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## Does job crafting assist dealing with organizational changes due to austerity measures? Two studies among Greek employees

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### ABSTRACT

In this paper, we focussed on Greek employees that are heavily affected by austerity-led organizational changes, and studied whether job crafting (defined as seeking resources, seeking challenges, reducing demands) helps them deal with these changes. In the first, cross-sectional study we examined whether job crafting relates to adaptive performance, and whether individuals' assessment of changes moderates this relationship. The results showed that the relationship between reducing demands and adaptive performance was positive for those assessing the changes more positively, and negative for those assessing them more negatively. This interaction was replicated in the second, quasi-experimental field study, where we examined the effects of an intervention designed to help employees deal with organizational changes and increase their well-being, adaptive performance and openness to such changes by stimulating job crafting behaviours. Participants received training and worked for 3 weeks on self-set job crafting goals. The intervention was effective in increasing reducing demands, positive affect and openness to change. Moreover, it had a positive effect on openness to change and adaptive performance through positive effect, but a negative effect on adaptive performance through reducing demands. Thus, the intervention facilitated to some extent employee functioning under unfavourable working conditions that result from austerity measures.

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The financial crisis and the resulting austerity measures have influenced organizational life by putting increasing demands on both organizations and employees (Sinclair, Sears, Zajack, & Probst, 2010). Organizations have to produce more with fewer costs, employees are laid-off, individuals have to work more efficiently with less resources and a higher workload. Such organizational changes have been prominent in Greece, a country that has been affected tremendously by the financial crisis. The austerity measures that have been introduced in Greece involve tax increases, cuts in social benefits and salaries, cuts in public sector employment and reductions in public services provided to citizens (Callan, Leventi, Levy, Matsaganis, & Sutherland, 2011). In an attempt to survive in this unstable environment, organizations in Greece implemented changes that – among other things – concerned pay or other resource cuts, increases in part-time employment and job intensification (Patra, 2012).

Job crafting, or taking charge of one's own working life by creating a meaningful, healthy and motivating work environment for one's self (Grant & Parker, 2009), becomes urgent because organizations are unlikely to invest in job enrichment during recession times. Job crafting refers to pro-active behaviours (Wrzesniewski & Dutton, 2001) that individuals use to shape their job characteristics (i.e., job demands and resources) in order to regulate their motivation and energy levels (Tims & Bakker, 2010). Importantly, job crafting has been found to

facilitate adaptive performance during organizational change (Petrou, Demerouti, & Schaufeli, 2015). In this study, we examine whether job crafting helps individuals (and organizations) deal with austerity-led, organizational changes, and whether job crafting behaviours can be enhanced by means of an intervention.

The idea that employees proactively change their own jobs expands the existing top-down perspectives on job design (Grant & Parker, 2009). Recently, several studies have framed job crafting within the Job Demands-Resources (JD-R) theory (Demerouti & Bakker, 2014), suggesting that employees craft their jobs by regulating the level of job demands and job resources, depending on their needs (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012; Tims & Bakker, 2010). Job resources are the characteristics of the work environment that facilitate employees to achieve their work-related goals, and stimulate personal growth and development, while job demands refer to those aspects of the job that require sustained physical and/or psychological effort or skills and are therefore associated with costs in energy (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

Wrzesniewski and Dutton (2001) introduced the concept of job crafting to refer to the physical and cognitive changes individuals make in their task or relational boundaries in order to make their job more meaningful. In line with this rationale, Petrou and colleagues (2012) conceptualized job crafting in the context of the JD-R model and argued that it captures the "everyday" modifications in job characteristics

that employees pursue voluntarily (Demerouti & Bakker, 2014). Accordingly, employees, who craft their jobs can 1) seek job resources, 2) seek demands/challenges and 3) reduce job demands. *Seeking resources* refers to proactive work behaviours through which employees increase their job resources (e.g., learning new things at work and asking advice from others). *Seeking challenges* represents proactive behaviours such as asking for more responsibilities, which leads to increases in challenging job demands. Lastly, *reducing demands* refers to behaviours that decrease the level of job demands by, for example, ensuring that the job is mentally or physically less demanding. These job crafting behaviours were found to influence perceived job demands and job resources daily (Demerouti, Bakker, & Halbesleben, 2015) and over time (Tims, Bakker, & Derks, 2013), and to have favourable effects on work engagement, burnout, job performance and employability (Tims, Bakker, & Derks, 2012, 2013; Tims, Bakker, Derks, & Van Rhenen, 2013), also in changing environments (Petrou et al., 2012). Importantly, this conceptualization of job crafting has been found to relate to openness to organizational change (Petrou et al., 2015) that refers to the willingness to accept the specific change (Wanberg & Banas, 2000), which is of relevance for the present study. For these reasons, we adopted the three-dimensional approach to job crafting proposed by Petrou and colleagues.

To investigate the role of job crafting during organizational changes, we conducted two studies in Greece after the financial crisis had started and austerity-led organizational changes had been implemented. The first study concerned a heterogeneous sample of Greek employees 2 years after the economic crisis became prominent. The goal of this study was to examine whether job crafting relates positively to employee adaptive performance (i.e., performance related to changing job requirements), and whether this relationship is moderated by how positive or negative employees assessed the implemented austerity-led, organizational changes (i.e., lay-offs, reorganizations, cuts in costs, salary reductions, etc.). In the second, quasi-experimental study, we replicated the results of the first study and examined additionally whether we can train employees who face organizational changes due to austerity measures to craft their demands and resources. Responding to the call of investigating the why and how of interventions (Randall & Nielsen, 2010), next to examining whether a job crafting intervention helps employees adapt during changes, we also tested the psychological mechanisms by which intervention outcomes occur. Our central assumption is that by crafting their job, employees will report improved well-being and adaptation over time.

## Study 1

"Members within work groups – both leaders and employees – can contribute to organizational adaptability by initiating and implementing change" (Griffin, Rafferty, & Mason, 2004, p. 565). We conceptualize adaptive performance as "those aspects of performance related to changing job requirements" (Griffin & Hesketh, 2003, p. 66). Adaptive performance has been operationalized with general measures that include handling emergencies, creative problem-solving, interpersonal

adaptability (Pulakos, Arad, Donovan, & Plamondon, 2000), or behavioural support for change (Herscovitch & Meyer, 2002). Similar to recent approaches (Jundt, Shoss, & Huang, 2015) and following Griffin, Neal, and Parker (2007), we focus on individual task adaptivity, which reflects the degree to which employees cope with and support changes that affect their job roles.

Job crafting is a proactive behaviour enacted by employees to adapt to an uncertain and rapidly transforming work environment (Kira, Van Eijnatten, & Balkin, 2010). Although both adaptive performance and job crafting have to deal with change, the former refers to top-down initiatives (to which individuals need to adhere), whereas the latter refers to self-initiated behaviours that may help individuals to deal with these changes. Through job crafting, employees flexibly modify or create the conditions that help them tailor new tasks or roles to their situation. In line with Wrzesniewski and Dutton (2001), job crafting helps employees to adjust their work to their preferences and find meaning in it, which is particularly important in times where organizations and individuals must adapt to new realities (Peeters, Arts, & Demerouti, 2016). Empirical studies indicate that individuals, who use passive coping (or refrain from using proactive strategies like job crafting) during organizational changes, experience more distress and health problems (Torkelson & Muhonen, 2003), implying that they may be less effective in dealing with change and less open to change. This may be because passive coping behaviours, due to their focus on the "self" in the person–environment relationship, tend to leave the unfavourable aspects of the environment unchanged (cf., Liu & Perrewé, 2005).

Specifically, by seeking job resources, employees expand their resource pool. Organizational change research shows that job resources are particularly helpful during change because they help employees cope with the change, reduce uncertainty (Cooper & Cartwright, 1997), and be more satisfied (Terry, Callan, & Sartori, 1996). Moreover, taking on more responsibilities or focusing on the challenging aspects of the change facilitates employee adjustment (Amiot, Terry, Jimmieson, & Callan, 2006). This is in agreement with Bandura's (1986) social learning theory and with incremental approaches to organizational change (e.g., Orlikowski, 1996), whereby the mastery of increasingly complex challenges helps individuals adjust to a new situation. Finally, when resources are lacking, a successful strategy that individuals use to maintain successful functioning is to select the most important aspect of their job and ignore aspects that require a lot of investment (cf. Baltes, 1997). Therefore, we suggest that individuals who reduce demanding job aspects should be able to preserve resources that they can use to adapt to change. Based on the above, we hypothesize:

*Hypothesis 1:* Job crafting (seeking resources, seeking challenges, and reducing demands) relates positively to adaptive performance.

