
Dynamic perspective of leader-member exchange and empowerment-enhancing practices in organizational change



Lea Rutishauser & Steffen R. Giessner

Abstract: Research demonstrates that leadership influences employees' reaction to organizational change. Recognizing the dynamic nature of change, we investigate the effect of leadership as a relational job aspect before change and over time during change. As leadership in change situations does not happen isolated but is embedded in an organizational context, we examine in addition an organizational job aspect: empowerment-enhancing practices. Mediation analysis of a two-wave study before and after an organizational relocation ($N_{T1}=276$; $N_{T2}=104$) reveals unique effects of the indirect relationships: Pre-change relational job aspects increase turnover intention in organizational change, mediated by job satisfaction; and pre-change organizational job aspects reduce turnover intention in organizational change. Furthermore, adjustment in job aspects during change reduce the adjustments of outcomes during organizational change. Practical implications are discussed.

Keywords: leadership, participation, autonomy, communication, empowerment-enhancing practices, turnover, organizational change



Eine dynamische Perspektive auf LMX-Führungsbeziehungen und Empowerment Praktiken im organisationalen Wandel

Zusammenfassung: Die Forschung zeigt, dass Führung die Reaktion der Mitarbeiter auf organisatorische Veränderungen beeinflusst. In Anbetracht der dynamischen Natur des Wandels untersuchen wir die Auswirkungen der Führung als relationalen Arbeitsaspekt vor dem Wandel und im Laufe der Zeit während des Wandels. Da Führung in Veränderungssituationen nicht isoliert stattfindet, sondern in einen organisatorischen Kontext eingebettet ist, untersuchen wir zusätzlich einen organisatorischen Arbeitsaspekt: befähigungsfördernde Praktiken. Die Mediationsanalyse einer Studie zu zwei Zeitpunkten vor und nach einem Unternehmensstandortwechsel ($N_{T1}=276$; $N_{T2}=104$) zeigt einzigartige Effekte der indirekten Beziehungen: Die pre-change relationalen Arbeitsplatzaspekte erhöhen die Fluktuationsabsicht bei organisatorischen Veränderungen, mediiert durch die Arbeitszufriedenheit; und die pre-change organisatorischen Arbeitsplatzaspekte reduzieren die Fluktuationsabsicht bei organisatorischen Veränderungen. Darüber hinaus reduzieren Anpassungen der Arbeitsplatzaspekte während des Wandels die Anpassungen der Ergebnisse des organisatorischen Wandels. Praktische Implikationen werden erörtert.

Stichworte: Führung, Partizipation, Autonomie, Kommunikation, befähigungsfördernde Praktiken, Fluktuation, organisatorischer Wandel

Organizational change implies a challenge for employees, sometimes related to positive outcomes such as job enrichment or development opportunities (Van Dam, 2005), but more often associated with negative outcomes (e.g., job insecurity) and resistance to organizational change (e.g., expression of dissatisfaction) (Oreg et al., 2018). Thereby, an organizational change could decrease the level of job satisfaction (Martin et al., 2005; Oreg et al., 2011) and increase the level of turnover intention as an antecedent of sustainable human capital (Holtom et al., 2008).

In situations with increased job insecurity, research shows that leadership plays an important role (Fugate, 2012; Huy, 2012). However, leadership, a relational job aspect, is embedded in an organizational context. During organizational change, not only leaders are perceived as change agents, but also the HR system (Alfes et al., 2019). Job aspects such as empowerment-enhancing practices (e.g., participation in decision making (Wanberg & Banas, 2000), autonomy in work tasks, and communication of the organization regarding important information (Conway & Monks, 2008)) are prevalent and essential to individuals coping with the situation. Consequently, these job aspects might reduce the negative influence of organizational change on employees' job satisfaction and turnover intention (Dulebohn et al., 2012). We examine employees' perception of their leader relationship (i.e., leader-member exchange, LMX) and empowerment-enhancing practices as joint predictors of employees' reaction to turnover intention during organizational change, mediated by job satisfaction. We study employees who experienced an organizational change in the form of a production site relocation. At the time of data collection, the employees experienced a change situation. We could benefit from these events and examine the effect that leadership and empowerment-enhancing practices had on the remaining workforce during relocation.

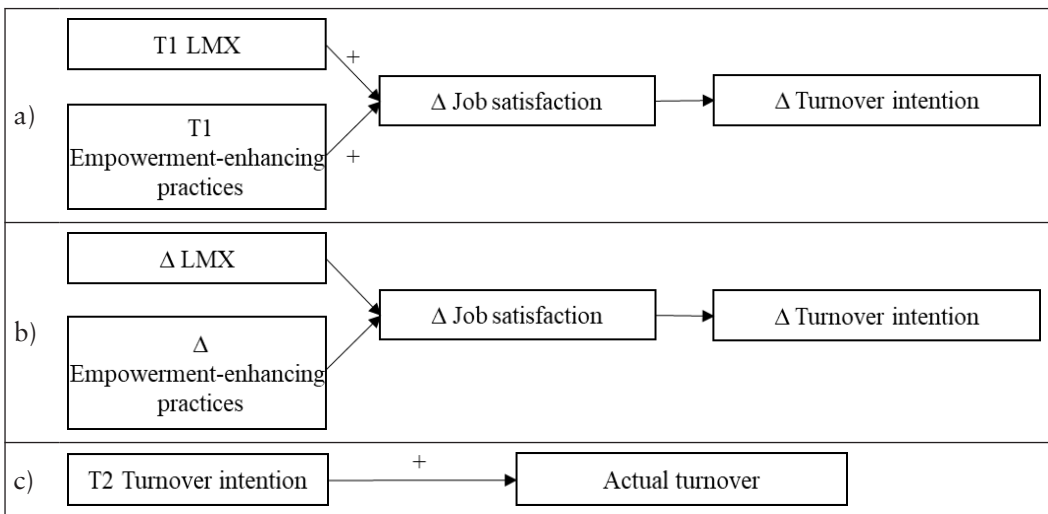
This study extends prior literature in three important ways. First, we investigate the combined effects of LMX and empowerment-enhancing practices on employee work outcomes during organizational change. Previous studies looked either at the relational job aspect of leadership or at the organizational job aspects enhancing organizational change. In reality, however, both job aspects are available during organizational change. We need to understand whether the relational job aspect of leadership alone is enough to manage organizational change or whether also organizational job aspects significantly contribute to the management of human capital during the organizational change process.

