

Social Context and Resilience as Predictors of Job Satisfaction and Performance: A Multilevel Study over Time

**Abstract**

Among job attitudes, overall job satisfaction has received the greatest attention in organizational research and it has frequently been suggested as the key factor influencing employees' performance. Although it reflects individual experiences, job satisfaction may be affected by attributes of both the individuals and the context in which they operate. The study explores the predicting role of individual work resilience and shared work-unit perceptions of social context (PoSC) on job satisfaction over time, as well as the relationship between job satisfaction and performance, as rated by supervisors. A sample of 305 white-collar employees, clustered in 67 work-units, participated in the study. Hierarchical linear modeling highlighted that: a) shared PoSC and work resilience are multilevel predictors of job satisfaction; b) shared PoSC are positively related to work resilience; c) job satisfaction is positively related to job performance; d) job satisfaction fully mediates the relation between work resilience and job performance, as well as the relation between shared PoSC and job performance. The findings demonstrate the pivotal role of job satisfaction in predicting job performance. At the practical level, the results suggest how to enhance job satisfaction and, thus, job performance by increasing shared PoSC and work resilience.

*Keywords:* Resilience, Social Context, Job Satisfaction, Performance, Hierarchical Linear Modeling

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Many people spend a significant amount of time in their workplace and the feelings of work-related satisfaction or dissatisfaction contribute to overall quality of life and psychological well-being (Judge and Watanabe 1993; Wright et al., 1999). Beyond the value of positive feelings for the individual, the benefits for organizations have been widely investigated, stressing the impact of job satisfaction on several organizational outcomes (e.g., Judge and Kammeyer-Mueller, 2012; Spagnoli et al., 2012). Moreover, the link between job satisfaction and job performance has long been of interest to organizational psychologists and several studies have suggested that job satisfaction is a key factor influencing productivity and job performance (Judge et al., 2001; Ricketta, 2008).

Up to now, job satisfaction has been studied mainly at the individual level, focusing on employees' characteristics like self-efficacy, core self-evaluations, and dispositional affect (Fernandez-Ballesteros et al., 2002; Judge and Kammeyer-Mueller 2012). A few studies have related work resilience and job satisfaction (Larson and Luthans, 2006; Youssef and Luthans, 2007), showing that individuals with higher levels of resilience are more likely to positively adapt and successfully bounce back from negative events in the workplace, and this can enhance their job satisfaction. However, these few studies are mostly correlational and cross-sectional, making difficult to establish causal relationships. Although job satisfaction reflects an evaluation of individual experiences, it is also likely to be affected by the attributes of the context in which the individual operates (Ostroff, 1992, 1993). Social environment variables, such as relationships with coworkers and supervisors, are closely related to job satisfaction and predict satisfaction levels above and beyond characteristics of the work itself (Judge

and Kammeyer-Mueller, 2012; Morgeson and Humphrey, 2006). In this regard, Borgogni and colleagues (Alessandri et al., 2014; Borgogni et al., 2011a; Borgogni et al., 2010b) introduced the concept of “Perceptions of Social Context” (PoSC<sup>1</sup>), defined as the individual’s perceptions of the more relevant social constituents internal to the organization (i.e., top management, immediate supervisor, and colleagues). At the aggregated level, PoSC could work as a broad concept reflecting the overall work-unit perception of the social environment.

In light of the paucity of studies investigating the interplay of individual and group variables in shaping job satisfaction, it seems imperative to explore its antecedents from a multilevel perspective. To describe the interrelationships among variables measured at different levels (i.e., individual and collective), strategies of analysis which explicitly account for the nested nature of data and take into consideration all potential group membership effects when examining the hypothesized relationships were required (Hofmann et al., 2000; Raudenbush and Bryk, 2002). Therefore, the present research contributes to reduce the aforementioned lack by studying the individual- and group-level predictors of employees’ job satisfaction over time, employing multilevel analyses on data gathered at two different time-points. More specifically, our purposes are multiples. First, we aim to corroborate the relationship between job satisfaction and performance. Second, we intend to confirm the association between resilience and job satisfaction, as well as the cross-level effects of unit-level PoSC on individual-level job satisfaction over time. Third, we examine the relationship between unit-level PoSC and resilience. Finally, we investigate the extent to which job satisfaction mediates the relationship between work resilience and performance as well as between PoSC and performance.

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<sup>1</sup> Presented in previous studies with the acronym PoC, that is Perception of Context (Borgogni et al., 2011).

### **Job Satisfaction and Job Performance**

Job satisfaction has been defined as "...an evaluative state that expresses contentment with, and positive feelings about, one's job" (Judge and Kammeyer-Mueller, 2012, p. 347). It is, thus, a broad construct that comprises all or most of the characteristics of the job itself and the work environment, which employees find rewarding, fulfilling and satisfying (Weiss, 2002).