Researchers have identified various employee responses to an organizational change, ranging from strongly positive (i.e., "this change is essential for the organization to succeed") to

strongly negative (i.e., “this change could ruin the company”; Piderit, 2000). Vakola and Nikolaou (2005) suggested that “change can be received with excitement and happiness or anger and fear, while employees’ response to it may range from positive intentions to support the change to negative intentions to oppose it” (p. 162). Individuals’ assessment of change concerns the evaluation of how favourable (i.e., positive) or unfavourable (i.e., negative) employees perceive the change to be (cf. Bovey & Hede, 2001). Such assessment is subjective in nature and determines behaviour during change (Armenakis, Bernerth, Pitts, & Walker, 2007). Individuals’ assessment of the change may be formed based on the outcome expectancy with respect to the satisfaction of needs (cf., Svensen, Neset, & Eriksen, 2007) or the mentally-represented summary evaluations (cf. Holland, Verplanken, & van Knippenberg, 2002). To this end, when employees understand and agree with the vision of their organization, they are likely to assess positively even changes that are generally regarded as negative, such as downsizing (Svensen et al., 2007). For instance, based on empirical evidence showing that the significant increase in the size of the Greek public sector over the past two decades associated with a decline in the growth performance of the Greek economy (Dalamagas, 2000), it may be argued that public sector employees may assess the reduction of the public sector via lay-offs positively, if they believe that this may enhance productivity.

Individuals’ reactions to changes in the environment may depend on their assessment of change. Research has pointed out that negative evaluations of an object are likely to influence an individual’s awareness of its negative, disliked aspects (Herscovitch & Meyer, 2002; Metselaar, 1997). In contrast, employees who assess changes in a positive manner are more motivated to “collaborate” by displaying extra-role behaviours that benefit their organization. In line with this argument, Kunz and Linder (2015) found that the relationship between need for achievement and intention to engage in innovative behaviour was positive for individuals with a positive attitude towards the change (that incorporates the assessment of change), and negative for individuals less open to new ideas.

In this context, individuals, who assess changes due to austerity as more positive, are more likely to use their job crafting efforts to facilitate their adaptive performance during the change implementation. In contrast, employees, who assess changes more negatively, are less likely to target their job crafting behaviours at facilitating their adaptivity in the context of the implemented organizational changes. This is in line with Tajfel’s (1975) social identity theory as adapted by Ellemers (2003) in the context of organizational change. Accordingly, when individuals assess organizational change as a threat to their organizational identity, they are likely to preserve the dominant, status quo situation and resist to the implementation of the change. Such individuals are less likely to strategically target their job crafting actions towards implementing the suggested organizational changes. Therefore, we hypothesize:

*Hypothesis 2:* Individuals’ assessment of change due to austerity measures moderates the relationship between job

crafting and adaptive performance in a way that this positive relationship is stronger for employees assessing the change more positively (vs. more negatively).

## Method

### Procedure and participants

The sample consisted of 380 employees, working in the public sector (58.4%), the private sector (33.4%), or as self-employed individuals (8.2%). Public sector included central government (19%), local government (12%), national services and organizations (29%) or other services (40%). Private sector included service sector (25%), commerce (11%), education (11%), finance (8%), management (6%) and other sectors (39%). Data were collected via network sampling by students and research assistants, which is a useful technique in terms of ecological validity (Demerouti & Rispens, 2014). Organizations that were known to undergo changes due to austerity measures were approached. Respondents’ mean age was 39.7 years ( $SD = 9.7$ ), their mean organizational tenure was 9.4 years ( $SD = 8.4$ ), 120 of them were men (32%) and 260 were women (68%).

Via two checklists, respondents indicated general changes that they were dealing with, as well as changes that were consequences of the austerity measures. The checklist of the general changes included new tasks (reported by 32% of the participants), new ways of completing the existing tasks (31%), new ways of working with colleagues or clients (28%), new technologies (33%), new products or services (17%), new location (22%), new manager (30%), or “other” (5%). The checklist of the austerity-led changes included lay-offs of colleagues (54%), pay-cuts (87%), decreases in the available resources necessary to complete job tasks (58%), or “other” (10%). The reported percentages suggest that the organizational changes that employees were facing had to do mainly with the austerity measures.

### Measures

Study materials were distributed in the Greek language. Original scales have been translated to Greek with the method of back-translation.

### Control variables

First, we controlled for the fact that different employees may have had to deal with different types of changes (either general changes or austerity-led changes). We dummy coded all types of organizational changes (both general and austerity-led) in order to use them as control variables in the analyses. Second, we controlled for sector in the analyses, because the public sector has been affected more by the austerity-led changes. The self-employed group was too small to form a meaningful comparison group ( $n = 31$ ), so we merged it with the private sector group, thus creating a control variable that compares the public sector to all other sectors. Finally, because we had a quite heterogeneous sample in terms of demographic characteristics, we controlled for gender, age and tenure.

*Job crafting* was measured with the scale of Petrou et al. (2012). Respondents indicated how often they engaged in several behaviours with an answering scale ranging from 1 = never to 5 = always. We used a 4-item shortened version of the 6-item *seeking resources* subscale by excluding two items that in the original scale had factor loadings below .40. An example item is "I ask others for feedback on my job performance" ( $\alpha = .60$ ). *Seeking challenges* included 3 items, such as "I ask for more tasks if I finish my work" ( $\alpha = .81$ ). *Reducing demands* included 4 items, such as "I try to ensure that my work is emotionally less intense" ( $\alpha = .60$ ).

### Individuals' assessment of changes due to austerity measures

Participants assessed the changes that had been implemented due to austerity with a self-constructed single item (i.e., "How negative or positive do you rate these changes to be?") presented to the respondents after the checklist of austerity-led changes including lay-offs of colleagues, pay-cuts and decreases in the available resources necessary to complete job tasks. Participants were asked to respond to this item by having the austerity-led changes they had experienced in mind. The item was rated with a scale ranging from 1 = very negative to 10 = very positive.

*Adaptive performance* was measured with the 3-item individual task adaptivity scale of Griffin et al. (2007). As in the original scale, respondents were asked to rate the items (e.g., "I adapted well to changes in core tasks";  $\alpha = .88$ ) on a scale ranging from 1 ("very little") to 5 (a "great deal") based on their behaviour in the previous 3 months.

### Analytical approach

We conducted stepwise moderated regression analysis with adaptive performance as the dependent variable. In the first step of the regression, we entered all control variables. Specifically, in order to control for the effects of different types of occurring organizational changes, we dummy-coded both checklists of organizational changes, leading to seven dummy-coded types of general changes and three dummy-coded types of austerity-led changes, and we controlled for these 10 variables. In addition, we controlled for sector, age, gender, and tenure. In the second step, we entered the standardized scores of the three job crafting dimensions and of individuals' assessment of changes. In the third step, we

entered the three interaction terms between standardized scores of individuals' assessment of changes and each of the job crafting variables.

## Results

Table 1 provides means, standard deviations and correlations of the study variables. Note that the mean score of assessment of changes was rather low indicating a pervasive negative rating in our sample.

Table 2 presents the results of the regression analyses. Although seeking resources and seeking challenges correlated positively to adaptive performance, the regression analysis suggested that only seeking challenges related positively to adaptive performance ( $\beta = .19, p < .001$ ). This partially supports Hypothesis 1. Furthermore, the interaction term between reducing demands and individuals' assessment of changes related significantly to adaptive performance (Figure 1). Simple slope tests revealed that the link between reducing demands and adaptive performance was positive for employees assessing the changes more positively (i.e., +1SD; estimate = .21,  $z = 2.60, p < .05$ ), and negative for those assessing the changes more negatively (i.e., -1SD; estimate = -.11,  $z = -2.12, p < .05$ ), providing partial support to Hypothesis 2. Analyses without the control variables resulted in the same conclusions. Also, rerunning analyses after excluding all self-employed from the dataset did not alter any of the results. Remarkably, although reducing demands did not relate directly to adaptive performance, which has also been found in earlier research [e.g., Tims et al. (2012) found a non-significant relationship between reducing demands and job performance], this relationship became significant and positive for employees who assessed austerity-led changes more positively. However, the conclusions that can be drawn from this study are limited as it is cross-sectional (and thus, with unclear causal ordering of effects). This calls for replication studies to validate the results using more rigorous tests of causality.

