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Antecedents and outcomes of Person-Job fit in temporary organizations – An empirical investigation of P-J fit on employee performance and turnover intention

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Abstract

Although a progressing projectification has led to a widespread use of temporary organizations (TOs) in many industries, the various factors that determine successful work in TOs of individual workers are widely unexplored. To take a first step towards closing this gap, we empirically investigate the effect of two specific personal skills on the individual outcome in TOs. In doing so, we examine for the first time the Person-Job (P-J) fit, as an integral part of the established Person-Environment (P-E) fit theory, in TOs. The results point out that (i) P-J fit is also an adequate analysis tool for a temporary working environment and (ii) that the individual performance in projects can be improved by the targeted selection of employees with the abilities to work under constraints of high interdependency and to work independently.

1 Introduction

In most industries projectification, e.g. a significant growth of project work, can be observed (Schoper et al., 2018). Task forces, projects or programs are widely called temporary organizations (TOs), which are usually embedded within a permanent organization (PO) or have several interfaces to it (Schwab and Miner, 2008). As a consequence, employees are often assigned to POs and TOs simultaneously or have to switch between them, whereby individual abilities to cope with new prevailing environmental requirements are decisive (Sydow and Braun, 2018).

In contrast to working conditions in POs, project-related work is often characterized by completing a non-routine task combined with complexity in terms of transdisciplinary participant backgrounds and differing hierarchical roles outside the TO (Baccarini, 1996; Hanisch and Wald, 2011, 2014; Packendorff, 1995). Few studies show that TOs are demanding working environments for employees, which can be described in more detail by (i) the impact of mental, social and physical exhaustion, (ii) a necessary type of resilience, which is based on a lack of recognition of human, temporary and social resources, including (iii) a clash of roles within a TO and a PO in addition to (iv) high levels of psychological stress reactions (e.g. Cicmil et al., 2016; Gällstedt, 2003; Zika-Viktorsson et al., 2006).

Stressful working conditions in TOs in combination with a distinct failure rate of projects (Cicmil et al., 2016; Daniel et al., 2013) allow the assumption that this is related to an unsuitable staffing of the respective project team. It seems obvious that temporary work settings may not be appropriate for everyone (Bakker et al., 2016; Sanchez et al., 2017; Walter and Zimmermann, 2016). Despite this simple statement, research on required attributes of

employees working in a temporary work environment has so far been almost neglected (Keegan et al., 2018; Nuhn and Wald, 2016; Turner et al., 2008).

This lack of research is surprising as an organizations' ability to benefit from new working forms depends upon how effectively employees are able to adapt to the change from an old to a new work mode, e.g. in this case from a PO to a TO, and vice versa (Raghurama et al., 2001). This requirement at the individual level implies three consequences: First, human staffing is an essential factor for the resilience of a TO, so that employees of TOs should be selected according to their personal attributes (Bredin and Söderlund, 2007). Second, this also requires a distinct characterization of a temporary work environment, and thus implicitly addresses a further research gap for a clear idea about the factors that distinguish a TO from a PO (Burke and Morley, 2016). Third, therefore the need not only for suitable personal and decisive TO characteristics but for the relationship between them and their effect on the outcome of a TO is obvious.

To further investigate these requirements a model that can link the various factors can be useful. As a core concept in research on selection and recruitment as well as organizational culture, the person-environment (P-E) fit concept has proved as a useful in organizational behavior (Chuang et al., 2015; Schneider, 1987; Shin, 2004; Werbel and Gilliland, 1999). Within this concept, several levels of fit can be distinguished (Jansen and Kristof-Brown, 2006). As integral part of the higher-level person-environment (P-E) fit concept, we apply in this study P-J fit in order focus the demanded job requirements at an individual level. P-J fit is broadly defined as a congruence between the demands of the performed job and the needed skills, knowledge and abilities (KSAs) of a job candidate (Werbel and Gilliland, 1999).

The fundamental assumption is that the more this consistency between the individual attributes and the characteristics of the job is pronounced, the more effective the interplay of individual and job become (Ostroff, 1993). Furthermore, several studies have found correlations between P-E fit and job outcomes: Thus, P-E fit positively correlates with organizational commitment, job satisfaction, career involvement and career success, and negatively correlates with turnover intentions (Bretz and Judge, 1994; Chatman, 1991; Kristof, 1996; Lauver and Kristof-Brown, 2001). These findings were originally based on studies in traditional, permanent organizations. However, the general P-E fit concept is a broad-based theory that links characteristics at an individual level with those of an environment, regardless of involved people or the observed environment (Edwards, 2008). Consequently, the same assumption can be made for a P-J fit in TOs. Moreover, the concept of linking an individual with a specific environment makes it possible to analyze the individual fit not only to his direct environment, but also to the more indirect, e.g. the surrounding permanent structures (Bakker et al., 2016; Schwab and Miner, 2008).

The purpose of this paper is (i) to provide attributes of employees required to work successfully in the demanding conditions of TOs, and (ii) considering the underlying characteristics of TOs as well as their interaction with the surrounding permanent structures. With regard to P-J fit in TOs this implies (i) the identification of specific antecedents for the highest possible fit with respect to the demanding job requirements within TOs as well as (ii) the indication of possible relationships between P-J fit in TOs itself and the individual outcome in TOs.

2 Theoretical background and research model

Although the terms project and TO are mostly used as synonyms in the literature, as in this paper (Tyssen et al., 2013), TO should be seen as appropriate, especially regarding to a

distinction from the broader PO (Svejvig and Andersen, 2015). In addition to the issue of terminology, there is no recognized distinct definition of a TO (Bakker, 2010; Hanisch and Wald, 2014). Nonetheless, some characteristics that determine a TO are repeatedly highlighted in the literature.