Second, we examine the effect of these two job aspects not only pre-change or post-change, but also how their adjustment during organizational change influences employees' behavior. Given the dynamic characteristic of organizational change, a fundamental gap in previous research on organizational change relates to the consideration of time (Oreg et al., 2011; Van Dam et al., 2008). Organizational change is inherently defined by time. Taking time into consideration, we present a more fine-grained perspective on the relationship between antecedents and outcomes before and after the change. More precisely, on the one hand, antecedents can buffer the negative effect of change. As a buffering mechanism, we understand the accumulation of job aspects prior to organizational change, which then reduces the negative impact on outcomes during the organizational change; thus, buffering the effects of organizational change. On the other hand, antecedents can dynamically adjust during the change process. As an adjustment mechanism, we understand the increase/decrease in relational and organizational job aspects during organizational change, which then affects the development of outcomes during

the change; thus, dynamically adjust for the effects of organizational change. The time lag design of our study contributes to the understanding of the temporal perspective of organizational change by comparing rather static models with more dynamic models of change. Practically, we answer whether it is important for organizations to prepare for the change and/or to respond to actual changes. Our results interestingly indicate that the response might be more important than the preparation.

Third, we link employee turnover intention to actual voluntary employee turnover after organizational change. Thereby, we provide empirical evidence for actual objective organizational impact in the aftermath of organizational change situations. Figure 1 shows the proposed research model.

Figure 1: Research Model



Note. For Δ (= change score; calculated as T2-T1), a positive value reflects an increase of the variable from T1 to T2; a negative value reflects a decrease of the variable from T1 to T2.

Consequences of Organizational Change

Employees play a critical role in successful organizational change (Choi, 2011). Previous research has focused on job aspects and how they benefit employees during organizational change, as well as on consequences of organizational change, such as job satisfaction and turnover intention (Martin et al., 2005; Oreg et al., 2011; Terry et al., 1996).

Employees' turnover intention significantly increases in situations with organizational change (Allen et al., 2001; Lee & Mitchell, 1994; Morrell et al., 2004). Turnover becomes attractive to employees if their employer seems to be in decline (Probst, 2003). Therefore, the translation of the intention into actual voluntary turnover of employees needs consideration as consequence of organizational change.

Moreover, organizational change also affects employees' job satisfaction (Amiot et al., 2006; Morrell et al., 2004; Rafferty & Restubog, 2010; Schweiger & Denisi, 1991). Employees' evaluation of their experience with the job leads to an affective attachment and an emotional state, defined as job satisfaction (Kooij et al., 2010) that correlates negatively with turnover intention (Griffeth et al., 2000; Holtom et al., 2008). In sum,

organizational change negatively affects employees' job satisfaction, thereby increasing turnover intention and leading to increased levels of actual voluntary turnover.

Leadership and HR Systems in Organizational Change

In stressful situations such as organizational change, employees might re-assess their work situation (Cheng et al., 2012; Terry et al., 1996; Väänänen et al., 2004) and value job aspects that help them to cope (e.g., supervisor support, participation). An organizational change creates paradoxes for employees and supervisors. Although they are not involved in designing the change, they are the ones to perform it, which may create tensions. Sense-making, information sharing, and social support are attributes that help individuals deal with paradoxes during organizational change (Sparr, 2018). Leadership, specifically the relationships between employees and their supervisors (Cheng et al., 2012), incorporate these attributes. However, during an organizational change, not only leadership but also other job aspects such as empowerment-enhancing practices (i.e., participation in decision making (Wanberg & Banas, 2000), autonomy in work tasks, and communication of the organization regarding important information (Conway & Monks, 2008)) are prevalent and vital to individuals coping with the situation. Having two different job aspects available might prepare employees for potential change situations (Cheng et al., 2012; Shin et al., 2012). Consequently, these job aspects might reduce the negative influence of organizational change on employees' job satisfaction and turnover intention (Dulebohn et al., 2012).

Buffering Effect of Leadership on Organizational Change

Different kinds of job aspects enhance employee adjustment (Martin et al., 2005; Van den Heuvel et al., 2013). We expect that the relational job aspect of LMX influences the adjustment of job satisfaction during organizational change. In this study, we define LMX, originally a dyadic construct between leaders and followers (Graen & Uhl-Bien, 1995), as an individually perceived construct based on social relationships between leaders and followers in the workplace. Supervisors significantly influence employees during organizational change. Their proximity to employees makes them aware of employees' needs in specific situations and how to effectively handle these needs (Huy, 2002). Supervisors' behavior is critical in terms of guiding, making sense of problems, and motivating employees during periods of organizational change (Fugate, 2012).

The relational aspects of leadership are well reflected in the LMX literature. LMX develops through mutual trust and repeated interaction between leader and employee. The quality of LMX varies between dyads, depending on the time and effort invested in the relationship. In high-quality LMX relationships, employees experience better support (Erdogan & Enders, 2007; Graen & Uhl-Bien, 1995) and supervisors can provide an interpretation of certain events (Self et al., 2007). Thus, high-quality LMX reflects more resources for coping with stressful situations. In reciprocation for resources that they receive, employees offer attachment and loyalty towards supervisors and, because they perceive supervisors to be agents of the organization, also towards organizations (Dulebohn et al., 2012). Consequently, this relational job aspect positively influences employees' support for organizational change (Holten & Brenner, 2015; Seo et al., 2012; Van Dam et al., 2008).