The causal relationship between job satisfaction and job performance has long been controversial (Judge and Kammeyer-Mueller, 2012), primary because of the use of cross-sectional designs (Judge et al., 2001). Recently, a meta-analysis tested the causal links between job attitudes (i.e., job satisfaction and organizational commitment) and performance, focusing on 16 longitudinal research studies (Ricketta, 2008). The results showed that, controlling for baseline performance, job satisfaction significantly influenced subsequent in- and extra-role performance, while the reverse causal effect was not statistically supported. This could be explained with the theoretical background that identifies job attitudes as proximal antecedents and guidelines of behavior (e.g., Fishbein and Ajzen, 1974), and also referring to the energizing and facilitative effects of positive affect (as one component of satisfaction) in the workplace (e.g., Staw et al., 1994). Consistent with the above-cited empirical and theoretical evidence, we posit that the more employees are satisfied with their job, the more likely they are to engage in positive behaviors on the job, thus performing what is required of them. Accordingly, we propose the following hypothesis:

*Hypothesis 1: Job satisfaction will be positively related to job performance.*

### **The (multilevel) antecedents of Job Satisfaction**

Traditionally, studies on job satisfaction have focused on employees' characteristics as salient antecedents (Judge and Kammeyer-Mueller, 2012). Nowadays,

due to the increasing complexity of work environments characterized by hyper-competition and rapid changes (Sutcliffe and Vogus, 2003), more attention has been called to the potential role of resilience in crisis scenarios (Kaplan et al., 2013). Resilience in organizational setting is commonly defined as the process to adjust and thrive amidst adversity, to go beyond the restoration of a “normal” level to learn and grow from adversity so as to emerge stronger than before (Sutcliffe and Vogus, 2003). Thus, resilience can be described as an important psychological process that helps the employee to face the demand for flexibility, adaptation, and improvisation in situations characterized by change and uncertainty (Youssef and Luthans, 2007), but it also represents the need to find unknown inner strengths and resources to cope effectively (Ganor and Ben-Lavy, 2003). A principle component of resilience in the workplace is that, after a negative event, the employee bounces back to higher levels of motivation, rebounding beyond homeostasis (West et al., 2009). Although, to date, the literature on workplace resilience is still scarce, previous studies have found positive associations with to job satisfaction, work happiness, and organizational commitment (Larson and Luthans, 2006; Youssef and Luthans, 2007). Moreover, Lioussis and colleagues (2009) showed that the Promoting Adult Resilience (PAR) program led participants to a significant improvement in their job satisfaction at a 6-month follow-up. Based on these previous findings, we argue that resilience will be positively related to job satisfaction. Indeed, job satisfaction reflects the individual evaluations of various aspects of the job, and resilience allows to proactively prepare for hardships and to minimize the impact of stressful aspects on the work life (Shin et al., 2012). Therefore, when people feel that they are resilient at work, they are more likely to evaluate their job positively and to experience higher satisfaction with it. Hence, we advance the following hypothesis:

*Hypothesis 2:* Employees’ resilience will be positively related to job satisfaction.

However, it is also important to take into account the context where the individual lives and works. A substantial body of research has shown that perceptions of one's context influence human responses, such as job satisfaction (Pritchard and Karasick, 1973; Schnake, 1983). It is likely that employees derive their job satisfaction from a context that they perceive as positive (Judge et al., 2000). In this regard, PoSC are representative of the individual's perceptions of the more relevant social constituents within the organization, namely top management, immediate supervisor, and colleagues, which relate to both productive and socio-emotional aspects of interactions.

Both aspects are taken into account because work groups carry out and pay attention simultaneously to two kinds of behaviors: the task-related behaviors, which are instrumental to goal achievement and production, as well as the relation-care behaviors, which respond to the inner needs of individuation and belongingness (Bales, 1950). As a consequence, PoSC differ from constructs as perceived social support, which are mainly related to positive social relationships and care for employees' well-being (Ho and Gupta, 2012). Moreover, while perceived social support usually refers to co-workers and supervisors (Ho and Gupta, 2012; Lim, 1996), PoSC simultaneously measure the perceptions of top management, supervisor, and colleagues. Previous studies have demonstrated how individual PoSC can shape employees' work attitudes, like job satisfaction (Borgogni et al., 2010a; Borgogni et al., 2011a; Parker et al., 2003).

PoSC can be considered as shared perceptions of the prototypical components of the social context (Borgogni et al., 2010b); in fact, perceptions originate within the person, but they are also the result of being exposed to intense situations which converge on consensual collective perceptions (Kozlowski and Ilgen, 2006). Employees collectively share the same work environment and the same leader, and ultimately create a bounded context that should lead to a common interpretation, understanding,

and attitudinal evaluation of the job experience (Kozlowski and Hattrup, 1992; Salancik and Pfeffer, 1978). Accordingly, we assume that employees may develop positive job attitudes not only when they favorably and individually perceive the organizational constituents, but also when they share these positive perceptions. In line with this assumption, we focused on shared PoSC within the work-units as a key antecedent of individual job satisfaction. We suggest that the more the employees shared a positive perception of supervisor, colleagues, and top management, the more they would be satisfied with their jobs. Hence, we set the following hypothesis:

*Hypothesis 3:* Shared positive perceptions of social context will be positively related to job satisfaction.