## Study 2

In the second study, we not only aimed to replicate the findings and to overcome some of the limitations of Study 1 by applying an intervention method, but we also examined whether employees' well-being (i.e., positive affect), openness to changes due to austerity measures and adaptive

**Table 1.** Means, standard deviations and inter-correlations between the study variables ( $N = 380$ ) for Study 1.

	M	SD	1	2	3	4	5	6	7	8
1. Sector	1.42	.49	–							
2. Age	39.72	9.65	-.27**	–						
3. Gender	1.68	.47	.00	-.08	–					
4. Tenure	9.39	8.41	-.18**	.69**	.01	–				
5. Seeking resources	2.96	.66	-.10*	-.04	-.01	-.06	–			
6. Seeking challenges	2.43	.96	.07	.05	.08	.02	.30**	–		
7. Reducing demands	2.29	.71	.07	-.06	-.07	.02	.00	-.11*	–	
8. Assessment of changes	2.92	2.06	.09	.15**	-.05	.13*	.01	.13*	.09	–
9. Adaptive performance	3.89	.82	.08	.00	-.05	-.05	.11*	.22**	.00	.13**

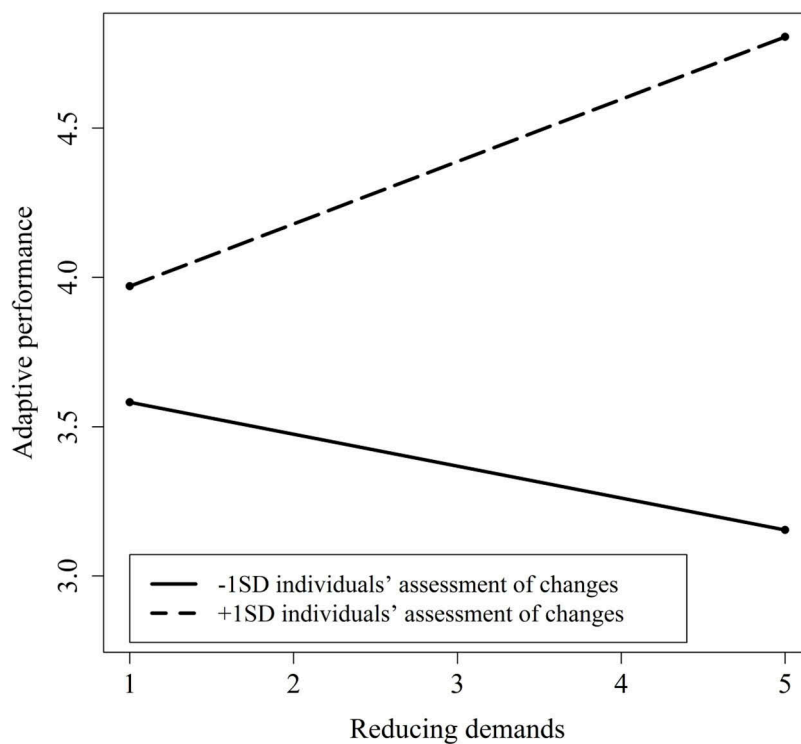
Sector is coded: 1 = public, 2 = all other sectors; dummy coded types of organizational change are not shown for the sake of clarity;

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

**Table 2.** Moderated regression analysis for the moderating effect of attitudes to austerity measures in the relationship between job crafting and adaptive performance for Study 1.

Variable	Adaptive performance								
	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
<i>Control variables</i>									
Sector	.10	.10	.06	.08	.10	.05	.13	.10	.08
Age	.01	.01	.11	.01	.01	.09	.01	.01	.10
Gender	-.04	.09	-.02	-.08	.09	-.05	-.07	.09	-.04
Tenure	-.01	.01	-.10	-.01	.01	-.10	-.01	.01	-.11
<i>General changes</i>									
New tasks	.08	.10	.05	.06	.09	.03	.06	.09	.03
New ways of completing existing tasks	-.15	.10	-.08	-.16	.10	-.09	-.16	.10	-.09
New ways of working with colleagues or clients	-.07	.10	-.04	-.11	.10	-.06	-.11	.10	-.06
New technologies	.18	.10	.10	.17	.09	.10	.16	.09	.09
New products or services	.25*	.13	.11*	.18	.12	.08	.19	.12	.09
New manager	.15	.10	.09	.20*	.10	.11*	.21*	.10	.12*
New location	-.14	.11	-.07	-.13	.11	-.06	-.10	.11	-.05
<i>Austerity-led changes</i>									
Lay-offs of colleagues	-.10	.09	-.06	-.11	.09	-.07	-.15	.09	-.09
Pay-cuts	-.11	.14	-.05	-.10	.14	-.04	-.05	.13	-.02
Decreases in resources	-.10	.09	-.06	-.12	.09	-.07	-.13	.09	-.08
<i>Main effects</i>									
Seeking resources				.05	.05	.07	.06	.05	.08
Seeking challenges				.17***	.04	.20***	.16***	.04	.19***
Reducing demands				.01	.04	.02	.05	.04	.06
Assessment of changes				.06	.04	.07	.04	.04	.04
<i>Interaction effects</i>									
Seeking resources $\times$ Assessment							.01	.04	.02
Seeking challenges $\times$ Assessment							-.03	.04	-.04
Reducing demands $\times$ Assessment							.16**	.05	.16**
$R^2$		.06			.12			.14	
Adjusted $R^2$		.02			.07			.09	
$\Delta R^2$					.06***			.02*	

Sector is coded: 1 = public, 2 = all other sectors; all dummy-coded types of general organizational change as well as all dummy-coded types of austerity-led changes are both compared against the category "other"; Assessment = Assessment of changes \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Figure 1.** The relationship between reducing demands and adaptive performance moderated by individuals' assessment of changes (Study 1).

performance can be improved by stimulating job crafting. This was done by implementing a bottom-up, job crafting intervention, which was initially developed by Van Den Heuvel, Demerouti, and Peeters (2015). This intervention consists of a one-day training that focuses on achieving individual changes at two different levels: (1) cognitions, and (2) behaviour (Zwaan, Van Burik, & Janssen, 2005). To achieve the first goal, employees are encouraged to reflect on their work situation and to recognize their work tasks and aspects of their job that they would like to change. The second goal is achieved through familiarization with the theory on job crafting and the JD-R model (Bakker & Demerouti, 2007), role-modelling, as well as goal-setting, sharing of past experiences, and positive feedback to enforce new behaviour (Bandura, Adams, & Beyer, 1977; Demerouti, Van Eeuwijk, Snelder, & Wild, 2011).

The elements of the intervention are based on social cognitive theory, which suggests that the interaction between the person, the behaviour, and the environment is critical for planning behaviour change interventions, underscoring that people are not passive recipients of an intervention (Bandura, 1989). Accordingly, successful behaviour change is achieved through mastery experiences triggered by vicarious and imagery experiences, verbal persuasion from others, and physiological and emotional states, while goal setting, persistence, and focused selection of activities and environments are also significant. During the training, employees challenge assumptions regarding their work characteristics via group discussions and the sharing of success stories. At the end of the training, employees draw up a personal crafting plan for several weeks. The plan concerns self-chosen job crafting actions that they believe will help them adapt better at work. These goals represent manageable units that enhance efficacy beliefs (Luthans, Avey, Avolio, & Peterson, 2010).

Van Den Heuvel et al. (2015) examined the effectiveness of a similar job crafting intervention among employees in a Dutch police district undergoing a planned reorganization unrelated to austerity. Participants received a one-day training, after which they worked on two self-set crafting goals per week for four consecutive weeks. The results showed that the intervention group reported less negative affect, higher self-efficacy, higher developmental possibilities and leader member exchange (LMX) in the post-measurement compared to the pre-measurement. The control group showed no significant changes. However, these significant effects were found using simple pre-post comparisons rather than repeated measures ANOVA (that would allow testing the effect of time \* intervention interaction). Moreover, multilevel analyses only for the intervention group showed that on weeks that individuals sought more resources than usual, they reported more autonomy, developmental possibilities, LMX and positive affect.