The emotional attachment and the mutual interaction that employees develop through high-quality LMX shows, that not only organizations (or leaders) invest in relationships, but also employees. Employees lose this investment if they change jobs, making turnover costly and employees reluctant to quit (Jiang et al., 2012; Mossholder et al., 2005). Having a good exchange relationship with a supervisor creates a good work experience in general, leading to satisfaction with the current job (Dulebohn et al., 2012; Erdogan & Enders, 2007).

Adjustments in job satisfaction and turnover intention are more reflective of such an adaptation process than considering them as a static variable after the organizational change. Shin and colleagues (2012) used a similar approach when examining how pre-change resources affected support and commitment for change and how it affected turnover. They found that available resources made employees strongly committed to organizations and, over time, reduced turnover because of the positive environment created by organizational support (Shin et al., 2012). Arguing that pre-change job aspects influence employees' adjustment over time, Väänänen and colleagues (2004) showed that relational job aspects (i.e., social support) influenced the perception of the job position during organizational change. The relational job aspect of LMX triggered positive feelings and feelings of belonging and therefore, in situations with increased job insecurity, created a supportive workplace atmosphere (Cheng et al., 2012; Terry et al., 1996).

The studies have in common that the job aspects available before organizational change reduced turnover after organizational change. Note that this perspective still provides a temporal distance between the job aspects (pre-change) and the actual outcomes (post-change). We hypothesize (see Figure 1a):

Hypothesis 1. Higher LMX before the change buffers against increasing employee turnover intention during organizational change. This is explained (i.e., mediated) via a buffering effect on the decrease in job satisfaction during organizational change.

Buffering Effect of HR Systems on Organizational Change

HR systems might serve as change agents and thereby help employees cope with organizational change. An HR system is strong when employees perceive specifically designed HR practices as valuable to deal with the expectations towards their behavior (Alfes et al., 2019; Lepak et al., 2006). Especially relevant during organizational change is the bundle of empowerment-enhancing practices, as employees' feelings of being "in control" of organizational change help reduce anxiety and job strain (Amiot et al., 2006; Fugate, 2012).

We identify empowerment-enhancing practices as employees' perceptions of HR practices to empower them in their work environment (Lepak et al., 2006; Subramony, 2009). Empowerment-enhancing practices consist of employees' perception of participation in decision-making, of receiving relevant information (communication), and job autonomy (Amiot et al., 2006; Choi, 2011; Fugate, 2012). For example, participation positively influences employee perceptions of change readiness, job autonomy positively affects commitment to change, and communication reduces change cynicism (Conway & Monks, 2008; Wanberg & Banas, 2000). Instead of separating participation, communication, and autonomy as individual practices, we consider them together in a more holistic

approach of grouping HR practices (Jiang et al., 2012; Kehoe & Wright, 2013; Lepak et al., 2006).¹

Organizations use investments in human resources to signal that they value and appreciate employee engagement in the organization and support employee skills and development. In turn, employees feel obliged to reciprocate, to show satisfaction and commitment, and to stay with the organization (Fabi et al., 2015; Kehoe & Wright, 2013). Moreover, leaving an organization that invests in HR practices and thus, in employees' resources, would mean to lose important job features (Jiang et al., 2012). Rafferty and Restubog (2010) found that organizations' pre-change announcement of organizational change positively influenced employees' post-change job satisfaction and negatively influenced employees' post-change turnover intention. We therefore suggest (see Figure 1a):

Hypothesis 2. Higher empowerment-enhancing practices before the change buffers against increasing employee turnover intention during organizational change. This is explained (i.e., mediated) via a buffering effect on the decrease in job satisfaction during organizational change.

Dynamic Adjustment Effect

We consider pre-change job aspects, not only as static variables, but also as dynamically adapting to change. A change situation increases uncertainty about the future. Therefore, the need for coping with this situation arises. A dynamic adjustment perspective suggests that job aspects, which are flexible during change, enable employees to adjust to uncertainty (Van den Heuvel et al., 2013). The few studies, which have investigated the dynamic effects on job satisfaction and on turnover intention during change (Allen et al., 2001; Woodward et al., 2000), have not addressed the dynamic effects of LMX and empowerment-enhancing job aspects. Because employees value perceived LMX and empowerment-enhancing practices, these job aspects gain importance during change (Halbesleben et al., 2014).

LMX is a central element in reducing employee uncertainty during organizational change (Amiot et al., 2006; Terry et al., 1996). Leaders' proximity to their followers allows them to react to and deal with specific needs immediately (Fugate, 2012; Huy, 2002). For instance, one employee may need more information about what the change might entail for her reporting of metrics, while another employee might be primarily concerned with potential changes in office locations.

Furthermore, the proximity between a leader and follower is also important for employees' sense-making and interpretation of the situation and the commitment to the situation (Fugate, 2012; Self et al., 2007). The proximity and flexibility of perceived LMX during organizational change are likely affecting the dynamic adjustment of job satisfaction and thus, the dynamic adjustment of turnover intention (see Figure 1b).

Hypothesis 3. An increase in LMX leads to a decrease in employee turnover intention during organizational change. This effect is explained (i.e., mediated) by an increase in job satisfaction during organizational change.

When examining adjustment of empowerment-enhancing practices, the fact that these practices are elements of HR systems and thereby part of an organization's strategy needs to be considered (Lepak et al., 2006). However, the pure existence of empowerment-enhancing practices is not sufficient during organizational change. Employees need to make

use of the practices as part of their coping strategy (Alfes et al., 2019; Halbesleben et al., 2014). We hypothesize that an actual adjustment in organizational job aspects during change affects the adjustment in job satisfaction and therefore, in turnover intention (see Figure 1b).

Hypothesis 4. An increase in empowerment-enhancing practices leads to a decrease of employee turnover intention during organizational change. This effect is explained (i.e., mediated) by an increase in job satisfaction during organizational change.