Time is probably the smallest common denominator of most contributions to TOs (Sieben et al., 2016). A distinction must be made here as to whether the temporal limitation or the temporal duration of an undertaking is the subject of discussion. The extent to which a time limitation must be short-, medium- or long-term, e.g. the temporal duration of a TO, can vary widely (Bakker, 2010). Whereas it is well-known that a TO will end at some pre-agreed point in the future, which is referred to as temporal determination (Hanisch and Wald, 2011; Jacobsson et al., 2015). This “temporariness” (Lundin and Söderholm, 1995, p. 445) represents the most widely accepted characteristic of TOs within organizational theory (Bakker et al., 2016; Burke and Morley, 2016).

A further established characteristic, the task, refers to the dependence of a TO on one or a very small number of defined tasks (Lundin and Söderholm, 1995). Aside from the small number of specific tasks, the nature of the task is also significant within TOs. In many cases a surrounding PO implements a TO for dealing with new, unique, non-routine, often complex tasks which also involve a high degree of uncertainty and risk compared to other tasks executed in a PO (Atkinson et al., 2006; Bechky, 2006; Turner and Müller, 2003).

In order to clarify the importance of resources within a project, a team dimension is often constituted. In this way, the formation process of a team is determined in particular by the task to be performed and how much time is available (Lundin and Söderholm, 1995). This in turn

often causes discontinuous, heterogeneous personnel compositions within TOs that are characterized by employees with different professional backgrounds and working methods compared to team compositions in POs (Baccarini, 1996; Nuhn and Wald, 2016).

Furthermore, by comparing the hierarchy in a TO with those in a PO shows often clear differences due to a distinct shift in a TO towards horizontal hierarchies (Müller et al., 2018; Tansley and Newell, 2007). This is even more important, since the typical embedding of a TO in a PO leads to the fact that employees of a TO often accompany different positions and roles outside the TO (Baccarini, 1996; Hanisch and Wald, 2014). Nevertheless, the project manager has to coordinate the project staff while the latter have to report to their line managers, which leads particularly to two consequences: First, there are conflicting roles of project staff members. Second, this supports less formal power and authority of a project manager than a comparable line manager (Hanisch and Wald, 2011; Sydow and Braun, 2018).

Additionally, coordination must be highlighted separately in this respect. Studies in temporary organizing tend toward a consensus of viewing TOs as having less formal and normative structures than POs (Hanisch and Wald, 2011; Meyerson et al., 1996). The horizontal hierarchy structures and the usually high complexity of activities within a TO require specific coordination mechanisms. Accordingly, TOs require a more informal coordination mechanism and interpersonal coordination processes in contrast to the formal coordination within a PO (Bechky, 2006; Hanisch and Wald, 2014; Tansley and Newell, 2007).

Taking into account the distinction between PO and TO, an investigation of individual outcomes in a particular working environment is of interest. In order to have a clear focus on the employee as an individual who performs his own, very specific task, this paper considers

the job-level. To make this fit type more accessible there is a tendency to rely on the implicit and topic-specific knowledge, skills, and abilities (KSAs) of an employee and to compare these with the general job requirements of the respective environment (Edwards, 2008; Kristof, 1996).

2.1 P-J fit by ability to work under constraints of high interdependence

Temporary jobs often demand the ability to deal with a highly complex task compared to a permanent work environment. Complexity referring TOs means that many different actions and parameters interact, so the effect of actions is difficult to assess. There is a high degree of interdependence or connection between many individual parts that must be observed in order to successfully complete the task(s) (Baccarini, 1996). Task complexity is not only based on the content component, such as novelty or uniqueness, but also on the fact that it is associated with a great dependence of individual subtasks (Hanisch and Wald, 2014). Hence, it is also necessary to be able to cope with interdependence when working in a TO. Building on a profound resilience, coping with interdependency includes a high degree of self-reference, the ability of improvisation as well as to adapt to change and develop new approaches on the fly. Furthermore, it can include the ability to move freely across hierarchical and departmental boundaries in order to achieve the results required for the success of their projects (Thomas and Mengel, 2008). We thus hypothesize:

H1a: Ability to work under constraints of high interdependence will lead *to a greater P-J fit in TOs.*

2.2 P-J fit by ability to work independently

In addition to dealing with numerous dependencies, a temporary work environment also requires a certain degree of autonomy and independence from employees in performing their

tasks. Due to the flat hierarchy and informal coordination in TOs, the relationship of temporary employees with their project manager are characterized of less supervision and monitoring compared to more permanent working settings (Hanisch and Wald, 2014). Further, responsibilities and empowerment to cope with project-related tasks often are passed on directly to the temporary employees (Hoegl et al., 2004). Hence, employees are expected to fulfill their tasks with minimal supervision and monitoring (Seers, 1989). Therefore, temporary employees are also expected to possess the skill-based attributes to be able to work independently (Engwall, 2003). Working independently or autonomously refers to individuals' ability in order to realize the organization-given freedom and thus to specific KSAs such as motivating oneself and deciding independently while defining, planning and implementing their own work steps and ensuring the results (Burke and Morley, 2016). Hence, we assume the following effect:

H1b: Ability to work independently will lead to a greater P-J fit in TOs.

2.3 P-J fit and outcomes in terms of performance and turnover intention

A large body of research has demonstrated the link between P-J fit and job outcomes (Edwards, 2008; Kristof, 1996; O'Reilly et al., 1991). Werbel and Gilliland (1999) explicitly emphasized that P-J fit is linked to overall performance and organizational effectiveness. Further, Kristof-Brown et al. (2005) showed empirically that P-J fit has a correlation with the overall job performance. Such a positive relationship of P-J fit with the job performance is also suggested respectively confirmed by other authors (Caldwell and O'Reilly, 1990). In the context of TOs, Spanuth and Wald (2017) found that TO proficiency, a construct closely related to P-J fit, positively influences the innovative work behavior of project staff, one important dimension of job performance. Notwithstanding that this effect is not yet proven for other aspects of TOs, we suggest that the same relationship should also apply to this type of organization. Thereby, we expect:

H2a: P-J fit *positively* influence individual performance in TOs.