Applying a modified version of Van den Heuvel et al.'s (2015) intervention, Gordon, Demerouti, Le Blanc, Bipp, and Bakker (2013) tested the impact of the job crafting intervention on employee well-being and job performance by using a group of Dutch medical specialists and a group of nurses, who were confronted with changes in their work tasks (again, unrelated to austerity). The job crafting intervention had

positive effects on well-being (i.e., work engagement, health, and reduced burnout), and job performance (i.e., adaptive, task, contextual, and objective performance) for both intervention groups. Importantly, whereas Van Den Heuvel et al. (2015) found no effect of the intervention on the job crafting scores, Gordon et al. (2013) did find effects of the intervention on the job crafting scores. For this reason, our intervention was based on Gordon et al.'s adaptation, and we asked participants to execute one (rather than two) job crafting action per week. Also, our intervention concerned only two job crafting dimensions and excluded seeking challenges because this behaviour was reported as unlikely to take place in a context of austerity-led organizational changes by participants during four interviews that preceded the intervention. Thus, we hypothesize:

*Hypothesis 3:* Employees participating in the job crafting intervention will experience higher levels of (a) seeking resources, and (b) reducing demands at the follow-up than employees in the control group.

### ***Job crafting intervention to adapt to changes due to austerity***

Previous evidence (Gordon et al., 2013; Van Den Heuvel et al., 2015) suggests that the job crafting intervention is a promising 'bottom-up' job redesign strategy that can improve employee well-being, job characteristics and job performance in changing settings. This is in line with the conclusions of a recent review of various intervention studies aimed at improving job redesign, well-being and performance (Daniels, Gedikli, Watson, Semkina, & Vaughn, *in press*). The reviewed studies provide promising evidence that training workers to improve the quality of their own jobs may enhance well-being and performance in some circumstances, although the results were not consistent across all studies.

Will such a "bottom-up" intervention help employees deal with organizational changes due to austerity measures, as well? During times of organizational changes, uncertainty is high (Griffin et al., 2007). This is particularly the case when changes do not aim at organizational development, but rather at survival in an unstable financial environment (Sinclair, Sears, Probst, & Zajack, 2010). By proactively changing the characteristics of their jobs, individuals increase their control over the situation that usually is lacking in uncertain times (Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004) thereby, adjusting to the change. Hornung and Rousseau (2007) revealed that proactive behaviour enhances confidence to behave in novel ways, which is required when confronted with organizational change. When employees craft their work environment, they may increase person-environment fit (Crant, 2000; Tims, Derks, & Bakker, 2016), which enhances well-being (Kristof-Brown, Zimmerman, & Johnson, 2005). Therefore, we expect that self-directed behaviour resulting from the intervention will lead to higher levels of job-related positive affect. More formally:

*Hypothesis 4:* Employees participating in the job crafting intervention will experience higher levels of positive affect at the follow-up than employees in the control group.

It has been found that some employees actively seek information in order to make sense of the change process and reduce uncertainty associated with the situation, whereas others avoid information seeking, or do so simply for the sake of interacting with peers (Kramer, Dougherty, & Pierce, 2004). Through proactive behaviours like job crafting, individuals are likely to become more open to the undergoing changes and adapt more successfully to these changes. Therefore, and in line with the arguments supporting Hypothesis 1, we suggest that:

*Hypothesis 5:* Employees participating in the job crafting intervention will experience higher levels of (a) openness to change and (b) adaptive performance at the follow-up than employees in the control group.

We aim to replicate the findings of Study 1 with regard to the moderating role of individuals' assessment of changes on the relationship between job crafting and the outcomes of interest (cf. Hypothesis 2). Also, we investigate the psychological processes through which the job crafting intervention may lead to employee functioning during threatening organizational changes. Taking Hypotheses 3–5 together, it is suggested that the job crafting intervention will result in increases in seeking resources and reducing demands that in turn, will influence the outcomes of interest. In other words, the group (intervention vs. control)  $\times$  time (pre- vs. post-test) interaction effect will have an indirect effect on positive affect, openness to change and adaptive performance via its effect on the job crafting behaviours (i.e., mediated moderation, Muller, Judd, & Yzerbyt, 2005). Namely:

*Hypothesis 6:* The intervention will relate to increases in job crafting (i.e., seeking resources and reducing demands) over time that, in turn, will relate positively to changes in (a) positive affect, (b) openness to change and (c) adaptive performance.

## Method

### Participants and procedure

The quasi-experimental design of this study consisted of pre-test and post-test measurements among 72 employees of a municipality in Greece. All participants filled in a survey prior to the intervention (Time 1; T1), and 4 weeks after the intervention (Time 2; T2). The authors have randomly decided to invite employees working in the central building of the municipality to participate in the intervention group, and employees working in peripheral departments (located in other buildings) to form the control group. Participants in the two groups were working in separate locations, which limited communication among employees from the different groups, thus minimizing contamination of the control group from the

experimental group. Employees of all locations were performing similar tasks. Of the 150 employees from the central building, 43 agreed to participate at T1 (29% response rate). Of the 43 people who participated in the intervention group at T1, 30 participated at T2. Of the 72 employees that were working in the separate locations, 45 agreed to participate at T1 (62% response rate). Of the 45 employees who participated in the control group at T1, 42 returned filled in questionnaires at T2. To enhance participation, four employees from the intervention group had the chance to win a gift voucher of 50 euros each during the reflection session that took place 1 month after the T2 measurement.

Participants were predominantly female ( $n = 58$ ; 81%). On average, they were 43.6 years old ( $SD = 6.64$ ), had been working for the municipality for 10.50 years ( $SD = 6.13$ ) and were working on average 40 h per week ( $SD = 2.11$ ). Of the participants, 34% held a university degree. The vast majority of participants were working in social services. Finally, most participants (53%) had a contract of definite duration. Via a checklist similar to the one used in Study 1, participants indicated the type of organizational changes that they were or had been dealing with (during the past month) due to the financial recession. The checklist of the changes was constructed on the basis of the information that had been collected during the four interviews that preceded the intervention (with management and employees of the municipality). Through these interviews, the researchers recorded the specific changes that had been implemented throughout the past month. Participants in the interviews attributed all of these changes to the austerity measures.

On the basis of this information, the checklist included the following changes: performing different/new job tasks (reported by 26% of participants), performing the same tasks in a different way (24%), collaborating with colleagues or civilians in a different way (17%), using different technologies (26%), providing new services (29%), working with a different supervisor (8%), working at a different location (8%), lay-offs of colleagues (22%), pay-cuts (34%), decreases in the available resources (e.g., photocopy paper) needed to complete job tasks (47%) and having to report when starting and leaving work (89%). The first eight types of changes related to job redesign due to personnel lay-offs, while the last change was introduced in an attempt to intensify the work processes by better controlling employee working hours.

As explained by the participants of the interviews, who provided the information regarding the implemented changes, these changes were cost-saving changes, due to austerity. From an open systems perspective (Katz & Kahn, 1966), where the organization is seen as an open system that is in constant interaction with the external environment, it is not surprising that changes in a public service organization in Greece are strongly related to the financial crisis and the related austerity measures. According to Xanthopoulou and Epitropaki (2015), the Greek crisis resulted to very high unemployment rates, while it led Greek organizations to employ severe measures to reduce costs. Approximately 47% of organizations report that they had to lay off people, 45% cut salaries, while most organizations had to introduce significant cuts in resources (e.g., photocopying paper or medical

materials). The additional demands that these austerity-led changes impose on employees are mainly that employees need to find ways to do the same job with fewer resources. For example, as a result of the resource cuts, an employee in the municipality was expected to use less photocopying paper to fulfil the administrative work of citizens or to work without breaks in order to serve the same number of citizens that previously had been served by one or even two more employees, who had been laid off in the meantime.