Effects of Turnover Intention on Actual Turnover

Besides turnover intention, employee withdrawal is a consequence of organizational change (Morrell et al., 2004; Wanberg & Banas, 2000). Spreitzer and Mishra (2002) investigated turnover behavior of employees one year after an organizational change and found that employees who were more attached to the organization were more likely to stay in the long term. As turnover intention is one of the best predictors of actual voluntary turnover (Griffeth et al., 2000; Holtom et al., 2008; Tett & Meyer, 1993), we hypothesize (see Figure 1c):

Hypothesis 5. Higher turnover intention after organizational change is positively related to actual voluntary employee turnover.

Methods

Setting

We used a time lagged study design to collect data in a manufacturing organization in Switzerland. Data was collected in September 2013 (T1) and in December 2014 (T2). Two years after T1, we were given actual turnover information from the organization's HR department. Although data was not collected recently, the rare opportunity of obtaining pre-change and post-change data without employees having known about organizational change in the first place, bears value still today.

In April 2014, several months after T1 and before T2, the organization informed their employees of an organizational change. Thus, T1 measures are not influenced by the change context as employees were not aware of the change at that time. The purpose of the change was to consolidate and relocate one production part of the organization to a different country. Thereby, organizational change included the lay-off of about a quarter of the employees at the previous production site. In our data, we cannot differentiate the degree of change each individual employee went through. Note, however, due to the severity of the change, all employees did experience the organizational change.

At the time of the T2 data collection, the organizational change was logistically and technically completed. However, the duration of subsequent effects of organizational changes on employee adjustment are most often longer than the actual physical change per se (De Lange, Taris, Kompier, Houtman, & Bongers, 2003). In October 2015, we collected turnover data from the HR department of the company.

Since we measured constructs before employees knew about the change and again after the change, we have a unique dataset: Employees answered the same questions before (T1) and after an organizational change (T2). Between the two points of data collection some employees left the company, which reduced the T2 sample size.

Sample and Procedure

Participants were mostly male (88 %). The average percentage of men in mechanical and electrical engineering industries in Switzerland, including manufacturing industry, is 75 %, compared to 54 % for the overall economy (Swissmem, 2016). The average employee in the sample was about 42 years old and had an organizational tenure of almost 11 years (128 months). The majority of the participants had completed vocational education (72 %).

Management announced the survey and encouraged employees to participate before we distributed it by email (employees with a company email address) and on paper (employees without a company email address). We sent reminders after about one week and we included a lottery opportunity in each survey, where participants could win a shopping voucher of 100 CHF. At T1, we invited 523 employees to participate in the questionnaire. The response rate was 53 % ($N = 276$). At T2, we approached those employees who had participated in T1 and who were still working in the company ($N = 223$). The response rate was 47 % ($N = 104$). To check for systematic non-participation in the T2 sample, we followed Goodman and Blum (1996) and conducted a subject attrition analysis. We ran a Bonferroni corrected multiple logistic regression on the dummy variable that denoted participants in the final T2 sample (= 1) and those who participated only in T1 (= 0). The results show no significant differences.

Measures

We applied a state of the art back-translation process to translate the original English items into German for use in the Swiss company. Unless stated otherwise, the items have been measured on a 6-point scale ranging from strongly disagree (= 1) to strongly agree (= 6). All items were measured in T1 and in T2, except for the actual employee turnover, which was measured only once, in October 2015.

Turnover. For actual voluntary employee turnover, the HR department provided information about the employment status of employees covering the last 12 months. We created a turnover variable with “1 = voluntary leavers” and “0 = stayers”.

Turnover intention. We used a three-item scale developed by Bozeman and Perrewé (2001) to measure turnover intention (e.g., “I will probably look for a new job in the near future”).

Job satisfaction. We measured job satisfaction with six items from König and colleagues (2011). A sample item was, “All in all, I’m satisfied with my job”.

LMX. We used the seven-item scale from Graen and Uhl-Bien (1995) to measure LMX (e.g., “My direct supervisor understands my job problems and needs”).

Empowerment-enhancing practices. The empowerment-enhancing practices consisted of perceived participation, autonomy, and communication, which were combined to one factor. To measure individual’s perception of *participation* and *autonomy*, we used 3 items each from the scale developed by Stegmann, and colleagues (2010) with the German version of the original scale from Morgeson and Humphrey (2006; sample items: participation “I have the possibility of taking part in making organizational decisions”, autonomy “I can plan how I do my work”). Perceived *communication* was measured with three items of Conway and Monks (2008; e.g., “My company informs me about important new initiatives at work”).

Control variables. In previous studies, age and gender showed an influence on employee behavior in situations with organizational change (Oreg et al., 2011). Furthermore, research indicates a gender gap in job satisfaction (Redmond & McGuinness, 2019) and turnover intention (Lyness & Judiesch, 2001) and suggests that with age neuroticism decreases. This implies that older employees, especially women, should cope better with emotional stressors like change (Robert et al., 2006). We, therefore, focused on T1 age and gender as control variables. Gender was operationalized as a binary variable (0 = female; 1 = male). Age was measured by calculating the age of each participant as per their reported year of birth.

Most variables in this study are based on self-reported measures, except for actual turnover data. Although, common method variance could have biased the results (Podsakoff et al., 2003), the use of two different measures over time should mitigate this concern. Indeed, a Harman single factor test showed no common method variance bias when using variables from the two different measures over time. Furthermore, the theoretical constructs in this study are about employee perceptions. Hence, directly asking employees about their perceptions seems to be the best way to measure these subjective perceptions.

