

## RESEARCH REPORT

# Catch Me If I Fall! Enacted Uncertainty Avoidance and the Social Safety Net as Country-Level Moderators in the Job Insecurity–Job Attitudes Link

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Job insecurity is related to many detrimental outcomes, with reduced job satisfaction and affective organizational commitment being the 2 most prominent reactions. Yet, effect sizes vary greatly, suggesting the presence of moderator variables. On the basis of Lazarus's cognitive appraisal theory, we assumed that country-level enacted uncertainty avoidance and a country's social safety net would affect an individual's appraisal of job insecurity. More specifically, we hypothesized that these 2 country-level variables would buffer the negative relationships between job insecurity and the 2 aforementioned job attitudes. Combining 3 different data sources, we tested the hypotheses in a sample of 15,200 employees from 24 countries by applying multilevel modeling. The results confirmed the hypotheses that both enacted uncertainty avoidance and the social safety net act as cross-level buffer variables. Furthermore, our data revealed that the 2 cross-level interactions share variance in explaining the 2 job attitudes. Our study responds to calls to look at stress processes from a multilevel perspective and highlights the potential importance of governmental regulation when it comes to individual stress processes.

**Keywords:** job insecurity, cross-cultural, enacted uncertainty avoidance, social safety net, stress

In response to ongoing pressures of globalization interspersed with economic recessions, companies have been continuously engaging in restructuring programs, mergers, acquisitions, and outsourcing for several decades now (e.g., Greenhalgh & Rosenblatt, 1984, 2010; Hellgren, Sverke, & Isaksson, 1999). At the same time, many industrialized countries have shifted their focus from a predominantly manufacturing economy to one that emphasizes the service and high-technology industries. Together, these changes have made today's employment situation less stable and secure (Greenhalgh & Rosenblatt, 1984, 2010). As a result, job insecurity

appears to be an increasingly globally relevant phenomenon, with some researchers labeling it one of the most important issues of applied psychology for the third millennium (Fernandez-Ballesteros, 2002).

Job insecurity—a person's "concern about the future permanence of the job" (Van Vuuren & Klandermans, 1990, p. 133)—is a stressor with numerous detrimental outcomes (Cheng & Chan, 2008; Sverke, Hellgren, & Näswall, 2002). The most recent meta-analysis on job insecurity (Cheng & Chan, 2008) showed that job satisfaction and organizational commitment are the two most frequently studied and most ubiquitous reactions to job insecurity. Moreover, given that job insecurity is viewed as a stressor causing emotional reactions (e.g., De Witte, 1999), the primary focus in most studies has been affective (rather than normative or continuance) organizational commitment (e.g., Feather & Rauter, 2004; Staufenbiel, & König, 2010).

Despite the large number of studies in support of a relationship between job insecurity and the outcomes of job satisfaction and affective commitment, effect sizes for job insecurity–outcome relationships vary greatly, suggesting the presence of moderator variables (Cheng & Chan, 2008; Sverke et al., 2002). Typically, meta-analytic (Cheng & Chan, 2008; Sverke et al., 2002) and primary research investigations have focused on the potential effects of individual-level variables as moderators (e.g., Berntson, Näswall, & Sverke, 2010; Kinnunen, Mauno, & Siltaloppi, 2010), with little attention paid to the potential role of moderators operating at higher levels.

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We argue that this near-exclusive focus on individual-level moderators falls short. Instead, higher level variables at the cultural and country levels may also explain substantial variation in job insecurity–outcome relationships. More specifically, we argue that the cultural practice of enacted uncertainty avoidance and a country's social safety net affect individual appraisals of job insecurity (Lazarus, 1968; Lazarus & Folkman, 1984), thereby buffering its relationships with the aforementioned job attitudes. We test our hypotheses using data from representative samples of the adult population drawn from 24 different countries.

Our study contributes to the literature in several ways. First, although job insecurity research has been conducted around the world (e.g., Bacon & Blyton, 2001; Lee, Bobko, Ashford, Chen, & Reb, 2008; Probst & Ekore, 2010), very little research has employed an explicitly cross-cultural perspective (see the two-country comparison studies by König, Probst, Staffen, & Graso, 2011; Probst & Lawler, 2006, for exceptions). By adding this cross-cultural perspective, we are able to assess the generalizability of job insecurity and its two most ubiquitous consequences (see also Gelfand, Erez, & Aycan, 2007). Second, our study shifts the view away from an exclusively individual-level investigation of job insecurity to an examination of interactions between individuals and theoretically relevant contextual factors. As social systems affect individual behaviors (Salancik & Pfeffer, 1978), several authors have already highlighted the importance of looking at stress processes from a multilevel perspective (Bliese & Jex, 1999, 2002; Probst, 2010). Third, combining a cross-cultural and a multilevel perspective enlarges previous thinking and may stimulate future research by highlighting that job insecurity and relevant correlates are embedded in a multitude of different contexts. Finally, our findings may have practical and policy implications to the extent that differences in the social safety net predict individual-level reactions to job insecurity.

Below we review the existing literature on the relationship between job insecurity and job attitudes. We follow this with a discussion of the mechanisms by which enacted uncertainty avoidance and the social safety net are expected to buffer those relationships.

### The Relationship Between Job Insecurity and Job Attitudes

Lazarus's (1968; Lazarus & Folkman, 1984) cognitive appraisal model is a well-established theory that explains how stressors result in a multitude of detrimental physical, behavioral, and affective reactions. As noted earlier, in the case of affective reactions to job insecurity, typical examples of such reactions are reduced job satisfaction and affective commitment (see also Sora, Caballer, Peiró, & De Witte, 2009; Sverke et al., 2002). Both types of job attitudes represent ways in which employees affectively withdraw from their job. Lowered job satisfaction is an attitudinal reaction directed at the individual him- or herself. In contrast to this, when individuals reduce their affective commitment, they attitudinally withdraw from their organization (Sverke et al., 2002) by reducing their emotional attachment to, identification with, and involvement in the organization (Allen & Meyer, 1990). Both job satisfaction and affective commitment are crucial reactions to job insecurity; at low levels, they can be harmful and costly for both the individual and the organization (Sverke et al., 2002).

