



## Economic crisis and the employee: The effects of economic crisis on employee job satisfaction, commitment, and self-regulation



Yannis Markovits<sup>a</sup>, Diana Boer<sup>b</sup>, Rolf van Dick<sup>b,\*</sup>

<sup>a</sup> Alexander's Technological Educational Institute of Thessaloniki, Nik. Plastira 66B, 54250 Thessaloniki, Greece

<sup>b</sup> Goethe University, Department of Psychology and Sports Sciences, Center for Leadership and Behavior in Organizations (CLBO), Grüneburgplatz 1, 60323 Frankfurt, Germany

### ARTICLE INFO

#### Article history:

Available online 20 October 2013

#### Keywords:

Job satisfaction  
Organizational commitment  
Regulatory focus  
Economic crisis  
Greece

### ABSTRACT

Greece has been suffering a severe crisis starting in about 2009. This paper examines the impact of the recent economic crisis in Greece on employee work-related attitudes via changes in regulatory focus. We collected data in a large and heterogeneous sample of employees ( $N = 1024$ ) during the crisis and compared them with a matched sample of employees surveyed ( $N = 882$ ) half a decade earlier, i.e., before the crisis. Participants reported their job satisfaction, organizational commitment and their self-regulatory focus. Results show, as expected, that participants after start of the crisis were lower in extrinsic job satisfaction, affective organizational commitment and were also (unexpectedly) lower in normative commitment, while these attitudinal changes were explained by decreased promotion orientation and increased prevention focus. Rather unexpectedly, pre-crisis and crisis samples did not differ in levels of continuance commitment. This paper makes a relevant contribution by showing that the threatening crisis event does not only have negative effects on work-related outcomes, but also that changes in regulatory foci occur and explain attitudinal change indicating an adaptive mechanism to the threatening situation of an economic crisis.

© 2013 Elsevier Ltd. All rights reserved.

### Introduction

Greece has been in the middle of the ongoing debt crisis since November 2009. The austerity plan includes tough adjustment by lowering public expenditure, gradually eliminating various subsidies (e.g., energy, housing, health, education), raising electricity rates, freezing public sector wages, capping pension payments and postponing social benefits (Ghellab & Papadakis, 2011). The country is facing its hardest ever financial and debt crisis, causing cuts in wages and pensions, public expenditure, social security spending, etc. (cf. Argyrou & Tsoukalas, 2011). Furthermore, unemployment rates are escalating with an overall unemployment rate of just below 30% (the rate for citizens younger than 25 years is higher than 60% in 2013), and so do poverty figures, suicide cases etc.

The present paper examines the effects of this severe economic crisis on work-related attitudes and mechanisms of individual self-regulation. This research aims to explore how the crisis might change attitudes. More specifically, we will look into changes in two of the most prominent job attitudes, namely job satisfaction and organizational commitment that have both well-documented effects on key behaviors such as employees' in-role and extra-role

performance, their productivity, creativity and turnover (e.g., Judge & Kammeyer-Mueller, 2012; Judge, Thoresen, Bono, & Patton, 2001; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). In addition, we examine changes in regulatory foci as explanatory mechanism for attitudinal changes in times of crisis. We argue that shifts in regulatory focus are adaptive adjustments that – in some cases – may prevent even worse effects on employee attitudes towards work in times of crisis. Exploring how and why crisis influences individual work attitudes is important due to its pressing impact on organizational outcomes and understanding the driving psychological mechanisms allows for an evidence-based adjustment and management of crisis-related psychological consequences.

#### Economic crisis and attitudes

Economic crisis is a threatening contextual circumstance that influences individuals' approaches in life and evaluations of their work situations. Bell and Blanchflower (2011) reported in a pan-European survey that the so-called 'happiness' levels in Southern Europe have sharply fallen between 2007 and 2010 due to the effect of the economic crisis and the high and continuously rising unemployment rates, especially among the younger cohorts of the working population. They found that "there is a noticeable decline in the happiness levels in Greece (–0.28), Ireland (–0.14), Portugal (–0.17) and Spain (–0.10), which have been hard hit by

\* Corresponding author. Tel.: +49 69798 35285.

E-mail addresses: [markovii@cyta.gr](mailto:markovii@cyta.gr) (Y. Markovits), [boer@psych.uni-frankfurt.de](mailto:boer@psych.uni-frankfurt.de) (D. Boer), [van.dick@psych.uni-frankfurt.de](mailto:van.dick@psych.uni-frankfurt.de) (R. van Dick).

recession and the sovereign debt crisis" (p. 103). Besides wellbeing, work-related evaluations are also affected by crisis. Seršić and Sverko (2000), for instance, found that during the period of transition and crisis in Croatia, job satisfaction did not change significantly; however changes in need satisfaction indicated a significant and profound worsening.

Evidence from outside Europe indicates similar effects of crisis. Mehri, Iqbal, Hekmat, and Ishaq (2011) concluded that employees working in the Iranian banking sector pre- and post-financial global crises expressed drastically reduced job motivation and job security levels. Another study on Taiwanese atypical workers (e.g., part-time workers, fixed-term contract employees, temporary and agency workers, self-employed), showed significant negative effects of the global economic crisis on employee job satisfaction (Lee, Wang, & Ip, 2011). These accounts from Europe, Middle East and Asia indicate that crises can have severe influences on work related attitudes.

According to threat theories, contextual threats impact on psychological mechanisms for instance by attenuating the impact of personality traits on attitudes Sibley, Osborne & Duckitt (2012) or the expression of conservative values in attitudes (Boer & Fischer, 2013). The underlying mechanisms include threats being strong sources of uncertainty, which impact on human motivation striving for a management of and coping with these uncertainties (Hogg, 2007). We argue that an economic crisis is a contextual threat that influences individuals' work-related attitudes. Furthermore, we claim that changes in regulatory foci function as threat adjustments underpinning these attitudinal changes. Next, we explicate which work-related attitudes are investigated in detail and how regulatory foci relate to these work-related attitudes. We contribute a novel take on work-related crisis effects and their underlying psychological mechanisms by developing three sets of hypotheses concerning (a) the impact of economic crisis on work-related attitudes, (b) the impact of economic crisis on promotion and prevention focus, and (c) the mediating role of regulatory foci for explaining the crisis effects on work-related attitudes.

#### *Work-related attitudes in times of crisis*

The work-related attitudes examined in the present study are job satisfaction and organizational commitment. Job satisfaction is defined as "how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs ... Job satisfaction is an attitudinal variable ... [and] can be considered as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job" (Spector, 1997, p. 2). Moreover, we consider job satisfaction comprised of two facets relating to the extrinsic and intrinsic features of a job (Cooper-Hakim & Viswesvaran, 2005): *Extrinsic satisfaction* is the satisfaction derived from extrinsic circumstances, such as remuneration, management policies, physical conditions, or job security. *Intrinsic satisfaction* is the individually felt satisfaction arising out of opportunities for achievement, creativity, personal advancement, etc. This approach to job satisfaction reflects cognitive evaluations of job satisfaction and internal cost-benefit analyses conducted by the employee (Brief, 1998).

During an economic crisis, employment conditions are severely hit, resulting in less positive and more negative job conditions at work, which are consequently negatively evaluated. Even if employment becomes ever more essential, and employees are more prepared to accept a poorer employment status and working conditions in return of safeguarding current employment and job positions, the general frustration experienced should have a negative impact towards their general job satisfaction on both extrinsic and intrinsic aspects.

**Hypothesis 1 (H1).** Employees facing an economic crisis are less satisfied overall with their jobs, than the employees not experiencing an economic crisis.

