures as in those firms the founders or executive directors themselves are regularly involved in the selection process.

The mean company age was 18.78 years (SD 24.25) and nearly half of the sample (47.3%) was younger than ten years with a quarter of the firms (25.7%) counting less than five years. The average headcount was 372.43 employees (SD 1,205.34), a number that is biased by seven large companies with thousand or more employees each. However, nearly four fifths of the sample (78.7%) counted less than 250 employees and 40% of the participating companies employed less than 50 people. Thus, major parts of the sample are small or medium enterprises according to the definition of the European Union (The Commission of the European Communities, 2003). Overall, small and large, as well as young and established firms are well balanced in the sample which allows good estimations of the moderating influence of firm age and size on the use of selection criteria.

VARIABLES AND MEASURES

The dependent variable in this study is the candidate’s hirability, in other words the likelihood to receive a job-offer. We asked the participants to assess the likelihood of offering employment to a hypothetical candidate on a seven-point Likert-type scale ranging from “very unlikely” to “very likely”.

The profiles of the hypothetical job applicants in our experiment are described by eight attributes at two levels each. These attributes represent the independent variables in our model and stem from the theoretical framework described above. The criteria can be grouped into three categories: Five criteria describe the applicant’s competencies grouped in different clusters (subject competency, social competency, personal competency, method competency, and entrepreneurial competency), two criteria represent different forms of fit (P-O fit and P-J-fit), and the last decision cue indicates the applicant’s social capital.

As our research is concerned with selection of IT-professionals in large and small firms, we introduced firm size and age as moderating variables. We investigated the impact of these firm characteristics on selection professionals’ use of certain main factors and selected two-way interactions for the assessment to recruit a hypothetical candidate. We use hierarchical linear modeling (HLM, see Bryk & Raudenbush, 1992) to test the impact of these variables which we operationalized in a post-experiment questionnaire.
Participants that followed the link in the invitation e-mail were led to a web-based research instrument which consisted of three major parts: an introduction, the candidate profiles, and a post-experiment questionnaire.

The first part informed the participators about the purpose of the study and its procedure. It contained information about the scenario and the decision cues that form the profiles as well as a brief instruction about how to administer the survey.

The scenario described a hypothetical job offer for a senior IT-consultant. In our experiment the description of the target position was crucial because the criteria used for selection do strongly depend on the type of employee to be hired. Thus, we had to model the job offer carefully. Preliminary interviews with HR professionals in the software industry showed that the position of an IT-consultant is particularly interesting and important for the firms. In contrast to a programmer or software engineer, this type of employee usually has a higher responsibility and due to direct customer contact the requirements for the position are generally higher. We searched jobpilot.de, a major online job-search engine, for job offers for senior IT-consultants in order to create the hypothetical job description. This description was discussed with HR professionals in software firms in order to ensure its authenticity.

Following the introduction, we presented the 33 candidate profiles to be rated by the participants. Finally, a post-experiment questionnaire which collected both demographical data as well as additional information on the participants completed the research instrument.

RESULTS

The main results are presented in table 2. For each decision cue, we report the standardized coefficient, the standard error, the t-ratio, as well as the level of significance.

<table>
<thead>
<tr>
<th>Selection Criterion</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.022</td>
<td>0.064</td>
<td>46.918***</td>
</tr>
<tr>
<td>Applicant fit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-O fit</td>
<td>0.648</td>
<td>0.059</td>
<td>11.070***</td>
</tr>
<tr>
<td>P-J fit</td>
<td>0.163</td>
<td>0.046</td>
<td>3.515**</td>
</tr>
<tr>
<td>Applicant competencies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>1.144</td>
<td>0.060</td>
<td>18.344***</td>
</tr>
<tr>
<td>Personal</td>
<td>0.815</td>
<td>0.044</td>
<td>18.429***</td>
</tr>
<tr>
<td>Subject</td>
<td>1.480</td>
<td>0.080</td>
<td>18.543***</td>
</tr>
<tr>
<td>Method</td>
<td>0.937</td>
<td>0.064</td>
<td>14.700***</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>0.597</td>
<td>0.042</td>
<td>14.310***</td>
</tr>
<tr>
<td>Social Capital</td>
<td>0.097</td>
<td>0.046</td>
<td>2.096*</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-J fit x Social</td>
<td>0.404</td>
<td>0.078</td>
<td>5.154***</td>
</tr>
<tr>
<td>P-J fit x Personal</td>
<td>0.427</td>
<td>0.082</td>
<td>5.206***</td>
</tr>
<tr>
<td>P-J fit x Subject</td>
<td>0.630</td>
<td>0.080</td>
<td>7.919***</td>
</tr>
<tr>
<td>P-J fit x Method</td>
<td>0.684</td>
<td>0.080</td>
<td>8.532***</td>
</tr>
<tr>
<td>P-J fit x Entrepreneurial</td>
<td>0.539</td>
<td>0.085</td>
<td>6.319***</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001
n=2,336 decisions nested within 73 selection professionals