In addition, the relationship between person-job fit and the intention to quit the job is also known. Apart from theoretical considerations, Cable and Judge (1996) and Kristof-Brown et al. (2005), among others, showed empirically a strong, negative correlation of P-J fit and the turnover intention of an employee. With regard to the content transfer of this relationship to the organizational configuration in a temporary working setting, however, further considerations are needed in comparison to the job outcome performance. Such a fundamental career decision as the intention to quit one's job is usually not based on a single project experience but reflects per se all influences and impressions of an employee, which he experiences in the context of his employer. A restriction of this construct to TOs and thus a simple adaption of the already proven effects within traditional, permanent organizations is therefore not appropriate. Additionally, Nuhn et al. (2017) showed empirically that a separated, significant effect of turnover intentions in TOs on employee performance at TO and PO level could not be confirmed. In order to pick up the tension and the symbiosis of simultaneous work in POs and TOs, we thus hypothesize:

H2b: P-J fit *negatively* influences the turnover intention.

2.4 P-J fit by the temporariness of an organizational unit

Building on the already derived five TO dimensions of temporal duration, nature of task, team composition, hierarchy and coordination, a framework can be developed to systematically differentiate between permanent and temporary organizations (see Figure 1). These TO dimensions are metric in character, i.e. can be more or less pronounced in an organizational unit and thus define in this paper the term “temporariness”. This coincides with the assumption that there is no clear distinction between POs and TOs but they represent two opposing poles

in an continuum (Nuhn et al., 2017; Sieben et al., 2016). This allows drawing two conclusions: Firstly, temporary organizing is a matter of degree rather than a unique form of organization. Secondly, this degree of temporariness depends on the extent to which an organization adopts the extreme features of the five metric dimensions in the direction of a “pure” TO.

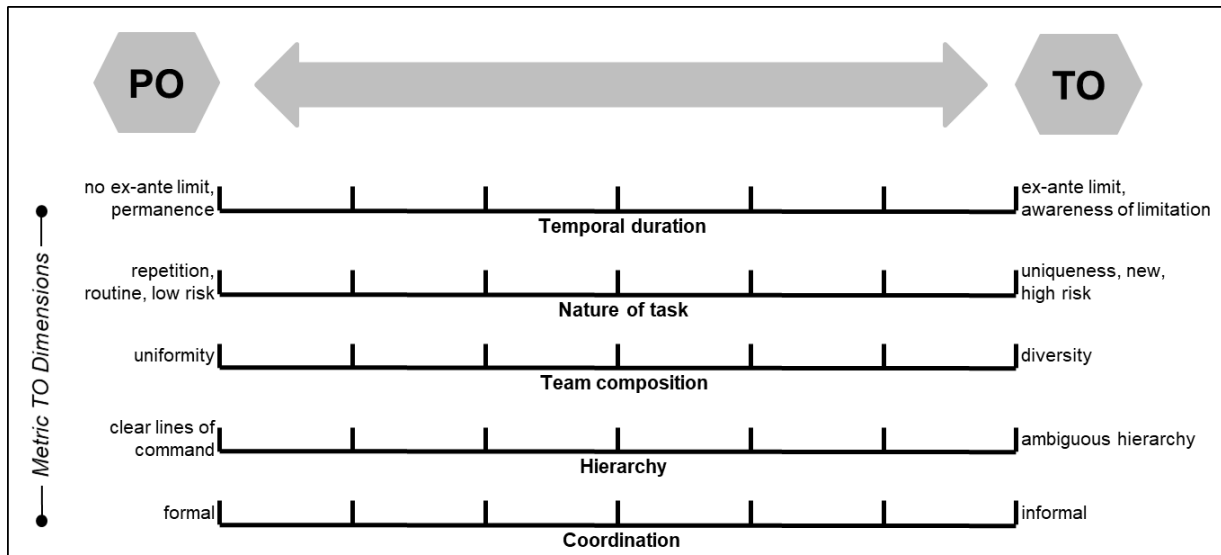


Figure 1: The five TO dimensions within the PO-TO-continuum (adopted in modified form from Henning and Wald (2019))

While a pure TO refers to an organization characterized by a high degree of temporariness (i.e., high on all five metric dimensions), in which the employees (i) are aware from the beginning of the (ii) unique, risk-prone task, (iii) in cooperation with colleagues from other departments, (iv) with ambiguous hierarchical instructions and (v) based on an informal coordination, such an ideal form of temporary organizing is not common. Usually, employees in temporarily organized working groups find working conditions that are characterized by an interplay of permanent and temporary working arrangements (Bredin and Söderlund, 2007).

With regard to the relationship between the perceived P-J fit within a TO and the performance within a TO, the degree of temporariness therefore has a decisive role. The greater the temporariness of an organizational unit, the greater the performance due to a high P-J fit within a temporary working setting. A similar relationship can be assumed between P-J fit in TOs and the turnover intention of an employee. Logically, however, the already expected negative effect is strengthened by a higher degree of temporariness of an organizational unit. Thus, we assume that the relationship between P-J fit in TOs and both outcomes, the performance within a TO as well as the turnover intention, is moderated by the overall temporariness of an organizational unit. In the end, a higher temporariness should result in a better individual performance for employees of TOs and in higher turnover intention. Hence, we hypothesize:

H3a: The temporariness of an organizational unit *moderates positively* the relationship between P-J fit and performance in TOs.

H3b: The temporariness of an organizational unit *moderates positively* the relationship between P-J fit and turnover intention

2.5 Performance by turnover intention

Turnover intentions of employees are linked often to performance in literature (Kuvaas and Dysvik, 2010). Generally, these two variables are found negatively correlated (Zimmerman and Darnold, 2009). For an explanation for this simple and obvious statement, theoretical models seem to provide useful guidance. There are many theoretical explanatory models. One of several performance contributions is by Griffin et al. (2007), who developed a model for work role performance. They describe performance as a perceived performance consisting of three dimensions: proficiency, adaptivity and proactivity. If an employee intends to quit his job, this may have a direct impact on all three levels of performance. For example, previously used personal resources for job execution can be used instead for the active job search or a previously

practiced proactive optimization of work processes is lost due to low intrinsic work motivation (Nuhn et al., 2017). Although the relationships between turnover intentions and job performance refer in general to permanent organizational units, the same considerations are equally applicable to PO and TO, at least when considered together. We therefore assume the following effect:

H4: Turnover intention negatively influences the performance in TOs.