Economic crisis and the austerity measures adopted by governments mainly affect wage levels and threaten job and employment security notions. Therefore, we explicitly investigate pay satisfaction and job security, because these specific aspects of extrinsic job satisfaction are likely to be strongly affected by an economic crisis. We propose that satisfaction towards extrinsic job features including pay levels and job security will be negatively affected as a result of the economic crisis.

**Hypothesis 2 (H2).** Employees facing an economic crisis are less satisfied regarding pay and job security, than the employees not experiencing an economic crisis.

The other important attitude we are focusing on is organizational commitment. It is the commitment to a particular organization, its goals and objectives, strategies, management policies and procedures. Organizational commitment has been defined as the relative strength of an individual's identification with and involvement in a particular organization, which is characterized by the belief in and acceptance of organizational goals and values, the willingness to exert effort on behalf of the organization, and a desire to maintain membership in the organization (Mowday, Porter, & Steers, 1982; Mowday, Steers, & Porter, 1979). Recent theorizing and evidence supports that organizational commitment is a multi-dimensional concept, having 'mindsets' rather than 'rationales', which by themselves "potentially reflect both cognitive and affective elements" (Vandenberghe, 2009: 100). For the last two decades, organizational commitment was devised as comprising three distinguishable and separable forms: (a) *affective commitment* – the emotional attachment to, identification with and involvement in the organization (i.e., the individual wants to be in an organization), (b) *continuance commitment* – the costs associated with leaving the organization (i.e., the individual needs to be in an organization), and (c) *normative commitment* – the employees' feelings of obligation to remain with the organization (i.e., the individual ought to be in an organization) (Allen & Meyer, 1990; Meyer, Allen, & Smith, 1993).

Coming to crisis effects on commitment, affective commitment is experienced when an employee strongly identifies with the goals of the organization and desires to remain a part of the organization. This employee commits to the organization because he/she "wants to". However, an economic crisis has adverse effects on affections and moods, resulting in a downturn in employees' affective feelings of commitment towards their organization. Brockner and colleagues (1987) showed that employees who managed to remain in their jobs after layoffs had lowered organizational commitment and this was particularly the case if they identified with layoff victims who were perceived as inadequately compensated and unjustly fired from their jobs. In a further study, Brockner and colleagues (1993) found employees' worries increased after a lay-off period, while these worries in turn facilitated an enhanced work motivation as a strategy to reduce future layoff risks. The latter may indicate an increase in continuance commitment from the pre- to post-crisis period in order to remain in and safeguard the current job, by all and any means. Continuance commitment has to do with the "side-bets", or investments an employee faces: these are the gains and losses that may occur should an individual stay or leave an organization. On the other hand, personal or job-related sacrifices by changing or losing a job are important concerns an individual ought to consider, before an action is taken. This means that the economic crisis would increase employees' continuance commitment since the "side-bets" are significant and the costs associated with losing or leaving a job would be harmful for the individual because of few alternatives. Lastly, normative commitment has to do with feelings of "moral obligation" when the organization puts forth effort on the job and the

employee decides to stay with the organization to “repay the debt”. It also reflects internalized norms (Wiener, 1982), which are developed well before the person joins the organization through family socialization and other socialization processes, and the individual should be loyal to the organization. This means, an economic crisis may not have any significant effect on normative commitment, both positive and negative, since it remains stable because it is commitment neither out of liking nor necessity, but instead, it is a deeply rooted moral obligation; and in effect, normative commitment should not change easily.

**Hypothesis 3 (H3).** Employees facing an economic crisis are less affectively committed with their organizations than employees not experiencing an economic crisis.

**Hypothesis 4 (H4).** Employees facing an economic crisis are more continuance committed with their organizations than employees not experiencing an economic crisis.

**Hypothesis 5 (H5).** Normative commitment will not change due to an economic crisis.

#### *Regulatory mechanisms in times of crisis*

Regulatory focus theory has been developed by Higgins (1997) who argued that the idea of self-regulation, i.e., the process of individuals' alignment with appropriate goals and objectives that fit with their own values and abilities, shall be extended by a two-dimensional approach comprising (1) self-regulation with a *promotion focus* (managing personal work-related accomplishments and aspirations) and (2) self-regulation with a *prevention focus* (securing job-related safety and working towards implementing predetermined responsibilities). This means that the self-regulatory states will be different for individuals characterized as promotion or prevention focused, while the two dimensions are largely independent. Higgins (1998) stated that “with a promotion focus, the state should be eagerness to attain advancements and gains... with a prevention focus, should be vigilance to assure safety and nonlosses” (p. 27). Nurturance needs, strong ideals and gain-non-gain situations shall induce promotion focus and from this, sensitivity to the presence or absence of positive outcomes and approach as strategic means are yielded. On the other hand, security needs, strong oughts, non-loss-loss situations shall induce prevention focus and from this, sensitivity to absence or presence of negative outcomes and avoidance as strategic means are yielded. Regulatory focus affects whether or not individuals often consider opportunities or limitations in the future. Specifically, a promotion focus at one time was correlated with a focus on future opportunities three months later. In addition, a prevention focus at one time was correlated with a focus on future limitations three months later (Zacher & de Lange, 2011). Individuals who adopt a prevention focus prefer clarity, because as uncertainty increases the likelihood they might not satisfy some duty or expectation they might have overlooked may increase as well (Leonardelli, Lakin, & Arkin, 2007).

Examining the effects of an economic crisis on regulatory foci, promotion focus is a self-regulation mechanism that drives individuals to eager for advancement and success and to strive for the accomplishment of their ideals and aspirations. An economic crisis will diminish the opportunities for advancement and success and may cause a negative effect on employees' promotion orientation. On the other hand, an economic crisis may cause individuals to become more prevention focused as a strategy to adjust to the threatening situation. Filippetti and Archibugi (2011) for instance show that Greece is facing a decline in innovation and entrepreneurship due to economic crisis, a macro-economic phenomenon that could be attributable to increased prevention focus of Greek employers. More precisely, the lower prospects for jobs opportuni-

ties and decreased job security during crisis will lead to a stronger focus on loss avoidance and vigilance to assure security.

**Hypothesis 6 (H6).** Employees facing an economic crisis are less promotion focused than employees not experiencing an economic crisis.

**Hypothesis 7 (H7).** Employees facing an economic crisis are more prevention focused than employees not experiencing an economic crisis.

#### *Regulatory mechanisms and work-related attitudes*

Regulatory foci motivate goal attainment and are therefore important drivers of work-related outcomes. Hence, employees' regulatory focus influences their job-related attitudes and evaluations. Lanaj, Chang, and Johnson (2012) recently provided a comprehensive overview and conceptual framework of regulatory focus and work-related outcomes. Using a distal-proximal approach, their framework distinguishes between general and work-specific regulatory foci as proximal motivational processes that more directly influence work-related outcomes. Similar to Summerville and Roese (2008) reference-point approach, work-specific regulatory foci are situational goal-directed and apply to our current conceptualization. In line with Lanaj and colleagues' (2012) findings we believe that the relationship between regulatory foci and affectivity is viable and conceptually relevant considering that self-regulation is an essential adaptive process that allows for adjustments during negative or positive situations. Economic crisis is a negative and threatening event, which has severe negative influences on work conditions and we argue that the threatening crisis event does not only has a direct negative effect on work-related outcomes, but that changes in regulatory focus occur which in turn exert an indirect effect on work-related outcomes.

