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Work-, Organizational-, and Health Psychology

**Job crafting in organizations:  
A valuable approach for job performance or  
just a theoretical framework?**

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## Management Summary

### Problem Indication and Method

Individual performance of employees is highly important for organizations to remain competitive and successful on the market. One method to increase individual job performance is *job crafting*, a relatively new approach to proactive behavior of employees. Job crafting was defined as “the changes employees may make to balance their job demands and job resources with their personal abilities and needs” (Tims, Bakker, & Derks, 2012, p. 174). Previously, job crafting proved to be related to employee’s work engagement and job performance (Bakker, Tims, & Derks, 2012; Tims, Bakker, & Derks, 2014). Yet, this prior work was limited in that job performance was measured either with self-appraisals or with peer-appraisals. However, supervisors are often argued to be the most competent to assess the employees’ job performance. The aim of the present study was to examine how *job crafting* predicts *work engagement* and *job performance* by not only using self-appraisals, but also employing supervisor-appraisals of the employees’ job performance. This study was conducted in a German-based organization within the international airport business. A cross-sectional, correlational study design was employed. The participants were invited via email to take part in an online -survey about job crafting, work engagement, and job performance. The corresponding supervisors were also requested via email to evaluate their employees’ job performance. Data of 88 dyads were analyzed (37.5% female).

### Key Findings

The present study revealed following key findings:

- Employees, who crafted their job more strongly, had higher levels of work engagement.
- Employees, who reported high levels of work engagement, also reported high own job performance ratings.
- Supervisors did not assess engaged employees higher on job performance than non-engaged employees.
- Job crafters provided themselves with better job performance ratings.
- Supervisors did not assess the job performance of job crafters as high as job crafters evaluated themselves.

### **Practical Implications**

In short, job crafting predicted employees' work engagement but not their actual job performance (supervisor-appraised). These findings have at least three practical implications:

- If managers aim to enhance employees' feelings of positive fulfillment at work, job crafting might be a beneficial instrument and strategy.
- If managers aim to enhance individual job performance through job crafting, I highly recommend stimulating job crafting behavior that is driven by performance-enhancement motives as general job crafting behavior does not reliably appear to predict better job performance.
- If managers generally aim to improve individual job performance, they might want to consider other interventions than stimulating job crafting behavior. In sum, job performance improvement due to job crafting may not be tangible enough, as it may only exist in the employees' minds.

### **Abstract**

The present study investigated how *job crafting* predicts *work engagement* and *job performance*. The definition of job crafting was theoretically framed in a stress model, the job demands-resources model. Therefore, job crafting contains the self-initiated modifications of job demands and resources in a manner that corresponds to the employees' preferences, personal abilities, and needs. Based on prior research, I hypothesized that job crafting leads to high levels of work engagement and job performance. Furthermore, I supposed that work engagement predicts job performance. The present study expanded previous research by not only using self-appraised job performance, but also supervisor-appraised job performance. Data were analyzed from 88 dyads who were working in an international airport operator in Germany. Results demonstrated that job crafting was significantly related to work engagement and self-appraised job performance, while insignificantly related to supervisor-appraised job performance. Moreover, work engagement was positively related to self-appraised job performance, yet unrelated to supervisor-appraised job performance. The findings suggest that job crafting may be a beneficial strategy to increase the individual work engagement, but not to enhance the actual job performance.

**Keywords:** job crafting, work engagement, job performance, job characteristics, JD-R

## **Job crafting in organizations:**

### **A valuable approach for job performance or just a theoretical framework?**

#### **Background and Problem Indication**

Individual job performance of employees is highly important for organizations to remain competitive and successful on the market. However, attaining and maintaining good individual performance is a challenge for both organizations and employees. Especially globalization and technological progress expose employees constantly to new forms of working and changed task demands (Tims, Bakker, & Derks, 2013). One method to tackle these challenges and thus increase the own job performance is *job crafting*, a relatively new approach to proactive behavior of employees. Job crafting is about shaping the own job characteristics and establishing a work environment in a manner that coincides the employees' preferences, personal abilities, and needs (Wrzesniewski & Dutton, 2001). It may be a good strategy for employees in our ever changing environment to cope more easily with novel situations (Van den Heuvel, Demerouti, Bakker, & Schaufeli, 2010).

The concept of job crafting only recently received attention (Wrzesniewski & Dutton, 2001). As a result, there are only a few studies that investigated the relationship between the concept of *job crafting* and *job performance* (Bakker et al., 2012; Tims et al., 2014). The existing studies showed that the relationship between job crafting and job performance was mediated by *work engagement*. However, these studies were limited in that job performance was measured through self-appraisals or peer-appraisals. In comparison to supervisor- and peer-appraisals, self-appraisals lead to more bias, as well as to less variability. Furthermore, little agreement can be

found between self-appraisals and the judgment of others (Atkins & Wood, 2002). Although peer-appraisals are often more accurate than self-appraisals, supervisors are often argued to be the best competent to assess the performance of their employees (Becker & Klimoski, 1989). Hence, the aim of the present study was to examine the relationships between *job crafting*, *work engagement*, and *job performance* by not merely using self-appraisals, but also supervisor-appraisals of employees' job performance to enhance the outcomes' reliability. In the present study, a dual measurement of job performance will take place.

In the following paragraphs, I will first explain the concepts of *job crafting*, *work engagement*, and *job performance*. Furthermore, I will use existing studies to describe the known relationships between these three concepts to formulate the hypotheses.

### **Job Crafting**

*Job design* is continuously regarded as essential for organizations. With a well-designed job, the well-being of employees and their personal development can be amplified (Strümpfer, 2006). Job design explains how “jobs, tasks, and roles are structured, enacted and modified and what the impact of these structures, enactments and modifications are on the individual, group, and organizational outcomes” (Grant & Parker, 2009, p. 5). As organizations are responsible for creating jobs and subsequently for selecting the right individuals who possess the appropriate knowledge and capacities for these jobs, job design may work as a top-down process (Berg, Dutton, & Wrzesniewski, 2008). Consequently, the idea of redesigning a job is traditionally perceived as a process by which the supervisor modifies the nature of employees' jobs, roles, or tasks. This view of redesigning a job, however, has been moved to the individual level in the

course of time. Specifically, researchers discovered that employees change their own job design when they have been working in one organization for several years (Berg et al., 2008). In most cases, managers do not possess the resources or time to detect every preference of every individual employee, whereas individuals know their preferences and have this information instantly accessible (Tims et al., 2014). This new perspective of job redesign and the process of proactively shaping the boundaries of a job by individuals is called *job crafting* (Wrzesniewski & Dutton, 2001).

The idea of job crafting was first described almost 30 years ago by Kulik, Oldham, and Hackman (1987), yet the term job crafting was coined later by Wrzesniewski and Dutton (2001). Job crafting is a specific form of proactive behavior and a concept of explicitly focusing on redesigning the own job (Wrzesniewski & Dutton, 2001). In this context, a job is described as a set of tasks and interpersonal relationships intended for an employee in an organization. During the process of job crafting, employees independently change aspects of their work with the aim to accomplish an improved fit between the job characteristics and employees' own needs, abilities, and preferences (Berg et al., 2008). Three different forms of job crafting can be found in literature. Firstly, the employees can make physical changes to alter the amount, form, and scope of job tasks (*crafting task boundaries*). Secondly, employees can take another form of physical change concerning the relationship with other colleagues, such as increasing or decreasing the number and intensity of interactions with them (*changing relational boundaries*). The third form of job crafting refers to altering the perceived meaning of the own job (*crafting cognitions*) (Wrzesniewski & Dutton, 2001). It is vital to mention that job crafting only concentrates on particular aspects of a job and does not intend to fully redesign it (Berg et al., 2008). The most essential aspect of job crafting is that individuals modify work aspects on their own desire and

initiative. This simultaneously indicates the difference between job crafting and several other bottom-up redesign approaches, such as *idiosyncratic deals* (i-deals) in which work conditions are bargained by employers and employees (Hornung, Rousseau, Glaser, Angerer, & Weigl, 2010; Lyons, 2008; Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012).

The present study is based on a general approach to job crafting (Tims et al., 2012). This approach concentrates on crafting job characteristics rather than content. Thus, it focuses on modifications in visible behavior by employees to alter their work situation. The definition of job crafting was theoretically framed in a contemporary stress-model (Tims et al., 2012), which is called *job demands-resources (JD-R) model* (Bakker & Demerouti, 2008; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). *Job crafting* is defined as “the changes that employees may make to balance their job demands and job resources with their personal abilities and needs” (p.174). In this case, the proactive adaption refers to job demands and job resources.

In terms of *JD-R*, all job characteristics can be classified into these two classes: *job demands* and *job resources*. Job demands contain job aspects that are related to sustained physical and mental effort and are therefore correlated to physiological and psychological costs (Demerouti et al., 2001). Accordingly, workload and time pressure can be considered as examples of job demands (Bakker & Demerouti, 2007). A previous study found that certain job demands may cause negative outcomes, such as turnover and burnout, while others may lead to positive outcomes, such as job satisfaction for instance (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). Thus, it depends on the demand whether employees experience positive or negative work outcomes. The other class of job characteristics, job resources, refers to those aspects of a job that (1) are useful in reaching work goals, (2) are functional to minimize job demands and thereby the related physiological and psychological costs, (3) are significant for

stimulating personal growth and learning (Bakker & Demerouti, 2007). Examples of job resources are autonomy and feedback. Recent studies suggested that these resources have a motivating potential and consequently result in positive outcomes, such as high level of work engagement and job performance, especially when employees face high job demands (Bakker & Demerouti, 2008).

Based on the JD-R, job crafting behavior can be classified into four different sub-dimensions (Tims et al., 2012). Firstly, the employees can *increase* their *structural job resources*. For example, if employees create more opportunities at work to develop themselves and to gain more autonomy or variety in the occupation, they will achieve positive work outcomes (Tims & Bakker, 2010). The second sub-dimension of job crafting is called *increasing social job resources*. The level of social job resources may enhance when employees proactively craft, for instance, more feedback. This can be a motivating and energizing method for guiding an individual successfully through the task. In sum, it would be valuable to maintain the high level of job resources (structural and social) at work (Bakker, Demerouti, & Euwema, 2005) in order to deal with high job demands (Bakker & Demerouti, 2008). The third sub-dimension of job crafting refers to *increasing challenging job demands*. According to this, employees may elevate their challenging job demands when they feel that they cannot exhaust their knowledge and skills, because there is no opportunity to do so in their profession (Tims & Bakker, 2010). Challenging job demands are, for example, adding more responsibilities to the work or voluntarily participating in new projects (Wrzesniewski & Dutton, 2001). The outcomes of challenging job demands are related to achievement of work goals and high work motivation (Cavanaugh et al., 2000). Employees would only augment their challenging job demands, when they possess sufficient job resources. Therefore, the absence of job resources, while having a high level of challenging job

demands, may result in health impairment (Tims & Bakker, 2010). The last sub-dimension of job crafting is *decreasing hindering job demands* when the requirements go beyond the employees' capabilities (Tims, Bakker, Derks, & van Rhenen, 2013). A means to achieve this could be, for example, minimizing the contact to people who have unrealistic expectations or problems, or to ensure that they do not have to make difficult decisions while working (Tims et al., 2012). This process intends to attain work goals with little effort. In this way, the employee may stay healthy. Furthermore, decreasing hindering job demands is in a number of cases related to job satisfaction and better job performance (Tims & Bakker, 2010).