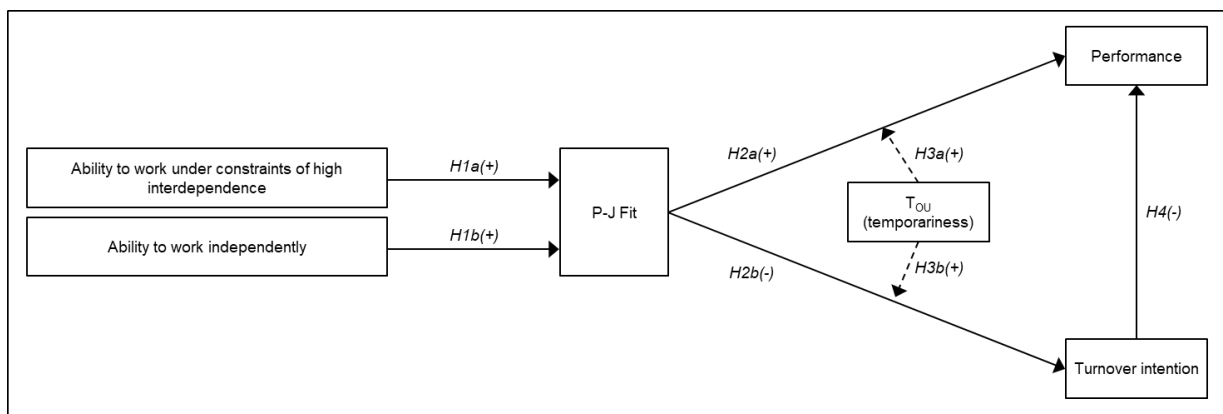


Figure 2: Research model

3 Data and methods

3.1 Data and sample

In order to test the hypotheses empirically, we focused on respondents from Germany for two reasons: First of all, the use of TOs as an organizational form in different industries is widespread within Germany. Schoper et al. (2018) have recently shown that the share of project work to total work in Germany across all industries amounts to 34%. Secondly, by this we can also reduce cultural influencing factors to a minimum. Finding appropriate contact persons and gaining access to them is a challenge for all kinds of empirical studies. In the context of temporary organizations, however, this is even more difficult due to the lack of conventional databases. We have adequately coped with this challenge by writing to TO-experts, whose

company is known to be increasingly working with projects as an organizational form. On the other hand, we have cooperated with numerous project management associations that have distributed our web-based questionnaire via their newsletters.

In terms of methodological rigorousness, potential participants were filtered regarding their qualification to report on temporary organizations. In doing so, all participants were presented a project definition that met the widely accepted characteristics of a project, such as time constraints, the need for resources and an independent process organization (Engwall, 2003), and asked as to whether they had participated in such an organizational form. Only those who affirmed this filter question were considered for the analysis. In the further course of the questionnaire, respondents were asked to evaluate all TO-related questions on the basis of their last project experience. This takes into account the fact that a person may be working in a PO and TO at the same time. To control for intersubjective validity and reliability, the questionnaire was pre-tested with 17 doctoral students, all of whom have project experience. As result of the pretest, no major changes were needed.

Data was gathered between September 15th, 2018 and December 31th, 2018. 603 individuals took part in our self-administered online survey. Taking into account the filter question asked at the beginning and excluding invalid answers, we obtained a total of 341 usable and qualified answers which were included into the analysis. The participants involved in the analysis were in the majority female (53.8%) and had an average age of 35. By taking a closer look at the sample's composition, more than 11 industries were covered, with a clear predominance towards the broader field of (financial) services (48.1%), followed by manufacturing industries (20.9%), energy and chemical industries (11.1%), education sector (7.8%), tourism (5.1%) or health sector (2.7%). 4.7% belonged to other industry sectors or did not indicate their industry.

The participants themselves are on a more operational positions within their project work (i.e. classical project staff, no project leading or similar role), while holding an average work experience of 10 years. The sectoral diversity of the sample augments the generalizability of our results.

Furthermore, we conduct a dyadic study in order to prevent common method variance regarding the employee performance in one TO. For this purpose, each respondent was asked at the end of the questionnaire to indicate their respective TO leader for the project to which they referred in their responses. In a separate online questionnaire, this superior was subsequently asked to assess the performance of the respective employee in this particular project. By doing so, we have achieved a second evaluation of at least 20 supervisors.

Procedural and statistical remedies were combined, in order to control for common method bias (Podsakoff et al., 2012). Within the questionnaire all independent and dependent variables were proximal separated from each other and their associated items were kept as simple as possible to minimize the vagueness of the construction of each item (Jarvis et al., 2004). With respect to procedural remedies the anonymity and confidentiality of all respondents was maintained, and care was taken to ensure that participants did not get the impression of better or worse answers. In addition, Chang (Chang et al., 2010) points out that common method variance is rather an issue in simpler models. This should be remedied by implementing temporariness as a moderator. Regarding statistical remedies we conduct three tests: First, we apply the Harman's single factor test by including all independent and dependent variables in an exploratory factor analysis, with no substantial amount of the total variance explained by the factor (i.e. 38.41%), Therefore common method variance should be no concern in our model (Podsakoff et al., 2003). Secondly, we conduct the Lindell-Whitney marker variable test. For this purpose, we

implement the measurement inventory for “motivation to engage in sports” (Semin et al., 2005) as theoretically independent marker variable within the model examined. This test result also indicates that common method variance is not relevant for our model, since the highest path coefficient is 0.21 and thus below the common threshold value of 0.30. Additionally, we applied the Kock’s collinearity test. Since all variance factors of the latent constructs in our model were well below 3.30 (Kock, 2015), this test also confirms that common method variance should be no concern in our model.