An ANOVA revealed that those participants who returned the follow-up questionnaire did not differ from participants who did not respond to the follow-up questionnaire on all (T1) measures including sociodemographic characteristics. Moreover, there were no significant differences between the intervention and control group on the demographics, on the type of changes that participants in the two groups were facing (only more participants in the control group reported having a different supervisor), and on the initial values of the study variables except one case: participants in the control group were found to be more open to change at T1 ( $M = 3.63$ ) than participants in the intervention group ( $M = 3.14$ ;  $t(62) = -2.11, p < .05$ ). Thus, the results concerning openness to change should be interpreted with caution.

### Intervention

Participation in the intervention was voluntary. As mentioned, prior to the intervention we conducted four interviews with management and potential participants in order to design the intervention in a relevant way (i.e., capture the specific austerity-led organizational changes that were implemented). All participants completed a baseline (pre-intervention) questionnaire, and then participants from the central municipality building were invited to participate in an intervention (i.e., training). A follow-up (post-intervention) questionnaire was sent to all participants of both groups.

The job crafting intervention consisted of a three-hour training. The training day included some background theory on the JD-R model (Demerouti et al., 2001) and job crafting (Wrzesniewski & Dutton, 2001). The exercises were designed to build awareness of employees' working environment according to the JD-R principles. A simple job analysis was conducted during which participants made an overview of their most important tasks and sub-tasks. Consequently, they focused on job demands and job resources that were relevant for their job and the changes in demands and resources they were experiencing in response to the organizational changes due to the economic recession. Next, the theory on job crafting was explained and participants were asked to identify a work characteristic (demand or resource) or work situation that was affected by the organizational changes and which they could alter via crafting. These personal stories were then discussed in sub-groups in order to help each other find ways of crafting. The trainers walked around during the exercises assisting participants.

The last part of the training was dedicated to preparing a personal crafting plan. In a small booklet, employees were asked to write down crafting goals for the 3 weeks following the training. The goals had to be SMART (Specific, Measurable,

Attainable, Results-oriented and Time-bound). During the first week, participants worked on increasing job resources, during the second week they focused on reducing job demands, and during the third week the goal was again to increase resources. In this way, they started and ended with a more simple assignment as during interviews it was shown that employees found it easier to seek resources than to reduce demands. Additionally, each week participants were asked to make time to reflect on what went well and what they learned that week. At the end of each week, participants received a reminder with the theme of the coming week and the request to complete the weekly questions. A month after the post-intervention measurement took place, participants met again for a reflection session. The goal of this session was to look back on the intervention and look forward to the future. Participants shared experiences, gave each other tips and discussed which elements of crafting they would continue to apply. At the end of the reflection session, the lottery took place.

### Measures

While responding to all items, we asked participants to have the past month as a point of reference such that answers covered the one-month follow-up time of the intervention.

### Questionnaire for the pre- and post-measures

*Job crafting* was measured with the scale of Petrou et al (2012; see Study 1). Because throughout the interviews two additional behaviours were addressed as important job crafting examples, we supplemented the scales of *seeking resources* and *reducing demands* with one additional item per scale. The new item used in the adjusted 5-item subscale of *seeking resources* was "I made sure I had enough variety in my work activities" ( $\alpha_{pre} = .70$ ;  $\alpha_{post} = .72$ ). The new item in the adjusted 5-item subscale of *reducing demands* was "I tried to set less strict deadlines to myself" ( $\alpha_{pre} = .74$ ;  $\alpha_{post} = .86$ ). *Seeking challenges* included 3 items ( $\alpha_{pre} = .85$ ;  $\alpha_{post} = .88$ ). This crafting dimension was measured for the sake of completeness, as our intervention did not include assignments related to seeking challenges. Respondents indicated how often they had engaged in job crafting behaviours in the past month (1 = never to 5 = always).

*Positive job-related affective well-being* was measured with the 6 items of the short version of the Job Affective Well-being Scale (Van Katwyk, Fox, Spector, & Kelloway, 2000) as adapted by Schaufeli and Van Rhenen (2006). Participants indicated how often they had felt the specific emotional states with regard to their job in the past month (1 = never to 5 = very often). Sample items included "My job made me feel enthusiastic" and "at ease" ( $\alpha_{pre} = .82$ ;  $\alpha_{post} = .89$ ).

*Openness to change due to austerity measures* was assessed with four items (e.g., "I am willing to invest time for the implementation of these changes in my organization") validated by Metselaar (1997). Participants responded while having in mind the changes they had experienced during the previous month due to the austerity measures (1 = totally disagree to 5 = totally agree) ( $\alpha_{pre} = .89$ ;  $\alpha_{post} = .92$ ).

*Adaptive performance* was measured with the same three items that were used in Study 1. Respondents were asked to rate the items having the past month as a point of reference on a scale ranging from 1 ("totally disagree") to 5 ("totally agree") ( $\alpha_{pre} = .81$ ;  $\alpha_{post} = .78$ ).

*Individuals' assessment of changes due to austerity measures* was rated with the same item that was used in Study 1. Again, this item was presented to the respondents after the checklist of the austerity-led changes that were implemented in the specific organization (i.e., performing different/new job tasks or the same tasks in a different way, collaborating with colleagues or civilians in a different way, using different technologies, providing new services, working with a different supervisor, working at a different location, lay-offs of colleagues, pay-cuts, decreases in the available resources needed to complete tasks, having to report when starting and leaving work) and took place during the past month (1 = very negative to 10 = very positive).

## Results

In order to replicate the findings of Study 1 (Hypothesis 1 and 2), we performed multilevel analyses with time nested in persons and group membership as a dummy variable (for similar analyses; see Le Blanc, Hox, Schaufeli, Taris, & Peeters, 2007), after controlling for time, group, and their interaction. As all changes were austerity-led and because of the rather small  $N$ , we did not include the specific type of changes as control (dummy) variables. All continuous explanatory variables were centred to the grand-mean. In Table 3, the results of Model 1 show that seeking resources related positively, whereas reducing demands related negatively to adaptive performance. Thus, Hypothesis 1 was supported for seeking resources (whereas for Study 1 this was the case for seeking challenges). Contrary to Hypothesis 1, reducing demands related negatively to adaptive performance. Also, seeking resources related positively to positive affect, adaptive performance and openness to change, and reducing demands related negatively to positive affect.

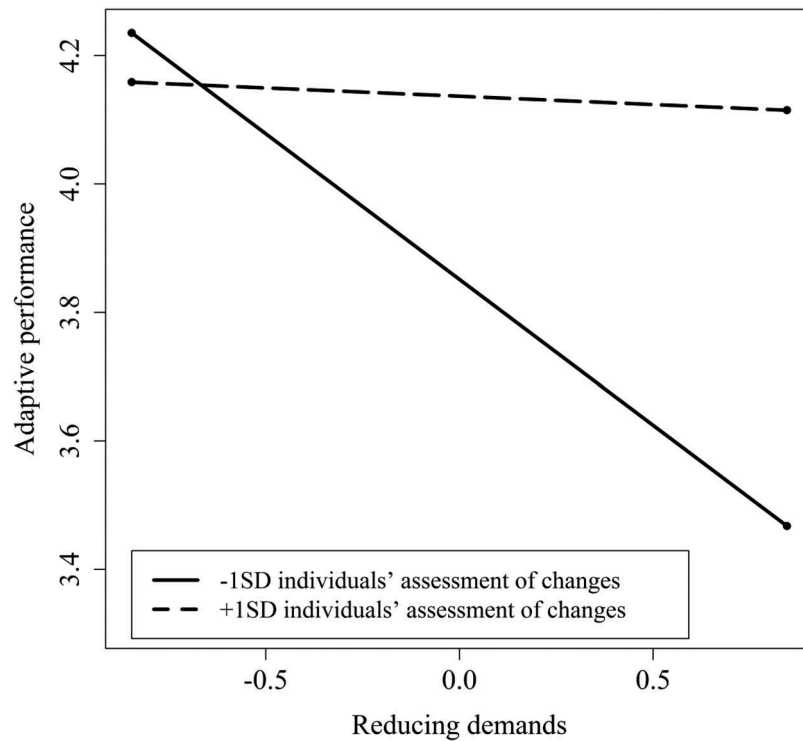
In order to test whether individuals' assessment of changes moderate the link between job crafting and adaptive performance (Hypothesis 2), we added individuals' assessment of changes as well as the interaction terms between the crafting dimensions and individuals' assessment of changes in the equation (Table 3; Model 2). The results showed that individuals' assessment of changes moderated the relationship between reducing demands and adaptive performance in a way that the relationship was negative for those assessing the changes more negatively (for  $-1SD$ : estimate =  $-.45$ ,  $z = -5.39$ ,  $p < .001$ ) and non-significant for those assessing the changes more positively (for  $+1SD$ : estimate =  $-.02$ ,  $z = -.31$ ,  $p = .76$ ; Figure 2). These findings partly replicate the findings of Study 1, where we also found that the relationship between reducing demands and adaptive performance was negative for those who assessed the changes more negatively. Also, we found that the interaction between seeking resources and individuals' assessment of changes on adaptive performance was significant. The relationship was positive for those assessing the changes more positively ( $+1SD$ : estimate =  $.21$ ,  $z = 2.12$ ,  $p = .03$ ), and for those assessing the changes more negatively ( $-1SD$ : estimate =  $.55$ ,  $z = 5.42$ ,  $p < .001$ ). However, the positive relationship was stronger for those assessing the changes more negatively (Figure 3). Although not hypothesized, the same interaction effects were tested also for positive affect and openness to change (Table 3; Model 2). The results were not significant for positive affect. For openness to change both interaction effects were significant and had a pattern similar to the interactions predicting adaptive performance. These results are available from the authors upon request.