More precisely, Lanaj et al. (2012) showed in their meta-analysis that promotion focus affects employees' job satisfaction positively due to the sensitization of and focus on positive features, while prevention focus impacts negatively on job satisfaction due to the sensitization of negative aspects. However, previous studies only looked at overall job satisfaction without separating intrinsic and extrinsic sources. We argue that promotion focus is particularly likely to influence intrinsic aspects of job satisfaction positively due to its focus on accomplishment and aspiration, while it should also be positively related to other aspects of satisfaction due to an overall focus on positive job characteristics. Connecting the proposed associations between regulatory foci and job satisfaction with Hypotheses 1, 2, 6 and 7 builds up our meditational argument: reduced promotion focus and increased prevention focus (at least partially) account for lower job satisfaction in times of crisis.

**Hypothesis 8 (H8).** Promotion and prevention focus will mediate the effects of the crisis on job satisfaction. The crisis will reduce promotion and increase prevention focus which in turn will lead to reduced satisfaction.

Regarding the association between regulatory foci and commitment, Kark and Van-Dijk (2007) developed a theory of how the regulatory focus of leaders might affect their followers' behavior. Regarding the followers' regulatory foci, they noted “promotion-focused individuals are intrinsically motivated and are mostly guided by their inner ideals and not by external forces. Thus, they are likely to be committed to the organization in an autonomous form (affective commitment). In contrast, prevention-focused individuals are more influenced by external or social pressure and attempt to fulfill obligations and avoid losses. Thus, they are more likely to be committed to the organization out of a sense of obligation or necessity (normative or continuance commitment)” (p. 517). Empirically, Markovits and colleagues (2008) showed that promotion and prevention foci have distinct relationships to the

three commitment components (see also Lanaj et al., 2012). Affective commitment was more strongly associated with promotion focus, whereas continuance commitment was more strongly related to prevention focus. Normative commitment showed similar associations to both promotion and prevention focus.

Connecting the effects of crisis on regulatory focus (H6, H7) and the distinctive links between regulatory focus on the three commitment components, we propose the following explanations of crisis effects on commitment (H3 to H5).

**Hypothesis 9 (H9).** Promotion and prevention focus mediate the effects of the crisis on commitment. More specifically, crisis leads to reduced affective commitment (cf. H3) mediated by reduced promotion focus (H9a); crisis leads to enhanced continuance commitment (cf. H4) mediated by enhanced prevention focus (H9b); crisis has no effect on normative commitment (cf. H5) due to compensating mediation effects of enhanced prevention and reduced promotion focus (H9c).

Hypothesis H9c provides further elaboration on the effects proposed in H5: we expect that the economic crisis may not influence normative commitment of employees, because the enhanced prevention focus (being positively linked to normative commitment) is able to buffer the negative effects of reduced promotion focus on normative commitment. Hence, H9c proposes a compensation effect of the shift in regulatory focus caused by the economic crisis. Since the indirect effects have a different direction than the direct effect (being zero), this may indicate an effect called “inconsistent mediation” (MacKinnon, Fairchild, & Fritz, 2007). This inconsistent combination of effects often occurs in psychological coping mechanisms where coping is triggered by a negative event which then facilitates psychological adjustment to the event (for details see MacKinnon et al., 2007). More specifically, in this hypothesis it is argued that in times of crisis individuals shift their regulatory focus towards enhanced prevention and reduced promotion focus in order to regulate the negative impact of the economic crisis. We elaborate more on these important adjustment mechanisms in the discussion section. Fig. 1 summarizes the proposed mediational model.

In sum, economic crisis is a negative and threatening circumstance that influences work conditions negatively. We aim to contribute to the literature by showing that the threatening event of an economic crisis does not only negatively influence work-related

attitudes, but that changes in regulatory foci are adaptive mechanisms in those threatening situations.

## Methodology

### Data and samples

We collected data of employees before and during the economic crisis and compared their work-related attitudes and regulatory foci. The data of the pre-crisis sample was collected between 2004 and 2007 in the private sector. Participants came from the geographical region of Thessaloniki in the Northern part of Greece. The response rate was 68%. The data of the crisis sample were collected between November 2011 and November 2012, also from private sector employees. The response rate was 71% and the respondents were from the same geographical area as in the pre-crisis sample. This area is the second largest in Greece, both population-wise and economy-wise; however, it is the worst hit region from the economic crisis.

Table 1 presents the demographic characteristics of the two samples. As can be seen, the samples match very closely with regard to a number of important demographic characteristics, although the Chi-Square tests revealed significant statistical differences in five of six analyses. We do not test for specific effects of industry or organizational size. We do, however, control for age and gender in our analyses as these variables may additionally influence work-outcomes.

### Measures

Organizational commitment was measured with the scales developed by Allen and Meyer (1990) – Affective Commitment Scale (AC), Continuance Commitment Scale (CC), and Normative Commitment Scale (NC). Sample items used for the measurement of organizational commitment are: “I would be very happy to spend the rest of my career with this organization” (AC); “Right now, staying with my organization is a matter of necessity as much as

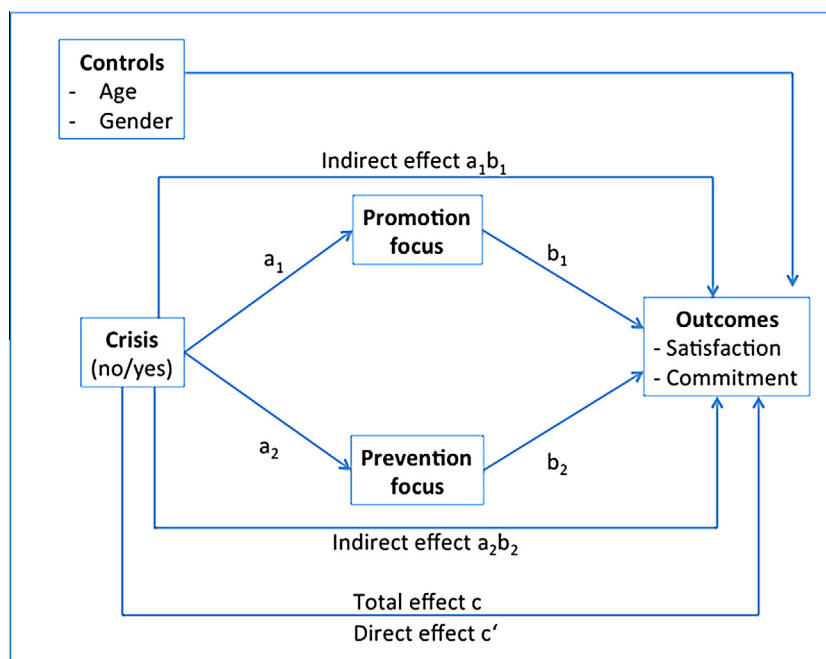


Fig. 1. Summary of the proposed mediation model.

**Table 1**  
Demographic characteristics of the samples.

	Characteristics	Pre-crisis	Crisis	Pearson Chi <sup>2</sup>
Gender	Males (%)	48.8	49.5	0.08
	Females (%)	51.2	50.5	
Age	20–34 years	36.3	45.7	24.77**
	35–45 years	29.6	29.7	
	46–65 + years	34.1	24.6	
Work experience	0–6 years	31.2	28.0	91.13**
	7–12 years	14.7	31.0	
	13–21 years	30.0	28.6	
	22 + years	24.0	12.4	
Education	Higher education (%)	26.8	39.7	49.28**
	Further education (%)	62.5	46.5	
	Postgraduate education (%)	10.8	13.8	
Marital status	Singles – non-married (%)	30.6	40.2	36.02**
	Married (%)	62.7	49.9	
	Divorced (%)	6.1	7.7	
	Widowed (%)	0.6	2.1	
Number of children	No children (%)	40.6	46.6	18.26**
	One child (%)	18.3	20.5	
	Two children (%)	33.8	24.9	
	Three and more children (%)	7.4	8.0	

Note:  $N$  (pre-crisis) = 882,  $N$  (crisis) = 1024; \*\* $p < .01$ .

desire” (CC); “I do not feel obligation to remain with the current organization” (NC, reversed).