Analysis

We conducted a confirmatory factor analysis to assess the structure of the model and examined the fit of different models. First, we ran a six-factor model where we assessed each latent variable as a separate factor. This model showed an acceptable measurement fit to the data, $\chi^2(260) = 812.4$, CFI = .87, RMSEA = .09. We then compared this six-factor model with an alternative model including one latent variable for all predictor variables, $\chi^2(275) = 1910.7$, CFI = .60, RMSEA = .15. The six-factor model showed a significantly better fit than the one-factor model, $\Delta\chi^2(\Delta df) = 1098.3(15)$, $p < .001$.

To test the hypotheses, we ran structured equation modeling (SEM) mediation tests (Rosseel, 2012). We examined two different mediation models. First, we looked at the buffering effect of T1 independent variables on the adjustment of the mediator and the dependent variable during organizational change. Second, we looked at the dynamic adjustment effect of the adjustment in independent variable on the adjustment in mediator and in dependent variable. To analyze the adjustment of the variables, we calculated change scores (Δ) by subtracting the T2 values from the T1 values (e.g., Settles et al., 2009; Woodward et al., 2000). We used change scores to test our hypotheses, rather than fit scores (Edwards, 1995), as we want to test the buffering effect and dynamic adjustment effect during the organizational change. For alternatively testing the hypotheses with latent difference scores, the sample was not large enough. In addition, we run regressions to test and verify our results with residual change scores (Gollwitzer et al., 2014). The hierarchical regression supported our findings from SEM analysis (see next section) to a great extent.²

Results

Descriptive Statistics

Table 1 shows the descriptive statistics and correlations. T1 LMX has a positive correlation with Δ turnover intention and a negative correlation with Δ job satisfaction, whereas T1 organizational job aspects (participation, autonomy, and communication) are not

significantly correlated to the outcomes. Furthermore, adjustment in relational job aspects (i.e., LMX) shows a negative correlation with adjustment in turnover intention and a positive correlation with adjustment in job satisfaction. Adjustment in organizational job aspects (i.e., participation, communication, and autonomy), however, show significant and positive correlation only with adjustment in job satisfaction.

Table 1: Means, Standard Deviations (SD), Correlations, and Cronbach’s Alpha Reliabilities

Variable	Mean	SD	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)
1) Age T1	41.84	10.85											
2) Gender T1	.89	.31	.09										
3) LMX T1	4.37	.99	.06	-.26*	(.91)								
4) Participa- tion T1	3.76	.87	.28**	-.03	.43**	(.71)							
5) Autonomy T1	4.74	.81	.19	-.07	.30**	.45**	(.80)						
6) Commu- nication T1	4.50	.71	.30**	-.12	.32**	.64**	.30**	(.81)					
7) Turnover intention Δ	.30	1.05	-.18	-.35**	.35**	-.10	.00	-.03					
8) Job satis- faction Δ	-.14	.64	.05	.23*	-.36**	.01	-.11	-.01	-.58**				
9) LMX Δ	.00	.98	.02	.25*	-.66**	-.10	-.04	-.15	-.46**	.61**			
10) Participa- tion Δ	-.24	.87	-.15	.12	-.12	-.50**	-.24*	-.21*	-.16	.25*	.11		
11) Auton- omy Δ	.01	.72	-.01	.17	-.34**	-.27**	-.59**	-.15	-.18	.34**	.33**	.27**	
12) Commu- nication Δ	-.47	.89	-.18	.14	-.13	-.25*	-.31**	-.38**	-.17	.38**	.25*	.55**	.39**

Note. N=94; Gender: 0 = female, 1 = male. Cronbach’s alpha in the diagonal.

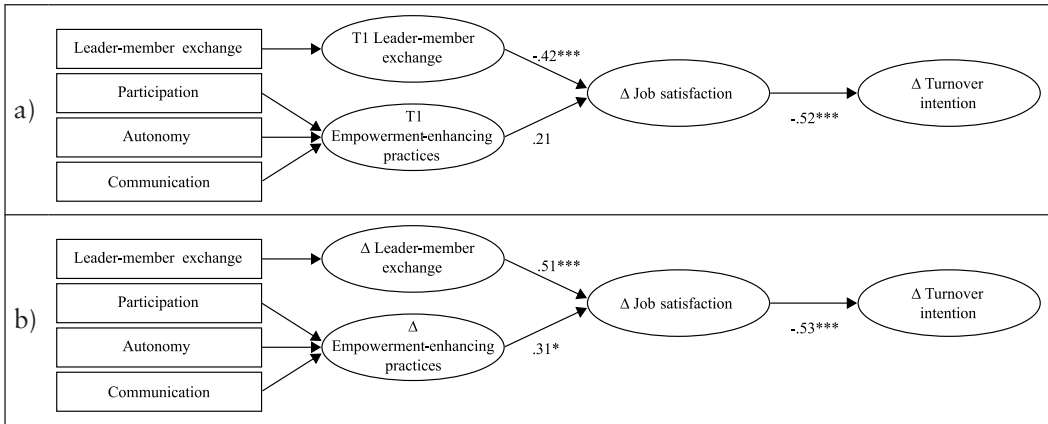
* $p < .05$, ** $p < .01$

We also compared the means of each job aspect before and after the organizational change. The mean for job satisfaction significantly decreases from T1 to T2 ($p < .05$), whereas the mean for turnover intention significantly increases ($p < .01$). Furthermore, the mean of LMX and of autonomy shows no significant change, and the means of participation ($p < .01$) and communication ($p < .05$) decrease.

Test of Hypotheses

To test the hypotheses 1 to 4, we used the lavaan package in R (Rosseel, 2012) and ran three separate models in SEM to test the effects of employee resources through job satisfaction on work outcome. We applied control variables for the mediator and the dependent variable. Figure 2 presents the model and results regarding the hypotheses.

Figure 2: Results Structural Equation Modeling



Note. For Δ (= change score; calculated as T2-T1), a positive value reflects an increase of the variable from T1 to T2; a negative value reflects a decrease of the variable from T1 to T2.