Additionally, we take into consideration the relationship between the two proposed antecedents of job satisfaction, that is shared PoSC and work resilience. The resilience literature suggests that learning and growing in the face of adversity depend significantly on the characteristics of the social environments (Luthar et al., 2000) as well as on the existence and the quality of interpersonal relationships (Luthans et al., 2006). Indeed, a supportive climate will likely act as a contextual resource for employees to quickly “bounce back” after setbacks (Luthans et al., 2008). However, it is important to note that not all relationships are equally valuable for resilience. In fact, relations can either facilitate or hinder information sharing, learning processes, and problem solving (e.g., Paulus and Nijstad, 2003). Research suggests that high-quality relationships are particularly precious for resilience, because individuals and their teams are better able to collectively comprehend difficult situations and figure out the best way to deal with them (Carmeli et al., 2013). Thus, individuals draw on their work relations as a source of strength during times of stress (Kahn, 2005). We consider that PoSC are representative of high-quality relationships, because they refer to the

perception of positive behaviors enacted by significant organizational constituents and appear to satisfy the core social motives that lead people in their interactions (Fiske, 2004). Indeed, colleagues reinforce belongingness and trust, through the development of solid and durable relationships; supervisors support foster individual control and self-concepts via positive feedback; top management ensures understanding through the definition of collective meanings, policies, and procedures. Therefore, we argue that the more work-unit share positive perceptions of their supervisor, colleagues, and top management, the more work-unit members are able to develop work resilience. Thus, the following hypothesis is offered:

*Hypothesis 4:* Shared positive perceptions of social context will be positively related to employees' resilience.

### **The mediating role of job satisfaction among multilevel antecedents and individual job performance**

The link between job satisfaction and job performance has been extensively studied (for a review, see Judge and Kammeyer-Mueller, 2012). However, it is also important to test this association in a framework which includes variables at different organizational levels, such as work-unit shared PoSC and individual work resilience, and to verify the multiple relationships between them by testing the possible mediating role of job satisfaction. Previous research has suggested that resilience leads to increased job performance (Luthar, 1991; Luthans et al., 2005), because highly resilient employees are better prepared to rebound or bounce back from adversities, problems, and failures since they are more flexible to modify demands, more open to new experiences, and they tend to use setbacks as “springboards” or opportunities for growth (Tugade and Fredrickson, 2004). Therefore, we expect work resilience to influence employees' performance through job satisfaction. Building on our earlier explanation of



the relationships between job satisfaction and performance on the one hand, and the relationships between work resilience and job satisfaction on the other, we predict that high-resilience employees will perform better, because they experience more job satisfaction engendered by resilience. Therefore, we argue that job satisfaction is a partial mediator of the effects of work resilience on employees' performance, so that more resilient employees, as opposed to their less resilient colleagues, will experience higher job satisfaction, which in turn will lead to better performances. Thus, we set the following hypothesis:

*Hypothesis 5:* Job satisfaction partially mediates the relationship between employees' resilience and performance.

Consistent with the above-cited empirical evidence and theoretical background that identifies social context as a proximal antecedents of job satisfaction, which in turn acts as a proximal determinant of behavior, we posit that the more positively the work-unit perceives their supervisor, colleagues, and top management, the more its members are satisfied with the job, and then the more likely they are to engage in positive behaviors on the job, thus performing what is required of them. Previous research confirmed the full mediation of job satisfaction between PoSC and performance (Borgogni et al., 2010a; Borgogni et al., 2011a), at the individual level. As innovation, we propose that this relation persists even in the case of shared PoSC:

*Hypothesis 6:* Job satisfaction fully mediates the relationship between shared positive perceptions of social context and performance.

## **Method**

### **Participants and Procedure**

A longitudinal study was conducted in the headquarters of one of the largest service companies in Italy, with a staff of about 150,000 employees working in the

14,000 offices located throughout the country. The first data collection (Time 1) was carried out in June 2010, and a total of 857 employees filled in the questionnaire out of the 1,158 who were initially contacted (response rate of 74%). The second set of data (Time 2) was collected in February 2012 and 935 employees (out of the 1,493 involved) answered the questionnaire (response rate of 63%). The final sample consists of 305 employees who responded at both times and could be clearly referred to a work-unit, defined as a unit of employees assigned to accomplish a set of tasks in a specific area and supervised by the same leader. Participants were white-collar employees working in a variety of functional areas and were distributed in 67 work-units, consisting of an average of 4.55 employees from each group. The 53.4% was men, the average age was 45 years ( $SD = 8.21$ ), and the mean organizational tenure was 15.15 years ( $SD = 10.14$ ).