### **Job Crafting and Work Engagement**

The interest in *work engagement* within the organizational context has been increasing in the last few years (Bates, 2004; Baumruk, 2004; Harter, Schmidt, & Hayes, 2002). In recent literature for organizational theory and work psychology, work engagement is described as a concept that includes the positive well-being of workers (Bakker, Schaufeli, Demerouti, & Euwema, 2007). It has been assessed that work engagement is advantageous for both the well-being of employees and for the well-functioning of organizations (Mustosmäki, Anttila, & Oinas, 2013). Work engagement appears to relate to constructive behaviors, such as independent problem solving and self-initiative (Salanova & Schaufeli, 2008). Additionally, it results in better job performance of employees (Halbesleben, 2010), innovativeness (Schaufeli, Bakker, & Salanova, 2006), and the organizations' financial profitability (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009).

*Work engagement* is defined as “a positive, fulfilling, work related state of mind that is characterized by *vigor, dedication, and absorption*” (Schaufeli, Salanova, González-Romá, &

Bakker, 2002, p. 74). *Vigor* measures the energy level and mental endurance while working. Moreover, it refers to the willingness of employees to spend an abundance of time and effort in their work, and to meet challenges persistently. *Dedication* refers to the question how strongly someone is involved in his or her work and by doing so feels proud, meaningful, inspired, challenged, and enthusiastic. The final aspect of work engagement, *absorption*, concerns being fully submerged and concentrated in one's work (Schaufeli et al., 2002).

The *JD-R model* states that employees working in an environment that includes a high number of job resources and challenging job demands can develop in their work and are more engaged (Bakker et al., 2012). Accordingly, changing a work environment proactively with regard to increasing job resources and challenging job demands, will lead to a motivational process and thus to high levels of work engagement (Bakker & Demerouti, 2007; Bakker et al., 2012). I expect that job crafting behavior may predict employees' work engagement. Therefore, the first hypothesis can be formulated:

*Hypothesis 1:* Job crafting behavior of employees is positively related to work engagement.

As opposed to the previously described positive relationship between job resources, challenging job demands, and work engagement, there are dissimilar findings with respect to hindering job demands and work engagement. Hindering job demands seem to be unrelated (Tims et al., 2012) or can even be negatively related to work engagement (Petrou et al., 2012). Specifically, in a daily diary study, a weak but a significant negative relationship between *decreasing hindering job demands* and work engagement was reported (Petrou et al., 2012). Another study argued that *decreasing hindering job demands* is negatively related to *vigor*, which emphasizes the energy characteristic of work engagement (Tims, Bakker, & Derks, 2013).

These findings indicate that *decreasing hindering job demands* does not cause motivational outcomes, but a health impairment process that consequently leads to burnout (Hakanen, Schaufeli, & Ahola, 2008). The exact relationship between *decreasing hindering job demands* and work engagement requires more exploration. Based on prior findings respecting the mixed results over job demands, I will examine the relationships between the four sub-dimensions of job crafting and work engagement. Therefore, I predict:

*Hypothesis 1a:* Increasing structural job resources is positively related to work engagement.

*Hypothesis 1b:* Increasing social job resources is positively related to work engagement.

*Hypothesis 1c:* Increasing challenging job demands is positively related to work engagement.

*Hypothesis 1d:* Decreasing hindering job demands is negatively related to work engagement.

## **Work Engagement and Job Performance**

*In-role performance* concerns the individual level of activities which are defined in the job description and employees are obliged to fulfill. This also includes behavior that is required or expected, and which is the basis of individual job performance (Katz, 1964).

There exist several reasons why engaged employees perform better than non-engaged employees (Demerouti & Cropanzano, 2010). One of the most imperative arguments is that engaged employees are full of positive feelings, which includes joy, happiness, satisfaction, and enthusiasm (Demerouti & Cropanzano, 2010; Fredrickson, 2001). A positive relationship between work engagement and job performance has been demonstrated in a number of studies

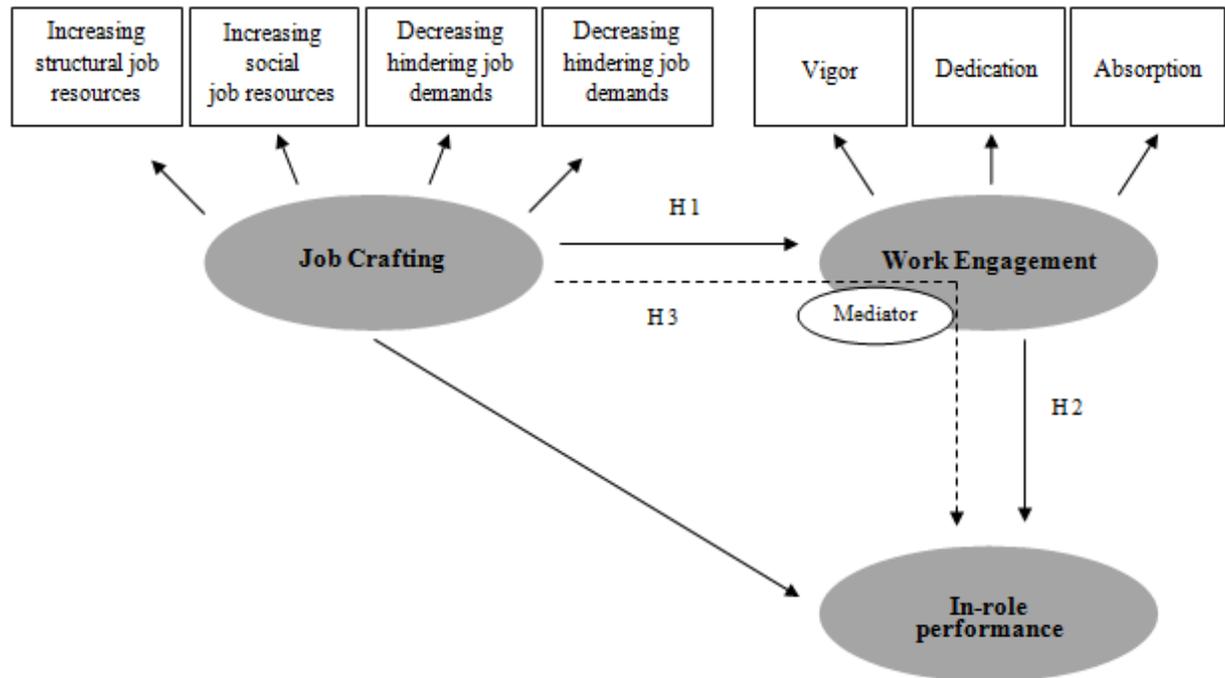
(Demerouti & Cropanzano, 2010). For example, a study among American employees revealed that the concept of work engagement is also essential for clarifying the variance in job performance (Halbesleben & Wheeler, 2008). Based on these results, I expect the following finding:

*Hypothesis 2:* Work engagement of employees is positively related to their in-role performance.

### **The Connection between Job Crafting, Work Engagement, and Job Performance**

After having theoretically discussed the relationships between *job crafting*, *work engagement*, and *job performance*, I am interested in the connection between these three variables. So far, the theoretical arguments suggested that job crafting influences work engagement and work engagement affects job performance. A recent study showed that job crafting affected colleague-ratings of job performance, while the relationship was mediated through work engagement (Bakker et al., 2012). Based on these arguments and findings it is anticipated that work engagement may take a mediator role in the relationship between job crafting and job performance. Therefore, I formulate the final hypothesis:

*Hypothesis 3:* Job crafting is positively related to in-role performance through work engagement.



*Figure 1.* A pictorial representation of the expected relationships between job crafting, work engagement and job performance.

In order to test my hypotheses, I conducted a study among airport employees in which I measured the levels of *job crafting*, *work engagement*, and *job performance*. Going beyond previous work, I measured the job performance in two ways – self-appraisals and supervisor-appraisals. In the following chapters, I will describe the methods in more detail. After this, I will report and discuss the outcomes. Finally, I will offer practical implications.

## **Method**

The present study was conducted in a German publicly traded organization within the international airport business. This organization employs over 20.000 people. The talent management of the organization agreed to participate in this study.

### **Design and Participants**

The study employed a cross-sectional, correlational design. Therefore, the findings can be generalized to the investigated population only at the survey time (Dooley, 2009). All participants had recently taken part in a talent development program. This sample was chosen, because of the easy access to the participants' respective supervisors. Another reason for choosing this sample was that they were working in diverse divisions and departments within the organization. Thus, we could ensure a representative sample. The questionnaire was distributed to a total of 127 employees whereas 99 actually participated (78%); 37 of the participating employees were female (37.4%); most participants aged from 41 to 50 years (56.6%). Furthermore, most participants had been working between 21 to 27 years (27.3%) for the organization, followed by participants who had been working 16 to 21 years (21.2%) for the organization. Moreover, 41 (41.4%) of the participants had a supervisory function.

### **Procedure**

The participants of this study were digitally surveyed via [www.thesistools.de](http://www.thesistools.de). They were informed via e-mail that they were chosen to participate in a survey about job crafting, work engagement, and job performance. A few days later, they received a second e-mail with a link, which contained background information and an invitation for participation. Additionally, the

participants were informed that their supervisors would also be requested to complete the job performance appraisal of their employees. To increase response rates, the confidentiality and the anonymity were emphasized. All participants received a personal link with an individual code. In addition, this code was assigned to the corresponding supervisor to aid linking the employees' surveys to the corresponding supervisor-appraisal afterwards. Thus, the corresponding supervisors were requested via e-mail to evaluate the employee's job performance. Furthermore, the e-mail also contained information about the research aim and it emphasized again the confidentiality and the anonymity of the data collection.

## **Measures**

Data were collected in German language on *job crafting*, *work engagement*, and *job performance*. To assess the levels of job crafting and work engagement at individual level, validated scales were used. Job performance was measured through a self-constructed questionnaire.

### **Job Crafting**

Self-ratings of job crafting were assessed by using the job crafting scale developed by Tims et al. (2012). In addition, the questionnaire was translated into German. To enhance the accuracy of the translation, five persons independently translated the questionnaire. Afterwards, these five translations were compared and combined to one questionnaire. The scale consists of 21 items and measures the four sub-dimensions of job crafting. The first sub-dimension *increasing structural job resources* was assessed by employing five items (e.g. "I try to develop my capabilities"). The second sub-dimension *increasing social job resources* was also evaluated by employing five items (e.g. "I ask my supervisor to coach me"). The third sub-dimension

*increasing hindering job demands* was measured again with five items (e.g. “When an interesting project comes along, I offer myself proactively as project co-worker”). The final sub-dimension *decreasing hindering job demands* was determined with six items (e.g. “I make sure that my work is mentally less intense”). Furthermore, employees had to respond on a 5-point Likert scale ranging from 1 (never) to 5 (very often). Cronbach’s alpha for job crafting was .77 and for the four sub-dimensions *increasing structural job resources*, *increasing social job resources*, *increasing challenging job demands*, and *decreasing hindering job demands*, were .76, .75, .75, and .82 respectively.