Cognitive appraisal theory posits that the way stressors are interpreted plays a crucial role (Lazarus, 1968; Lazarus & Folkman, 1984). In other words, the cognitive appraisal of the stressor is assumed to moderate the relationship between stressor and subsequent reactions. When cognitively appraising a stressor, individuals evaluate their ability to deal with the stressor, which affects the extent to which the stressor results in negative outcomes (Lazarus, 1968; Lazarus & Folkman, 1984). Lazarus and Folkman (1984) argued that several factors affect individual appraisal processes. Most pertinent to this study, the authors note that individuals are embedded in higher level societal systems, thereby arguing for reciprocal relationships between society and culture on the one hand and individual stress processes on the other. Hence, besides factors at the individual level, factors from the cultural or country context can likewise be assumed to affect an individual's appraisal of job insecurity.

### Enacted Uncertainty Avoidance: A Cultural Characteristic Affecting the Appraisal of Job Insecurity

Research suggests that not all individuals or cultures have the same need for or place the same value on certainty and security (e.g., in the GLOBE project; House, Hanges, Javidan, Dorfman, & Gupta, 2004). According to Hofstede (2001), culture is in essence a collective mental programming or mindset, reflecting traditions and common ways of thinking. What is more, these cognitive mindsets are enacted in several institutions, such as government, legal, and educational systems (Hofstede, 2001).

In the context of job insecurity, enacted uncertainty avoidance can be understood as a country-level characteristic affecting stressor appraisal at the individual level. Uncertainty avoidance reflects the extent to which ambiguous situations may be felt as threatening within a society (Hofstede, 2001). Enacted uncertainty avoidance is the practical consequence of this dislike and represents the extent to which people from a society rely on "social norms, rules and procedures to alleviate the unpredictability of future events" (House et al., 2004, p. 30). Hence, in the context of our study, we refer to *enacted uncertainty avoidance* as reported societal manifestations due to a general dislike of uncertain situations. Specifically, people from countries with high enacted uncertainty avoidance emphasize structured lives with laws and rules covering the majority of situations (House et al., 2004).

Thus, in the context of cognitive appraisal theory (Lazarus, 1968; Lazarus & Folkman, 1984), the higher level cultural difference of enacted uncertainty avoidance would be predicted to affect the individual-level cognitive appraisal of job insecurity. When confronted with job insecurity, individuals in countries with high enacted uncertainty avoidance (i.e., countries with extensive norms, rules, and procedures to alleviate such uncertainty) would be expected to have a clearer idea regarding what happens and how they are protected in the event of job loss. Therefore, we expect that there will be fewer negative reactions to job insecurity in terms of job satisfaction and affective commitment.

*Hypothesis 1:* The negative relationship between employees' job insecurity and their job satisfaction and affective commitment will be buffered by their country's enacted uncertainty avoidance: Employees in countries with high enacted

uncertainty avoidance will have fewer negative reactions to job insecurity relative to employees in countries with low enacted uncertainty avoidance.

### **The Social Safety Net: A Socioeconomic Country Characteristic Affecting the Appraisal of Job Insecurity**

We also propose a second country-level characteristic to affect the cognitive appraisal of job insecurity, namely, a country's social safety net. This is a socioeconomic characteristic referring to the extent of government regulation of the labor market and governmental social protection programs designed to protect workers from job loss and significant income declines (Blank, 1994). Such safety net programs generally include (a) income transfer programs designed to lift employees and their families out of poverty, (b) in-kind programs providing access to health insurance or affordable housing, and (c) social insurance programs such as disability benefits and social security. They also encompass regulatory mechanisms that provide for continued job security or that mandate employer contributions to benefit programs such as unemployment insurance.

According to Boots, Martinson, and Danziger (2009), such social safety nets are essential resources, as they serve the purpose of protecting and buffering employees from economic shocks. Hence, as people from countries with a strong social safety net are well equipped against uncertain situations in the employment context, they are likely to appraise job insecurity as less threatening. As a consequence, they are predicted to react less negatively toward job insecurity in terms of job satisfaction and affective commitment. König et al. (2011) presented a similar reasoning in their study among working students, finding more negative reactions to job insecurity in the United States (i.e., a country with a relatively weak social safety net) compared with Switzerland (i.e., a country with a relatively strong social safety net; Blank, 1994).

**Hypothesis 2:** The negative relationship between employees' job insecurity and both their job satisfaction and affective commitment will be buffered by their country's social safety net: Employees in countries with stronger social safety nets will have fewer negative reactions to job insecurity relative to employees in countries with weaker social safety nets.

### **Enacted Uncertainty Avoidance and the Social Safety Net: A Look at the Interface**

In sum, we have postulated that both enacted uncertainty avoidance and the social safety net at the country level have a similar effect, namely, a buffering effect on the proposed job insecurity–job attitudes relationships. We have described enacted uncertainty avoidance as the broader cultural difference variable that refers to a multitude of institutions reported by people to tackle uncertain situations. In contrast, the social safety net is one concrete implementation of rules and regulations that take effect in the context of uncertainty in the employment context. Based on our hypotheses, the question arises as to whether the two cross-level interactions share variance and if they are linked within our proposed relationships. We investigate this issue by means of an exploratory research question.

**Research Question:** Do the two cross-level interactions share variance in explaining outcomes of job insecurity?

## **Method**

### **Sample**

Individual-level data for this study came from the International Social Survey Program (ISSP), a continuing annual cross-national collaboration involving 43 countries. Every year, the survey has a main topic; the data for this study came from a subset of the 2005 module on the main topic of work orientations.