For both times, employees received an email from the HR department, announcing the research, and one from the researchers, explaining the project and the web-based questionnaire. Participation was voluntary, and each respondent was assigned a code by the HR department, corresponding to his or her questionnaire, in order to match the answers to the questionnaire with the supervisory performance ratings and, at the same time, guarantee privacy.

## Measures

The measures included: a) self-reports from the questionnaires of work resilience, PoSC and job satisfaction; and b) employees' job performance provided by the HR Department as an objective measure. All items were rated on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*).

**Work resilience.** To assess employees' resilience at Time 1, a 9-item scale was developed *ad-hoc* for the specific organizational context. Items were generated through some meetings with key managers of the organizations, using Flanagan's (1954) critical

incident technique in order to focus on the specific work context. Unlike previous measures, which have generally assessed protective factors or resources involving personal characteristics and coping styles (e.g., Connor and Davidson, 2003), items were framed as statements of work-related abilities to bounce back, resist illness, adapt to stress, or thrive in the face of adversity, in accordance with the conceptualization of Smith and colleagues (2008). More specifically, the present scale aims at assessing resilience as bouncing back from stress in organizations; hence, contrary to existing broader scales, our items specifically refer to resilience in the job context. An example item is: “*I overcome all frustrations related to my failures*”.

As exploratory factor analysis (EFA) is typically used in the process of scale development and construct validation (Brown, 2006), we conducted a principal factor analyses (PFA) in order to explore the factorial structure of the work resilience scale, using a sample of 555 employees who participated in the Time 1 survey but were removed from the final sample of the present study. The results showed that the factor solution explained 43.96% of the total variance and the factor loadings of the 9 items of the scale ranged between 0.57 and 0.74, indicating a solid factor (Costello and Osborne, 2005). Additionally, the Cronbach’s alpha coefficient of the scale was 0.87.

Additionally, we performed a confirmatory factor analysis (CFA) on the study sample ( $n = 305$ ), using the Mplus software (Muthén and Muthén, 2012). The results of the CFA suggested that the 9-item scale fits the data well:  $\chi^2(27) = 71.97$ , CFI = 0.94, TLI = 0.92, SRMR = 0.04 (Hu and Bentler, 1999), and RMSEA = 0.08 (Browne and Cudeck, 1993). The Cronbach’s alpha for this sample was 0.82.

*Perception of Social Context.* A 17-item scale was used to assess employees’ perceptions of social context (PoSC) at Time 1. The scale was previously validated in

the same organizational context (Borgogni et al., 2010a) and consolidated through a meta-analytic procedure in various organizations (Borgogni et al., 2011a).

The scale consists of three dimensions:

- a) Immediate supervisor. Five items assessed the employees' perceptions of their immediate supervisor in supporting and assisting co-workers, encouraging their involvement, treating them equally, taking care of their professional development (e.g., "*My immediate supervisor takes care of my professional growth*").
- b) Colleagues. Four items measured the individuals' perceptions of relationships among colleagues regarding their reciprocal trust, integration of competences, mutual support, and cooperation in facing obstacles (e.g., "*In my office people trust each other*").
- c) Top management. Eight items referred to participants' perceptions of top management's actions with regard to their attention to employee development, the communication of organizational goals, procedures and policies, the integration of units, and the fair treatment of workers (e.g., "*Top management is interested in employees' well-being*").

The three dimensions were aggregated to investigate the employee's perceptions of social context as a unique construct, in order to emphasize the whole set of conditions in which the individual is deeply embedded and whose elements are strictly interrelated. In other words, at the aggregated level, PoSC could work as a more general concept, reflecting the overall perceptions of the social environment. The Cronbach's alpha for the entire scale was 0.78.

*Job satisfaction.* Three items, adapted from the job satisfaction scale of Judge and colleagues (1998), were used to assess employees' job satisfaction at Time 2. We used those items positively worded, that is: "*I feel fairly satisfied with my job*", "*I am*

*enthusiastic about my work*”, and *“I am finding real enjoyment in my work”*. The Cronbach’s alpha for this scale was 0.89.

*Job performance.* Data on respondents’ performance were drawn from the performance appraisal system at Time 2. The measure reflects the overall ratings of job performance by supervisors and refers to the same year as the second survey. Performance was assessed on a 10-point scale (from 1 = “Inadequate” to 10 = “Beyond the expectations”) and includes five behavioral domains, namely “customer focus” (i.e., to anticipate clients’ needs and expectations); “innovation” (i.e., to think up and develop innovative solutions); “integration” (i.e., to build up constructive relationships in order to achieve common goals), “problem solving” (i.e., to identify problems correctly and find appropriate solutions), and “openness” (i.e., to explore new opportunities that contribute to the organizational change process). A PFA supported the one-factor structure, suggesting that a single performance factor underlies the five behavioral domains. The factor solution explained 81.32% of the total variance and the alpha for the composite measure was 0.94.