3.2 A measurement for the temporariness of an organizational unit

Like TO, the term temporariness is not clearly defined in the literature (cf. Janowicz-Panjaitan et al., 2009). As mentioned, the temporariness of an organizational unit in this paper is based on a compilation of relevant, distinctive properties that differentiate a TO from a PO and thus (i) provide a definition for TO on the one hand and (ii) a differentiation from the PO on the other. Accordingly, temporariness is composed of five dimensions, temporal duration, nature of task, team composition, hierarchy and coordination.

Going forward from our understanding of temporariness and considering that this content design of the PO-TO continuum is unique, we need to offer a suitable possibility to operationalize temporariness, i.e. to make it measurable. Based on the approach of Naman and Slevin (1993), we also operationalize our concept on the idea that congruence between specific variables can be measured as congruence of pairs of smaller elements. The underlying assumption is that a possible congruence between variables can be determined by their absolute difference in different categories. By transferring this procedure to the temporariness of an organizational unit, the deeper TO dimensions automatically become the center of attention.

Measuring TO dimensions is challenging, as to the best of our knowledge there are no established scales that fully reflect the intended content. If possible, our measurement uses established scales which have been adapted to the TO dimensions with slight modifications. Sometimes, however, the development of own items was necessary (for an overview see Table 1 and 2). Regarding the TO dimension ‘temporal duration’, we have developed four items, which were designed to clearly emphasize the time limitation of a project. In order to assess the TO dimension ‘nature of task’ two constructs were combined. The TO dimension ‘team composition’ was operationalized by using the established measurement of Campion (1993) for team diversity, with marginal adaptations towards project work. For the TO dimension ‘hierarchy’ there is no established scale to be found that covers the entire scope of content. For this reason, two scales have been combined. Lastly, there is also no established scale for the TO dimension ‘coordination’, which implies informal control and leadership of employees and tasks. For this reason, three measurement scales were combined and adapted.

Each construct was developed as reflective one as well as tested, refined and confirmed during the pretests. They were assessed on seven-point Likert scales (“1” = Strongly disagree, “7” = Strongly agree”). In order to use pair-based difference analysis to develop a measurement for temporariness, the design of the Likert scale is crucial. Within each TO dimension, a reference is required as a base value for calculating the distance between the observed configuration and a target configuration. According to the designation of the five dimensions, i.e. TO dimensions, as well as the superordinate terminology of ‘temporariness’, the maximum value of an item in the direction of a "pure" TO is assumed as the respective reference value. Such a maximum evaluation in all dimensions represents the only theoretically existent ideal form of a temporary organization.

Further, following comparable research on other forms of organizations (Shin, 2004), we assume that each of the five metric TO dimensions occupies the identical meaning for determining temporariness in organizations. Consequently, the temporariness of an organizational unit (T_{OU}) is the unweighted sum of the temporariness scores TS of the TO dimensions i ($i=1,n$). According to our developed model, the temporariness is determined by five TO dimensions (temporal duration, nature of task, team composition, hierarchy, coordination). To allow higher values to be synonymous with a higher degree of temporariness, the sum is inverted:

$$T_{OU} = (-1) \sum_{i=1}^5 TS_i$$

In order to calculate the temporariness scores TS_i , the sum of the values of the distances between the extreme value in the direction of a pure TO within the five TO dimension i and the values of aspect j within the TO dimension i is determined:

$$TS_i = \sum_{j=1}^4 e_j - v_{ij}$$

Thus, the temporariness of an organizational unit T_{OU} is calculated by the sum of the five temporariness scores of the TO dimensions, which in turn is the sum of the Euclidean distance to an ideal temporary organization.

3.3 Measures

As already introduced, this study applies partially a dual-informant design. More specifically, in order to prevent potential problems with common method variance, the dependent variable ‘performance’, i.e. the performance of one employee in one specific TO, was assessed by the employee as well as the corresponding TO leader. For assessing all constructs, only established scales were used, which had to partially adapt due to the use of a German-speaking

questionnaire and to clarify the focus on TOs. Further, each scale item was measured using a 7-point Likert scale, ranging from 1 (totally disagree) to 7 (totally agree) (for an overview see Table 3).

P-J fit was measured using the established measure of Lauver and Kristof-Brown (2001). According to many other authors (e.g. Cable and DeRue, 2002; Cable and Judge, 1996; Resick et al., 2007), this construct assess perceptions of job fit and not an actual fit. In addition, this measurement clearly focuses on the complementary fit, which in contrast to the supplementary fit does not aim at additional characteristics to the environment, but at characteristics and abilities that cover the required demands. Further, it also contains exclusively the conceptual direction of demands-abilities (D-A) fit and not that of needs-supplies (N-S) fit and thus also corresponds here to the prevailing opinion in the literature on the operationalization of P-J fit (Cable and Judge, 1996; Edwards, 2008). The construct used to assess the perceived person-job fit uses four out of five items from the original battery of Lauver and Kristof-Brown (2001), which are reflective defined and cover questions about the employee's skills and personality.

In line with the operationalization of P-J fit, the constructs of the two KSAs, the ability to work under constraints of high interdependence and the ability to work independently, are also selected in the direction of a complementary D-A fit. The ability to work under constraints of high interdependence was assessed by a construct of Pearce (1991). Four of the original five reflective items were used. One item ("My own performance is dependent on receiving accurate information from others.") was omitted because of two reasons: First, it is too similar to the construct 'performance', which was measured separately in the model studied. Second, in the context of the P-E fit consideration this item rather aimed at interpersonal cooperation and thus at the level of person-group fit and not at personal knowledge, skills and abilities which are

needed for the execution of a job. For assessing the second KSA, the ability to work independently, the original four-item battery of Tripp et al. (Tripp et al., 2016) was used. All items were reflective and not adapted for this study.