*Job satisfaction* was assessed with items based on the Minnesota Satisfaction Questionnaire – MSQ (Weiss, Dawis, England, & Lofquist, 1967). The questionnaire taps both into overall job satisfaction and also its facets extrinsic satisfaction, pay satisfaction and job security satisfaction. Sample items are: “The opportunity to use the abilities I possess”; “The feeling of accomplishment for the work I do”; “The chances for promotion and advancement I receive from the organization”; “The personnel policies used by the management (fair and equal treatment of all employees)”.

The *promotion focus/prevention focus* scale was from Lockwood, Jordan, and Kunda (2002). Some of the items used for this scale are: “I am more oriented toward preventing losses than I am toward achieving gains” (prevention focus); “I often imagine myself experiencing good things that I hope will happen to me” (promotion focus); “Overall, I am more oriented toward achieving success than preventing failure” (promotion focus). All items were translated into Greek and have provided satisfactory consistencies and validity in earlier research (Markovits, Davis, Fay, & Van Dick, 2010; Markovits, Davis, & Van Dick, 2007; Markovits et al., 2008).

The answering scales for all measures in the pre-crisis sample were 7-point Likert scales, (with endpoints 1 = “complete disagreement”, and 7 = “complete agreement”); for the crisis sample 5-point Likert scales were used (with the same endpoints). In order to have comparable measurement scales, we transformed the scores of both groups into percentages of maximum possible (POMP) scoring (Cohen, Cohen, Aiken, & West, 1999). POMP scores range between 0 and 100 and allow comparisons of mean scores measured on different scales (Cohen et al., 1999; for an application see Fischer & Boer, 2011).

## Results

Table 2 shows the means, standard deviations, internal reliabilities and intercorrelations of job satisfaction, its facets, the forms of organizational commitment, and the regulatory foci. The mean values for both groups and their comparison are displayed in Table 3.

We test our hypotheses using bootstrap multiple mediation analysis (Preacher & Hayes, 2008) in addition to mean comparisons

based on ANOVA. Mediation analysis that uses bootstrapping has been shown to be the most appropriate method in terms of power, vulnerability to violations of normality, and the ability to detect true relationships among variables (MacKinnon, Lockwood, Hoffmann, West, & Sheets, 2002). The mediation analysis allows the calculation of total effects ( $c$ -paths; effects of crisis on outcomes; Hypotheses 1 to 5) and direct effects ( $c'$ -paths; effects of crisis on outcomes after accounting for mediators), the effects of crisis on the mediators ( $a$ -paths; Hypotheses 6 and 7), and the simultaneous assessment of the two mediating effects ( $ab$ ; Hypotheses 8 and 9), while also controlling for possible confounding variables. In our analyses we control for age and gender effects as these demographic variables may directly influence our outcome variables. Mediation is assessed based on a point estimate and bootstrapped 95% confidence interval (CI; 5,000 bootstrap iterations). A mediator effect is statistically meaningful at 95% if zero is not included in the 95% confidence interval. We used standardized POMP scores in order to enhance interpretability of path coefficients (standardized coefficients are reported).

First, testing Hypotheses 1 and 2 revealed that employees during crisis had significantly lower levels of overall job satisfaction ( $\beta = -0.16$ ,  $p < 0.01$ ); total effect  $c$  in Table 4), extrinsic satisfaction ( $\beta = -0.22$ ,  $p < 0.01$ ), pay satisfaction ( $\beta = -0.17$ ,  $p < 0.01$ ) and job security satisfaction ( $\beta = -0.59$ ,  $p < 0.01$ ) compared to employees before the crisis (see also mean comparison in Table 3). The particularly strong effect on job security satisfaction was not surprising considering the uncertainty induced by an economic crisis. Intrinsic satisfaction was not directly affected by crisis. Hypothesis 1 is partially supported (due to the lack of effect on intrinsic satisfaction,  $\beta = -0.07$ ,  $ns$ ) and Hypothesis 2 is fully confirmed.

Second, the effects of crisis on commitment are displayed in Tables 3 and 5 (see total effect  $c$ ). As expected, employees' affective commitment was strongly reduced during crisis compared to employees before crisis ( $\beta = -0.22$ ,  $p < 0.01$ ) confirming Hypothesis 3. Continuance commitment was not directly affected by economic crisis ( $\beta = -0.03$ ,  $ns$ ); hence Hypothesis 4 was not supported. Contrasting our hypothesis, normative commitment was negatively affected by crisis ( $\beta = -0.10$ ,  $p < 0.05$ ): during crisis employees showed somewhat lower normative commitment compared to employees before the crisis. Hypothesis 5 was therefore not supported.

**Table 2**  
Descriptive statistics (means, standard deviations, Cronbach's alpha coefficients), Pearson correlations.

	Mean	S.D.	$\alpha$	1	2	3	4	5	6	7	8	9	10
1. Job satisfaction	59.54	15.17	0.95		0.91**	0.91**	0.58**	0.64**	0.24**	0.14**	0.56**	0.08*	0.27**
2. Extrinsic satisfaction	58.61	15.91	0.92	0.92**		0.65**	0.63**	0.68**	0.19**	0.11**	0.49**	0.06*	0.20**
3. Intrinsic satisfaction	60.54	17.32	0.90	0.92**	0.69**		0.43**	0.49**	0.25**	0.15**	0.53**	0.08*	0.29**
4. Pay satisfaction	54.83	25.40	0.94	0.45**	0.54**	0.28**		0.42**	0.05	0.06*	0.32**	-0.02	0.14**
5. Job security	61.40	23.95	0.84	0.62**	0.62**	0.51**	0.22**		0.15**	0.12**	0.38**	0.00	0.13**
6. Affective commitment	55.48	16.39	0.80	0.54**	0.49**	0.51**	0.26**	0.37**		0.20**	0.30**	0.21**	0.06*
7. Continuance commitment	48.25	12.76	0.74	0.16**	0.17**	0.11**	0.12**	0.22**	0.29**		0.30**	0.15**	0.21**
8. Normative commitment	54.12	17.34	0.75	0.47**	0.43**	0.43**	0.25**	0.28**	0.72**	0.38**		0.18**	0.17**
9. Prevention focus	58.17	15.39	0.70	0.04	0.04	0.02	0.03	0.03	0.10**	0.20**	0.20**		0.03
10. Promotion focus	71.02	14.78	0.79	0.17**	0.13**	0.18**	0.02	0.18**	0.19**	0.13**	0.13**	0.14**	

Note: POMP scores (range 0–100) for combined sample ( $N = 1,890$ ); below diagonal correlations of the pre-crisis sample ( $N = 873$ ), above diagonal correlations of crisis sample ( $N = 1017$ ); \*\* $p < .01$  (two-tailed).

**Table 3**  
Mean values and standard deviations of the variables examined (POMP scores, range 0–100), mean comparison controlling for age and gender.