Country-level data came from the GLOBE study (House et al., 2004) for enacted uncertainty avoidance and from the International Labor Organization (ILO; 2004) for the social safety net. Combining the two country-level data sets and the individual-level data set resulted in 15,200 individuals nested within 24 countries (Australia, Canada, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Japan, Mexico, New Zealand, Philippines, Portugal, Russia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, the Netherlands, United Kingdom, United States). A total of 51.8% of participants were male, and 35.9% had a supervisor position. The mean age in the sample was 41.7 years ( $SD = 12.1$ ), and participants indicated an average of 12.8 years of schooling ( $SD = 3.8$ ).

### **Individual-Level Measures**

**Job insecurity.** Job insecurity was measured with the item "My job is secure," to be answered on a 5-point Likert scale ranging from 1 = *strongly agree* to 5 = *strongly disagree* (for the same use, see Anderson & Pontusson, 2007; Erlinghagen, 2008).

**Job satisfaction.** Job satisfaction was measured with the item "How satisfied are you in your main job?" to be answered on a 7-point Likert scale ranging from 1 = *completely satisfied* to 7 = *completely dissatisfied* (reverse scored).

**Affective commitment.** Affective commitment was measured with two items, which were "I am willing to work harder than I have to in order to help the firm or organization I work for succeed" and "I am proud to be working for my firm or organization." Items were answered on a 5-point Likert scale ranging from 1 = *strongly agree* to 5 = *strongly disagree* (reverse scored). Cronbach's alpha was .69.

As the three individual-level measures were not operationalized with commonly used and validated measures, we conducted a validation study among 310 employees. We concurrently administered the original ISSP items along with previously validated scales. Job insecurity was measured with four items by Staufenbiel and König (2010); commitment was measured with Allen and Meyer's (1990) Affective Commitment subscale; and job satisfaction was measured with Tsui, Egan, and O'Reilly's (1992) scale. The correlation between the job insecurity measures was .82 (corrected for the unreliability of the standard measure:  $r_{\text{partially disattenuated}} = .86$ ). The correlation between the job satisfaction measures was .62 ( $r_{\text{partially disattenuated}} = .65$ ), and the correlation between the two-item ISSP affective commitment score and the Affective Commitment subscale was .73 ( $r_{\text{partially disattenuated}} = .83$ ). Thus, it appears that the measures used in this study are valid indicators of their respective constructs.

## Country-Level Variables

**Enacted uncertainty avoidance.** This was operationalized using the Uncertainty Avoidance Practices scores from the GLOBE study (House et al., 2004), a research program consisting of a team of 170 scholars to study societal and organizational culture and attributes of effective leadership in 62 countries. Uncertainty avoidance practices measure people's perception of what their culture is like and was originally measured with four items. Individual scores were then aggregated to the country level by the GLOBE researchers. A sample item is "In this society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do" (measured on a 7-point Likert scale). To determine whether aggregate scores of individually assessed uncertainty avoidance practices were empirically justifiable, the GLOBE researchers relied on the proportion of the total variance that could be explained by country membership ( $ICC_1$ ) and country-mean reliability ( $ICC_2$ ), which were .36 and .96, respectively (Hanges & Dickson, 2004). All indices support aggregation well (Bliese, 2000; LeBreton & Senter, 2008); for more information see Hanges and Dickson (2004, 2006). Moreover, as culture-specific response tendencies (Hui & Triandis, 1989; Stening & Everett, 1984; Triandis, 1994) may bias subsequent cross-cultural comparisons (House et al., 2004), we utilized the respective country scores corrected for response bias provided by the GLOBE study.

**Social safety net.** Two economic security indices developed by the ILO's (2004) Socio-Economic Security Programme were used to operationalize the social safety net: the labor market security (LMS) index and the income security (IS) index. Each index has two subcomponents reflecting a government's formal commitment to LMS and IS (termed *input* by the ILO), as well as the comprehensiveness of the actual programs in place in the country (referred to as *process*). Specifically, the LMS index reflects the extent to which workers have access to reasonable income-earning activities and whether there are governmental policy commitments to that effect, as well as programs in place to provide opportunities for labor market security (e.g., government investment in programs such as worker retraining and other skills-based initiatives aimed at preparing workers for new workplace realities and changing labor market demands). The IS index is

calculated as a function of a government's commitment to income security and the degree of comprehensiveness of the social protection system. Although several variables influence a country's IS index (e.g., minimum wage protections, collective bargaining provisions), unemployment benefits play a large role. In particular, this is influenced by the qualifying period of contributions before individuals become eligible for unemployment benefits, the ratio of contributions made by employees and employers to the unemployment insurance system, the duration of benefits, and the percentage of income replacement that the unemployment benefits provide (ILO, 2004).

Although a country's unemployment policies can clearly impact both LMS and IS, the key difference between the two is that the LMS index is about the structures in place to create adequate employment opportunities, whereas the IS index concerns the structures in place to ensure that adequate levels of income are available for employed and unemployed individuals. Each of the indices can range from 0 to 1. To create our composite measure of the social safety net, we computed the average value across these components for each country, such that the *social safety net* =  $(IS_{input} + IS_{process} + LMS_{input} + LMS_{process})/4$ .

## Control Variables

On the basis of past research in the job insecurity field (e.g., Hellgren & Sverke, 2003; Kinnunen, Mauno, Nätti, & Happonen, 1999; Orpen, 1993; Schaufeli, 1992), we included a number of control variables (Becker, 2005) that might act as third variables in the proposed relationships, specifically, age, gender, years of education, and supervisory position.

## Results

As our data set consisted of two data levels (Level 1 = individuals; Level 2 = countries), we chose hierarchical linear modeling to analyze the data (Raudenbush & Bryk, 2002). All predictors were centered at the grand mean.