### **Work Engagement**

Work engagement was assessed with self-ratings on the German short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006). This scale consists of 9 items which measure the three sub-dimensions of work engagement. Each of these sub-dimensions was evaluated by three items. An example item of *vigor* is “At my work, I feel bursting with energy”, of *dedication* is “I am enthusiastic about my job”, and “I feel happy when I am working intensely” illustrates an example of *absorption*. Response categories ranged on a 7-point Likert scale from 0 (never) to 6 (always). Cronbach’s alpha for work engagement was .94 and for the three sub-dimensions *vigor*, *dedication*, and *absorption*, were .86, .89, and .91 respectively.

### **In-role Performance**

In-role performance was evaluated with self-appraisals and supervisor-appraisals on a self-constructed single-item scale. The chosen item was based on the existing general job performance evaluating template of the organization. The item for the self-appraisal was: “Please estimate your current job performance” and the item for the supervisor-appraisal was: “Please estimate the current job performance of your employee”. Responses were given on a 5-point

scale with 1 (I/ She/ He perform(s) a service, which corresponds in some points to the expectations for the execution of the tasks); 2 (I/ She/ He perform(s) a service, which corresponds in most points to the expectations for the execution of the tasks); 3 (I/ She/ He perform(s) a service, which corresponds in all points to the expectations for the execution of the tasks); 4 (I/ She/ He perform(s) a service, which significantly exceed in most points to the expectations for the execution of the tasks); and 5 (I/ She/ He perform(s) a service, which significantly exceed all points to the expectations for the execution of the tasks and is also characterized by own initiatives).

One might wonder why I selected a single-item measure rather than a multiple-item measure. After all, longer scales are generally more reliable (Gardner, Cummings, Dunham, & Pierce, 1998); however, this is not necessarily true in this case. Multiple-item scales do not outperform the single-item scales for measuring job performance if “elaborate definitions of key performance dimensions” are given and raters have “to estimate how well ratees perform in general” (Gardner et al., 1998, p. 911). The item that I used was designed to meet these requirements. Additionally, single-item measures enhance supervisors’ response rates since they take only a few minutes of their time. Thus in my view, the advantages of a single-item measure outweigh the advantages of a multiple-item measure (see APPENDIX A for the complete questionnaire).

### **Demographic Assessment**

The demographic data, which were also collected in this study, was gender, age, supervisory function (yes or no), and division. The employees could only respond on a category scale to ensure anonymity.

## Statistical Analysis

### Preliminary Analyses

Initially, I calculated the data's averages and percentages to obtain an overview of the demographic characteristics. Then, Cronbach's alpha was computed for the used scales and subscales.

### *Assumptions of Parametric Tests and Linear Regression Models*

In order to decide which test is appropriate for exploring the previously stated hypotheses (H1 and H2), I had to examine the assumptions of parametric tests and linear regression models. The following assumptions were tested:

#### *Normal Distribution*

To investigate whether the data were normally distributed regarding the scales and subscales of job crafting, work engagement, and job performance, the *Kolmogorov-Smirnov* test was conducted. This test is used for samples with  $N > 50$ . If the test shows no significance ( $p > .05$ ), the distribution of a sample does not significantly differ from a normal distribution (Field, 2013). In this study, neither the total job crafting scale nor the subscales, *increasing social job resources* and *decreasing hindering job demands*, were normally distributed. The subscales *increasing structural job resources*,  $D(88) = .09$ ,  $p = .071$ , and *increasing challenging job demands*,  $D(88) = .07$ ,  $p = .200$ , were normally distributed. Furthermore, all three subscales of work engagement (*vigor*, *dedication*, and *absorption*) were significantly non-normal,  $D(88) = .11$ ,  $p = .015$ ;  $D(88) = .11$ ,  $p = .010$ ;  $D(88) = .12$ ,  $p = .005$ , whereas the total work engagement scale was significantly normal,  $D(88) = .08$ ,  $p = .200$ . Finally, the distributions of the self-appraised job performance and supervisor-appraised job performance were non-normal, with respectively  $D(88) = .25$ ,  $p < .001$  and  $D(88) = .19$ ,  $p < .001$  (APPENDIX B).

### *Homogeneity of Variance*

Homogeneity of variance means that the residuals of a pattern are spread evenly throughout the data (Field, 2013). To ascertain whether this occurred in the present study, a scatterplot was constructed for work engagement as dependent and job crafting as independent variable; additionally, self-appraised or supervisor-appraised job performance was established as dependent and work engagement as independent variable. The scatterplot demonstrated that the residuals were spread almost homogeneous in all three cases (APPENDIX B).

### *Outliers*

Boxplots for all scales and subscales of job crafting, work engagement, and job performance were created. The boxplots displayed only one outlier for the job crafting scale, a few outliers for the subscales *decreasing hindering job demands* and *increasing social job resources*, no outliers for the scale and subscales of work engagement, and one to two outliers for each appraisal of job performance (APPENDIX B – boxplots). Through an extra correlation analysis without outliers (see below), I found that correlations were not strongly affected by excluding the outliers. The correlations and thus the significance of the relationships between the study variables decreased slightly when removing the outliers. This had almost no influence on the outcomes. Therefore, the outliers were neither replaced nor removed (APPENDIX B – see Table 10).

### *Independence*

It is essential that data of various participants are independent. This means, for example, that the behavior of participant X may not influence the behavior of participant Y (Field, 2013). In this study, observations were nearly all independent. Only 9% of the supervisors evaluated the

job performance of more than one employee, two at most. For this reason, I assumed that observations were independent.

### *Independence of Error*

In order to analyze the independence of error, I used the *Durbin-Watson* test by initially inserting work engagement as dependent variable and job crafting as independent variable (H1). I subsequently inserted job performance as dependent variable and work engagement as independent variable (H2). The value of the Durbin-Watson test ranges from 0 to 4. If the value is approximately 2, the residuals do not correlate. Values ranging between 1.5 and 2.5 are acceptable (Field, 2013). The Durbin-Watson value for job crafting and work engagement was 1.8; the value for work engagement and self-appraised job performance was 1.8; the value for work engagement and supervisor-appraised job performance was 2.2. Thus, the assumption of independence of error was satisfied (APPENDIX B).

### *Linearity*

The *lack of fit* test was conducted, to assess whether the relation between the independent variable and dependent variable was linear. According to the test, a linear model exists, if  $p$  is greater than .05. A linear model between job crafting and work engagement (H1) could be assumed, because  $p$  was .986. In addition, there was a linear model between work engagement and self-appraised job performance,  $p = .240$ , as well as between work engagement and supervisor-appraised job performance,  $p = .535$  (H2) (APPENDIX B).

### **Main Analyses**

Based on the outcomes of the tested assumptions, I concluded that all assumptions were satisfied, except normality. However, as regression is robust to non-normal data (Box & Watson, 1962; Fisher, 1922), I decided to use parametric linear regression analyses to test H1, H1 a-d,

and H2. Hence, I conducted a simple linear regression analysis for H1 and H2. Moreover, a hierarchical multiple regression analysis was performed to test H1 a-d. Furthermore, gender and age were inserted as control variables.

To investigate whether work engagement mediated the relationship between job crafting and job performance (H3) two simple mediation analyses were conducted with reference to Preacher and Hayes (Hayes, 2013). This method is robust against non-normally distributed data (Hayes, 2013). In the first analysis, the self-appraised job performance was included as dependent variable. In the second analysis, the average of the two job performance appraisals was computed and I used this as dependent variable.

## Results

### Descriptive Results

In total, 99 employees and 115 supervisors participated in this survey with finally 88 combined data records containing self-reports and supervisor-appraisals of job performance. Due to the fact that both self-appraisal and supervisor-appraisal of job performance will be considered in this study, the 88 data matches were used for the main analyses. Thus, data were analyzed from 88 dyads (69.3%). Table 1 provides an overview of the demographic characteristics of the final sample. Additionally, Table 2 presents the actual means, standard deviations, and the correlations among the study variables.

Table 1

*Demographical variables (N = 88)*

Demographical variables		n	%
Gender	Female	33	37.5
	Male	55	62.5
Age	20 – 30 years old	6	6.8
	31 – 40 years old	17	19.3
	41 – 50 years old	49	55.7
	51 – 60 years old	16	18.2
Supervisor Function	Yes	37	42.0
	No	51	58.0
Job Tenure	1 – 5 years	2	2.3
	6 – 10 years	8	9.1
	11 – 15 years	15	17.0
	16 – 20 years	18	20.5
	21 – 25 years	25	28.4
	26 – 30 years	16	18.2
	> 30 years	4	4.8

Table 2

*Means, standard deviations, and correlations among study variables (N = 88)*

	M	SD	1	2	3	4	5	6	7	8	9	11	12	13
1. Job Crafting	67.22	8.03	1											
2. Increasing structural JR	18.88	3.44	.79**	1										
3. Increasing social JR	12.33	3.12	.63**	.25*	1									
4. Increasing challenging JD	15.35	3.48	.82**	.50**	.44**	1								
5. Decreasing hindering JD	20.66	1.98	.25*	.18	-.21	.01	1							
6. Work Engagement	44.77	10.08	.63**	.63**	.27*	.51**	.16	1						
7. Vigor	15.33	3.16	.58**	.58**	.25*	.50**	.06	.87**	1					
8. Dedication	15.14	3.76	.58**	.60**	.24*	.46**	.13	.92**	.72**	1				
9. Absorption	14.31	4.15	.57**	.54**	.24*	.44**	.22*	.93**	.70**	.79**	1			
10. Job Performance (Self-appraisal)	3.66	.93	.30**	.31**	.16	.30**	-.07	.23*	.30**	.21*	.14	1		
11. Job Performance (Supervisor- appraisal)	3.41	1.00	.14	.17	.02	.13	-.01	.21*	.12	.27*	.19	.27**	1	
12. Job Performance (Average of both)	3.53	.77	.27**	.30**	.11	.27*	-.05	.28**	.26*	.30**	.21	.78**	.81**	1

Note. JR = job resources. JD = job demands. \* $p < .05$ ; \*\* $p < .01$ .

### Is job crafting positively related to work engagement?

To examine whether job crafting is positively related to work engagement a simple linear regression analysis was conducted. Job crafting was included as independent variable and work engagement as dependent variable. Moreover, I controlled for the influence of gender and age (control variables). As expected, the results illustrated that the predictor job crafting is significantly related to work engagement,  $\beta = .81$ ,  $t(84) = 7.7$ ,  $p < .001$ . Job crafting explained a significant proportion of variance in work engagement scores,  $R^2 = .46$ ,  $F(1, 54) = 20.6$ ,  $p < .001$ . Thus, H1 was confirmed (see Table 3).