	Samples	Mean	SD	F	$\eta^2$
Job satisfaction	Pre-crisis	60.88	15.57	11.84**	0.01
	Crisis	58.39	14.72		
Extrinsic satisfaction	Pre-crisis	60.45	16.46	23.46**	0.01
	Crisis	57.02	15.25		
Intrinsic satisfaction	pre-crisis	61.36	17.46	2.28	0.00
	crisis	59.84	17.17		
Pay satisfaction	pre-crisis	57.02	26.28	14.32**	0.01
	crisis	52.95	24.47		
Job security satisfaction	pre-crisis	69.26	23.02	184.94**	0.09
	crisis	54.64	22.64		
Affective commitment	pre-crisis	60.51	20.44	157.00*	0.08
	crisis	51.14	9.99		
Continuance commitment	pre-crisis	48.21	13.61	0.35	0.00
	crisis	48.29	12.00		
Normative commitment	pre-crisis	55.27	19.48	5.26*	0.003
	crisis	53.13	15.21		
Prevention focus	pre-crisis	57.16	15.55	8.50**	0.004
	crisis	59.05	15.21		
Promotion focus	pre-crisis	73.20	12.71	37.71*	0.02
	crisis	69.15	16.12		

Note:  $N$  (pre-crisis) = 882,  $N$  (crisis) = 1,024; \* $p < .05$ , \*\* $p < .01$ .

With regard to regulatory foci, Hypotheses 6 and 7 were supported: during crisis employees showed lower promotion focus ( $\beta = -0.28$ ,  $p < 0.01$ ) and higher prevention focus ( $\beta = 0.13$ ,  $p < 0.01$ ) compared to employees before the crisis.

Next, we investigate whether changes in regulatory focus account for changes in work-related attitudes as response to economic crisis. Results of indirect effects analysis (see Table 4) indicate that reduced promotion focus mediated the crisis effect of reduced job satisfaction (*point estimate* =  $-0.06$ ,  $CI = -0.09/-0.04$ ), extrinsic satisfaction (*point estimate* =  $-0.05$ ,  $CI = -0.07/-0.03$ ), pay satisfaction (*point estimate* =  $-0.03$ ,  $CI = -0.04/-0.01$ ), job security satisfaction (*point estimate* =  $-0.04$ ,  $CI = -0.06/-0.02$ ) as well as intrinsic satisfaction (*point estimate* =  $-0.07$ ,  $CI = -0.10/-0.04$ ), although the latter did not have a direct effect by crisis. Experiencing an economic crisis reduced employees' promotion focus including proactive achievement orientation and aspiration, and this in turn leads to lower job satisfaction. Although economic crisis enhanced employees' prevention focus, this did not mediate the crisis effects on satisfaction with the exception of extrinsic satisfaction (*point estimate* =  $0.01$ ,  $CI = 0.0002/0.02$ ). Extrinsic satisfaction was lowered by economic crisis; however, crisis also enhanced employees' prevention focus which in turn related positively to extrinsic satisfaction. This mediator effect is an incon-

sistent mediation which is likely to occur in coping mechanisms triggered by negative events that help to adjust to environmental threats and stressful life events.

Furthermore, both regulatory foci mediated the crisis effects on organizational commitment. Experiencing an economic crisis reduced employees' promotion focus (see H6), and this in turn lead to lower affective (*point estimate* =  $-0.03$ ,  $CI = -0.05/-0.05$ ), normative (*point estimate* =  $-0.04$ ,  $CI = -0.06/-0.02$ ) and continuance commitment (*point estimate* =  $-0.05$ ,  $CI = -0.07/-0.03$ ) although the latter was not directly affected by crisis. Economic crisis also enhanced employees' prevention focus (see H7), and prevention focus in turn was associated with all three facets of commitment (affective: *point estimate* =  $0.01$ ,  $CI = 0.01/0.03$ ; normative: *point estimate* =  $0.02$ ,  $CI = 0.01/0.04$ ; continuance: *point estimate* =  $0.02$ ,  $CI = 0.01/0.04$ ). The latter could be an adjustment and regulatory mechanism that seems to be triggered by the negative experience of economic crisis.

The control variables showed some consistent influences on the outcome variables (see Tables 4 and 5). Older participants were more satisfied intrinsically and with their job security, and more committed with regard to all three commitment aspects; however, they were less satisfied with their pay. Female participants were less satisfied overall, extrinsically and with their pay, and were less affectively committed.

## Discussion

The results of the comparisons between the two samples before and during the economic crisis in Greece indicate small but consistent effects of the economic crisis on employees' attitudes and regulation mechanisms. By and large, the threatening event of the economic crisis consistently deteriorates ones' economic and employment conditions which has negative effects on attitudes. Moreover, individuals may shift their regulatory focus in order to regulate the negative impact of the economic crisis. Interestingly and contrary to an alternative interpretation of the small crisis effects being indicative of insignificant impact of crisis on people, we believe that crisis affects people even more than our findings are able to show and that these effects are rather underestimated, because individuals are rich in adaptive psychological mechanisms which allow for an adjustment to threatening situations especially when these are continuing (see below for an elaboration on this speculation). Our paper points towards such adjustment processes although our findings are limited to design-related non-causal interpretations and small effect sizes. We first discuss the main effects of crisis on attitudes and then elaborate on the regulatory mechanisms triggered by economic threat, followed by a discussion of limitations and alternative explanations.

**Table 4**  
Mediation analysis for job satisfaction.

	Job satisfaction	Extrinsic satisfaction	Intrinsic satisfaction	Pay satisfaction	Job security satisfaction
<i>Controls</i>					
Age <sup>a</sup>	.04	-.03	.11**	-.09*	.11**
Gender <sup>b</sup>	-.11 <sup>†</sup>	-.16**	-.05	-.10 <sup>†</sup>	-.07
<i>Crisis effects<sup>c</sup></i>					
Total effect c	-.16**	-.22**	-.07	-.17**	-.59**
Direct effect c <sup>†</sup>	-.10*	-.18**	.00	-.15**	-.55**
<i>Mediators</i>					
Promotion b <sub>1</sub>	.22**	.16**	.24**	.08**	.14**
Prevention b <sub>2</sub>	.04 <sup>†</sup>	.04 <sup>†</sup>	.03	.01	-.01
<i>Indirect effects<sup>d</sup></i>					
Promotion a <sub>1</sub> b <sub>1</sub>	-.06 <sup>†</sup> [-.09/-.04]	-.05 <sup>†</sup> [-.07/-.03]	-.07 <sup>†</sup> [-.10/-.04]	-.03 <sup>†</sup> [-.04/-.01]	-.04 <sup>†</sup> [-.06/-.02]
Prevention a <sub>2</sub> b <sub>2</sub>	.01 [-.0002/.02]	.01 <sup>†</sup> [.0002/0.02]	.00 [-.0002/.01]	.00 [-.01/.01]	-.00 [-.01/.01]
R <sup>2</sup>	.06**	.05**	.07**	.02**	.12**

Notes: Standardized coefficients reported; Direct effects of crisis on mediators: Promotion a<sub>1</sub> = -.28\*\*; Prevention a<sub>2</sub> = .13\*\*.

<sup>a</sup> Age groups 1 = 20–34, 2 = 35–45, 3 = 46–65 years.

<sup>b</sup> 0 = male, 1 = female.

<sup>c</sup> 0 = pre-crisis, 1 = crisis.

<sup>d</sup> Point estimate, in brackets 95% bias corrected, accelerated confidence interval based on 5000 bootstrap resample's \**p* < .05; \*\**p* < .01; *N* = 1900.