## Descriptive Statistics

Means, standard deviations, and zero-order correlations are displayed in Table 1. In line with previous research, job insecurity

Table 1  
Means, Standard Deviations, and Zero-Order Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Enacted uncertainty avoidance	4.35	0.65	—	.61**	-.12	.28	.39	.22	-.43*	.19	.06
2. Safety net	0.76	0.13	—	—	.18	.39	.39	.41*	-.17	-.28	-.23
3. Job insecurity	2.31	1.13	—	—	—	.03	-.03	.17	.08	-.55**	-.38
4. Gender <sup>a</sup>	1.48	0.50	—	—	-.02**	—	.25	.33	.03	-.18	-.21
5. Age	41.70	12.07	—	—	-.02**	-.03**	—	.25	.03	-.24	.02
6. Years of schooling	12.82	3.84	—	—	-.04**	.03**	-.10**	—	-.39	-.39	-.26
7. Supervisor position <sup>b</sup>	1.64	0.48	—	—	.07**	.15**	-.08**	-.17**	—	-.11	-.35
8. Job satisfaction	3.41	1.03	—	—	-.24**	-.00	.08**	-.01	-.12**	—	.68**
9. Organizational commitment	3.70	0.88	—	—	-.16**	-.05**	.03**	.01	-.19**	.43**	—

*Note.* Correlations below the diagonal are individual-level correlations ( $N = 15,200$ ). Correlations above the diagonal are country-level correlations, with individual-level measures aggregated to the country level ( $N = 24$ ).

<sup>a</sup> 1 = male, 2 = female. <sup>b</sup> 1 = yes, 2 = no.

\*  $p < .05$ . \*\*  $p < .01$  (two-tailed).



was negatively related to both job satisfaction ( $r = -.24, p < .01$ ) and affective commitment ( $r = -.16, p < .01$ ) at the individual level.

Before proceeding with the multilevel analyses, we first determined (by means of the null model) whether between-group differences do indeed account for a significant proportion of the overall variance in our dependent variables (i.e., ICC<sub>1</sub>; Bliese, 2000; LeBreton & Senter, 2008). For job satisfaction, between-country differences accounted for 5.7% of the total variance, and for affective commitment, between-country differences accounted for 10.5% of the total variance.<sup>1</sup>

### Tests of Cross-Level Interactions With Enacted Uncertainty Avoidance (Hypothesis 1) and the Social Safety Net (Hypothesis 2)

To test Hypotheses 1 and 2, we followed a hierarchical test procedure. We compared a set of three nested models, starting with Model 1, which included the four individual-level control variables and job insecurity as a random effect. The results of this model showed significant variation in the individual slopes,  $\chi^2(23) = 85.35, p < .001$ , for job satisfaction;  $\chi^2(23) = 110.72, p < .001$ , for affective commitment. We tested Hypothesis 1 by entering the main effect of enacted uncertainty avoidance and the Job Insecurity  $\times$  Enacted Uncertainty Avoidance interaction term (see Aiken & West, 1991) in Model 2. We tested Hypothesis 2 by entering the social safety net main effect and the Social Safety Net  $\times$  Job Insecurity interaction term above the control variables and job insecurity in Model 3. As we compared nested models, parameters were estimated using full maximum-likelihood estimation (e.g., Raudenbush & Bryk, 2002). Tables 2 and 3 display the results.

To test Hypothesis 1, we examined the Job Insecurity  $\times$  Enacted Uncertainty Avoidance interaction entered in Model 2. The respective interaction terms were significant for job satisfaction ( $t = 2.69, p < .05$ , see Table 2) and affective commitment ( $t = 3.84, p < .001$ , see Table 3). In the case of job satisfaction, the cross-level interaction explained 33.2% of the variance in the job insecurity slopes; in the case of affective commitment, the cross-level interaction explained 48.1% of the slope variance. Figures 1 and 2 display the significant buffering effects of enacted uncertainty avoidance. Hence, Hypothesis 1 was supported.

To test for Hypothesis 2, we examined the Job Insecurity  $\times$  Social Safety Net interaction entered in Model 3. The interaction terms were significant for job satisfaction ( $t = 3.88, p < .001$ , see Table 2) and affective commitment ( $t = 3.96, p < .001$ , see Table 3). In the case of job satisfaction, the cross-level interaction explained 56.6% of the variance in the job insecurity slopes; in the case of affective commitment, the cross-level interaction explained 52.7% of the slope variance. Figures 3 and 4 display the significant buffering effects of the social safety net. Hence, Hypothesis 2 was supported.<sup>2,3,4</sup>

### The Relative Importance of the Two Interaction Effects

In order to examine the relative effects of both interactions, we entered the Job Insecurity  $\times$  Social Safety Net interaction above the Job Insecurity  $\times$  Enacted Uncertainty Avoidance interaction into the analyses in Model 4. The Job Insecurity  $\times$  Enacted

Uncertainty Avoidance interaction term became nonsignificant upon entering the Job Insecurity  $\times$  Social Safety Net interaction for job satisfaction (see Table 2) and affective commitment (see Table 3). The respective Job Insecurity  $\times$  Social Safety Net interactions were significant for both outcome variables. This suggests that both interactions share variance, with the stronger effect being captured by the social safety net interaction. Implications of this finding are elaborated upon in the Discussion section.

## Discussion

The most important finding of our study is the fact that the relationships between job insecurity and its two most central outcomes, job satisfaction and affective commitment, are moderated by country-level variables. We showed that enacted uncertainty avoidance and the social safety net buffer the negative relationships between job insecurity and these job attitudes. Given these findings, our study contributes to the literature by showing that reactions to job insecurity are not universally equal. Instead, reactions to job insecurity depend on the cultural and country context in which a person is embedded.

Second, in line with Lazarus (1968; Lazarus & Folkman, 1984), we show that entities affecting stressor appraisal do not have to be located only at the individual level but can also accrue from the higher levels, such as the national or cultural level. Instead of focusing on job insecurity and its correlates at the individual level only, our study shifts the view to interactions between individuals and context factors. In doing so, we follow the oft-mentioned call to model occupational stress phenomena within multilevel designs to enrich stress research both theoretically and practically (see also Bliese & Jex, 1999, 2002; Probst, 2010).