Van Dyne and LePine (van Dyne et al., 1998) have developed a measurement for performance that clearly focuses in-job performance. With this in mind, marginal terminological adaptations in respect of project tasks allowed the use of this established scale consisting of four reflective items. The reflective scale of the second dependent latent variable, turnover intention, is based on the widely used Colarelli scale (1984), which deals with the intention of leaving a company. As already mentioned, a restriction of turnover intention only on POs or TOs is not appropriate. In order to pick up the tension and the symbiosis of simultaneous work in POs and TOs, a new fourth item (“I aim to change my job within my company.”) was added to the existing three items, expressing the desire to change jobs, but only within the company. To control for demographical as well as macro-economic effects, we added three control variables: Age, gender and branch.

3.4 Analysis

In order to test our hypotheses, we applied a variance-based structural equation modeling (SEM) approach, in particular the partial least square method (PLS-SEM). This allowed us to simultaneously assess and test the various cause-and-effect chains in our model. The appropriateness of PLS-SEM compared to covariance-based SEM is further underlined by its superiority with regards to the handling of complex research models and thus to investigate P-J fit as predictor of the turnover intention and performance in TOs under varying degrees of temporariness (Hair et al., 2013). Additionally, PLS-SEM has found its way into management research in the more recent past (for an overview see Hair et al., 2013), also including studies

in the domain of project management (Bjorvatn and Wald, 2018) and in particular in the examination of performance and turnover intentions in TOs (Nuhn et al., 2017). Hence, for estimating the inner and outer model parameters, we deployed the established software solution SmartPLS 3.0. 2000 replications for non-parametric bootstrapping with individual-level changes preprocessing were used to calculate the standard errors (Chin, 1998).

In order to test the moderating role of the evaluated temporariness of an organizational unit, we applied procedures suggested within the product indicator approach by Chin et al. (2003) for calculating interaction effects. Thereby, all items of both the independent and moderating variable were standardized and subsequently multiplied in order to generate an interaction term (Chin et al., 2003). Further, in order to test include our sample of 20 supervisor responses regarding the performance of their employees within a TO, we conduct a paired-samples correlation test.

4 Results

4.1 Evaluation of measurement model

We assess the quality of our constructs, which were all operationalized as reflective constructs, by conducting several statistic tests (see Table 3). In a first step, we check for all Cronbach's alphas if they surpasses the traditional threshold of >0.7 (Hair et al., 2013), which is the case for our data. Afterwards, we assess both, indicator reliability (Chin, 2010) and convergent reliability (Bagozzi and Yi, 1988) by calculating all indicator loadings as well as each composite reliability (CR) and average variance extracted (AVE). As the common threshold of >0.7 (Chin, 1998) for all indicator loadings was applied, indicator reliability can be confirmed. Further, each construct has to reach a CR of at least 0.6 as well as an AVE of at least 0.5. Again, and without any exception, both thresholds were surpassed, indicating convergence validity.

Due to the fact, that we only deployed reflective constructs to our structural research model, tests for indicator relevance or multicollinearity were not applied. Conclusively, the results of the measurement evaluation appear to qualify for an evaluation at structural model level.

4.2. Evaluation of structural model

By calculating all path coefficients, their respective significance levels and the endogenous construct's R^2 -value we checked the appropriateness of our structural model. While rule-of-thumb values for R^2 are tough to specify, the determined R^2 -values indicate coherence of the model and the data. R^2 -values are 0.28 for P-J fit, 0.168 for turnover intention and 0.348 for performance. Besides these values, Figure 3 illustrates all path coefficients and their respective significance levels. Accordingly, almost all of our hypotheses are empirically supported by the results.

More specifically, **H1a** and **H1b** are supported as both KSAs, the ability to work under constraints of high interdependence ($\beta = 0.16$; $p < 0.1$) and the ability to work independently ($\beta = 0.40$; $p < 0.01$), positively influences P-J fit in temporary organizations. In line with **H2a**, we also revealed that the effect of P-J fit in TOs is positively related to the performance within a TO ($\beta = 0.45$; $p < 0.01$). Additionally, our conducted dyadic study regarding the employee performance showed no statistically significant deviation in the information provided by employees and superiors. **H2b** is also supported, due to the negative relationship between P-J fit and turnover intention is found to be significant ($\beta = -0.43$; $p < 0.01$). Concerning the hypothesized moderating effects of the temporariness of an organizational unit (T_{OU}) neither H3a ($\beta = -0.17$; $p < 0.01$) nor H3b ($\beta = -0.11$; n.s.) were empirically confirmed. Nevertheless, there is a highly significant moderation effect of T_{OU} on the relationship between P-J fit on performance in TOs. However, this moderating effect is of negative nature, and thus opposite

to hypothesis H3a. On the basis of this - albeit surprising - result, further analyses were undertaken to investigate this negative moderation effect (see section ‘4.3 Additional analyses’). Finally, in line with H4, turnover intention ($\beta = -0.10$; $p < 0.05$) is negatively related to performance within TOs.

Regarding the control variables, i.e. age, gender, branch, only the effect of age was found significant ($\beta = -0.08$; $p < 0.1$). However, as the effect turned out to be rather weak, we will neglect all control variables in our further discussion.