### **Data Aggregation**

Our data were hierarchically structured such that 305 employee-level cases (level 1) were nested within 67 work-units (level 2). Work resilience, job satisfaction, and job performance were used at level 1 (employee). Perceptions of social context were aggregated at level 2 (work-unit); according to multilevel theory, this is defined as a *direct consensus model* (Chan, 1998). To evaluate the effect of group membership on parameter estimates, the following tests were conducted: Average Deviation index ( $AD_{M(j)}$ ; Burke and Dunlap, 2002) was used to assess inter-rater agreement; reliability was assessed using the intraclass correlation coefficient – ICC(1) (Bliese, 2000); and one-way analyses of variance (ANOVA) were used to test for statistically significant

differences between work-units (Kenny and LaVoie, 1985). Conventionally, values of 1.2 have been used as the traditional upper-limit cut-point using a 7-point scale for  $AD_{M(j)}$  (Burke and Dunlap, 2002), whereas values greater than .12 for ICC(1) are considered sufficient evidence to justify aggregation (Bliese, 2000). The sizes of the  $AD_{M(j)}$  and ICC(1) indices were 1.03 and 0.18, respectively, indicating an adequate fit. Moreover, one-way ANOVA verified the existence of statistically significant differences between work-units,  $F(66, 304) = 2.215, p < 0.001$ . Taken together, the reported indexes provided empirical justification to aggregate the individual data on PoSC at the work-unit level.

### Data Analyses

In order to test our hypotheses, we used hierarchical linear modeling (HLM) (Bryk and Raudenbush, 1992) as a statistical framework for our data analyses by using LISREL 8.8 (Jöreskog and Sörbom, 2006). Conventional statistical analyses violate the assumption of independence of observations because of the hierarchical structure of the data, which may lead to spurious results (Hox, 2002). However, multilevel regression analyses take into account the potential group membership effects when examining the hypothesized level-1 relationships, as well as when examining the hypothesized cross-level relationships. They allow us to make simultaneous inferences on the effects of variations in the independent variables at the individual level and work-unit level on the dependent variables. In Bryk and Raudenbush's (1992) notation, this is the form of the model:

Level 1: Performance  $T2_{ij} = \beta_{0j} + \beta_{1j}(\text{Resilience } T1_{ij}) + \beta_{2j}(\text{Satisfaction } T2_{ij}) + r_{ij}$

Level 2:  $\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{PoSC } T1_j) + u_{0j}$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

In the analyses, all predictor variables were grand-mean centered to facilitate model estimation (Hofmann and Gavin, 1998). As stated in the last two rows of the equation, the slopes between individual-level variables (resilience at Time 1 and satisfaction at Time 2) are fixed, and therefore they are not allowed to randomly vary across groups.

In order to test Hypotheses 5 and 6 concerning mediation, we examined the four conditions for mediation suggested by Baron and Kenny (1986): (1) the independent variables should be related to the dependent variable; (2) the independent variables should be related to the mediator; (3) the mediator should be related to the dependent variable, controlling for the independent variables; and (4) for full mediation, the effect of the independent variables on the dependent variable is reduced to non-significance when the mediator's effect on the dependent variable is taken into account. If the fourth condition is not met, partial mediation is concluded. Finally, because recent research suggests that the Baron and Kenny mediation test is too conservative and that indirect effects can still be significant when Baron and Kenny's criteria are not fully met (MacKinnon et al., 2002), we also tested the mediation hypotheses (Hypotheses 5-6) using Sobel's (1988) test of indirect effects, which MacKinnon and colleagues (2002) found to provide a better balance between Type I and Type II errors.

## **Results**

We initially checked our data for normality (Muthén and Kaplan, 1985). The assumption of normality was not violated. The results of the analyses can be obtained from the first author upon request. Table 1 presents the means, standard deviations, and correlations among the variables at the individual level. As can be seen, the correlations between work resilience and PoSC were significant and positive, as were their correlations with job satisfaction. In turn, job satisfaction showed a significantly

positive correlation with job performance. No significant correlations were found between work resilience and job performance or between PoSC and job performance.

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INSERT TABLE 1 ABOUT HERE  
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### **Multi-level Analyses and Test of Hypotheses**

In accordance with Hypothesis 1, the relationship between job satisfaction and performance was significant and positive ( $\beta = 0.16, p < 0.01$ ). In support of Hypotheses 2 and 3, the relationship between work resilience and job satisfaction was significant and positive ( $\beta = 0.45, p < 0.001$ ), as was the relationship between work-unit PoSC and job satisfaction ( $\beta = 0.54, p < 0.001$ ). Furthermore, the relationship between work-unit PoSC and work resilience was also significant and positive ( $\beta = 0.25, p < 0.01$ ), as expected in Hypothesis 4. Then several models were estimated, each differing in the number of predictors that were included in the analysis. In the first model (Model 0) no predictor variables were added and this model was used to determine the percentage of the total variance in the dependent variable (i.e., performance) ascribable to between-group variance. As can be seen in Table 2, Model 0 reveals that a significant proportion of the total variance in individual performance at Time 2 (15%) was explained by work-unit membership. Significant variance between units justifies the inclusion of predictors at the unit-level of analysis.