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

Testing hypotheses 1 and 2, the overall model fit is acceptable, $\chi^2(16) = 28.28$; CFI = .92; RMSEA = .09. The results showed that T1 LMX significantly reduces job satisfaction during organizational change and that T1 empowerment-enhancing practices marginally significantly increase job satisfaction during organizational change. The decrease in job satisfaction during organizational change significantly increases turnover intention during change (Figure 2a).

The indirect effect shows that T1 LMX significantly increases turnover intention during organizational change. The effect went in the opposite direction than predicted. The indirect path of T1 LMX on Δ turnover intention was significant for the 90 % CI (see Table 2) and for the 95 % CI (for Δ turnover intention CI [.09,.41]). Thus, hypothesis 1 was not fully supported.

In contrast, the indirect effect of T1 empowerment-enhancing practices on Δ turnover intention did go in the predicted direction and is significantly different from zero with 90 % confidence, but not with 95 % confidence (for Δ turnover intention CI [-.25,.01]), providing some support for hypothesis 2.

Table 2: Results of Indirect Effects and Bootstrapping (Model a)

Variable	T1 LMX			T1 HR Practices		
	Indirect effect	90 % Bootstrapped CI		Indirect effect	90 % Bootstrapped CI	
		Lower	Upper		Lower	Upper
Δ Turnover intention	.23	.11	.37	-.11	-.21	-.01

Note. Based on 1,000 bootstrap samples. CI = confidence interval.

Testing for hypotheses 3 and 4, the model fit data well, $\chi^2(16) = 20.82$; CFI = .97; RMSEA = .06. The results showed that the adjustment in LMX as well as in empower-

ment-enhancing practices during organizational change significantly and positively affected the change in job satisfaction. Furthermore, the decrease in job satisfaction during organizational change significantly increased turnover intention (Figure 2b). Tests of indirect effects support both hypotheses. The predicted indirect effect of Δ LMX and of Δ empowerment-enhancing practices through Δ job satisfaction significantly relates to Δ turnover intention (Table 3). Therefore, hypotheses 3 and 4 were supported.

Table 3: Results of Indirect Effects and Bootstrapping (Model b)

Variable	Δ LMX			Δ HR Practices		
	Indirect effect	95 % Bootstrapped CI		Indirect effect	95 % Bootstrapped CI	
		Lower	Upper		Lower	Upper
Δ Turnover intention	-.27	-.44	-.11	-.17	-.33	-.03

Note. Based on 1,000 bootstrap samples. CI = confidence interval.

We used logistic regressions to test hypothesis 5. Turnover intention after organizational change significantly increases the likelihood of actual turnover one year after the organizational change (Table 4, Model 2: $\Delta\chi^2 = 5.41$, Wald statistics = 5.04, $p < .05$, Nagelkerkes $R^2 = .188$). Results support hypothesis 5.

Table 4: Results of Logistic Regression on Actual Turnover

Variables	Model 1		Model 2	
	b^a	Wald statistics	b^a	Wald statistics
T1 Age	.992	.01	1.008	.05
T1 Gender	.169	4.98*	.282	2.11
T1 Turnover intention	1.274	0.62	.773	.40
T2 Turnover intention			1.986	5.04*
$\Delta\chi^2$		5.22		5.41*

Note. N= 98.

^a Values above 1 indicate a positive effect, values at 1 indicate no effect and values below 1 indicate a negative effect.

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

Discussion

Different job aspects support employees in unique ways during and after change situations. Our findings support previous research and further reveal the importance and unique effects of LMX and empowerment-enhancing practices in organizational change. Pre-change resources indirectly relate to adjustment in job satisfaction during organizational change, and thus, in turnover intention (Hypotheses 1 and 2). Interesting is the effect of LMX, which goes in the opposite direction than predicted: Employees with

high LMX before organizational change experience a decrease in job satisfaction during organizational change. Prior research might help to explain this finding. For example, Kim and colleagues (2011) showed that employees who have a particularly good exchange relationship with their employer are more inclined to perceive organizational change as a potential threat to this relationship. In general, employees who value and invest in their job show more negative perceptions about organizational change (Van Dam, 2005). Moreover, organizational change is not only demanding for employees, but also for supervisors. They experience a paradoxical situation and are required to support and care for their employees when they need support themselves (Sparr, 2018). Disappointment with supervisor decisions and behavior connected to organizational change could therefore influence employees' adjustment to change (Vakola, 2016). Although employees with more pre-change LMX are less likely to experience extremely low job satisfaction, they may experience a higher level of threat towards these valued features and consequently, the level of job satisfaction is likely to decrease more than for those with low pre-change LMX (convergence to the mean).

Moreover, during organizational change, adjustments in both job aspects contribute, through change in job satisfaction, to adjustments in turnover intention (Hypotheses 3 and 4). Comparing the effects of adjustment in predictors on the adjustment in outcomes, we find the indirect effect of LMX to be about twice as strong as the effect of empowerment-enhancing practices. However, the difference in effect sizes is not statistically significant. Still, an explanation for the stronger effect of LMX could be its higher flexibility and proximity compared to empowerment-enhancing practices, and therefore, the ability to adapt more easily to and to support the needs of employees in the situation of organizational change. Comparing the effects of the rather static variable of empowerment-enhancing practices and the rather flexible variable LMX, we assume that the romance of leadership (Meindl et al., 1985) contributes to the importance of LMX. Just perceiving to have high LMX might not be sufficient during organizational change. Employees need to actually experience an increase in LMX for an effect on job satisfaction and turnover intention during organizational change. Empowerment-enhancing practices on the other hand is more reliable and present during organizational change.

These findings show that a mix of different job aspects is needed to support employees in situations of organizational change. Moreover, we have extended current research on employee behavior intention by including actual employee behavior in the analysis. Although the negative effects of organizational changes on employee behavior seem to diminish or stabilize over time (Griffeth et al., 2000; Paulsen et al., 2005), several months after the second data collection, there is still a significant relationship between employee turnover intention and actual employee turnover. According to our findings, one way to manage employee turnover as a consequence of organizational change, is to invest in employees' relationship with the leader and in empowerment-enhancing practices in order to enable them to deal with difficult situations. It would be interesting for future research to further investigate the duration in which consequences of organizational change influence employee behavior intention and actual behavior.