Table 3

*Results of regression analysis with work engagement as dependent variable (H1)*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	39.11	5.99			6.5	< .001
	Gender	2.74	2.26	.13		1.2	.228
	Age	.31	1.38	.03		.2	.822
2	(Constant)	-17.84	8.74			-2.0	.044
	Gender	1.61	1.75	.08		.9	.361
	Age	1.48	1.08	.12		1.4	.172
	Job Crafting	.81	.11	.64		7.7	< .001

*Note.* Control variables = gender, age. Independent variable = job crafting

### Relationships between sub-dimensions of job crafting and work engagement

For testing H1 a-d, a hierarchical multiple linear regression analysis was used. In this case, the four different subscales of job crafting and the control variables were inserted as independent variables and work engagement as dependent variable. The outcomes of this analysis indicated that the relationship between *increasing structural job resources* and work

engagement,  $\beta = 1.37$ ,  $t(81) = 4.8$ ,  $p < .001$ , and between *increasing challenging job demands* and work engagement,  $\beta = .68$ ,  $t(81) = 2.3$ ,  $p = .024$ , was significant. In contrast, the sub-dimensions *increasing social job resources*,  $\beta = .26$ ,  $t(81) = .8$ ,  $p = .406$ , and *decreasing hindering job demands*,  $\beta = .50$ ,  $t(81) = 1.1$ ,  $p = .271$ , were unrelated to work engagement. Based on these findings, it can be concluded that H1a and H1c were confirmed, while H1b and H1d were not (see Table 4).

Table 4

*Results of regression analysis with work engagement as dependent variable (H1 a - d)*

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>		
1	(Constant)	39.11	5.99		6.5	< .001
	Gender	2.74	2.26	.13	1.2	.228
	Age	.31	1.38	.03	.2	.822
2	(Constant)	-9.97	-9.97		-.8	.419
	Gender	1.21	1.78	.06	.7	.498
	Age	.75	1.10	.06	.7	.500
	Incr. struc. JR	1.37	.29	.47	4.8	< .001
	Incr. soc. JR	.26	.32	.08	.8	.406
	Incr. chall. JD	.68	.30	.24	2.3	.024
	Decr. hind. JD	.50	.45	.10	1.1	.271

*Note.* Control variables = gender, age. Independent variable = subscales of job crafting. Incr = increasing. Struc = structural. JR = job resources. Soc = social. Chall = challenging. JD = job demands. Decr = decreasing.

### Is work engagement positively related to job performance?

In order to assess whether work engagement is positively related to job performance, three simple linear regression analyses were conducted. I used the two different job performance appraisals and their average as a dependent variable. Furthermore, work engagement was inserted as independent variable and I controlled again for gender and age (control variables). The tests indicated a positive relationship between work engagement and self-appraised job performance (see Table 4),  $\beta = .02$ ,  $t(84) = 2.1$ ,  $p = .038$ , and between work engagement and the average of the two job performance appraisals (see Table 5),  $\beta = .02$ ,  $t(84) = 2.6$ ,  $p = .012$ . No relationship was established between work engagement and supervisor-appraised job performance (see Table 6),  $\beta = .02$ ,  $t(84) = 1.9$ ,  $p = .057$ .

Table 4

*Results of regression analysis with self-appraised job performance as dependent variable (H2)*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	3.59	.56			6.4	< .001
	Gender	.20	.21	.11		1.0	.340
	Age	-.07	.13	-.06		-.5	.606
2	(Constant)	2.77	.67			4.1	< .001
	Gender	.14	.21	.08		.8	.489
	Age	-.07	.13	-.06		-.6	.564
	Work Engagement	.02	.01	.23		2.1	.038

*Note.* Control variables = gender, age. Independent variable = work engagement.

Table 5

*Results of regression analysis with average of the two job performance appraisals as dependent variable (H2)*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	3.42	.46			7.4	< .001
	Gender	.19	.17	.12		1.1	.276
	Age	-.05	.10	-.05		-.5	.643
2	(Constant)	2.60	.55			4.8	< .001
	Gender	.13	.17	.08		.8	.433
	Age	-.06	.10	-.06		-.5	.588
	Work Engagement	.02	.01	.27		2.6	.012

*Note.* Control variables = gender, age. Independent variable = work engagement.

Table 6

*Results of regression analysis with supervisor-appraised job performance as dependent variable (H2)*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	3.24	.60			5.4	< .001
	Gender	.18	.22	.09		.8	.430
	Age	-.03	.14	-.03		-.2	.816
2	(Constant)	2.44	.72			3.4	.001
	Gender	.12	.22	.06		.5	.586
	Age	-.04	.14	-.03		-.3	.777
	Work Engagement	.02	.01	.21		1.9	.057

*Note.* Control variables = gender, age. Independent variable = work engagement.

## **Does work engagement mediate the relationship between job crafting and job performance?**

To test a potential mediating effect, it is vital that the direct relationship between the independent variable and the dependent variable is significant (Hayes, 2013). In this study, the relationship between job crafting and self-appraised job performance,  $\beta = .04$ ,  $t(84) = 2.9$ ,  $p = .005$ , as well as the relationship between job crafting and the average of the two job performance appraisals,  $\beta = .03$ ,  $t(54) = 2.5$ ,  $p = .014$ , was significant. In contrast, the relationship between job crafting and supervisor-appraised job performance was insignificant,  $\beta = .02$ ,  $t(84) = 1.2$ ,  $p = .229$  (APPENDIX C). Thus, I conducted two simple mediation analyses only for self-appraised job performance and for the average of the two job performance appraisals as dependent variable to examine whether work engagement mediated the relationship between job crafting and job performance (95% confidence interval of the indirect effect was obtained with 10000 bootstrap resamples). Furthermore, it was again controlled for gender and age.

### **Self-appraised job performance as dependent variable**

In the first simple mediation analysis, the self-appraised job performance was introduced as dependent variable. The results disclosed that the relationship between job crafting and job performance was not mediated through work engagement,  $\beta = .004$ ;  $CI = -.02$  to  $.03$  (see Table 7).

Table 7

*Results of mediation analysis with self-appraised job performance as dependent variable (H3)*

Model	Effect	SE	t	p	CI (lower)	CI (upper)
Total effect of X on Y	.04	.01	2.7	.009	.01	.06
Direct effect of X on Y	.03	.02	1.8	.077	-.003	.06
Indirect Effect of X on Y with Boot	.004	.01			-.02	.03

*Note.* X = Job crafting. Y = self-appraised job performance

### **Average of the average of the two job performance appraisals as dependent variable**

In the second analysis, the average of the two job performance appraisals was used as dependent variable. I found again no mediating role of work engagement in the relationship between job crafting and job performance,  $\beta = 0.01$ ;  $CI = -.004$  to  $.03$  (see Table 8).

Table 8

*Results of mediation analysis with average of the two job performance appraisals as dependent variable (H3)*

Model	Effect	SE	t	p	CI (lower)	CI (upper)
Total effect of X on Y	.03	.01	2.14	.035	.002	.05
Direct effect of X on Y	.02	.02	1.0	.323	-.015	.05
Indirect Effect of X on Y with Boot	.01	.01			-.004	.03

*Note.* X = job crafting. Y = average of the two job performance appraisals

Based on the findings of these two simple mediation analyses, I concluded that work engagement did not mediate the relationship between job crafting and job performance. Accordingly, H3 was not confirmed (APPENDIX C – overview of all variable relationships).

## Discussion

The present study investigated the relationships between *job crafting*, *work engagement*, and *job performance*. This research expands prior findings by using self-appraisals as well as supervisor-appraisals of job performance. In the following paragraph, I discuss the most essential contributions to my study.

### Theoretical Contributions

First, I found a strong relationship between job crafting and work engagement. Employees, who crafted their job characteristics more strongly, had higher levels of work engagement. Thus, hypothesis 1 was confirmed. This result was in line with previous research (Bakker et al., 2012). Both findings signified that the employees' capability of crafting their job may lead to psychologically fulfilling work activities (Wrzesniewski & Dutton, 2001).

Nevertheless, what are the job crafting activities that actually result in higher levels of work engagement? To figure this out, the relationships between the sub-dimensions of job crafting and work engagement were examined (H1 a-d). As expected (Petrou et al., 2012; Tims et al., 2012), the sub-dimension *increasing structural job resources* was positively related to work engagement. Hence, employees who successfully increase the availability of job resources at work, may feel positively fulfilled because they see themselves growing (Tims et al., 2012). Additionally, as anticipated, *increasing challenging job demands* affected work engagement positively. Tasks which are complex and intellectually demanding may increase feelings of interest and especially of involvement (Amabile, 1996). However, I found that *increasing social job resources* did not predict work engagement. Perhaps, this null finding can be explained by the dependency on various work situations and on employees; other job resources than social job

resources may have more influence on work engagement. For example, it could be argued that status control, salary, and esteem reward might be the most significant job resources that may help balancing job demands on strain (Siegrist, 1996).

By contrast, a negative relationship between *decreasing hindering job demands* and work engagement was expected since prior study findings indicated that *decreasing hindering job demands* may lead to a health impairment process that in turn may cause burnout (Hakanen et al., 2008; Petrou et al., 2012; Tims, Bakker, & Derks, 2013). Contrary to my expectation, I found that *decreasing hindering job demands* was unrelated to work engagement. As *decreasing hindering job demands* predicts burnout, this sub-dimension may resemble the avoidance-oriented coping (trying evading problems) (Roth & Cohen, 1986). However, job crafting differs from the concept of coping. Specifically, job crafting is a strategy for managing the personal work environment (Wrzesniewski & Dutton, 2001), and not for managing stress (Folkman & Moskowitz, 2004). Clearly, the underlying process of these relationships should be further investigated in future research.

The second hypothesis, which was tested, supposed that the employees' work engagement is positively related to their in-role performance. This hypothesis has not been supported through the supervisor-appraised job performance. It was only confirmed by the self-appraised job performance. This signifies that employees who reported high levels of work engagement, also reported high own job performance ratings. In contrast, supervisors did not assess engaged employees higher on job performance than non-engaged employees. These differences may have arisen through basing the job performance ratings on different aspects of job performance by raters (Cascio, 1998). When inspecting the correlation table (see Table 2), we can observe that the sub-dimensions of work engagement, *vigor* and *dedication*, were positively

correlated with self-appraised job performance, while only *dedication* was positively correlated with supervisor-appraised job performance. Prior research on these sub-dimensions demonstrated that *vigor* and *dedication* are similar to motivational concepts developed in the past. It was found that *vigor* resembles the concept of intrinsic motivation (Deci & Ryan, 1985). Applied to this study, this might imply that employees with a high level of *vigor* might be more intrinsically motivated and therefore might rate themselves higher than their supervisors would do. Supervisors may not observe the energy and endurance of their employees, thus, may not recognize their intrinsic motivation. Returning to prior research findings, *dedication* was compared to the construct of job involvement (Brown, 1996; Lee, Carswell, & Allen, 2000). Employees, who are dedicated to their profession, might be regarded as more involved than others. These employees might receive and give themselves high job performance appraisals. In comparison to the two sub-dimensions *vigor* and *dedication*, *absorption* is a phenomenon that is less often experienced (González-Romá, Schaufeli, Bakker, & Lloret, 2006; Langelaan, Bakker, Van Doornen, & Schaufeli, 2006).