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INSERT TABLE 2 ABOUT HERE  
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Once significant between-unit variance has been demonstrated in Model 0, individual-level predictors (i.e., work resilience and job satisfaction) were included in



Model 1. As shown in Table 2, job satisfaction was significantly related to performance while no significant relationship was found between resilience and performance. These results are somewhat in line with our Hypothesis 5, which predicted that employees' job satisfaction partially mediate the relationships between employees' work resilience and performance. In order to assess mediation, we followed the procedure described above and the results are shown in the upper portion of Table 3. Following the approach recommended by Baron and Kenny (1986), we first examined the effects of work resilience on performance. The relationship was not significant ( $\beta = 0.12, p = 0.18$ ), indicating that condition 1 was not supported. However, as revised by Shrout and Bolger (2002), condition 1 is no longer required for mediation as long as the other two conditions are met, and also because requiring a significant relation substantially reduces the power to detect real mediation effects (MacKinnon et al., 2007). Second, we examined the effect of resilience on job satisfaction and the relationship was significantly positive ( $\beta = 0.45, p < 0.001$ ), and thus met the second condition. We then examined the effect of job satisfaction on performance controlling for resilience. The relationship was significantly positive ( $\beta = 0.14, p < 0.05$ ), thereby supporting the third condition. Last, we found that the relationship between resilience and performance was not significant when the mediator was present ( $\beta = 0.06, p = 0.52$ ), as expected in the light of the non-significant results of the condition 1 test. In sum, conditions 2 and 3 of Baron and Kenny's (1986) test for mediation were satisfied while conditions 1 and 4 were not. Nevertheless, based on the revised criteria (Kenny et al., 1998), Hypothesis 5 is partially supported given that job satisfaction fully mediates the relationship between resilience and performance. Additionally, Sobel's test was performed with the partial estimates and standard errors from Table 3 and it was significant ( $t = 2.20, p < 0.05$ ), thus supporting this last link in the mediation process.

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INSERT TABLE 3 ABOUT HERE  
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Next, a unit-level predictor (i.e., PoSC) is included in Model 2, and so Model 2 includes both predictors at the individual and group levels. As shown in Table 2, there is no significant association between PoSC and performance. These results are in line with our Hypothesis 4, which predicted that employees' job satisfaction would fully mediate the relationships between employees' work-unit PoSC and employees' performance. The results from the mediational analyses are reported in the lower part of Table 3. According to Baron and Kenny (1986) recommendations, we first examined the relationship between work-unit PoSC and employees' performance. The relationship was not significant ( $\beta = -0.02, p = 0.92$ ), indicating that condition 1 was not supported. Second, we tested the effect of PoSC on job satisfaction, which was significant and positive ( $\beta = 0.54, p < 0.001$ ), meeting the second condition. We then examined the effect of job satisfaction on performance, controlling for the effect of PoSC. The relationship was significant and positive ( $\beta = 0.17, p < 0.01$ ), satisfying the third condition. Last, we found that the association between PoSC and performance was not significant when the mediator was present ( $\beta = -0.11, p = 0.50$ ), as expected in the light of the non-significant results of the condition 1 test. In sum, only conditions 2 and 3 of Baron and Kenny's (1986) test for mediation were satisfied. Again, based on the revised criteria (MacKinnon et al., 2007; Shrout and Bolger, 2002), we can conclude that Hypothesis 6 is supported, so that job satisfaction fully mediates the relationship between PoSC and performance. In addition, the Sobel's test was significant ( $t = 2.31, p < 0.05$ ), supporting the latter link in the mediation process. Finally, it should be noted that the final complete model explains the 17% of the variance in job performance.

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### **Discussion**

Taken together, our findings lead us to draw several conclusions. First, we provide empirical evidence for the positive relationship between job satisfaction and job performance at the individual level of analysis (supporting Hypothesis 1). Second, our results offer an innovative perspective on the multilevel predictors of job satisfaction. In fact, work resilience and shared PoSC were shown to exert a positive effect on individual job satisfaction, at the individual and cross levels respectively (supporting Hypotheses 2 and 3). In addition, the study suggests that shared PoSC represent an important social environment component, affecting individual work resilience (supporting Hypothesis 4). Finally, PoSC and work resilience were found to be indirectly, positively related to employees' performance through job satisfaction. That is, job satisfaction is the pathway through which work resilience and shared PoSC promote employees' performance (partially supporting Hypothesis 5 and supporting Hypothesis 6). Our findings provide implications for research and practice.

### **Research Implications**

First, our study gives evidence about and enhances the validity of the satisfaction–performance relationship. While a lasting debate about the nature and the strength of the association between the two constructs has been of interest to organizational psychologists, our results corroborate the more established evidence suggesting that the satisfaction-to-performance link is stronger than the performance-to-satisfaction relation (Judge and Kammeyer-Mueller, 2012; Riketta, 2008).