To test the effects of the job crafting intervention on the outcomes of interest (Hypotheses 3–5), we performed repeated measures ANOVA. The Box Test of Equality for covariance matrices was not significant for all analyses, except for adaptive performance [ $F(3) = 3.52$ ,  $p = .01$ ]. The results revealed that participants in the intervention group did not report higher levels of seeking resources [ $F(1, 72) = .11$ ,  $p = .74$ ] or seeking challenges [ $F(1, 72) = .02$ ,  $p = .88$ ], but they did report higher levels of reducing demands [ $F(1,$

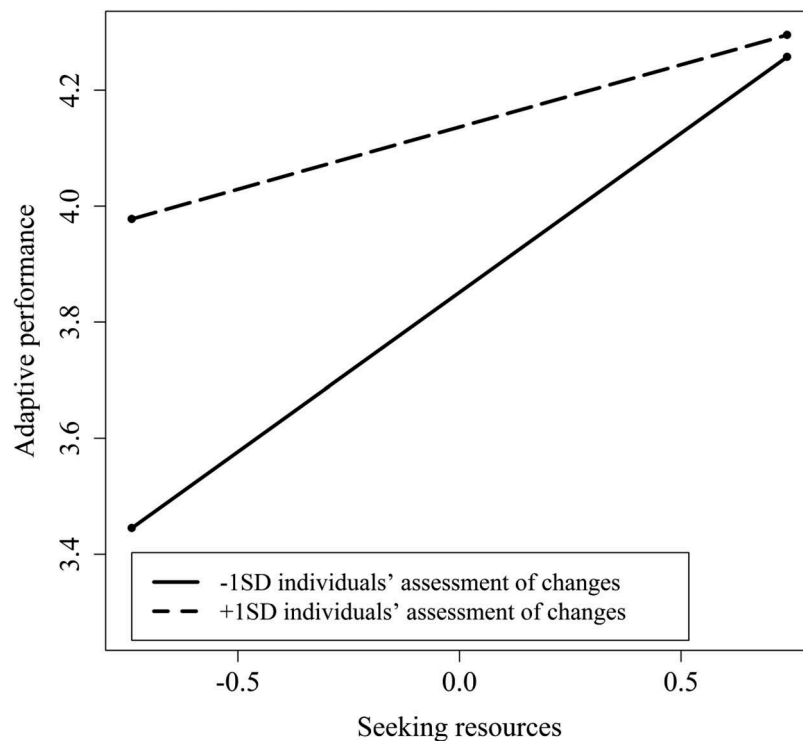
**Table 3.** Multilevel analyses examining mediating and moderating effects ( $N = 72$ ).

Model: Variables	Positive Affect			Openness to Change			Adaptive Performance		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
<b>Model 1: Main Effects</b>									
Intercept	3.615	.100	36.15***	3.594	.137	26.23***	4.035	.085	47.47***
Time (Refer. Category = Pre)	-.068	.096	-.708	-.139	.143	.97	-.280	.117	-2.39*
Group (Refer. Category = Control)	-.188	.156	1.21	-.436	.214	-2.04*	.096	.173	.55
Time x Group	.340	.151	2.25*	.518	.223	2.32*	-.025	.182	-.14
Seeking Resources	.436	.078	5.59***	.235	.105	2.24*	.338	.085	3.98***
Reducing Demands	-.154	.066	-2.33*	-.083	.093	-.89	-.200	.075	-2.67**
<b>Model 2: Moderation</b>									
Intercept	3.547	.103	34.44***	3.587	.132	27.17***	3.994	.093	42.95***
Time	-.149	.118	-1.23	-.145	.138	-1.05	-.263	.116	-2.27*
Group	-.120	.157	-.76	-.408	.206	-1.98*	-.025	.142	-.18
Time x Group	.520	.181	2.87**	.680	.216	6.54***	.197	.180	1.09
Seeking Resources	.471	.082	5.74***	.270	.104	2.60*	.382	.072	5.31***
Reducing Demands	-.146	.069	-2.12*	-.090	.087	-1.03	-.240	.061	-3.93***
Assessment of changes	.057	.024	2.38*	.131	.030	4.37***	.064	.022	2.91**
Seeking Resources x Assessment of changes	-.057	.034	-1.68	-.086	.042	-2.05*	-.075	.032	-2.34*
Reducing Demands x Assessment of changes	.030	.027	1.11	.067	.034	1.97*	.096	.026	3.69***

Time: 0 = Pre and 1 = Post; Group: 0 = Experimental and 1 = Control; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .



**Figure 2.** The relationship between reducing demands and adaptive performance moderated by individuals' assessment of changes (Study 2).



**Figure 3.** The relationship between seeking resources and adaptive performance moderated by individuals' assessment of changes (Study 2).

72) = 3.91,  $p = .05$ ] after the intervention and in comparison with participants in the control group (see Table 4). Further, analyses showed that compared to the control group, the intervention group reported higher levels of positive affect [ $F(1, 72) = 3.79$ ,  $p = .056$ ] and openness to change [ $F(1,$

72) = 5.36,  $p = .02$ ] after the intervention. Finally, the results showed that the intervention group did not show any improvements in adaptive performance, after the intervention [ $F(1, 72) = .21$ ,  $p = .65$ ]. We also conducted paired sample t-tests for the intervention and the control group, separately

**Table 4.** Results of repeated measures GLM ( $n_{\text{intervention}} = 30$  and  $n_{\text{control}} = 42$ ) for Study 2.

Variables	SS	df	MS	F	p	partial $\eta^2$
Seeking Resources	.02	1	.02	.11	.74	.00
Seeking Challenges	.01	1	.01	.02	.88	.00
Reducing Demands	1.21	1	1.21	3.91	.05	.05
Positive Affect	.80	1	.80	3.79	.06	.05
Openness to Change	1.95	1	1.95	5.36	.02	.08
Adaptive Performance	.05	1	.05	.121	.70	.00

**Table 5.** Mean scores, SD, paired sample T-tests for the Study variables ( $n_{\text{intervention}} = 30$  and  $n_{\text{control}} = 42$ ).

Variable	Intervention		t-test		Control		t-test	
	M	SD	t	p <sup>1</sup>	M	SD	t	p <sup>2</sup>
JC: Seeking Resources Pre	2.81	.74			2.85	.67		
JC: Seeking Resources Post	2.78	.78	.21	.835	2.87	.80	-.27	.79
JC: Seeking Challenges Pre	1.90	.98			1.91	.98		
JC: Seeking Challenges Post	1.90	.99	.00	1.00	1.94	.98	-.33	.74
JC: Decreasing Demands Pre	1.90	.65			2.03	.78		
JC: Decreasing Demands Post	2.40	.95	-3.28	.003	2.16	.93	-1.10	.28
Positive Affect Pre	3.44	.81			3.60	.65		
Positive Affect Post	3.67	.71	-2.07	.048	3.52	.79	.73	.47
Openness to Change Pre	3.14	.91			3.63	.86		
Openness to Change Post	3.55	.85	-2.52	.019	3.52	.85	.71	.48
Adaptive Performance Pre	3.98	.78			4.09	.62		
Adaptive Performance Post	3.62	.96	2.05	.050	3.82	.55	2.82	.01
Assessment of Change Pre	6.04	2.38			6.00	2.03		
Assessment of Change Post	4.96	2.28	1.61	.123	6.00	2.22	0.00	1.00

JC: Job Crafting; <sup>1</sup>df = 29; <sup>2</sup>df = 41.