Moreover, our findings contribute to the understanding that job insecurity and its correlates are embedded in personal, organizational, and macroeconomic contexts, each having the potential to exert specific influences (see also Sinclair, Sears, Probst, & Zajak, 2010). As our study looks at job insecurity and related processes from a wider angle, we enlarge previous thinking of the construct, which has been mainly individually oriented. Similarly, Gelfand et al. (2007) recommended that researchers move beyond studying only cultural characteristics in cross-cultural research and to instead or additionally include contextual factors such as "political, economic, and legal factors, educational systems, climate,

<sup>1</sup> Although job insecurity was not a dependent variable, we performed the same analysis for it. The ICC<sub>1</sub> was .02; that is, 2% of the variance was accounted for by between-country differences.

<sup>2</sup> We reran all analyses with group-mean centered individual-level data (Enders & Tofghi, 2007), which revealed identical results.

<sup>3</sup> As we averaged GLOBE scores for the former East and West Germany, the French- and German-speaking parts of Switzerland, and for a Black and a White sample in South Africa, we ran all analyses again (with both grand-mean and group-mean centered data), leaving out the three countries in question. The analyses yielded the same results for all proposed hypotheses.

<sup>4</sup> When testing cross-level interaction effects, Hofmann and Gavin (1998) suggested controlling for the respective Level 2 interaction. We reran all analyses (with both grand-mean and group-mean centered data), which revealed the same results. The Level 2 interaction terms were nonsignificant in all analyses.

Table 2  
Multilevel Estimates for Models Predicting Job Satisfaction

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	68.90***	69.39***	72.99***	79.52***
Gender	1.94	1.94	1.91	1.91
Age	10.88***	10.85***	10.88***	10.85***
Years of schooling	2.28*	2.23*	2.28*	2.29*
Supervisor position	-11.67***	-11.68***	-11.68***	-11.66***
Job insecurity	-15.03***	-17.18***	-19.25***	-19.56***
Enacted uncertainty avoidance		0.49		2.11*
Job Insecurity $\times$ Enacted Uncertainty Avoidance		2.69*		0.92
Social safety net			-1.69	-2.75*
Job Insecurity $\times$ Social Safety Net			3.88***	2.57*
-2*log(lh)	42,263.81	42,257.10	42,249.02	42,244.63
Diff-2*log		6.71*	14.79***	12.47**
df		2	2	2
$\sigma^2_{\epsilon}$ (SE)	0.93707 (0.96803)	0.93707 (0.96803)	0.93713 (0.96806)	0.93713 (0.96805)
$\sigma^2_{u0}$ (SE)	0.05742 (0.23963)	0.05661 (0.23792)	0.05100 (0.22583)	0.04271 (0.20666)
$\sigma^2_{u1}$ (SE)	0.00286 (0.05345)	0.00191 (0.04371)	0.00124 (0.03517)	0.00116 (0.03406)

Note. Values are *t* coefficients unless otherwise noted. Diff-2\*log of Model 2 refers to the comparison with Model 1; Diff-2\*log of Model 3 refers to the comparison with Model 1; Diff-2\*log of Model 4 refers to the comparison with Model 2.

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

resources, level of technological advancement, and demographic composition" (Gelfand et al., 2007, p. 497). Our study responds to that call by including the social safety net as an important socioeconomic aspect that clearly differs between countries.

The analyses conducted to answer our research question revealed that both cross-level interaction terms shared variance and that the Job Insecurity  $\times$  Social Safety Net interaction accounted for the effect of the Job Insecurity  $\times$  Enacted Uncertainty Avoidance interaction. These findings might be interpreted such that the two cross-level moderators are causally linked, with two possible interpretations appearing plausible at this point. On the one hand, cultural characteristics are broad tendencies to favor certain states of affairs over others, which are directly reflected in people's behavior (Hofstede, 2001). Hence, enacted uncertainty avoidance

may represent the more distal moderator, whereas the social safety net could be viewed as the resulting concrete behavioral manifestation in the context of uncertain situations in the employment context. On the other hand, concrete behaviors that we see today can themselves reinforce the societal norms and the ecological conditions that led to them (Hofstede, 2001). Hence, it may also be that the social safety net affects the cultural characteristic of enacted uncertainty avoidance. As a result, future research might tease out the relationship among and the potential interplay of the country-level variables studied. Either way, a process of mediated moderation may take place.

Generally, however, the interpretation of mediated moderation is still speculative and limited in several ways by our available data set. First, mediation requires temporal precedence from the inde-

Table 3  
Multilevel Estimates for Models Predicting Affective Commitment

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	65.68***	65.69***	68.22***	69.51***
Gender	-2.60**	-2.63**	-2.66**	-2.66**
Age	1.90	1.89	1.91	1.90
Years of schooling	4.09***	4.03***	4.07***	4.04***
Supervisor position	-19.89***	-19.90***	-19.86***	-19.87***
Job insecurity	-8.88***	-11.12***	-11.34***	-12.17***
Enacted uncertainty avoidance		-0.08		0.97
Job Insecurity $\times$ Enacted Uncertainty Avoidance		3.84***		2.06
Social safety net			-1.37	-1.69
Job Insecurity $\times$ Social Safety Net			3.96***	2.15*
-2*log(lh)	36,624.70	36,612.88	36,610.74	36,606.09
Diff-2*log		11.82**	13.96***	6.79*
df		2	2	2
$\sigma^2_{\epsilon}$ (SE)	0.64579 (0.80361)	0.64574 (0.80358)	0.64579 (0.80361)	0.64575 (0.80359)
$\sigma^2_{u0}$ (SE)	0.07523 (0.27428)	0.07522 (0.27427)	0.06966 (0.26393)	0.06706 (0.25895)
$\sigma^2_{u1}$ (SE)	0.00258 (0.05081)	0.00134 (0.03659)	0.00122 (0.03497)	0.00096 (0.03102)

Note. Values are *t* coefficients unless otherwise noted. Diff-2\*log of Model 2 refers to the comparison with Model 1; Diff-2\*log of Model 3 refers to the comparison with Model 1; Diff-2\*log of Model 4 refers to the comparison with Model 2.