Through additional analyses, I found that job crafting was directly related to self-appraised job performance. This direct relationship was also established in several other studies (Bakker et al., 2012; Grant & Parker, 2009). Contrary to the expectation, high level of job crafting did not result in high supervisor-appraised job performance. Evidently, employees who rated high on job crafting provided themselves with better job performance ratings, while supervisors did not assess job crafters' performance as high as job crafters evaluated themselves. On the one hand, a possible explanation for these findings might be that job crafting does not predict better job performance, but merely makes employees believe that they are performing better in their jobs. On the other hand, it could be supposed that job crafting predicts improved

job performance, but only in manners that are unobserved by supervisors (for example, going the extra mile, helping others etc.).

The final finding of this study is the deficiency of a mediating effect of work engagement in the relationship between job crafting and self-appraised job performance. Thus, I could not acquire evidence for clarifying the nature of this relationship by work engagement (H3). Presumably, employees' personal initiatives for crafting a work environment in a manner that matches their preferences, personal abilities, and needs could be sufficient for believing and feeling as if they are performing better. Employees' work engagement appears to play no role in the relationship between job crafting and self-appraised job performance. Due to the non-consistent finding with prior research (Bakker et al., 2012; Tims et al., 2014), it is recommended to further investigate the role of work engagement in the relationship between job crafting and job performance.

### **Limitations and Future Research**

In this section, I explain the research limitations regarding to study design, sample size and composition, and questionnaires. Moreover, I offer recommendations for further research.

Firstly, I used a cross-sectional, correlational study design to examine the relationships between job crafting, work engagement, and job performance. However, this is not an adequate method to study cause-and-effect inferences. In a previous long-term study, reversed causality was found between job crafting and work engagement (Tims et al., 2014). Accordingly, it was argued that work engagement, reported at a specific point in time, predicted job crafting in the succeeding month. In addition, job crafting was also predictive of work engagement in the third month. Thus, job crafting may promote work engagement, and work engagement may also

stimulate job crafting (Tims et al., 2014). By using a long-term study in future research, cause-and-effect inferences can be established. All three variables (*job crafting*, *work engagement*, and *job performance*) should be measured at different points in time. Then, the relationships between these variables should be investigated again. This may provide us with reliable results about the exact direction of the relationships.

A second limitation of the current study is the small sample size. As a consequence of this small sample size ( $N = 88$ ), it is difficult to generalize the findings to the entire population. Therefore, larger sample sizes are especially essential in quantitative research (Field, 2013). Thus, it is important to increase the sample size in the future for valid tests of the hypotheses.

An additional limitation is that the variance of the study sample was limited, because employees had recently participated in a talent development program. This denotes a relatively homogenous group of participants who stood out in a positive manner in the past. It is conceivable that these employees are more probable to craft their job (Lyons, 2008; Wrzesniewski & Dutton, 2001). In future research, the sample composition should be more heterogeneous.

The final limitation concerns the translation of the job crafting questionnaire. During the translation process, it was impossible to avoid the risk of error (Hunt & Bhopal, 2004). Translations can cause a loss of the items' original meaning; consequently, the reliability of the scales may decrease. Thus, it would be more sufficient to employ the original version of the job crafting scale in the future.

## **Practical Implications**

The practical implications of the present study rely on following findings:

1. Job crafting predicted work engagement and self-appraised job performance.
2. Job crafting was unrelated to supervisor-appraised job performance.

Clearly, job crafting might be a beneficial instrument and strategy to enhance the feelings of positive fulfillment at work. Due to job crafting, employees may feel more positive about themselves and be more engaged. Furthermore, crafting a job may lead to feelings of productivity. If managers aim to enhance these feelings of their employees, managers as well as employees may be aware of the concept of job crafting. Moreover, managers may provide opportunities for this kind of proactive behavior and stimulate this actively. If employees desire to promote their personal development and be more engaged in their job, they have to embrace these opportunities and start crafting their personal work environment.

As previously mentioned, job crafting may not actually affect job performance. Employees may only believe that they are performing better. However, it might be also possible that job crafting affects job performance in such a way that managers do not observe. Speculatively, managers may especially notice behaviors that facilitate the organization's aims, such as job crafting behavior that is motivated by performance-enhancement (a motive involving a rational desire to perform work activities effectively) (Chen, Lam, & Zhong, 2007). For instance, in a recent study it was detected that feedback-seeking behavior (social job resource) predicted objective job performance when managers felt that the behavior was regulated by performance-enhancement motives (Chen et al., 2007). Job crafting behavior, driven by performance-enhancement, might be directed to the improvement of work goals. Additionally, this may also increase the quality of job requirements (Chen et al., 2007). This indicates that the

performance-enhancement motive might be the most crucial predictor for positive appraisals of job crafting behavior. Therefore, if managers aim to enhance individual job performance through job crafting, I highly recommend stimulating job crafting behavior that is driven by performance-enhancement motives as general job crafting behavior does not reliably appear to predict better job performance. However, if managers generally aim to improve individual job performance, they might want to consider other interventions than stimulating job crafting behavior. In sum, job performance improvement due to job crafting may not be tangible enough, as it may only exist in the employees' minds.

## **Conclusion**

Several prior studies argued that job crafting is an imperative phenomenon that predicts positive outcomes in a work context, such as work engagement and job performance. The present study highlights the intriguing possibility that general job crafting behavior does not predict employees' job performance. Nevertheless, job crafters may only believe that they are performing better in their professions.

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## APPENDIX A

### Invitation email to participants

Sehr geehrte Frau..., Sehr geehrter Herr...,

im Rahmen des Talent Managements bei [REDACTED] möchten wir untersuchen, wie das proaktive Gestalten der eigenen Aufgabenbereiche die Erfüllung in der Arbeit und die individuell erbrachte Leistung beeinflussen. Diese Studie erfolgt im Rahmen einer Masterarbeit bei [REDACTED].

An der Studie nehmen die Teilnehmer/-innen des [REDACTED]-[REDACTED] Qualifizierungspool der vergangenen Jahre teil. Aufgrund der vorgegebenen Aussagen möchten wir gerne wissen, wie Sie Ihren Arbeitsplatz gestalten, ob Sie in der Arbeit Erfüllung finden und wie Sie Ihre individuelle Leistung einschätzen. Mit Ihrer Unterstützung können wir repräsentative Ergebnisse erzielen und wichtige Handlungsempfehlungen in der Personalarbeit ableiten.

Um die Qualität der Studie zu erhöhen, wird auch Ihre Führungskraft gebeten, Ihre Leistung einzuschätzen. Dies erfolgt unabhängig von Ihrer Selbsteinschätzung und mit Codes verschlüsselt, sodass die Antworten nicht auf Einzelpersonen zurückzuführen sind. **Somit bleibt die Befragung in jeder Hinsicht anonym. Die Daten werden nur als Gesamtergebnis dem Bereich [REDACTED] vorgestellt. Die Studie wurde im Vorfeld mit dem Betriebsrat und Datenschutz abgestimmt.**

Die Durchführung der Befragung dauert **ca. 10 Minuten**. Bitte füllen Sie Ihren Fragebogen bis **spätestens 27. Januar 2015 aus**.

Um die Befragung zu starten, aktivieren Sie bitte folgenden Link:

**LINK**

Die Ergebnisse der Studie stellen wir Ihnen gerne nach Abschluss der Arbeit vor.

Da die Aussagekraft dieser Arbeit von der Gesamtzahl der Teilnehmer/-innen wesentlich abhängt, bitten wir Sie um Ihre Teilnahme.

Für Rückfragen und weitere Informationen steht Ihnen Frau Rana Jradi per Email (r.jradi@[REDACTED].de) oder telefonisch ([REDACTED]) gerne zur Verfügung.

Vielen Dank für Ihre Teilnahme!

Mit freundlichen Grüßen,

Rana Jradi (Mislím)

## Main survey

### Willkommen bei dieser Umfrage

Sehr geehrte Teilnehmerin,  
Sehr geehrter Teilnehmer,

vielen herzlichen Dank, dass Sie an dieser Studie teilnehmen. Sie ist Teil meiner Masterarbeit im Bereich Arbeits-, Organisations- und Gesundheitspsychologie an der Radboud Universität in Nijmegen (Niederlande).

Ständig wachsende Tätigkeitsanforderungen und eine wachsende Erwartung der Mitarbeiter/-innen nach individueller Gestaltung der eigenen Aufgabenbereiche beschreiben unseren beruflichen Alltag. In dieser Studie möchten wir untersuchen, wie das proaktive Gestalten der eigenen Aufgabenbereiche die Erfüllung in der Arbeit sowie die individuell erbrachte Leistung beeinflusst.

Die Umfrage erfolgt auf freiwilliger Basis und nimmt ca. 10 Minuten Ihrer Zeit in Anspruch. Bitte beachten Sie, dass es keine richtigen oder falschen Antworten gibt, sondern dass Ihre persönliche Meinung gefragt ist. Ihre Antworten werden vollständig anonym und vertraulich behandelt. Auch werden Ihre persönlichen Angaben nicht an Dritte weitergegeben. Die Studie wurde im Vorfeld mit dem Betriebsrat und Datenschutz abgestimmt.

Damit die Daten statistisch korrekt ausgewertet werden können, bitte ich Sie den Fragebogen komplett auszufüllen.

Vielen Dank für Ihre Teilnahme!

Mit freundlichen Grüßen,  
Rana Jradl

Weiter

Bitte beantworten Sie folgende Fragen zu Ihrer Person:

Welches Geschlecht haben Sie?

- weiblich
- männlich

Wie alt sind Sie?

- < 20 Jahre
- 20 - 30 Jahre
- 31 - 40 Jahre
- 41 - 50 Jahre
- 51 - 60 Jahre
- 61 - 70 Jahre

Haben Sie eine Führungsposition?

- Ja
- Nein

Wie lange arbeiten Sie schon bei der Fraport AG?