Although not all effects reached statistical significance level, most effects point in the predicted direction. Our sample size limited our power for testing. Consequently, it might be too early to assume that hypotheses, which are not supported, are statistically incor-

rect. Rather, future meta-analytic integration might help to reveal the overall buffering and dynamic adjustment effects of empowerment-enhancing practices and LMX.

Implications

Pre-change data was collected at a point in time when employees had been unaware of the upcoming organizational change. The underlying data set therefore allows researching and analyzing the dynamics of organizational change and the dynamic buffering and adjustment effects in organizational change situations – an important differentiation for theoretical and practical purposes. Having reliable relational and organizational job aspects is crucial for employees in dynamic environments. For practice, we suggest focusing on both the pre- and post-change phase.

In the pre-change phase, it is generally important that employees have good empowerment-enhancing practices. This is particularly important in dynamic environments, where organizational change is the norm rather than the exception. Employers should not only implement empowerment-enhancing practices that support the organization's HR strategy, but also practices that are highly valued by employees, such as participation in decision-making, autonomy, and communication. In addition, good relationships may serve employees as resources, although employees with high LMX experience a bigger decrease in job satisfaction during organizational change than those with lower LMX. Consequently, organizations with cultures that are not designed to enable relationships, may experience less reduction in job satisfaction during an organizational change. However, overall, the job satisfaction in organizations with well-established relationships will most likely remain on a relatively higher level. Therefore, organizations should support and encourage high LMX by providing enough time and resources to supervisors and employees to foster relationships, by supporting team building and leaving options for job crafting.

In the post-change phase, flexibility of job aspects is crucial. The current study indicates that flexible job aspects, adapting to the changing situation, have a stronger effect than more stable job aspects. Empowerment-enhancing practices are developed from HR strategies and are therefore relatively stable over time. Although an organization may well provide empowerment-enhancing practices that support employees in their daily work, it cannot adapt them quickly during organizational change. Organizations can only intensify the promotion of HR practices relevant to employees to raise awareness of their existence.

Compared to empowerment-enhancing practices, LMX relationships are more flexible, and thus account for changes in the organization and the needs of employees. Well-established personal relationships are easily activated when needed. With organizational change gradually becoming a normal state for organizations, leadership training with a focus on leading and supporting employees during organizational change and leadership in uncertain situations might enable organizations to gain competitive advantage.

Limitations and Outlook

We analyzed two different perspectives on organizational change to understand how relational and organizational job aspects help employees during organizational changes. As we researched one single organization, the findings are influenced by the unique characteristic of the organizational sample. Nevertheless, this setting allowed us to control for organizational factors as the organizational setting may also affect the influence of

the relocation on employees. We assume that employees who were closely related to the relocated production site experienced a higher impact of organizational change and its consequences than others. However, the organizational change is likely to have impact on all employees, be it due to redesigned processes, changes in collaborations, or replacements of peers or supervisors. Although organizational change probably did not directly involve all employees to the same degree, the current data does not allow differentiation of participants into a treatment and a control group. Note, however, that due to this situation, the resulting effects of employees' resources on turnover intention and actual turnover might be weaker, and thus these effects are rather more conservative, than when studying the employees who have undergone the most severe change process specifically.

Furthermore, the sample size for studying the dynamic effects over two points in time is rather small. Consequently, our results should be treated with caution. However, focusing on the pattern of results, we confirmed most of our predictions, but some did not reach the conventional level of significance. Thus, we might interpret these non-significant effects as being weak evidence for our prediction, but certainly not disconfirming our assumptions.

Finally, our study does not allow to draw causal conclusions. However, we present a two-wave study and thereby enable to investigate pre- and post-change data. Future studies could also consider the effects of other mediators such as organizational commitment, which is another important predictor of employee turnover. Furthermore, it would also be possible to test moderating effects of employee attitudes (i.e., job satisfaction, organizational commitment, organizational identification) to gain more insights into boundary effects during organizational change.

References

- Alfes, K., Shantz, A. D., Bailey, C., Conway, E., Monks, K., & Fu, N. (2019). Perceived human resource system strength and employee reactions toward change: Revisiting human resource's remit as change agent, *Human Resource Management*, 58(3), 239-252.
- Allen, T. D., Freeman, D. M., Russell, J. E. A., Reizenstein, R. C., & Rentz, J. O. (2001). Survivor reactions to organizational downsizing: Does time ease the pain?, *Journal of Occupational and Organizational Psychology*, 74(2), 145-164.
- Amiot, C. E., Terry, D. J., Jimmieson, N. L., & Callan, V. J. (2006). A longitudinal investigation of coping processes during a merger: Implications for job satisfaction and organizational identification, *Journal of Management*, 32(4), 552-574.
- Bozeman, D. P., & Perrewé, P. L. (2001). The effect of item content overlap on Organizational Commitment Questionnaire-turnover cognitions relationships, *Journal of Applied Psychology*, 86(1), 161-173.
- Cheng, Huang, G., Lee, C., & Ren, X. (2012). Longitudinal effects of job insecurity on employee outcomes: The moderating role of emotional intelligence and the leader-member exchange, *Asia Pacific Journal of Management*, 29(3), 709-728.
- Choi, M. (2011). Employees' attitudes toward organizational change: A literature review, *Human Resource Management*, 50(4), 479-500.
- Conway, E., & Monks, K. (2008). HR practices and commitment to change: an employee-level analysis, *Human Resource Management Journal*, 18(1), 72-89.