Table 2: Results of Multiple Regression Analysis

The results show, that all main effects are significantly used by selection professionals in rating a candidate’s hirability. For each criterion, the relationship is positive, i. e. the likelihood to receive a job-offer increases if the candidate shows high competence, high P-O fit or extended social capital.

These data give evidence to our hypotheses 1, 3, and 5 which stated that higher P-O fit, higher competencies, as well as higher social capital of the candidate will increase the candidate’s likelihood to receive a job-offer. However, the low regression coefficient as well as the rather low significance for applicant so-
cial capital indicate that the impact of this criterion on the selection decision is limited as compared to the other criteria.

Hypothesis 2 stated that the positive impact of a candidate’s P-O fit will be moderated by the firm’s age. In order to test this hypothesis, we used HLM which allows to investigate situations in which lower levels of analysis are nested in higher-level units of analysis (Bryk & Raudenbush, 1992). In our case, 2,336 selection decisions are nested in 73 decision makers. Thus, on the first level all decisions are treated as independent (within-subject analysis) whereas on the second level information about the decision makers is introduced (between-subject analysis). This allows us to test the influence of higher-level criteria (in our case firm age) on the relationships at the lower level. The results of the model are presented in table 3.

<table>
<thead>
<tr>
<th>Selection Criterion</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects (level 1) are presented in table 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderating impact of firm age on</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-O fit</td>
<td>-0.005</td>
<td>0.002</td>
<td>-2.179*</td>
</tr>
<tr>
<td>P-J fit</td>
<td>0.003</td>
<td>0.001</td>
<td>2.232*</td>
</tr>
<tr>
<td>Social Competency</td>
<td>0.002</td>
<td>0.002</td>
<td>1.081</td>
</tr>
<tr>
<td>Personal Competency</td>
<td>0.000</td>
<td>0.001</td>
<td>-0.289</td>
</tr>
<tr>
<td>Subject Competency</td>
<td>0.001</td>
<td>0.002</td>
<td>0.550</td>
</tr>
<tr>
<td>Method Competency</td>
<td>0.001</td>
<td>0.002</td>
<td>0.302</td>
</tr>
<tr>
<td>Entrepreneurial Competency</td>
<td>0.001</td>
<td>0.001</td>
<td>0.572</td>
</tr>
<tr>
<td>Social Capital</td>
<td>-0.001</td>
<td>0.001</td>
<td>-0.373</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001

n=2,336 decisions nested within 73 selection professionals

Table 3: Results of Hierarchical Linear Modelling Analysis

Results show that firm age had a significant influence both on the relationship between P-O fit as well as P-J fit and the candidate’s hirability. More precisely, there is a decrease in the strength of the relationship between P-O fit and hirability for decision makers in older firms relative to those from younger firms. The impact on P-J fit is in inverse: The relationship between P-J fit and hirability is stronger for decision makers from older firms relative to those from young ventures.

These results tell us that there is a statistically significant difference in the relationship between P-O fit and a person’s hirability across firms of different age: P-O fit is more important for the selection decision in younger firms than in older firms which supports hypothesis 2.