The second implication underscores the relevance of adopting a multilevel view of job satisfaction and performance predictors. Indeed, we detected direct relationships of individual work resilience and work-unit PoSC with job satisfaction, as well as indirect associations with job performance via individual job satisfaction. These results have several implications. First, extending previous work, they indicate that job satisfaction helps to explain the relationships of individual and work-unit level variables with performance. Second, the role of work resilience in predicting job satisfaction over time seems particularly encouraging, as it suggests that the more employees are resilient, the more they are satisfied with their work. Previous evidence has shown that resilience can be developed through training sessions (Luthans et al., 2006), therefore, especially in difficult situations like the current economic crisis, resilience could be strengthened to promote employees' capabilities to overcome challenges and strain, thereby enhancing their satisfaction. Third, we found that high levels of work-unit PoSC provide a shared positive organizational context that supports employees' job satisfaction over time. Although it is known that employees are more satisfied when they perceive organizational constituents positively (e.g., Borgogni et al., 2010a), our result is remarkable because it extended this link to the work-unit level, while previous research focused on just the individual level. Finally, in contrast to our expectations, we did not detect a direct association between resilience and performance, suggesting that resilience rather works indirectly, via job satisfaction. This result is noteworthy because, to our knowledge, this is the first study explicitly examining the relationship between work resilience and (objective) job performance over time, and it failed to demonstrate a direct link. Although further investigation is needed, the finding seems to challenge the widely acknowledged statement that higher resilience predicts higher performance (Sutcliffe and Vogus, 2003).

Finally, we found that PoSC are representative of contextual factors or resources which may better prepare employees to quickly “bounce back” after setbacks. In this light, PoSC can be considered a supportive context that acts as a source of strength during times of stress, through high-quality relationships with salient organizational constituents. The idea that supportive environments may create the necessary positive conditions for the development of resilience is established in the literature (e.g., Luthans et al., 2008); however, to our knowledge, no other studies have offered evidence for the relation between work-unit level shared perceptions of context and individual resilience. An important implication is that researchers need to account for the influence of both individual and work-unit level predictors, to more fully explain the variance in employees’ resilience.

### **Practical Implications**

Our study indicates that managers should use somewhat different strategies to increase employees’ job satisfaction and, in turn, achieve better performance. First, given the importance of work resilience in engendering job satisfaction, activities or interventions should focus on the development of employees’ resilience. Consistent with Luthans and colleagues (2006), both proactive and reactive approaches can be proposed to enhance individual resilience. The first approach involves structuring the organization around the anticipation of the need for resilience, which can be achieved through three strategies: (a) proactive prevention and reduction of risk or stress, (b) enhancement of personal and available organizational resources, and (c) improvement of employees’ psychological capital. The reactive perspective mainly builds upon the Broaden-and-Build theory of positive emotions (Fredrickson, 2001), suggesting that repeated exposure to positive emotions may help to strengthen individuals’ resilience. Accordingly, activities or interventions could be used to build positive emotional

experiences, such as by allowing employees to gain significance and satisfaction from their work, as well as consistently reminding them to think positively and to find meaning when negative events occur (Luthans et al., 2006).

In addition, because of the prominent role played by shared PoSC in generating work resilience, job satisfaction and subsequent job performance, we propose practical suggestions on activities or interventions aimed at supporting the engendering or maintenance of a positive social context at work, accounting for each of the three main constituents of PoSC. To enhance the immediate supervisor's positive perception, interventions are encouraged to support leadership. A coaching program could be recommended to train supervisors to: (a) diagnose individuals' characteristics and the activities that best match them, (b) understand the opportunities and boundaries of each employee to support the expression of personal talents, (c) set challenging goals for each employee, (d) deliver constructive feedbacks that facilitate employees' growth, and (e) understand and manage the relationship with employees (Borgogni et al., 2010a). To improve the perceptions of relationships among colleagues, managers should promote a prosocial orientation characterized by cooperativeness and sharing, as well as allow the development of strong and stable within-group relationships, thus ensuring feelings of belongingness and trust. Managers can develop strategies to promote group cooperation and group cohesion (e.g., team building and team development). In this regard, it is important to be aware that spiral processes may substantially influence the affective states and the interpersonal relationships within work-units. Through mechanisms of affective sharing and affective similarity-attraction, a work-unit's employees tend to develop homogenous positive moods and emotions, as well as favorable within-group relationships over time (Walter and Bruch, 2008). Finally, given their global position, managers may take opportunities to proactively influence and shape the PoSC, both

regarding themselves and other constituents. Accordingly, top management needs to uphold the clarity of the mission, transparency in communications, conveyance of equity and trust, and integration among different units. For this purpose, they could aim to conduct an organizational analysis to avoid overlaps among roles and positions, to increase interdependence among leaders of the different units, and to set group goals (Borgogni et al., 2011b). In this sense, intervention may pay attention to (1) enhancing coordination and communication, (2) actively engaging in image management, and (3) developing culture-related issues that fit in with the environment and resolve challenges (Borgogni et al., 2010b).