(Table 5). Note that both groups assessed changes more positively at T1 (with means about 6.00), but the experimental group became neutral at T2 (mean about 5). In all examined variables, the control group did not report any significant changes over time; the only exception being adaptive performance, since both groups exhibited a significant decrease in adaptive performance. Taken together, these results support Hypotheses 3b, 4 and 5a, whereas Hypotheses 3a and 5b were rejected. The intervention had no effect on the seeking resources dimension, while both groups reported decreases in adaptive performance over time.

According to Hypothesis 6, post-test increments in job crafting in the intervention (vs. the control) group were expected to relate positively to the three outcomes of interest (i.e., positive affect, openness to change and adaptive performance) over time. Hypothesis 6 was tested by means of multi-level analyses (Table 3; Model 1). The results showed that seeking resources related positively to all outcome variables, while reducing demands related negatively to positive emotions and adaptive performance. The indirect effect of time  $\times$  group to outcomes via the job crafting dimensions that is proposed in Hypothesis 6 was tested only for reducing demands, because seeking resources was not found to be

improved by the intervention. The Monte Carlo test (Selig & Preacher, 2008) supported a significant and negative (rather than positive) indirect effect of time  $\times$  group to adaptive performance (LL = -.187, UL = -.0006) and a non-significant effect to positive affect (LL = -.15, UL = .002) via reducing demands. The indirect effect to openness to change was not tested because reducing demands did not relate significantly to this outcome (Table 3). Therefore, Hypothesis 6 was rejected.

Finally, we performed additional analyses and tested whether individuals reported higher openness to change and adaptive performance because they experienced more positive affect after practicing job crafting, which is in line with the assumptions of Oldham and Hackman (2010). We found that the indirect effect of time  $\times$  group on openness to change through positive affect was significant and positive (LL = .022 to UL = .359). In a similar vein, the indirect effect of time  $\times$  group on adaptive performance via positive affect was also significant and positive (LL = .023 to UL = .345). These findings suggest that participants in the intervention group reported higher positive affect over time (and in comparison to the control group) that in turn, enhanced their openness to change and adaptive performance.

## Overall discussion

In the present study, we examined whether job crafting can help individuals (and organizations) deal with organizational changes that are implemented due to economic recession, whether job crafting can be enhanced by means of an intervention, and through which processes and mechanisms practicing job crafting may facilitate employee functioning. We collected data from two samples of Greek employees, who had been heavily affected by the financial crisis. In Study 1, among a heterogeneous sample of employees, we showed that seeking challenges related positively to adaptive performance. However, reducing demands was found to relate positively to adaptive performance only for those employees who assessed the austerity-led changes more positively. In contrast, the relationship was negative for those assessing the changes more negatively.

As job crafting represented a strategy that related to adaptation during change, we went one step further and trained Greek, public sector employees to craft their demands and resources. Replicating and extending Study 1, in the intervention study (Study 2), we found a similar interaction pattern between reducing demands and participants' assessment of changes due to austerity not only for adaptive performance but also for openness to change. In Study 2, we also found that seeking resources associated positively with adaptive performance and openness to change for those assessing the changes more negatively.

Participants in the intervention group reported higher levels of reducing demands, as well as higher positive affect and openness to change. However, both the experimental and control group showed a significant decrease in adaptive performance over time. Although we cannot oversee the fact that this decrease could be attributed to an external factor that was not considered in this study, it could be also explained by

the findings concerning the moderating role of individuals' assessment of changes. Namely, in this study, reducing demands (a strategy that had been enhanced through the intervention) related negatively to adaptive performance only for those assessing the change more negatively.

Whereas seeking resources did not increase in the intervention group, we found that changes in seeking resources related positively to changes in positive affect, openness to change and adaptive performance. Finally, whereas the effect of the intervention on adaptive performance was explained only by reducing demands, this indirect effect was not in line with expectations since increases in reducing demands in the intervention (vs. the control) group related negatively to adaptive performance. In additional analyses and in line with Oldham and Hackman (2010), we found that participation in the intervention increased openness to change and adaptive performance because individuals felt more positive affect. Taken together, these results support our central conclusion that stimulating employees to craft their job in general, relates to improvements in their well-being, openness to change and adaptation over time. On a negative note, job crafting was not found to be the explanatory mechanism of the effect of the intervention and reducing demands was negatively rather than positively related to adaptive performance (particularly so for those with assessing the changes more negative).

Our research contributes to the literature in several ways. First, we found overall support for the importance of job crafting for employee functioning during detrimental organizational changes. Seeking challenges (Study 1) and seeking resources (Study 2) were found to relate positively to adaptation to change. Even in contexts that are heavily affected by threatening organizational changes that are austerity-led, searching for challenging and motivating aspects in the job, as well as for immaterial resources (e.g., social support, supervisor coaching, feedback, etc.) helps individuals to survive and adapt. As resources are particularly helpful in the context of organizational change (Cooper & Cartwright, 1997), it is essential for organizations to keep channels providing resources open. Moreover, as mastery of complex challenges helps adjust to a new situation (cf. Orlikowski, 1996), it is important to stimulate individuals to adopt such positive work behaviours. Taken together, both studies confirm the beneficial role of expansion crafting (Wrzesniewski & Dutton, 2001) for adaptation and positive functioning even in changing and threatening environments.

Second, a unique contribution of our study is that it uncovered the role of reducing demands during austerity-led organizational changes. Although we suggested that the job crafting dimension of reducing demands would be beneficial for adaptation because of the nature of changes in the specific context (which are detrimental and characterized by reduction of material resources), we found some remarkable results. In Study 1, reducing demands did not relate to adaptive performance, whereas in Study 2 it related negatively to adaptive performance and positive affect. Thus, reducing demands was not generally helpful for employees to adjust to austerity-led organizational changes just like it has been found to decrease work engagement (Petrou et al., 2012) and task performance (Tims et al., 2012).

However, we uncovered under which specific conditions the effects of reducing demands are not detrimental or even positive. Specifically, employees who rated the austerity-led changes more positively seemed likely to reduce the demanding aspects of their job in a constructive way by trying to understand the change (Herscovitch & Meyer, 2002) and not resisting (Bovey & Hede, 2001) or sabotaging it (Stensaker, Meyer, Falkenberg, & Haueng, 2002). Perhaps these employees were effective in simplifying tasks, in selecting the most important aspect of their jobs and ignoring aspects that require a lot of effort in order to increase (in Study 1) or maintain (in Study 2) successful functioning (cf. Baltes, 1997). Similar to research on attitudes towards organizational change (Kunz & Linder, 2015), the link between reducing demands and adaptive performance was negative for those assessing the changes due to austerity measures more negatively. A negative assessment of the austerity-led changes worsened the reactions to changes in the form of adaptive performance. Particularly for Study 2, where for all employees (intervention and control group) adaptive performance deteriorated at Time 2, our findings mean that a more positive assessment of the change helped them keep their adaptation intact, by buffering the negative effect of reducing demands.

Third, we found that our job crafting intervention stimulated individuals to use the available possibilities to change their job (particularly their job demands) and to enhance beneficial outcomes for themselves (i.e., increased positive affect) and their organizations (i.e., increased openness to change). Stimulating individuals to set and achieve small job crafting goals enhanced the chances of achieving desired outcomes such as being open to the experiences linked to the change. Although previous studies also supported the effectiveness of similar job crafting interventions (e.g., Gordon et al., 2013; Van Den Heuvel et al., 2015), this is the first study to provide evidence about the effects of the job crafting training for employees facing changes imposed by a financial recession, and not changes designed on the basis of organizational needs. Taking into account that many of the changes due to austerity were detrimental for employees (Sinclair et al., 2010), our findings underscore the importance of stimulating employees to craft their job, when facing such changes. During times when organizations are preoccupied with the implementation of threatening changes, employees may be neglected. This is when it is most important to act proactively in order to facilitate their work-related well-being and openness to change (Gordon et al., 2013; Meyers, Van Woerkom, & Bakker, 2013; Tims & Bakker, 2010).