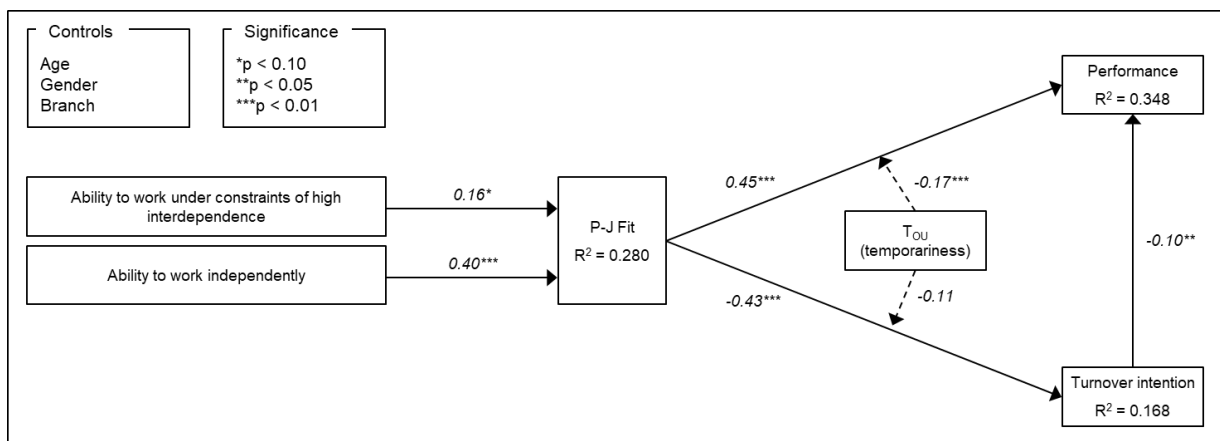


Figure 3: Structural model results

4.3 Additional analysis

As already mentioned, the moderating effect of the temporariness of an organizational unit on the relationship between P-J fit and performance within a temporary organization turned out to be highly significant ($p < 0.01$), but negative. This is particularly surprising because both P-J fit and performance were explicitly queried for the reference unit of a temporary organization. A negative moderation of T_{OU} implies in a first interpretation that the organizational unit used should be as permanent as possible, i.e. should be at the extreme edge of a PO in all five TO dimensions (e.g. formal coordination or running routine tasks). Since this is apparently not in

line with the positive effect of a preferably high P-J fit in TOs on the performance in TOs (compare H2a), additional analyses are appropriate.

Figure 4 illustrates an in-depth analysis of this negative moderating effect. In particular, two interrelated findings are revealed here: First, the more permanent (and not temporary) an organizational unit is, the more positive the relationship between P-J fit and performance within a TO. Secondly, however, up to a certain value of P-J fit within a TO, it is still advantageous in terms of performance in a TO to choose a temporary configuration of the organizational unit used.

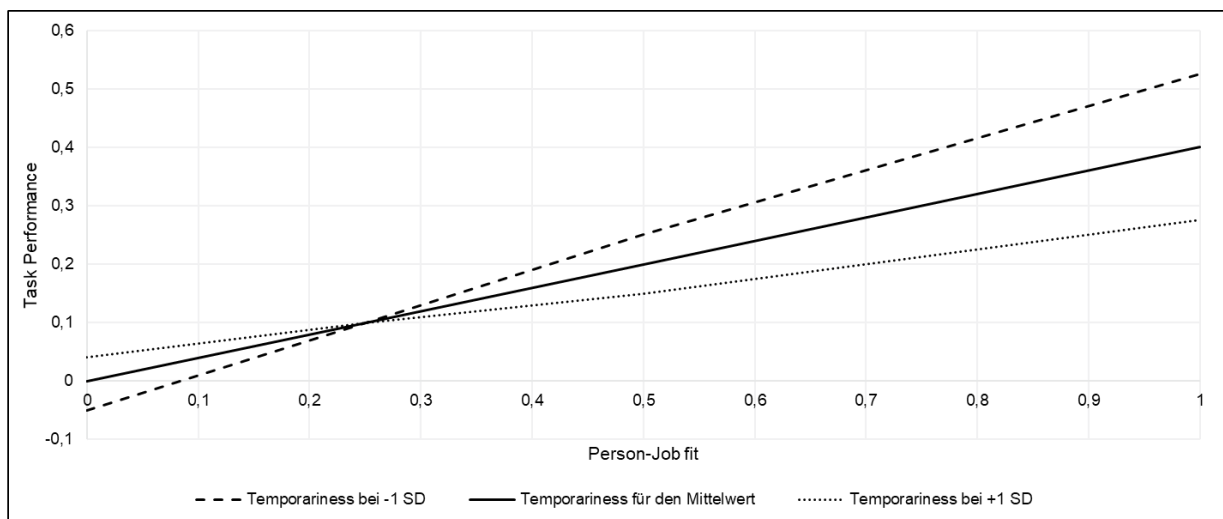


Figure 4: Moderating effect of T_{OU} on the relationship between P-J fit and performance in TOs

In the context of an additional analysis of the negative moderation effect of T_{OU} on the relationship between P-J fit and performance, it should also be considered whether a (negative) quadratic, i.e. parabolic, relationship between T_{OU} and the performance in TOs exists. To paraphrase this implies that there would be a maximum for the temporary configuration of an organizational unit to increase the effect of P-J fit on performance in TOs. This could also be an explanation for the surprising sign of moderation. However, no significant quadratic effect

has been shown with this moderation, which means that this explanation attempt must be rejected until now.

5 Discussion

There are different calls in the literature for providing a sounder theoretical basis for the study of TOs (e.g. Hanisch and Wald, 2014). This paper answers to this call by applying the person-environment (P-E) fit theory on TOs. Thus, the aim of this study was to apply the analysis tool P-J fit to TOs in order to find personal attributes required for successful work in temporary work environments.

Theoretically, our paper contributes to the existing literature in several ways. First, it expands both the existing P-E fit and TO literature by further empirical research regarding an increasingly important topic. The widespread use of TOs as organizational form and the resulting projectification (Schoper et al., 2018), represents a suitable and rich field of analysis to further test and extend the P-E fit theory. Second, our study confirms assumptions about the importance of two specific personal employee attributes in the context of working in TOs. So far, no factor on the individual level has been identified in research that take into account the resulting requirements and challenges through the demanding working conditions in TOs. We were able to show that both KSAs the ability to work under constraints of high interdependency and the ability to work independently positively enhances P-J fit in TOs. Third, according to existing literature regarding the effect of P-J fit on work outcomes in traditional forms of organization (Kristof-Brown et al., 2005), this relationship has also been investigated in TOs for the first time. The results support the assumptions that also in TOs the work performance is positively influenced by P-J fit and the turnover intention negatively.