Hypothesis 4 stated that interactions exist between the applicant’s competencies and the person-job fit. An interaction between two variables means that the effect of one independent variable on a dependent variable varies as a function of another independent variable. Table 2 shows that all five interactions are statistically significant. The regression coefficient of the interaction can be interpreted as the amount of change in the slope of the regression of the candidate’s hirability on his / her competency when P-J fit changes by one unit. The coefficients indicate that selection professionals are more likely to hire an applicant when his / her competency is well developed and that this relationship is more positive for candidates with high P-J fit. The nature of these significant interaction effects provides support for hypothesis 4.

**DISCUSSION**

In this paper, we introduce a model for personnel selection that is based on applicant competencies and the notion of P-O fit. The model describes how the candidate’s P-O fit, social capital, and competencies (grouped in the five clusters of social, personal, subject, method, and entrepreneurial competency) influence the selection professional’s decision to hire or not to hire the applicant. Furthermore, it describes how the impact of applicant competencies on hirability is moderated by the applicant’s fit with the formal job requirements. We tested the model via a policy capturing experiment. The empirical results show that this model is a valid representation of selection decisions as each criterion significantly contributes to the decision of selecting a candidate.

A closer look at the results reveals some interesting implications. The most important contribution of this paper is that we take into account interaction relationships between the factors influencing the selection
professionals’ decision to hire a candidate. Existing studies have neglected potential interactions between the formal job-related P-J fit and more person-centered criteria like applicant competencies (e. g. Moy & Lam, 2004).

In light of the ongoing debate about the end of the job, managers seem to be aware that there is the need to take into account both aspects of applicant qualities. Future oriented competencies that enable the applicant to adapt to various situations (like, for example, method competency) or to interact with co-workers (social competency) have a higher impact if the candidate does also fulfill the requirements of the immediate vacancy as expressed in the formal job description.

With respect to the theory of P-O fit, we can confirm the proposition of Heneman et al. (2000) that the notion of fit between the applicant’s values and the organizational culture is indeed more important in young ventures than in more established firms. This finding contributes to the ample literature on P-O fit as it provides insight into the relationship between characteristics of the hiring organization and the importance of fit.

Both, P-O fit as well as person-focused selection criteria like applicant competencies, are often viewed as a reaction to the diminishing importance of specific jobs that goes along with modern forms of organization like project management (Bowen et al., 1991; Bridges, 1994; Nybø, 2004). Our results indicate that selection professionals are aware of these challenges but still focus the specific vacancy and its job description, no matter how stable it will be.

The applicant’s social capital, i. e. the network relations he has established in his previous career and that are now ‘transferred’ to his new employer, does only play a minor role in the selection process. Selection professionals do not seem to be aware of this way of enhancing their firm’s social capital basis. Comments of the pre-testers, however, lead us to the conclusion that this importance might be highly dependent on the vacancy that has to be filled. The higher the position of the job to be filled and the more sales-oriented it is, the higher might be the value and importance of the candidate’s social capital.

LIMITATIONS AND HINTS FOR FUTURE RESEARCH

The successful recruitment of qualified employees is a key factor which influences success and business growth. An important task in staffing organizations is the selection of employees as the organization has to choose the right candidates who meet the requirements of the job as well as fit the organization. Our paper contributes new insight into how person-organization fit, applicant competencies, and social capital are used as decision cues by selection professionals in the IT industry. Like with all studies, we are aware of some limitations of our approach.

First, decisions have been made under experimental conditions. For reasons of space and time constraints, the number of decision cues had to be limited and the cues were presented in a way that diverges from the usual situation in personnel selection were applicant and selection professional usually have face-to-face contact at least once.

Second, the decisions made by the participants have been related to a specifically described position of a senior IT consultant. In practice, slight modification in the target profile might lead to changes in the decision making behavior, especially concerning the relative importance of decision cues.

Third, our decision model focused on the final decision in the selection process. The use of selection criteria, however, might vary in other stages, like the final screening.

Despite these limitations, our findings provide new insight and some of the results call for further investigation. First, it would be interesting to test the model on other types of jobs and other industries in order to compare how the setting of a job and its environment influences the decision process. Second, with regard to the impact of the applicant’s social capital and social competence on the selection decision, it would be particularly interesting to investigate whether vacancies that are typically sales oriented and thus require a great extend of social interaction influence the importance of these cues in the selection process.
REFERENCES


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