Fourth, our study provides some intriguing findings regarding the mechanisms through which the intervention achieved favourable effects. We suggested that the mechanism behind the success of the intervention would be that employees are actively involved in pursuing self-set job crafting goals, and motivated to reflect upon, share, and actualize job crafting behaviours (Bandura et al., 1977; Demerouti et al., 2011; Gordon et al., 2013; Van Den Heuvel et al., 2015). However, our results did not confirm this suggestion. We found that only reducing demands explained the effect of the intervention on adaptive performance, but that this effect was negative rather than positive. In order to explain the fact that

participants in the intervention group reported higher levels of openness to change (but also higher levels of adaptive performance), we performed additional analysis, which showed that positive affect explained why individuals became more open to change after completing the intervention. Moreover, although the intervention had no direct effect on adaptive performance it had an indirect positive effect through positive affect, indicating that positive affect is the intervening mechanism (that explains the indirect effect of the intervention, cf. MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

These findings seem to support the proposition of Oldham and Hackman (2010) that the benefits of job crafting may “derive from substantive changes in the work itself” or “merely from having the opportunity to tailor one’s own work responsibilities” (p. 471). Specifically, the participation in the intervention helped individuals to feel good because they increased the fit with their job and eliminated aspects of their job that hindered their performance. As a result they became more open and adaptive to the unfavourable changes that were imposed due to austerity (cf. Crant, 2000; Kristof-Brown et al., 2005; Oldham & Hackman, 2010). This finding is also in line with the integrative model of happiness by Lyubomirsky, Sheldon, and Schkade (2005), which states that 40% of individual well-being is determined by intentional activity (i.e., behavioural and cognitive activities that people choose to engage in and that take some effort to enact). Taking charge of one’s work environment may satisfy the basic need for autonomy and self-determination (Ryan & Deci, 2000), but also the outcome of job crafting actions may be rewarding in itself, for example, by eliminating inefficiencies in work processes that had been frustrating the individual (Oldham & Hackman, 2010). The finding that our intervention enhanced participants’ positive affect that consequently related positively to their adaptation in the change environment is also in line with the theoretical assumption and related evidence that happy employees are also more productive (Cropanzano & Wright, 2001).

Next to these contributions it is important to refer to the fact that several of our hypotheses were rejected. As already indicated, the expected indirect effect of the intervention on outcomes through job crafting was not confirmed. Additionally, the direct effect of the intervention on adaptive performance was not confirmed. Moreover, job crafting failed to show a consistent positive relationship with adaptive performance across studies and crafting dimensions. Whereas the intervention focused also on seeking resources, we failed to find an effect of the intervention on this job crafting dimension. Perhaps individuals noticed that they could craft resources much more easily than they actually did after participating in the intervention. Thus, it is possible that they under-reported their actual behaviour after the intervention (Van Den Heuvel et al., 2015). Moreover, we found seeking resources to relate positively to adaptation, particularly for those who assessed the changes as negative. This finding suggests that this job crafting behaviour may be particularly helpful for this particular group of employees.

Finally, the only job crafting dimension that related positively to adaptive performance in Study 1 (i.e., seeking

challenges) was not part of the training. Due to this, we cannot expand on the replication of this relationship in our intervention. In the interviews preceding the intervention study, the participating employees told us that it is practically impossible for them to seek challenges (mainly due to lack of time). Thus, we decided to exclude this dimension from the assignments of the training. However, we did measure this dimension in Study 2, because it was significant in Study 1. As shown, (Tables 4 and 5) there was not a significant change in the levels of seeking challenges.

Taken together, our findings seem to suggest a paradox, namely, that practising job crafting (i.e., training and weekly assignment) made employees more open to change and more adaptive through experiencing positive affect. However, the positive outcomes of the training did not occur because of the specific job crafting strategies. Rather, self-reports of job crafting were positively, unrelated or even negatively related to the outcomes of interest, while these relationships were dependent on specific boundary conditions (i.e., positive or negative assessment of change).

### Limitations and future research

A number of limitations of this study need to be mentioned. First, in both studies we used only self-report measures, which can result in common method biases. The fact that we found significant interaction effects in both studies indicates that common method bias is not a serious threat. However, future studies should integrate objective indicators of job crafting, which has recently been proven to be possible for the behavioural conceptualizations of job crafting as the one applied in our study (Tims et al., 2012). Second, although we replicated some of our findings in two samples, both samples are rather small and the first study is cross-sectional. Therefore, we need to interpret the results with caution and longitudinal studies with larger samples are needed to replicate and validate our results.

Third, the reliability of the seeking resources and reducing demands scales was below the .70 threshold in Study 1. For seeking resources, this may be attributed to the fact that we used a reduced version of the original scale (4 instead of 6 items). Adding one item to this scale in Study 2 resulted in acceptable reliability ( $\alpha > .70$ ). For reducing demands, the low reliability in Study 1 was not in line with earlier research among Dutch (i.e., the language in which the scale has been developed originally) employees, where the same items have been used and Cronbach’s alpha was acceptable ( $\alpha > .75$ ; Petrou, Demerouti, & Schaufeli, 2017). This issue (which possibly points to a cross-cultural difference) could be solved in future studies by incorporating the fifth item we had added in the reducing demands scale in Study 2 that resulted in satisfactory internal consistency.

Another limitation of this study is the low participation rates particularly with regard to the intervention group. Although participation to our intervention at T1 (29%) was similar to earlier research (i.e., ranging from 25 to 50%; Toker, Heaney, & Ein-Gar, 2015), it is still an issue of concern. Toker et al. found that reasons for non-participation are (1) having limited resources to invest in the programme’s activities, (2) a

belief that participation may lead to resource loss (e.g., confidentiality or time); (3) a belief that participation will not lead to resource gain, and (4) a belief that the value of the gain is not high. These reasons may apply also to our intervention and deserve attention in the acquisition of participants.

Fifth, we found that the intervention group reported lower openness to change than the control group in the pre-measurement, which means that particularly participants who were less willing to change participated in the intervention. Whereas, the intervention group did not differ from the control group on the other pre-intervention scores, this difference calls for cautious interpretation of the findings regarding openness to change. This is of particular importance since we did not use a fully randomized control trial in Study 2, which raises concerns regarding the potential effect of sampling bias on the study findings. Thus, future intervention studies should apply more robust designs with random allocation of participants to the different study groups in order to get bias free estimates of the examined relationships.

Finally, the effectiveness of the intervention was measured approximately 4 weeks after the intervention was completed. Thus, we do not know whether the effects that we found are long-lasting or short-lived, and whether participants continued to craft their job after the intervention ended. These are important issues to be examined in future studies using longer time frames to evaluate the effectiveness of job crafting interventions. Sixth, although in Study 1 we controlled for both general and austerity-led changes, we did not control for the individuals' assessment of the general changes. Also, Study 2 concerned only austerity-led changes and their assessment. Thus, our findings do not provide information as to whether individuals' assessments of the austerity-led changes explain employee attitudes and behaviours over and above their assessments of other general changes. Finally, our study was a relatively small researcher-driven endeavour. Therefore, we do not know how effective it would be if scaled-up in companies (or the government itself) as a way to facilitate employees' who deal with impoverished working conditions. Also, it is not clear whether employees may experience job crafting negatively (i.e., due to shift in responsibility, legitimacy and so on). Consequently, the results of the present study and the related implications for organizations (that are discussed below) should be considered with caution.

### Implications and conclusion

Taking all the findings together, we propose those organizations that are affected heavily by austerity measures that bring unfavourable organizational changes to help employees develop more positive assessment of the changes by communicating their potentially positive aspects. After this first step, organizations and supervisors can leave room to employees to craft their jobs and provide them with opportunities to 'fit' their jobs to their strengths, skills, and preferences. In this way, they are likely to feel better despite the overall negative climate, and consequently, more willing to adapt (under certain conditions) and be more open to change. We support a shift towards individual job redesign interventions that consider the influence of contextual and individual factors, in

determining intervention effectiveness. Because every situation and individual is unique, job redesign interventions should be adjusted to meet the changing needs of today's organizations and individuals to create a "win-win" situation.

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