**Table 5**  
Mediation analysis for organizational commitment.

	Affective commitment	Normative commitment	Continuance commitment
<i>Controls</i>			
Age <sup>a</sup>	.15**	.10**	.12**
Gender <sup>b</sup>	-.13**	-.08	.04
<i>Crisis effects<sup>c</sup></i>			
Total effect c	-.55**	-.10*	.03
Direct effect c <sup>†</sup>	-.53**	-.09*	.05
<i>Mediators</i>			
Promotion b <sub>1</sub>	.11**	.13**	.17**
Prevention b <sub>2</sub>	.11**	.17**	.16**
<i>Indirect effects<sup>d</sup></i>			
Promotion a <sub>1</sub> b <sub>1</sub>	-.03 <sup>†</sup> [-.05/-.02]	-.04 <sup>†</sup> [-.06/-.02]	-.05 <sup>†</sup> [-.07/-.03]
Prevention a <sub>2</sub> b <sub>2</sub>	.01 <sup>†</sup> [.01/.03]	.02 <sup>†</sup> [.01/.04]	.02 <sup>†</sup> [.01/.04]
R <sup>2</sup>	.13**	.07**	.07**

Notes: Standardized coefficients reported; Direct effects of crisis on mediators: Promotion a<sub>1</sub> = -.28\*\*; Prevention a<sub>2</sub> = .13\*\*.

<sup>a</sup> Age groups 1 = 20–34, 2 = 35–45, 3 = 46–65 years.

<sup>b</sup> 0 = male, 1 = female.

<sup>c</sup> 0 = pre-crisis, 1 = crisis.

<sup>d</sup> Point estimate, in brackets 95% bias corrected, accelerated confidence interval based on 5000 bootstrap resamples \**p* < .10, <sup>†</sup>*p* < .05; \*\**p* < .01; *N* = 1,900.

### Work attitudes in times of crisis

Attitudes are not stable and can change due to social influences and developments from the external environment. Such development and change is an economic/financial crisis that affects the whole of the working population. Greece is facing such a crisis, the so-called “debt crisis”, and since 2010, one austerity program follows another. So far, there are three “Memorandum” programs between the Greek government and the troika of European Commission, International Monetary Fund and European Central Bank and still the country's macro-economic figures have not changed, in order to foresee a U-turn of the economy. It is interesting to see that the average living standards have fallen to the levels of twenty and more years ago; however, the cost of living is still rising.

Thus, to expect changes on work attitudes is not surprising, while the consistent negative effects on attitudes are still intriguing. Due to effect size considerations, we focus our discussion on the strongest effects, i.e. on extrinsic satisfaction and affective commitment, and on the unexpected effects on continuance and normative commitment. The results concerning extrinsic job satisfaction were as expected. The worsening of one's situation, the increase of unemployment rates, the drastic reduction of wages (on average more than 40% during the last four years), the limited

opportunities for employment, as well as the general employment prospects, could not have a positive impact on job satisfaction. Job satisfaction, being primarily a cognitive evaluation, and composed of extrinsic components (wages, working conditions, issues of security, HR policies, organizational environment, issues of fairness, etc.), is directly influenced by the adverse economic conditions. Security satisfaction is most severely hit due to economic crisis (indicated by an effect of medium size) and this is in line with the results from the Gallup survey – Greeks are the most pessimistic about their future and their lives (Manchin, 2012). This negative feeling for the future and life expectations may impact also negatively on job security, implications for secure jobs and employment, resulting in dissatisfaction with job security. The results of our research show that the impact is only prevalent for extrinsic satisfaction, but not for intrinsic satisfaction.

Affective commitment was significantly lower in response to the economic crisis, probably due to the affective feelings at work being influenced negatively during crisis. Continuance commitment, on the other hand, remained stable. Despite the limited employment opportunities, few alternatives in the labour market due to the extreme recessionary conditions, the perceived personal costs of leaving a current job were not affected by the economic crisis. It is worth mentioning that Greece has the highest

emigration figures during the last three years within the European Union. Greeks, especially the young and well-educated, are emigrating into the Northern countries of Europe looking for better employment and life prospects, and more secure and qualified jobs and careers. This trend makes it even more difficult for those who either lack mobility or are afraid of the new and unknown environment in another European country, are stuck in their current jobs and may be frightened that they may lose this job due to the worsening of the recession. This is only expressed in the strongest effects on job security satisfaction and affective commitment. However this pattern does not spill over to continuance commitment: continuance commitment remains stable and the calculative parts of commitment do not become more important than the affective parts.

Finally, normative commitment also changed unexpectedly although this form of commitment is deeply rooted in and influenced by the socialization process, and the values and beliefs stemming from family, school and community environments. Even the immediate effects of the crisis on individuals seem to impact on normative aspects of their lives and beliefs. A change in these normative aspects seems to progress much faster than expected. Hence, at the time of data collection (about 2 years after the onset of crisis), crisis resulted in a change in normative beliefs and evaluations reducing employees' feelings of obligation, duty and indebtedness.

#### *Self-regulation as adaptive change in times of crisis*

We proposed that economic crisis affects individuals' self-regulation mechanisms and that these mechanisms explain the attitudinal changes. Our results show that employees, as a result of the economic crisis, become more prevention and less promotion focused. This is an expected outcome since Zacher and de Lange (2011) showed that regulatory focus affects whether or not individuals consider opportunities or limitations in the future. Lanaj and colleagues (2012) speculate that environmental cues may cause changes in promotion and prevention focus as a strategic tendency. Our results are the first to indicate that economic crisis is a threatening environmental cue triggering shifts in regulatory foci. These shifts are viable explanatory mechanisms for changes in work-related attitudes. Promotion focus is correlated with a focus on future opportunities and prevention focus is correlated with a focus on future limitations. Also, prevention focused individuals base their decisions on logic, and rational and systematic information processing. Promotion focused individuals, on the other hand, utilize their experiential system, and intuition, hunches, and emotions are important for decision making (Novak & Hoffman, 2009). This finding is important for the reasoning behind the results of the current study: The economic crisis causes people to be more cautious and to think carefully before making important decisions. Rationality, controlled thinking, calculation and consideration of the pros and cons of any alternatives and opportunities prevail on individuals' decision making process. Economic crisis are threatening to employees' high aspirations, their eagerness and nurturance needs. Due to the threatening economic situation employees seek preservation of their current status and position and become more vigilant. This development alters individuals' self-regulation and they focus more towards prevention than promotion. Moreover, the bad economic situations, the pessimistic beliefs of the Greeks discovered from international surveys and the sensitivity to negative cues are not only characteristics of prevention focused individuals (Keller, Hurst, & Uskul, 2009), but they may also foster the creation of more and more prevention regulation mechanisms to ones' behavior.

Besides these main effects on regulatory focus we proposed a new perspective claiming that changes in regulatory foci – at least partially – account for crisis effects on work-related attitudes. First,

our findings revealed that promotion focus relates to job satisfaction and all its facets, and to commitment and its three sub-dimensions. These relations are in line with previous research (Lanaj et al., 2012), while we also extend previous findings by showing that extrinsic and intrinsic aspects of job satisfaction relate positively to gain and aspiration focused self-regulations. Importantly, economic crisis hampers employees' promotion focus and this reduced promotion focus in turn relates to reduced job satisfaction and commitment. Here, a sequence of consistent associations explains the negative effect of crisis on work-attitudes.