- 1 - 5 Jahre
- 6 - 10 Jahre
- 11 - 15 Jahre
- 16 - 20 Jahre
- 21 - 25 Jahre
- 26 - 30 Jahre
- > 31 Jahre

Bitte geben Sie mithilfe der Skala an, wie häufig folgende Aussagen auf Sie zutreffen:

	Nie	Manchmal	Regelmäßig	Oft	Sehr oft
Ich versuche meine Fähigkeiten kontinuierlich weiterzuentwickeln.	<input type="radio"/>				
Ich versuche mich selbst professionell weiter zu entwickeln.	<input type="radio"/>				
Ich versuche Neues bei der Arbeit zu lernen.	<input type="radio"/>				
Ich stelle sicher, dass ich meine Kapazitäten voll ausnutze.	<input type="radio"/>				
Ich entscheide selbst, wie ich etwas tue.	<input type="radio"/>				
Ich achte darauf, dass ich weniger psychisch anstrengende Arbeit verrichten muss.	<input type="radio"/>				
Ich achte darauf, dass ich weniger emotional anstrengende Arbeit verrichten muss.	<input type="radio"/>				
Ich achte darauf, dass ich den Kontakt zu den Menschen minimiere, deren Probleme mich emotional beeinflussen.	<input type="radio"/>				
Ich achte darauf, dass ich den Kontakt zu den Menschen minimiere, deren Erwartungen unrealistisch sind.	<input type="radio"/>				
Ich stelle sicher, dass ich nicht zu viele schwierige Entscheidungen bei der Arbeit treffen muss.	<input type="radio"/>				
Ich achte darauf, dass meine Arbeit keine langen Konzentrationsphasen am Stück erfordert.	<input type="radio"/>				
Ich bitte meine Führungskraft um Beratung.	<input type="radio"/>				
Ich frage, ob meine Führungskraft zufrieden mit meiner Arbeit ist.	<input type="radio"/>				
Ich suche bei meiner Führungskraft nach Inspiration.	<input type="radio"/>				
Ich frage andere nach Feedback zu meiner Arbeitsleistung.	<input type="radio"/>				
Ich frage meine Kollegen nach Rat.	<input type="radio"/>				
Wenn ein interessantes Projekt ansteht, biete ich mich proaktiv als Projektmitarbeiter an.	<input type="radio"/>				
Wenn es neue Entwicklungen gibt, bin ich eine(r) der ersten, die/ der sich darüber informiert und diese ausprobiert.	<input type="radio"/>				
Wenn es etwas ruhiger bei der Arbeit ist, sehe ich dies als eine Gelegenheit, um ein neues Projekt zu starten.	<input type="radio"/>				
Ich übernehme regelmäßig zusätzliche Aufgaben, auch wenn ich dafür kein zusätzliches Gehalt bekomme.	<input type="radio"/>				
Durch die Untersuchung der Zusammenhänge verschiedener Aspekte meines Jobs, versuche ich meine Arbeit anspruchsvoller zu gestalten.	<input type="radio"/>				

weiter

Bitte geben Sie mithilfe der Skala an, wie häufig folgende Aussagen auf Sie zutreffen:

	Nie	Fast nie	Ab und zu	Regelmäßig	Häufig	Sehr häufig	Immer
Bei meiner Arbeit bin ich voll Energie.	<input type="radio"/>						
Beim Arbeiten fühle ich mich fit und tatkräftig.	<input type="radio"/>						
Wenn ich morgens aufstehe, freue ich mich auf meine Arbeit.	<input type="radio"/>						
Ich bin von meiner Arbeit begeistert.	<input type="radio"/>						
Meine Arbeit inspiriert mich.	<input type="radio"/>						
Ich bin stolz auf meine Arbeit.	<input type="radio"/>						
Ich fühle mich glücklich, wenn ich intensiv arbeite.	<input type="radio"/>						
Ich gehe völlig in meiner Arbeit auf.	<input type="radio"/>						
Meine Arbeit reizt mich mit.	<input type="radio"/>						

Weiter

Bitte schätzen Sie Ihre aktuelle Leistung im Job ein (es ist nur eine Auswahl möglich):

Ich erbringe eine Leistung, die den Erwartungen an die Ausführung der Aufgaben in einigen Punkten entspricht.  
 Ich erbringe eine Leistung, die den Erwartungen an die Ausführung der Aufgaben in den meisten Punkten entspricht.  
 Ich erbringe eine Leistung, die den Erwartungen an die Ausführung der Aufgaben in allen Punkten entspricht.  
 Ich erbringe eine Leistung, die in den meisten Punkten die Erwartungen an die Ausführung der Aufgaben deutlich übertrifft.  
 Ich erbringe eine Leistung, die in allen Punkten die Erwartungen an die Ausführung der Aufgaben sehr deutlich übertrifft und zusätzlich durch persönliche Impulse gekennzeichnet ist.

Abschicken

## Invitation email to supervisors

Sehr geehrte Frau..., Sehr geehrter Herr...,

im Rahmen des Talent Managements bei [REDACTED] möchten wir untersuchen, wie das proaktive Gestalten der eigenen Funktion die Erfüllung in der Arbeit sowie die individuell erbrachte Leistung beeinflussen. Diese Studie erfolgt im Rahmen einer Masterarbeit bei [REDACTED].

An der Studie nehmen die Teilnehmer/-innen des [REDACTED]-[REDACTED] Qualifizierungspool der vergangenen Jahre teil. Sie werden zur Gestaltung ihres Arbeitsplatzes und Erfüllung in der Arbeit befragt. Weiterhin werden sie gebeten, ihre individuelle Leistung einzuschätzen.

Um die Qualität der Studie zu erhöhen, werden Sie als Führungskraft gebeten, die individuelle Leistung Ihrer Mitarbeiterin/ Ihres Mitarbeiters einzuschätzen. Dies erfolgt unabhängig von der Selbsteinschätzung der Mitarbeiterin/ des Mitarbeiters und mit Codes verschlüsselt, sodass die Antworten nicht auf Einzelpersonen zurückzuführen sind. **Somit bleibt die Befragung in jeder Hinsicht anonym. Die Daten werden nur als Gesamtergebnis dem Bereich [REDACTED] vorgestellt. Die Studie wurde im Vorfeld mit dem Betriebsrat und Datenschutz abgestimmt.**

Die Durchführung der Befragung dauert **ca. 1 Minute**. Bitte füllen Sie Ihren Fragebogen bis **spätestens 27. Januar 2015 aus**.

Um die Befragung zu starten, aktivieren Sie bitte folgenden Link/ folgende Links:

**Name Mitarbeiter/-in: LINK**

**Bitte beachten Sie, dass Sie zu jeder Ihrer Mitarbeiterinnen/ zu jedem Ihrer Mitarbeiter einen individuellen Link erhalten!**

Die Ergebnisse der Studie stellen wir Ihnen gerne nach Abschluss der Arbeit vor. Da die Aussagekraft dieser Arbeit von der Gesamtzahl der Teilnehmer/-innen wesentlich abhängt, bitten wir Sie um Ihre Teilnahme.

Für Rückfragen und weitere Informationen steht Ihnen Frau Rana Jradi per Email (r.jradi@[REDACTED].de) oder telefonisch ([REDACTED]) gerne zur Verfügung.

Vielen Dank für Ihre Teilnahme!

Mit freundlichen Grüßen,

Rana Jradi (Mislím)

## Additional survey for the supervisor-appraisal of job performance

### Willkommen bei dieser Umfrage

Sehr geehrte Führungskraft,

vielen herzlichen Dank, dass Sie an dieser Studie teilnehmen. Sie ist Teil meiner Masterarbeit im Bereich Arbeits-, Organisations- und Gesundheitspsychologie an der Radboud Universität in Nijmegen (Niederlande).

Da es immer schwerer wird den Mitarbeitern den optimalen Job zu ermöglichen, ist es wichtig, dass die Mitarbeiterinnen/ Mitarbeiter auch selbst die Initiative ergreifen und den eigenen Arbeitsplatz mitgestalten, um die eigene Erfüllung in der Arbeit und die individuell erbrachte Leistung zu erhöhen.

Um dieses Verhalten bei Fraport Mitarbeitern zu untersuchen, werden Teilnehmer/-innen des Take-Off-Qualifizierungspool der vergangenen Jahre befragt.

Mit dem Ziel, die Qualität der Studie zu erhöhen, bitten wir Sie um die Einschätzung der individuellen Leistung Ihrer Mitarbeiterin/ Ihres Mitarbeiters.

Auf der nächsten Seite werden Sie um die Einschätzung der individuellen Leistung Ihrer Mitarbeiterin/ Ihres Mitarbeiters gebeten. Dies nimmt ca. 1 Minute Ihrer Zeit in Anspruch. Die Umfrage erfolgt auf freiwilliger Basis und Ihre Antworten werden vollständig anonym und vertraulich behandelt. Auch werden Ihre persönlichen Angaben nicht an Dritte weitergegeben. Die Studie wurde im Vorfeld mit dem Betriebsrat und Datenschutz abgestimmt.

Vielen Dank für Ihre Teilnahme!

Mit freundlichen Grüßen,  
Rana Jradi

weiter

Bitte schätzen Sie die aktuelle Leistung Ihrer Mitarbeiterin/ Ihres Mitarbeiters im Job ein (es ist nur eine Auswahl möglich):

- ⊙ Mein(e) Mitarbeiter(in) erbringt eine Leistung, die den Erwartungen an die Ausführung der Aufgaben in einigen Punkten entspricht.
- ⊙ Mein(e) Mitarbeiter(in) erbringt eine Leistung, die den Erwartungen an die Ausführung der Aufgaben in den meisten Punkten entspricht.
- ⊙ Mein(e) Mitarbeiter(in) erbringt eine Leistung, die den Erwartungen an die Ausführung der Aufgaben in allen Punkten entspricht.
- ⊙ Mein(e) Mitarbeiter(in) erbringt eine Leistung, die in den meisten Punkten die Erwartungen an die Ausführung der Aufgaben deutlich übertrifft.
- ⊙ Mein(e) Mitarbeiter(in) erbringt eine Leistung, die in allen Punkten die Erwartungen an die Ausführung der Aufgaben sehr deutlich übertrifft und zusätzlich durch persönliche Impulse gekennzeichnet ist.

Abschicken

**APPENDIX B****Assumptions of parametric tests and linear regression models****Normal Distribution**

Table 9

*Normal distribution of all scales and subscales*

Scale	Kolmogorov-Smirnov		
	Statistic	df	<i>p</i>
1. Job Crafting	.11	88	.017
2. Increasing structural JR	.09	88	.071
3. Increasing social JR	.12	88	.013
4. Increasing challenging JD	.07	88	.200
5. Decreasing hindering JD	.15	88	<.001
6. Work Engagement	.08	88	.200
7. Vigor	.11	88	.015
8. Dedication	.11	88	.010
9. Absorption	.12	88	.005
10. Job Performance (Self-Appraisal)	.25	88	< .001
11. Job Performance (Supervisor- Appraisal)	.19	88	< .001

*Note.* JR = job resources. JD = job demands.

**Homogeneity of Variance**

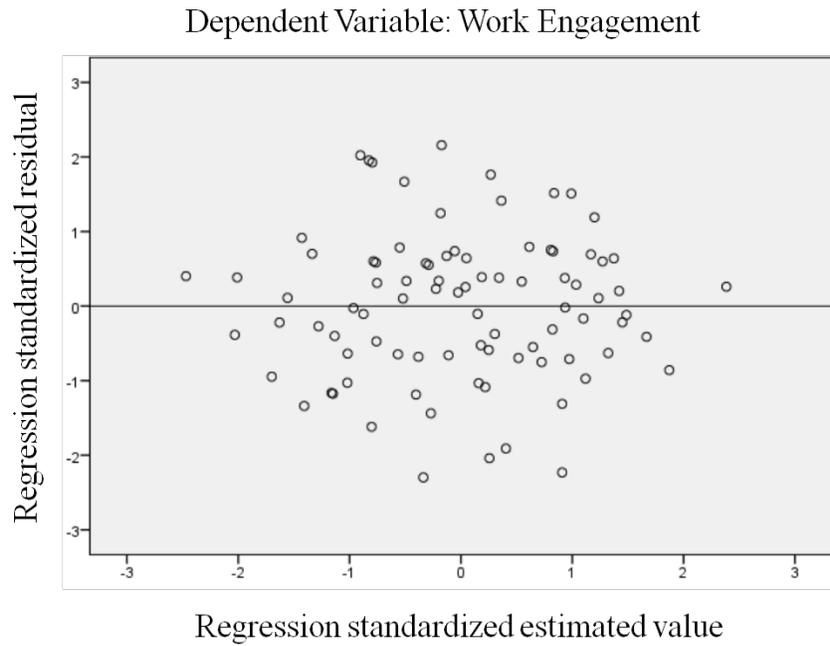


Figure 2. Scatterplot for work engagement as dependent and job crafting as independent variable