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

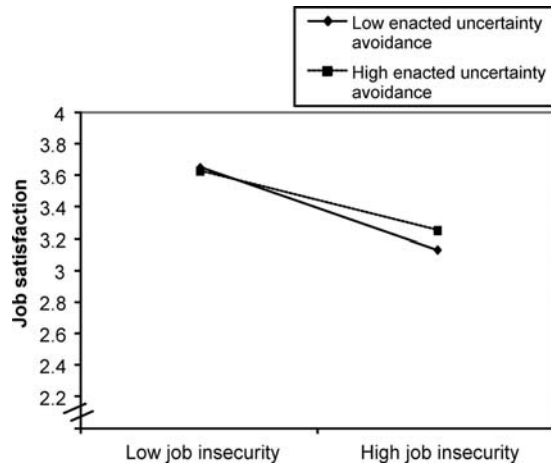


Figure 1. The cross-level interaction effect of country-level enacted uncertainty avoidance on the relationship between individual-level job insecurity and job satisfaction.

pendent variable to the mediator to the dependent variable (e.g., MacKinnon, Fairchild, & Fritz, 2007). We did not conduct a more formal test of mediation, as such a test would have been fairly inconclusive given the lack of temporal precedence of the measures in our data set. Second, as we have both Level 1 and Level 2 predictors within the mediation model, the issue of multilevel confounding may arise (Preacher, Zyphur, & Zhang, 2010; Zhang, Zyphur, & Preacher, 2009). Mean slope estimates cover both within and between effects, whereby only between effects are relevant if Level 2 variables are included in the mediation model. As a consequence, the estimation of the respective indirect effect may be biased. Finally, there may be reliability differences between the two interaction terms that promoted the current results. In particular, it may be the case that our social safety net indicator is more reliable than the enacted uncertainty avoidance measure. In fact, calculating a reliability coefficient based on the four chosen

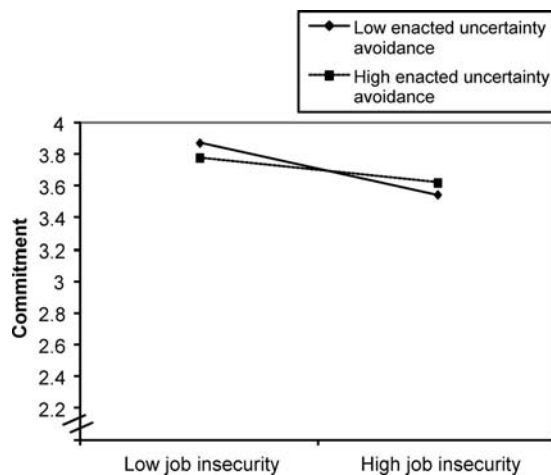


Figure 2. The cross-level interaction effect of country-level enacted uncertainty avoidance on the relationship between individual-level job insecurity and affective commitment.

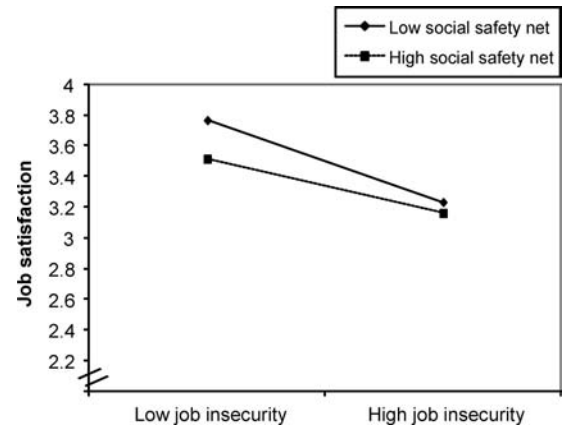


Figure 3. The cross-level interaction effect of country-level social safety net on the relationship between individual-level job insecurity and job satisfaction.

social safety net indicators revealed a Cronbach's alpha of .73. In the case of enacted uncertainty avoidance, the GLOBE researchers calculated the ICC<sub>2</sub> as an indicator of the reliability of the group mean, which was .96. On the one hand, this finding suggests that the social safety net interaction term may in fact be the less reliable interaction term. On the other hand, the two indices are not directly comparable, preventing us from drawing a definite conclusion.

One finding merits further consideration. Although we found the hypothesized buffering effects for both country-level variables, the corresponding figures look somewhat different. Although Figures 1 and 2 align with our theoretical arguments (i.e., that enacted uncertainty avoidance is a buffer in times of high job insecurity), Figures 3 and 4 suggest a different effect for the social safety net. It might be that individuals in low safety net countries have more positive job attitudes under the condition of low job insecurity precisely because they know that there is little safety net available to them. Therefore, the fact that they have a relatively secure job is all the better for them, particularly compared with someone who has a secure job in a high safety net country (and who may perhaps take this job security for granted). However, high job insecurity

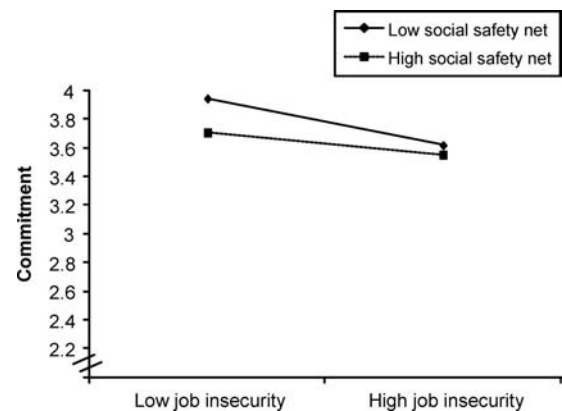


Figure 4. The cross-level interaction effect of country-level social safety net on the relationship between individual-level job insecurity and affective commitment.

may be more threatening for people in the context of a weak social safety net, because there is little to catch them if they fall. This may explain why the data display a steeper slope among individuals who have high job insecurity (rather than low job insecurity) in the low social safety net countries.