Secondly, prevention focus was positively associated with all three commitment dimensions, but not significantly with job satisfaction. This indicates that prevention focus enables employees to commit to their organization emotionally, normatively and with respect to their continuing relation, whereas more evaluative components of work-related attitudes (i.e. satisfaction) are not underpinned by non-loss orientations and preservation focused self-regulation. Prevention focus plays an interesting role in this crisis effect study, because more loss avoidance and preservation is triggered by the crisis which in turn relate positively to the aforementioned work-related outcomes. This seemingly inconsistent sequence of relationships is characteristic for coping and adjustment mechanisms (Holmbeck, 1997; MacKinnon et al., 2007; Shrout & Bolger, 2002; for applications see for instance Hathaway & Pargament, 1990; Swenson & Prelow, 2005). This means that prevention focus functions as an adjustment mechanism, which prevents more profound negative effects of crisis on work-related outcomes due to a suppression-like effect (Holmbeck, 1997; MacKinnon et al., 2007; Shrout & Bolger, 2002). This becomes particularly evident in the case of continuance commitment: crisis did not exert a direct effect on this form of commitment possibly due to the compensating indirect effects of promotion and prevention focus (being of opposite direction). In the other effects, the negative impact on reduced promotion focus may be too strong to be countervailed by an increase in prevention focus. Yet, prevention focus – which can be seen as a double-edged sword in innovation and management research – can be helpful in preventing even worse effects in times of crisis. Enhanced prevention focus may have a stabilizing effect in times of crisis, however, it may not be able to provide the necessary aspiration and innovation potential to overcome crisis. As this latter note is of course speculative, future research in this field may provide novel and important insights into psychological interventions to economic crisis. Our findings indicate that changes in regulatory foci may be one adaptive mechanism in response to the economic threat of a crisis.

#### *Limitations and alternative explanations*

Turning to the limitations of our study, the use of two different measurement scales is an important issue but the same issue occurs in most meta-analyses: making scores measured on different scales comparable and therefore allowing meaningful comparisons. Instead of converting one scale into the range of the other scale, we used an established transformation procedure (POMP; Cohen et al., 1999), which transforms the scores of both groups into a common metric of 0–100. POMP transformation is now frequently applied in meta-analyses (e.g., Fischer & Boer, 2011; Fischer & Chalmers, 2008; Fischer & Mansell, 2009; Paul & Moser, 2006) and primary studies (Baguley, 2009; Srivastava, McGonigal, Richards, Butler, & Gross, 2006) allowing comparisons of mean scores measured on different scales. Besides the comparability of mean levels, correlations may be affected by different scales (e.g., Preston & Colman, 2000), however a recent study for instance showed that less response options (6 point scale) compared to more response options (11 point scale) yielded a similar or slightly better factor structure (based on more robust factor loadings) and



there was no indication that one of the two scales performed consistently better in correlation analyses (Schwartz et al., 2012). Therefore, we are confident about our data, its transformation and the analysis.

Furthermore, we need to critically evaluate our cross-sectional design, its general limitations and the rather low effect sizes. Common-method variance is one major concern in cross-sectional field data using Likert-type response formats. This issue may become most pressing in the assessment of indirect effects based on correlational data (i.e., the b-paths). However, looking at the correlation tables of both data sets, we can see correlations ranging from zero to strong effects. This variability in associations indicates a theoretically meaningful differentiation in effect sizes with, for instance, sub-dimensions of one domain are strongly correlated, while outcomes of different domains are less strongly correlated. Based on this observation we believe that common-method variance is not largely affecting our results. The effect sizes of our results range from small to medium effects and this in turn leads to small indirect effects. The main objective of the present study was to show that economic crisis affects work-related attitudes and how shifts in self-regulation may account for crisis effects. We refrain from claiming strong effects and future research may direct their attention towards elucidating conditions of varying magnitude in crisis effects.

There are relatively few alternatives to this type of cross-sectional field studies. This deficiency is exhibited in all field studies using self-reported quantitative-type questionnaires. It is difficult to envisage a way in which individual attitudes can be assessed other than through self-report. Longitudinal studies incorporating behavioral data from third party informants are strongly advocated in the literature. However, such an approach was not possible here and third party informants would be unable to comment on individual attitudes. Third party reports of satisfaction or behavioral assessment of commitment are clearly avenues to be pursued in future. Finally, the samples are clearly not representative of the total Greek population and generalizability of the findings is limited – at this point to private sector employees in Northern Greece.

One alternative source of impact on our outcome variables may stem from systematic changes in positive affect during the day (Golder & Macy, 2011). We argue that such variations will not impact systematically on our data, because the participants have answered the survey at some stage during the day. This sampling procedure has the advantage that daily variations in mood-related effects are averaged out. This averaging out affects both samples so the same degree, hence diurnal variations are unlikely to affect our data.

The focusing illusion of wealth effects put forward by Kahneman and colleagues (2006) is an interesting point raised by one reviewer. We show consistent evidence across a number of attitudinal work-related outcomes. If this effect is to be interpreted within the frame of focusing illusion, one explanation would be that this indicates a shift in focusing point: crisis has generic negative effects which shift evaluation points towards lower ends. An alternative perspective based on perspective shifts could be that after the first shock moments of crisis and enduring economic difficulties over longer periods, the reference points may adjust and shift back to 'normal' resulting in normalization of work-related attitudes and wellbeing. These suggestions are, however, speculative and in any case, our data captures the reality for the people in crisis who feel less satisfied, more insecure, less committed and changing in their regulatory focus, hence, our results reflect the psychological reality of employees in times of crisis.

## Implications and Conclusions

We believe that, despite the above limitations, the results presented here contribute to our knowledge in several ways. First, it

is important to see that the crisis does indeed impact people's attitudes in negative ways even if some of the effects are rather small. Although this was expected, it is not trivial – the participants surveyed in 2011 and 2012 were all in employment and did not report lower satisfaction and affective commitment because of having lost their jobs due to the crisis. So, changes they report are likely to be due to perceptions of how the crisis affects their general opportunities and provides insights into their mindsets. We have argued and shown that the crisis does impact employees' regulatory focus first and that this variable then is responsible for changes in satisfaction and commitment as a mediator.

It seems interesting that not all attitudes have changed in the same way. Whereas affective commitment decreased, continuance commitment remains stable. So, employees like working for their employers less than before the crisis but their feelings of being "stuck" out of lack of alternatives remains relatively high. With respect to this latter finding and as an implication of our study, managers would be well advised not to take advantage of this situation. Satisfaction and commitment have been shown to impact on people's productivity and when these factors decline further, organizations and ultimately the Greek economy would suffer even further. Therefore, it is extremely important for managers to do what they can to maintain levels of morale as they are or try to improve them by treating people with respect, being fair and responsive and by focusing on the intrinsic aspects of work. Finally, our research also delivers a further argument why politicians and regulators need to resolve the crisis quickly. When whole societies, such as the Greek one, move towards prevention orientation, dissatisfaction and low affective commitment, the situation may follow a vicious cycle, with lower and lower productivity but also with lower employees' creativity and innovation. Doing something, and doing it quickly is imperative – and this does not only follow from the rating agencies evaluation of Greek bonds but also from looking at the individual Greek citizens' attitudes.