### **Limitations and Research Directions**

The study has limitations which highlight important avenues for future research. First, our operationalization of shared PoSC did not quantify differences among the effects of each of the three social constituencies. However, taking them all together, PoSC represent the contextual conditions shaped by organizational members' actions and become a source of perceptions of the social climate. Moreover, we obtained higher inter-rater agreement, which shows the consensus of the work-unit members about the PoSC as a whole. Thus, although more research is needed to confirm our findings, our initial results suggest that PoSC can be an important context condition affecting individual self-evaluations and attitudes. In addition, measures taken from the same source at the same time are potentially at risk of common method bias (Podsakoff et al., 2003). This problem may affect only our independent variables. However, the use of self-reports was justified by the nature of the constructs, because the employees are the most accurate source of their own internal perceptions (such as PoSC) and self-evaluations (such as work-resilience). Moreover, the mediator (i.e., job satisfaction) was collected at a different point in time (i.e., 20 months later) and the outcome (i.e., job

performance) was derived from a different source, namely from the performance appraisal system, reducing the risk of suffering from common method variance.

Another limitation is related to the construction of the items. In our study, all variables were assessed at the individual level and had the individual as their referent. It should be noted that an explicit work-unit referent would have been more appropriate for those items that referred to PoSC, since they tend to produce less disagreement within groups and more variability among groups (Klein et al., 2001). However, our aggregation indices, namely ICC(1) and  $AD_{M(I)}$ , well meet the criteria to justify consensus. Another issue related to the construction of the items concerns the fact that work resilience was assessed with a tailored scale, specifically constructed for this study. Although this measure has the strength to be specific for the particular work context, making it applicable to other work contexts is a more difficult task. Future studies are needed to compare our measure with other well-established work resilience scales, to determine its suitability, or in using the present measure in different contexts.

We encourage researchers to expand the focus from within-person studies to the team and/or organizational level in order to enrich our understanding of organizational processes in a more comprehensive way. For example, as also pointed out by Judge and colleagues (2001), it would be worth knowing whether the satisfaction-performance relationship is stronger at the collective (vs. individual) level of analysis. Although some efforts have been made in this direction (e.g., Whitman et al., 2010), the results indicated that satisfaction has different relations with different performance criteria and in different contexts. Consequently, a relevant factor to be taken into account in developing future hypotheses will be to specify appropriate multilevel models. Finally, although our initial findings are encouraging, they are based on a sample taken from a large service company in Italy. Thus, it is important to extend the generalizability of our



findings to different organizational contexts, such as small and medium-size enterprises.

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Table 1.

*Means, Standard Deviations, and Correlations among variables (N = 305)*

	<i>M</i>	<i>SD</i>	1	2	3	4
1. PoSC (T1)	4.76	0.91	-			
2. Work Resilience (T1)	5.49	0.65	0.38**	-		
3. Job Satisfaction (T2)	5.03	1.04	0.38**	0.29**	-	
4. Performance (T2)	7.73	1.02	0.04	0.08	0.13*	-

*Note.* PoSC = Perception of Social Context; T1 = Time 1; T2 = Time 2.

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

Table 2

*Hierarchical Linear Models results*

Variables	DV = Performance (T2)		
	Model 0	Model 1	Model 2
	$\beta$ (SE)	$\beta$ (SE)	$\beta$ (SE)
Intercept	7.75*** (.08)	7.04*** (.29)	6.99*** (.30)
Resilience (T1)		0.06 (.09)	0.06 (.09)
Job Satisfaction (T2)		0.14* (.06)	0.15* (.06)
Work-unit PoSC (T1)			-0.12 (.17)
Pseudo R-squared	.15	.17	.17
Variance level 2	0.16* (.07)	0.17* (.07)	0.17* (.07)
Variance level 1	0.89*** (.08)	0.84*** (.08)	0.84*** (.08)
-2 * log (likelihood)	846.57	822.94	822.38
<i>df</i>	3	5	6

*Note.* Pseudo R-squared was calculated as the sum of total variance attributable to within and between variance components (Singer, 1998). PoSC = Perception of social Context; T1 = Time 1; T2 = Time 2.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Table 3

*Individual-Level and Cross-Level Mediation Analyses*

<b>Step and variable</b>	$\beta$	<i>SE</i>
Individual-level tests		
DV = Job satisfaction		
1. Work resilience	0.45***	0.09
DV = Performance		
1. Work resilience	0.12	0.09
2. Work resilience	0.06	0.09
Job satisfaction	0.14*	0.06
Cross-level tests		
DV = Job satisfaction		
1. Work-unit PoSC	0.54***	0.13
DV = Performance		
1. Work-unit PoSC	-0.02	0.16
2. Work-unit PoSC	-0.11	0.17
Job satisfaction	0.17**	0.06

Note. DV = dependent variable; PoSC = Perception of Social

Context.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Figure 1. The final model with standardized path coefficients ( $N = 305$ ). Dotted lines show no significant path