From a practical standpoint, our study sheds light on the potential role that the social safety net plays in influencing individual stress processes. The importance and implementation of a social safety net is a hotly debated issue around the globe. In the United States, for example, there is no consensus regarding the appropriate role of the government in regulating the free marketplace and industry, whereas most European countries highlight the importance of a strong social safety net. However, many would argue that such governmental restrictions regarding the hiring, firing, and unemployment benefits of workers impede the flexibility of organizations. Although we do not assume that our single study provides definitive insight into those issues, our results clearly suggest that governmental policies related to employment security affect individual-level reactions to job security.

There are, of course, limitations associated with our study. In the current study, we focused only on country-level variables that were predicted to have a buffering effect on job insecurity–job attitudes relationships. However, there may well be variables that exert an exacerbating effect. The country-level unemployment rate, for example, might have such an effect. People in countries with a relatively high unemployment rate might react more negatively to job insecurity, as this may suggest a tighter job market with fewer alternatives should they lose their employment.

A further aspect concerns the type of job insecurity that we assessed, as the construct has been conceptualized in a number of different ways. For example, Borg (1992) differentiated between cognitive (i.e., the anticipated likelihood of losing one's job) and affective job insecurity (i.e., the worry of anticipated job loss). Others distinguish between subjective and objective job insecurity (e.g., De Witte & Näswall, 2003). Our measure captured employees' subjective perception of their cognitive job insecurity. Hence, future research might explore whether the investigated country characteristics show the same interactional patterns with other types of job insecurity.

Finally, our data were collected in 2005, a time of relative economic stability in the countries under investigation. However, one may wonder whether the buffering effects of enacted uncertainty avoidance and the social safety net would have been even stronger if the data had been collected during an acute crisis, such as the 2007–2008 recession. In times of an acute crisis, potential protective resources may become more salient for people, which may in turn enhance the buffering effects investigated. Hence, future research might explore the extent to which such acute circumstances may act as additional context factors in these relationships.

## References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- 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. doi:10.1111/j.2044-8325.1990.tb00506.x
- Anderson, C. J., & Pontusson, J. (2007). Workers, worries and welfare states: Social protection and job insecurity in 15 OECD countries. *European Journal of Political Research*, 46, 211–235. doi:10.1111/j.1475-6765.2007.00692.x
- Bacon, N., & Blyton, P. (2001). High involvement work systems and job insecurity in the international iron and steel industry. *Canadian Journal of Administrative Sciences*, 18, 5–16. doi:10.1111/j.1936-4490.2001.tb00239.x
- Becker, T. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8, 274–289. doi:10.1177/1094428105278021
- Berntson, E., Näswall, K., & Sverke, M. (2010). The moderating role of employability in the association between job insecurity and exit, voice, loyalty and neglect. *Economic and Industrial Democracy*, 31, 215–230. doi:10.1177/0143831X09358374
- Blank, R. M. (1994). *Social protection versus economic flexibility: Is there a trade-off?* Chicago, IL: University of Chicago Press.
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco, CA: Jossey-Bass.
- Bliese, P. D., & Jex, S. M. (1999). Incorporating multiple levels of analysis into occupational stress research. *Work & Stress*, 13, 1–6. doi:10.1080/026783799296147
- Bliese, P. D., & Jex, S. M. (2002). Incorporating a multilevel perspective into occupational stress research: Theoretical, methodological, and practical implications. *Journal of Occupational Health Psychology*, 7, 265–276. doi:10.1037/1076-8998.7.3.265
- Boots, S. W., Martinson, K., & Danziger, A. (2009). *Employers' perspective on San Francisco's paid sick leave policy*. Washington, DC: The Urban Institute.
- Borg, I. (1992). Überlegungen und Untersuchungen zur Messung der subjektiven Unsicherheit der Arbeitsstelle [Reflections and studies on the measurement of subjective uncertainty of employment]. *Zeitschrift für Arbeits- und Organisationspsychologie*, 36, 107–116.
- Cheng, G. H.-L., & Chan, D. K.-S. (2008). Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology*, 57, 272–303. doi:10.1111/j.1464-0597.2007.00312.x
- De Witte, H. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology*, 8, 155–177. doi:10.1080/135943299398302
- De Witte, H., & Näswall, K. (2003). 'Objective' vs 'subjective' job insecurity: Consequences of temporary work for job satisfaction and organizational commitment in four European countries. *Economic and Industrial Democracy*, 24, 149–188. doi:10.1177/0143831X03024002002
- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, 12, 121–138. doi:10.1037/1082-989X.12.2.121
- Erlinghagen, M. (2008). Self-perceived job insecurity and social context: A multi-level analysis of 17 European countries. *European Sociological Review*, 24, 183–197. doi:10.1093/esr/jcm042
- Feather, N. T., & Rauter, K. A. (2004). Organizational citizenship behaviours in relation to job status, job insecurity, organizational commitment and identification, job satisfaction and work values. *Journal of Occupational and Organizational Psychology*, 77, 81–94. doi:10.1348/096317904322915928
- Fernandez-Ballesteros, R. (2002). Challenges of applied psychology for the third millennium: Introduction to the special issue. *Applied Psychology*, 51, 1–4. doi:10.1111/1464-0597.0075z
- Gelfand, M. J., Erez, M., & Aycan, Z. (2007). Cross-cultural organizational behavior. *Annual Review of Psychology*, 58, 479–514. doi:10.1146/annurev.psych.58.110405.085559



- Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. *Academy of Management Review*, 9, 438–448. doi:10.2307/258284
- Greenhalgh, L., & Rosenblatt, Z. (2010). Evolution of research on job insecurity. *International Studies of Management and Organization*, 40(1), 6–19. doi:10.2753/IMO0020-8825400101
- Hanges, P. J., & Dickson, M. W. (2004). The development and validation of the GLOBE culture and leadership scales. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 122–151). Thousand Oaks, CA: Sage.
- Hanges, P. J., & Dickson, M. W. (2006). Agitation over aggregation: Clarifying the development of and the nature of the GLOBE scales. *The Leadership Quarterly*, 17, 522–536. doi:10.1016/j.leaqua.2006.06.004
- Hellgren, J., & Sverke, M. (2003). Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modelling. *Journal of Organizational Behavior*, 24, 215–236. doi:10.1002/job.184
- Hellgren, J., Sverke, M., & Isaksson, K. (1999). A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being. *European Journal of Work and Organizational Psychology*, 8, 179–195. doi:10.1080/135943299398311
- Hofmann, D. A., & Gavin, M. B. (1998). Centering decisions in hierarchical linear models: Implications for research in organizations. *Journal of Management*, 24, 623–641. doi:10.1016/S0149-2063(99)80077-4
- Hofstede, G. (2001). *Culture's consequences* (2nd ed.). Beverly Hills, CA: Sage.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- Hui, C. C., & Triandis, H. C. (1989). Effects of culture and response format on extreme response style. *Journal of Cross-Cultural Psychology*, 20, 296–309. doi:10.1177/0022022189203004
- International Labor Organization. (2004). *Economic security for a better world*. Geneva, Switzerland: Author.
- Kinnunen, U., Mauno, S., Nätti, J., & Happonen, M. (1999). Perceived job insecurity: A longitudinal study among Finnish employees. *European Journal of Work and Organizational Psychology*, 8, 243–260. doi:10.1080/135943299398348
- Kinnunen, U., Mauno, S., & Siltaloppi, M. (2010). Job insecurity, recovery and well-being at work: Recovery experiences as moderators. *Economic and Industrial Democracy*, 31, 179–194. doi:10.1177/0143831X09358366
- König, C. J., Probst, T. M., Staffen, S., & Graso, M. (2011). A Swiss-U.S. comparison of the correlates of job insecurity. *Applied Psychology*, 60, 141–159. doi:10.1111/j.1464-0597.2010.00430.x
- Lazarus, R. S. (1968). Emotions and adaptation: Conceptual and empirical relations. In W. J. Arnold (Ed.), *Nebraska Symposium on Motivation* (Vol. 16, pp. 175–266). Lincoln, NE: University of Nebraska Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11, 815–852. doi:10.1177/1094428106296642
- Lee, C., Bobko, P., Ashford, S., Chen, Z., & Reb, X. (2008). Cross-cultural development of an abridged job insecurity measure. *Journal of Organizational Behavior*, 29, 373–390. doi:10.1002/job.513
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593–614. doi:10.1146/annurev.psych.58.110405.085542
- Orpen, C. (1993). Correlations between job insecurity and psychological well-being among White and Black employees in South Africa. *Perceptual and Motor Skills*, 76, 885–886. doi:10.2466/pms.1993.76.3.885
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15, 209–233. doi:10.1037/a0020141
- Probst, T. M. (2010). Multi-level models of stress and well-being. *Stress and Health*, 26, 95–97. doi:10.1002/smi.1313
- Probst, T. M., & Ekore, J. O. (2010). An exploratory study of the costs of job insecurity in Nigeria. *International Studies of Management and Organization*, 40(1), 92–104. doi:10.2753/IMO0020-8825400106
- Probst, T. M., & Lawler, J. (2006). Cultural values as moderators of employee reactions to job insecurity: The role of individualism and collectivism. *Applied Psychology*, 55, 234–254. doi:10.1111/j.1464-0597.2006.00239.x
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models* (2nd ed.). Thousand Oaks, CA: Sage.
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23, 224–253. doi:10.2307/2392563
- Schäufeli, W. (1992). Unemployment and mental health in well and poorly educated school-leavers. In C. Verhaar & L. Jansma (Eds.), *On the mysteries of unemployment: Causes, consequences and policies* (pp. 253–271). Dordrecht, the Netherlands: Kluwer.
- Sinclair, R., Sears, L. E., Probst, T. M., & Zajack, M. (2010). A multilevel model of economic stress and employee well-being. In J. Houdmont & S. Leka (Eds.), *Contemporary occupational health psychology: Global perspectives on research and practice* (Vol. 1, pp. 1–20). Hoboken, NJ: Wiley. doi:10.1002/9780470661550.ch1
- Sora, B., Caballer, A., Peiró, J. M., & De Witte, H. (2009). Job insecurity climate's influence on employees' job attitudes: Evidence from two European countries. *European Journal of Work and Organizational Psychology*, 18, 125–147. doi:10.1080/13594320802211968
- Staufenbiel, T., & König, C. J. (2010). A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *Journal of Occupational and Organizational Psychology*, 83, 101–117. doi:10.1348/096317908X401912
- Stening, B. W., & Everett, J. E. (1984). Response styles in a cross-cultural managerial study. *Journal of Social Psychology*, 122, 151–156. doi:10.1080/00224545.1984.9713475
- Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: A meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, 7, 242–264. doi:10.1037/1076-8998.7.3.242
- Triandis, H. C. (1994). Cross-cultural industrial and organizational psychology. In H. C. Triandis, M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 4, pp. 103–172). Palo Alto, CA: Consulting Psychologists Press.
- Tsui, A. S., Egan, T. D., & O'Reilly, C. A., III. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, 37, 549–579. doi:10.2307/2393472
- Van Vuuren, C. V., & Klandermans, P. G. (1990). Individual reactions to job insecurity: An integrated model. In P. J. D. Drenth, J. A. Sergeant, & R. J. Takens (Eds.), *European perspectives in psychology* (Vol. 3, pp. 133–146). Chichester, England: Wiley.
- Zhang, Z., Zyphur, M. J., & Preacher, K. J. (2009). Testing multilevel mediation using hierarchical linear models: Problems and solutions. *Organizational Research Methods*, 12, 695–719. doi:10.1177/1094428108327450

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