## References

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1–18.
- Argyrou, M. G., & Tsoukalas, J. D. (2011). The Greek debt crisis: Likely causes, mechanisms, and outcomes. *The World Economy*, 34, 173–191.
- Baguley, T. (2009). Standardized or simple effect size: What should be reported? *British Journal of Psychology*, 100, 603–617.
- Bell, D. N. F., & Blanchflower, D. G. (2011). The crisis, policy reactions and attitudes to globalization and jobs. In M. Bacchetta & M. Jansen (Eds.), *Making globalization socially sustainable* (pp. 85–118). Geneva: ILO & WTO.
- Boer, D., & Fischer, R. (2013). How and when do personal values guide our attitudes and sociality? Explaining cross-cultural variability in attitude-value linkages. *Psychological Bulletin*, 139, 1113–1147.
- Brief, A. P. (1998). *Attitudes in and around organizations*. Thousand Oaks: Sage.
- Brockner, J., Grover, S., O'Malley, M. N., Reed, T. F., & Glynn, M. A. (1993). Threat of future layoffs, self-esteem and survivors' reactions: Evidence from the laboratory and the field. *Strategic Management Journal*, 14, 153–166.
- Brockner, J., Grover, S., Reed, T., DeWitt, R., & O'Malley, M. (1987). Survivors' reactions to layoffs: We get by with a little help for our friends. *Administrative Science Quarterly*, 32, 526–541.
- Cohen, P., Cohen, J., Aiken, L. S., & West, S. G. (1999). The problems of units and the circumstance for POMP. *Multivariate Behavioral Research*, 34, 315–346.
- Cooper-Hakim, A., & Viswesvaran, C. (2005). The construct of work commitment: Testing an integrative framework. *Psychological Bulletin*, 131, 241–259.
- Filippetti, A., & Archibugi, D. (2011). Innovation in times of crises: National systems of innovation, structure, and demand. *Research Policy*, 40, 179–192.
- Fischer, R., & Boer, D. (2011). What is more important for national well-being: money or autonomy? A meta-analysis of well-being, burnout, and anxiety across 63 societies. *Journal of Personality and Social Psychology*, 101, 164–184.
- Fischer, R., & Chalmers, A. (2008). Is optimism universal? A meta-analytical investigation of optimism levels across 22 nations. *Personality and Individual Differences*, 45, 378–382.
- Fischer, R., & Mansell, A. (2009). Commitment across cultures: A meta-analytical approach. *Journal of International Business Studies*, 40(8), 1339–1358.

- Ghellab, Y., & Papadakis, K. (2011). The politics of economic adjustment: State unilateralism or social dialogue? In J. Somavia (Ed.), *The global crisis: Causes, responses and challenges* (pp. 81–91). Geneva: ILO.
- Hathaway, W. L., & Pargament, K. I. (1990). Intrinsic religiousness, religious coping, and psychosocial competence: A covariance structure analysis. *Journal for the Scientific Study of Religion*, 29, 423–441.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (30, pp. 1–46). New York: Academic Press.
- Hogg, M. A. (2007). Uncertainty-identity theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, 39 (pp. 69–126). San Diego, CA: Academic Press.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, 65, 599–610.
- Judge, T. A., & Kammeyer-Mueller, J. D. (2012). Job attitudes. *Annual Review of Psychology*, 63, 341–367.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127, 376–407.
- Kahneman, D., Krueger, A., Schkade, D., Schwarz, N., & Stone, A. (2006). Would you be happier if you were richer? A focusing illusion. *Science*, 312, 1908–1910.
- Kark, R., & Van-Dijk, D. (2007). Motivation to lead, motivation to follow: The role of the self-regulatory focus in leadership processes. *Academy of Management Review*, 32, 500–528.
- Keller, J., Hurst, M., & Uskul, A. (2009). Prevention-focused self-regulation and aggressiveness. *Journal of Research in Personality*, 42, 800–820.
- Lanaj, K., Chang, C.-H. D., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: A review and meta-analysis. *Psychological Bulletin*, 138, 998–1034.
- Lee, B. H. V., Wang, L. R. L., & Ip, D. F. K. (2011). Global financial crisis and job satisfaction of atypical workers: The case of Taiwan. *Journal of Asian Public Policy*, 4, 103–120.
- Leonardelli, G. J., Lakin, J. L., & Arkin, R. M. (2007). A regulatory focus model of self-evaluation. *Journal of Experimental Social Psychology*, 43, 1002–1009.
- Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83, 854–864.
- Mackinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7, 83–104.
- Mackinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593–614.
- Manchin, A. (2012). Worldwide Greeks most pessimistic about their lives plurality expect their lives will be worse in five years. *Gallup World*. <http://www.gallup.com/poll/156137/Worldwide-Greeks-Pessimistic-Lives.aspx> (Retrieved 27/01/2013).
- Markovits, Y., Davis, A. J., Fay, D., & Van Dick, R. (2010). The link between job satisfaction and organizational commitment – Differences between public and private sector employees. *International Public Management Journal*, 13, 177–196.
- Markovits, Y., Davis, A. J., & Van Dick, R. (2007). Organizational commitment profiles and job satisfaction among Greek private and public sector employees. *International Journal of Cross-Cultural Management*, 7, 77–99.
- Markovits, Y., Ullrich, J., Van Dick, R., & Davis, A. J. (2008). Regulatory foci and organizational commitment. *Journal of Vocational Behavior*, 73, 485–489.
- Mehri, M., Iqbal, M. J., Hekmat, R. K., & Ishaq, H. M. (2011). *Impact of global financial crises on job security and job motivation of employees of banking sector in Iran*, 2nd International Conference on Business and Economic Research. Malaysia (proceedings): Kedah.
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78, 538–551.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnysky, L. (2002). Affective, continuance and normative commitment to the organization: A meta-analysis of antecedents, correlates and consequences. *Journal of Vocational Behavior*, 61, 20–52.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee organization linkages: The psychology of commitment, absenteeism and turnover*. New York: Academic Press.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224–247.
- Novak, T. P., & Hoffman, D. L. (2009). The fit of thinking style and situation: New measures of situation-specific experiential and rational cognition. *Journal of Consumer Research*, 36, 56–72.
- Paul, K. I., & Moser, K. (2006). Incongruence as an explanation for the negative mental health effects of unemployment: Meta-analytic evidence. *Journal of Occupational and Organizational Psychology*, 79, 595–621.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879–891.
- Preston, C. C., & Colman, A. M. (2000). Optimal number of response categories in rating scales: reliability, validity, discriminating power, and respondent preferences. *Acta Psychologica*, 104, 1–15.
- Schwartz, S. H., Cieciuch, J., Vecchione, M., Fischer, R., Ramos, A., & Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, 103, 663–688.
- Seršić, D. M., & Sverko, B. (2000). Croatian workers in the period of transition: a five-year follow-up of job related attitudes. *Social Science Information*, 39, 363–376.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422–445.
- Sibley, C. G., Osborne, D., & Duckitt, J. (2012). Personality and political orientation: meta-analysis and test of a threat-constraint model. *Journal of Research in Personality*, 46, 664–677.
- Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Thousand Oaks: Sage.
- Srivastava, S., McGonigal, K. M., Richards, J. M., Butler, E., & Gross, J. J. (2006). Optimism in close relationships: How seeing things in a positive light makes them so. *Journal of Personality and Social Psychology*, 91, 143–153.
- Summerville, A., & Roese, N. J. (2008). Self-report measures of individual differences in regulatory focus: A cautionary note. *Journal of Research in Personality*, 42, 247–254.
- Swenson, R. R., & Prellow, H. M. (2005). Ethnic identity, self-esteem, and perceived efficacy as mediators of the relation of supportive parenting to psychosocial outcomes among urban adolescents. *Journal of Adolescence*, 28, 465–477.
- Vandenbergh, C. (2009). Organizational commitments. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.), *Commitment in organizations: Accumulated wisdom and new directions (SIOP Organizational Frontiers Series)* (pp. 99–135). New York: Routledge.
- Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). Manual for the Minnesota Satisfaction Questionnaire. *Minnesota Studies in Vocational Rehabilitation, Bulletin*, 22.
- Wiener, Y. (1982). Commitment in organizations: A normative view. *Academy of Management Review*, 7, 418–428.
- Zacher, H., & de Lange, A. H. (2011). Relations between chronic regulatory focus and future time perspective: Results of a cross-lagged structural equation model. *Personality and Individual Differences*, 50, 1255–1260.