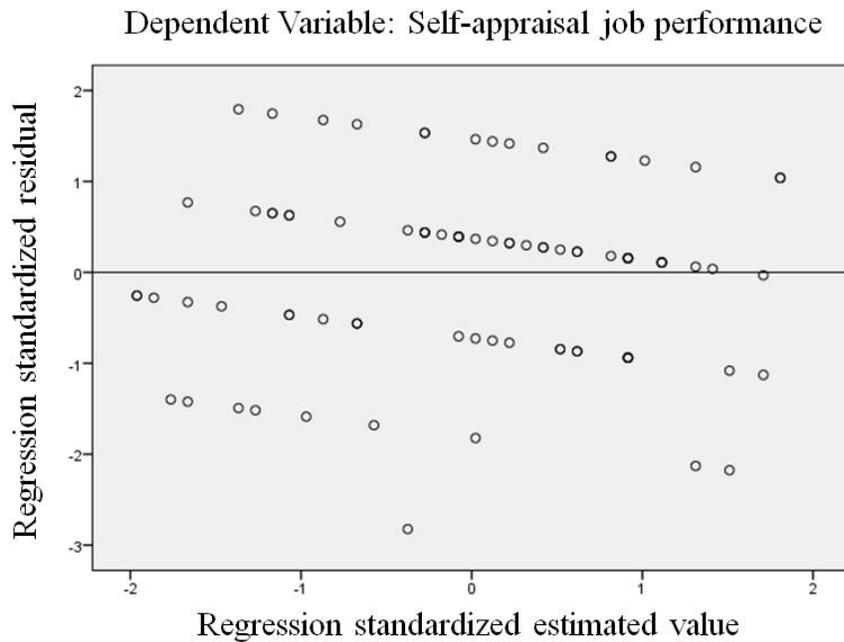


Figure 3. Scatterplot for self-appraised job performance as dependent and work engagement as independent variable

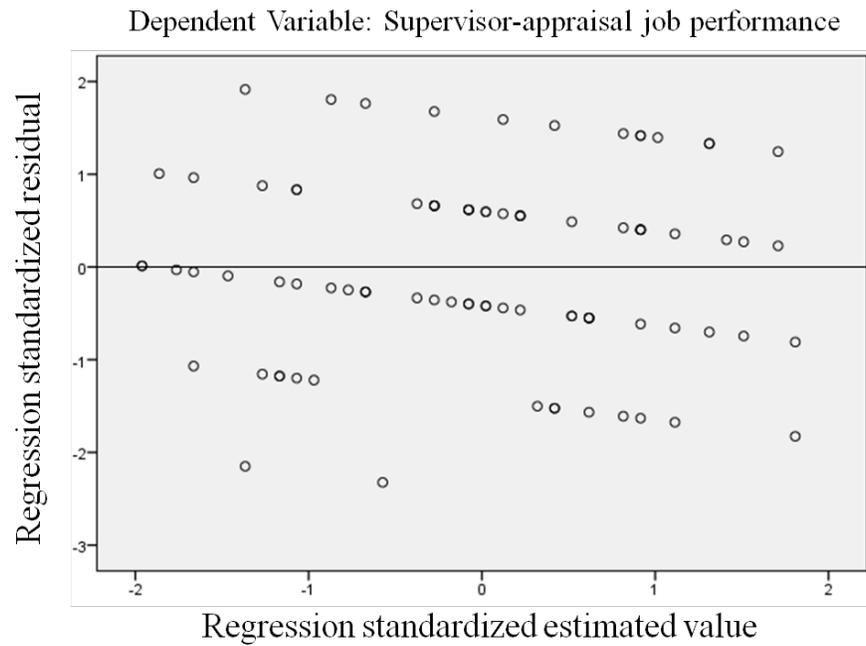
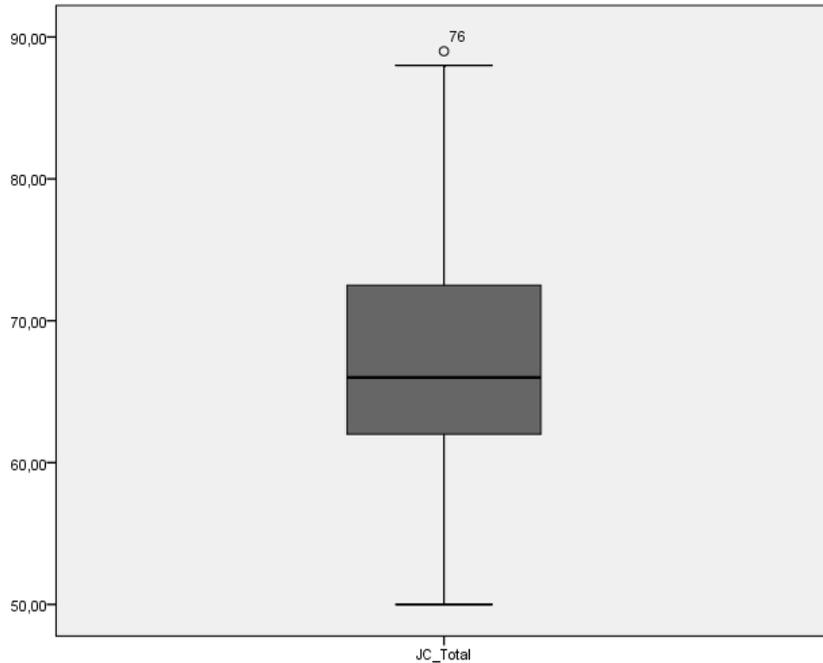


Figure 4. Scatterplot for supervisor-appraised job performance as dependent and work engagement as independent variable

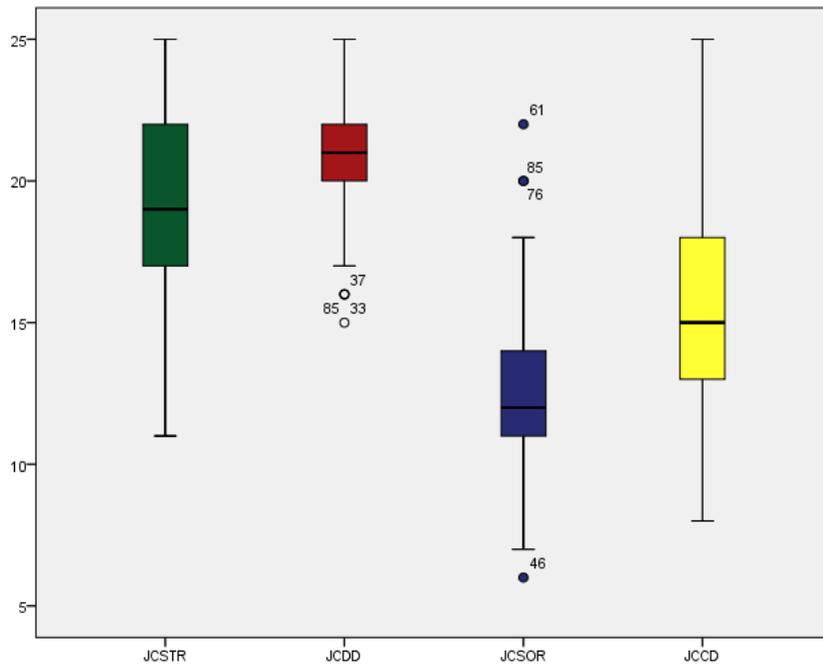
**Outliers**

*Boxplots for each scale and subscale*



JC\_Total = Job crafting

Figure 5. Boxplot for the job crafting scale



- JCSTR = Structural job resources
- JCDD = Hindering job demands
- JCSOR = Social job resources
- JCCD = Challenging job demands