Additionally, by the development of a measurement for temporariness we were abled (i) to analyze an organizational unit as a working environment and (ii) to systematically classify the examined organizational unit in the continuum of the extreme forms of PO and TO. Based on this, empirical evidence was provided by finding a significant moderating effect of temporariness on the effect of P-J fit on the performance in TOs. In-depth analyses of this negative moderation effect induce the assumption that there is an optimum of P-J fit in temporary work environments in order to achieve the best possible performance. This could be a first evidence for similar assumptions in the context of the superordinate P-E fit concept, that some degree of misfit might benefit individuals and organizations (Edwards, 2008).

From a practical perspective, we provide distinct instructions for employee and job selection and thus are in line with one traditional use of the P-E fit concept. Our results of the relationship between the examined KSAs and P-J fit help (line and project) managers to better understand which employees KSAs need to pay attention to in order to achieve the best possible individual results in projects and to minimize migration (desires) of employees. Thus, an optimized staffing can be created and the overall performance of project portfolios can be increased. In addition, our findings can also be utilized to develop more targeted training programs for future project staff by trying to strengthen certain skills.

Besides numerous new insights, this study also has limitations that may lead to future research avenues. For instance, our results are based on a cross-sectional design, which does not show us whether the investigated effects may change over time. One effective way to overcome this issue would be to choose a longitudinal design instead. There is also potential in the investigation of further KSAs, which can be regarded as essential employee attributes in TOs. The same applies to other TO characteristics. Furthermore, although we have sought through

our approach a dyadic study, to minimize a subjective bias, often referred to as single or key informant bias (Phillips, 1981). Nevertheless, our sample of supervisor responses as a second information source is small compared to the total number of participants. To minimize this bias and to improve the overall validity and reliability of the measurement results, a substantially larger set of multiple information would be desirable.

Appendix A

Table 1

Construct	Type	Source
Ability to work under constraints of high interdependence	Reflective (4 items)	Pearce (1991)
Ability to work independently	Reflective (4 items)	Tripp et al. (2016)
P-J fit	Reflective (4 items)	Lauver and Kristof-Brown (2001)
Temporariness of an organizational unit	Temporal duration	<i>No established scale available; self-development</i>
	Nature of task	Mohammed, Susan and Nadkarni (2011); Goodhue and Thompson (1995)
	Team composition	Campion (1993)
	Hierarchy	Rizzo, House and Lirtzman (1970); Ragins, Cornwell and Singh (2007)
	Coordination	Tinsley (2001); Mohammed, Susan and Nadkarni (2011); Iacovou, Thompson and Smith (2009)
Performance	Reflective (4 items)	Van Dyne and LePine (van Dyne et al., 1998)
Turnover intention	Reflective (4 items)	Colarelli (1984)

Table 2

TO dimension	Item
Temporal duration	I am aware that my project will dissolve as soon as its purpose is fulfilled.
	I am aware that my project is bound to a time-limited purpose.
	Already at the beginning of my activity I knew that my project will not exist in the long run.
	Already at the beginning I knew that due to the temporal limitation of the project also my activity in this connection will end.
Nature of task	I often feel very pressed for time when I perform my job.
	I frequently deal with unstructured business problems.
	I frequently deal with ad hoc, non-routine business problems.
	The business problems I work on involve answering questions that have never been asked in that way before.
Team composition	The members of my project team are from different areas of expertise.
	The members of my project team have skills that complemented each other.
	The members of my project team have a variety of different experiences.
	The members of my project team vary in functional backgrounds.
Hierarchy	I work under incompatible policies and guidelines.
	I work with two or more groups who operate quite differently.
	I do things that are accepted by one person over me and not accepted by others.
	I receive request from persons in equal rank and authority over me to do things which conflict.
Coordination	The members of my project team question the decisions made within the project, even if they were made by the project manager.
	The project manager consults the project team on the prioritization of tasks and the scheduled implementation time for each task.
	Project team members actively participated in the definition of project goals and schedules.

Coordination (contd.)	Project team members were kept informed about major decisions concerning the project.
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Table 3

Construct (Alpha; CR; VIF)	Item	Loading (λ_i)	Sig. (t-value)
Ability to work under constraints of high interdependence (0.895; 0.927; 2.013)	I am able to work closely with others in doing my work.	0.871	34.992
	I am able to coordinate frequently my efforts with others.	0.874	22.613
	I am able to perform a job that has significant interdependencies to other organizational units.	0.869	33.143
	I am able to consult with others within and outside my organizational unit frequently.	0.872	43.616
Ability to work independently (0.900; 0.930; 2.013)	I am able to use organizational freedoms to the benefit of my tasks.	0.861	35.985
	I am able to decide on my own how to go about doing the work.	0.878	47.335
	I am able to use my personal initiative and judgement in carrying out the work.	0.914	46.151
	I am able to perform my job with a great deal of autonomy within my job.	0.402	49.830
P-J fit (0.873; 0.913; 1.350)	I have the right skills, abilities and knowledge for doing this job.	0.823	27.494
	There is a good match between the requirements of this job and my skills.	0.870	50.739
	My personality is a good match for this job.	0.852	36.194
	I am the right type of person for this type of work.	0.859	30.858
Performance (0.885; 0.902; 0.698)	I perform the tasks that are expected as part of my job.	0.825	21.576
	I fulfill the responsibilities specified in my job description.	0.734	16.501
	I meet performance expectations.	0.882	48.717
Turnover intention (0.796; 0.877; 0.657)	I adequately complete my responsibilities.	0.892	57.454
	If I have my own way, I will not be working for my company one year from now.	0.928	68.262
	I frequently think of quitting my job.	0.878	36.450
	I am planning to search for a new job during the next 12 months.	0.914	62.935
	I aim to change jobs within my company.	0.402	5.237

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