Figure 6. Boxplots for the subscales of job crafting

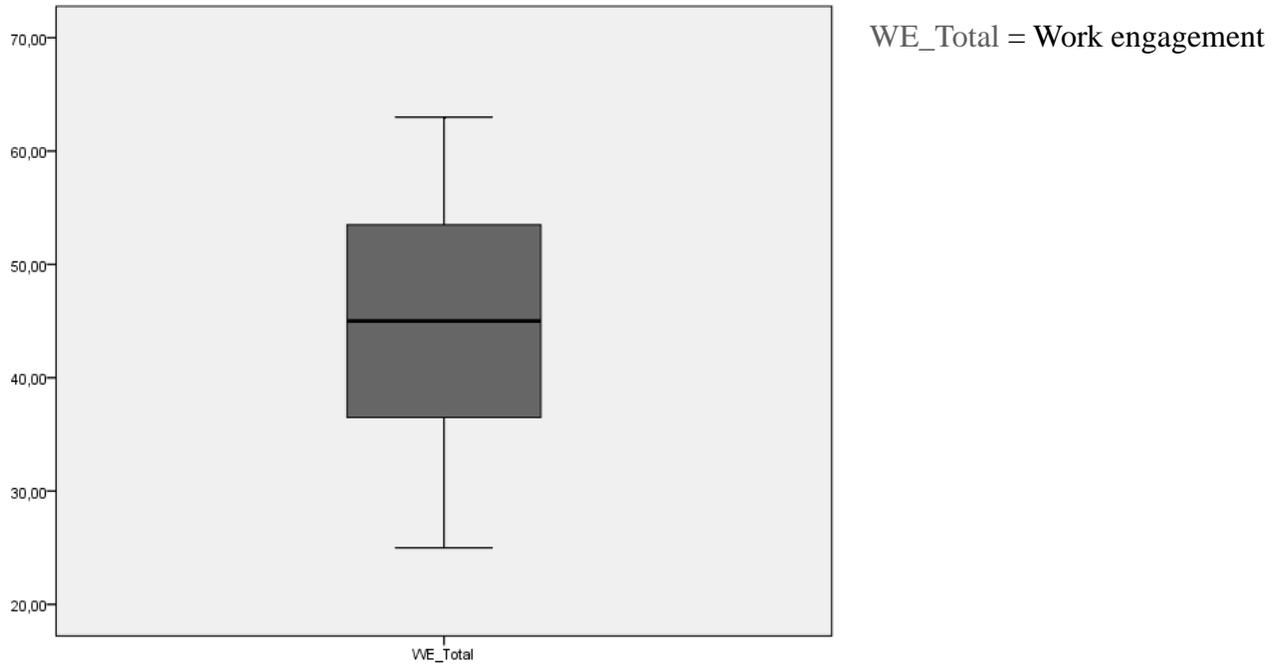


Figure 7. Boxplot for the work engagement scale

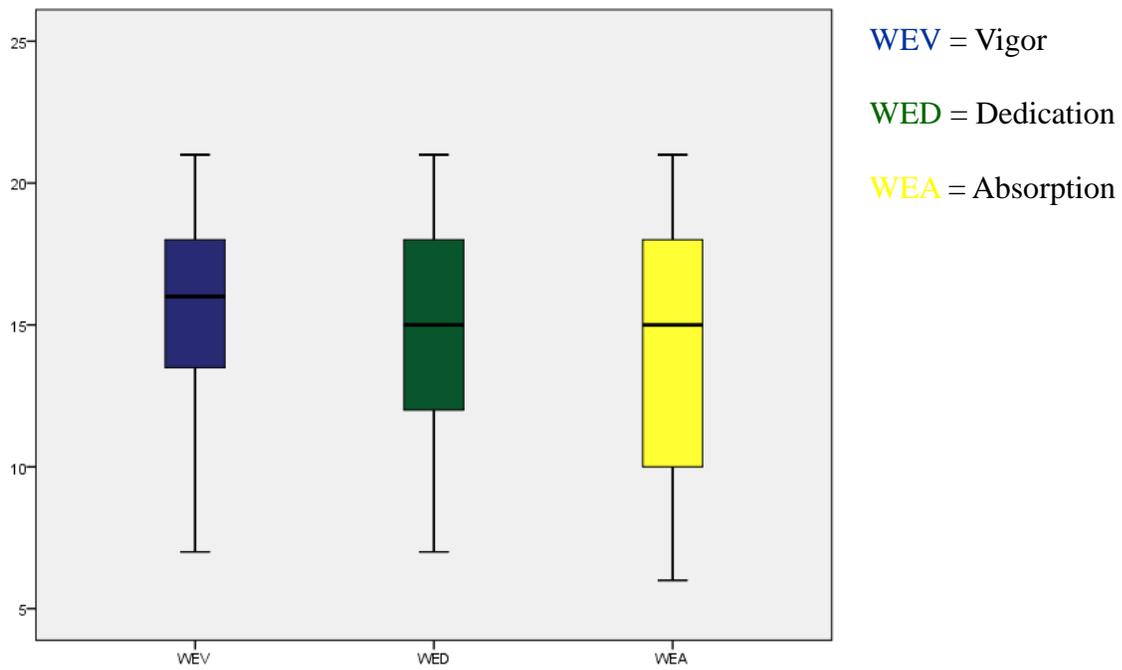


Figure 8. Boxplot for the subscales of work engagement

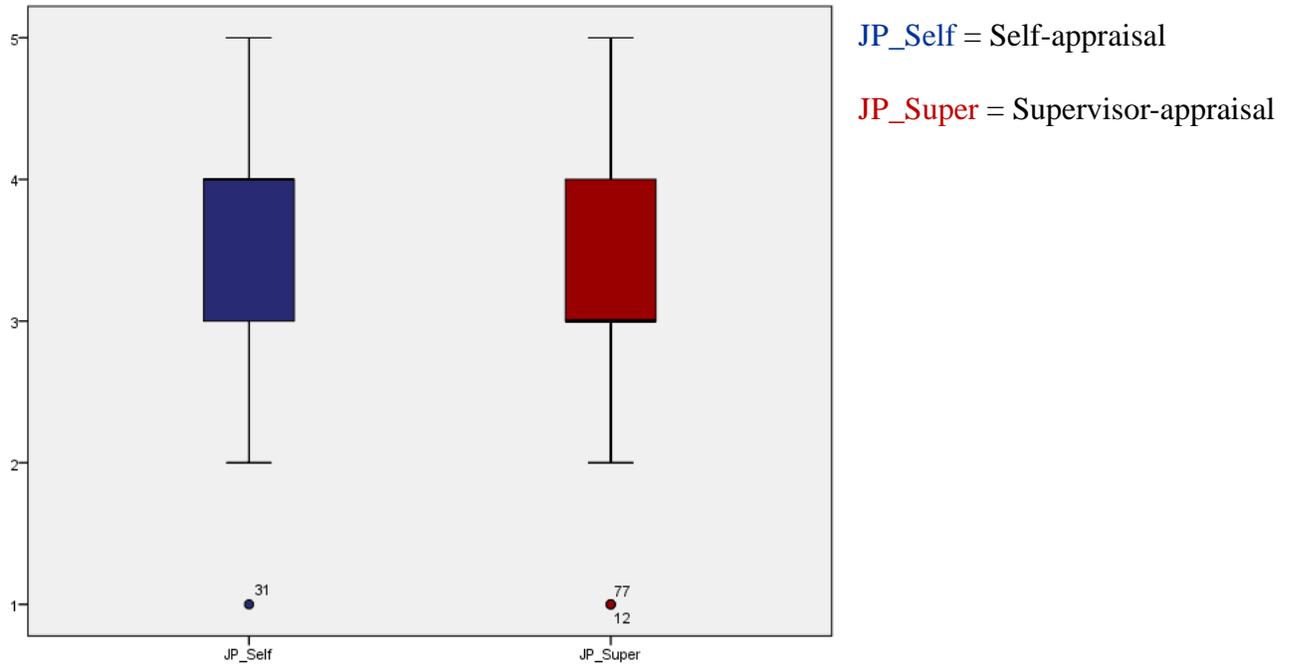


Figure 9. Boxplots for self-appraised and supervisor-appraised job performance

*Correlation table for study variables without outliers*

Table 10

*Means, standard deviations, and correlations among study variables without outliers*

	M	SD	1	2	3	4	5	6	7	8	9	11	12	13
1. Job Crafting	66.97	7.73	1											
2. Increasing structural JR	18.88	3.44	.80**	1										
3. Increasing social JR	12.12	2.67	.55**	.20	1									
4. Increasing challenging JD	15.35	3.48	.81**	.50**	.38**	1								
5. Decreasing hindering JD	20.89	1.70	.22*	.14	-.22*	.10	1							
6. Work Engagement	44.77	10.08	.64**	.63**	.28*	.51**	.14	1						
7. Vigor	15.33	3.16	.58**	.58**	.26*	.50**	.07	.87**	1					
8. Dedication	15.14	3.76	.59**	.60**	.25*	.46**	.10	.92**	.72**	1				
9. Absorption	14.31	4.15	.57**	.55**	.25*	.44**	.20	.93**	.70**	.79**	1			
10. Job Performance (Self-Appraisal)	3.69	.89	.29**	.27*	.21	.31**	.03	.23*	.32**	.17	.17	1		
11. Job Performance (Supervisor- Appraisal)	3.47	.94	.14	.12	.09	.08	-.06	.17	.08	.24*	.15	.19	1	
12. Job Performance (Average of both)	3.53	.77	.31**	.30*	.19	.27*	.02	.28**	.26*	.30**	.21	.77**	.78**	1

Note. JR = job resources. JD = job demands. \* $p < .05$ ; \*\* $p < .01$ .

### Independence of Error

Table 11

*Durbin-Watson test (H1)*

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE	Durbin-Watson-Statistic
1	.14	.02	-.004	10.10	
2	.65	.42	.40	7.79	1.8

*Note.* 1 = control variables (gender, age); 2 = gender, age, job crafting; Dependent variable = work engagement

Table 12

*Durbin-Watson test (H2)*

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE	Durbin-Watson-Statistic
1	.11	.01	-.01	.94	
2	.25	.06	.03	.92	1.8

*Note.* 1 = control variables (gender, age); 2 = gender, age, work engagement; Dependent variable = self-appraised job performance

Table 13

*Durbin-Watson test (H2)*

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE	Durbin-Watson-Statistic
1	.09	.01	-.02	1.01	
2	.22	.05	.02	.99	2.2

*Note.* 1 = control variables (gender, age); 2 = gender, age, work engagement; Dependent variable = supervisor-appraised job performance

### Linearity

Table 14

*Lack of fit test (H1)*

Source	SS	df	MS	F	<i>p</i>
Lack of Fit	1012.94	29	34.93	.5	.986
Pure Error	4281.77	57	75.12		

*Note.* Independent variable = job crafting. Dependent variable = work engagement

Table 15

*Lack of fit test (H2)*

Source	SS	df	MS	F	<i>p</i>
Lack of Fit	30.35	32	.95	1.2	.240
Pure Error	41.33	54	.77		

*Note.* Independent variable = work engagement. Dependent variable = self-appraised job performance

Table 16

*Lack of fit test (H2)*

Source	SS	df	MS	F	<i>p</i>
Lack of Fit	30.28	32	.95	1.0	.535
Pure Error	52.99	54	.98		

*Note.* Independent variable = work engagement. Dependent variable = supervisor-appraised job performance

## APPENDIX C

## Results of regression analyses and mediation analyses

Table 17

*Results of regression analysis with self-appraised job performance as dependent variable*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	3.59	.56			6.4	< .001
	Gender	.20	.21	.11		1.0	.340
	Age	-.07	.13	-.06		-.5	.606
2	(Constant)	1.14	1.01			1.1	.265
	Gender	.15	.20	.08		.8	.453
	Age	-.02	.13	-.01		-.1	.897
	Job Crafting	.04	.01	.30		2.9	.005

*Note.* Control variables = gender, age. Independent variable = job crafting.

Table 18

*Results of regression analysis with average of the two job performance appraisals as dependent variable*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	3.42	.46			7.4	< .001
	Gender	.19	.17	.12		1.1	.276
	Age	-.05	.11	-.05		-.5	.643
2	(Constant)	1.61	.84			1.9	.060
	Gender	.15	.17	.10		.9	.364
	Age	-.01	.10	-.01		-.1	.906
	Job Crafting	.03	.01	.27		2.5	.014

*Note.* Control variables = gender, age. Independent variable = job crafting.

Table 19

*Results of regression analysis with supervisor-appraised job performance as dependent variable*

Model		Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>
		$\beta$	<i>SE</i>	<i>B</i>			
1	(Constant)	3.24	.60			5.4	< .001
	Gender	.18	.23	.09		.8	.430
	Age	-.03	.14	-.03		-.2	.816
2	(Constant)	2.08	1.13			1.8	.069
	Gender	.16	.23	.08		.7	.492
	Age	-.01	.14	-.01		-.1	.952
	Job Crafting	.02	.01	.13		1.2	.229

*Note.* Control variables = gender, age. Independent variable = job crafting.

Table 20

*Results of mediation analysis 1*

A-Relation		B-Relation		C-Relation		C'		Mediation	
Effect	<i>p</i>	Effect	<i>p</i>	Effect	<i>p</i>	Effect	<i>p</i>	Effect	CI
.808	< .001	.02	.038	.04	.005	.03	.077	.004	-.02 - .03

*Note.* A-Relation = relationship between job crafting and work engagement. B-Relation = relationship between work engagement and self-appraised job performance. C-Relation = relationship between job crafting and self-appraised job performance. C' = direct effect of job crafting on self-appraised job performance when including work engagement. Mediation = the indirect effect of job crafting on self-appraised job performance via work engagement. CI = confidence interval

Table 21

*Results of mediation analysis 2*

A-Relation		B-Relation		C-Relation		C'		Mediation	
Effect	<i>p</i>	Effect	<i>p</i>	Effect	<i>p</i>	Effect	<i>p</i>	Effect	CI
.808	<.001	.02	.012	.26	.014	.02	.323	.01	-.004 - .03

*Note.* A-Relation = relationship between job crafting and work engagement. B-Relation = relationship between work engagement and average of the two job performance appraisals. C-Relation = relationship between job crafting and average of the two job performance appraisals. C' = Direct effect of job crafting on average of the two job performance appraisals when including work engagement. Mediation = the indirect effect of job crafting on average of the two job performance appraisals via work engagement. CI = confidence interval