- de Lange, A. H., Taris, T. W., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2003), "The very best of the millennium": Longitudinal research and the demand-control-(support) model, *Journal of Occupational Health Psychology*, 8(4), 282–305.
- Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris, G. R. (2012), A meta-analysis of antecedents and consequences of leader-member exchange, *Journal of Management*, 38(6), 1715–1759.
- Edwards, J. R. (1995), Alternatives to difference scores as dependent variables in the study or congruence in organizational research, *Organizational Behavior and Human Decision Processes*, 64(3), 307–324.
- Erdogan, B., & Enders, J. (2007), Support from the top: Supervisors' perceived organizational support as a moderator of leader-member exchange to satisfaction and performance relationships, *Journal of Applied Psychology*, 92(2), 321–330.
- Fabi, B., Lacoursière, R., & Raymond, L. (2015), Impact of high-performance work systems on job satisfaction, organizational commitment, and intention to quit in Canadian organizations, *International Journal of Manpower*, 36(5), 772–790.
- Fugate, M. (2012), The impact of leadership, management, and HRM on employee reactions to organizational change, *Research in Personnel and Human Resources Management*, 31, 181–212.
- Gollwitzer, M., Christ, O., & Lemmer, G. (2014), Individual differences make a difference: On the use and the psychometric properties of difference scores in social psychology, *European Journal of Social Psychology*, 44, 673–682.
- Goodman, J. S., & Blum, T. C. (1996), Assessing the non-random sampling effects of subject attrition in longitudinal research, *Journal of Management*, 22(4), 627–652.
- Graen, G. B., & Uhl-Bien, M. (1995), Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi domain perspective, *Leadership Quarterly*, 6(2), 219–247.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000), A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium, *Journal of Management*, 26(3), 463–488.
- Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014), Getting to the "COR", *Journal of Management*, 40(5), 1334–1364.
- Holten, A.-L., & Brenner, S. O. (2015), Leadership style and the process of organizational change, *Leadership & Organization Development Journal*, 36(1), 2–16.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008), Turnover and retention research: A glance at the past, a closer review of the present, and a venture into the future, *Academy of Management Annals*, 2(1), 231–274.
- Huy, Q. N. (2002), Emotional balancing of organizational continuity and radical change: The contribution of middle managers, *Administrative Science Quarterly*, 47(1), 31.
- Jiang, K., Lepak, D. P., Jia, J. U., & Baer, J. C. (2012), How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms, *Academy of Management Journal*, 55(6), 1264–1294.
- Kehoe, R. R., & Wright, P. M. (2013), The impact of high-performance human resource practices on employees' attitudes and behaviors, *Journal of Management*, 39(2), 366–391.
- Kim, T. G., Hornung, S., & Rousseau, D. M. (2011), Change-supportive employee behavior: antecedents and the moderating role of time, *Journal of Management*, 37(6), 1664–1693.

- König, C. J., Probst, T. M., Staffen, S., & Graso, M. (2011), A Swiss–US comparison of the correlates of job insecurity. *Applied Psychology*, 60(1), 141–159.
- Kooij, D., Jansen, P., Dijkers, J., & De Lange, A. (2010), The influence of age on the associations between HR practices and both affective commitment and job satisfaction: A meta-analysis. *Journal of Organizational Behavior*, 31, 1111–1136.
- Lee, T. W., & Mitchell, T. R. (1994), An alternative approach: The unfolding model of voluntary employee turnover. *Academy of Management Review*, 19(1), 51–89.
- Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006), A conceptual review of human resource management systems in strategic human resource management research. *Research in Personnel and Human Resources Management*, 25(06), 217–271.
- Lyness, K. S., & Judiesch, M. K. (2001). Are female managers quitters? The relationships of gender, promotions, and family leaves of absence to voluntary turnover. *Journal of Applied Psychology*, 86(6), 1167–1178.
- Martin, A. J., Jones, E. S., & Callan, V. J. (2005), The role of psychological climate in facilitating employee adjustment during organizational change. *European Journal of Work and Organizational Psychology*, 14(3), 263–289.
- Meindl, J. R., Ehrlich, S. B., & Dukerich, J. M. (1985), The Romance of Leadership. *Administrative Science Quarterly*, 30(1), 78–102.
- Morgeson, F. P., & Humphrey, S. E. (2006), The work design questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321–1339.
- Morrell, K. M., Loan-Clarke, J., & Wilkinson, A. J. (2004), Organisational change and employee turnover. *Personnel Review*, 33(2), 161–173.
- Mossholder, K. W., Settoon, R. P., & Henagan, S. C. (2005), A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors. *Academy of Management Journal*, 48(4), 607–618.
- Oreg, S., Bartunek, J. M., Lee, G., & Do, B. (2018), An affect-based model of recipients' responses to organizational change events. *Academy of Management Review*, 43(1), 65–86.
- Oreg, S., Vakola, M., & Armenakis, A. (2011), 'Change recipients' reactions to organizational change. *Journal of Applied Behavioral Science*, 47(4), 461–524.
- Paulsen, N., Callan, V. J., Grice, T. A., Rooney, D., Gallois, C., Jones, E., ... Bordia, P. (2005), Job uncertainty and personal control during downsizing: A comparison of survivors and victims. *Human Relations*, 58(4), 463–496.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003), Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Probst, T. M. (2003), Exploring employee outcomes of organizational restructuring. *Group & Organization Management*, 28(3), 416–439.
- Rafferty, A., & Restubog, S. (2010), The impact of change process and context on change reactions and turnover during a merger. *Journal of Management*, 36(5), 1309–1338.
- Redmond, P., & McGuinness, S. (2019). Explaining the Gender Gap in Job Satisfaction. *IZA Institute of Labor Economics*, Discussion Paper Series, No. 12703.
- Roberts, B. W., & Viechtbauer, W. (2006), Patterns of Mean-Level Change in Personality Traits Across the Life Course: A Meta-Analysis of Longitudinal Studies. *Psychological Bulletin*, 132(1), 1–25.

- Rosseel, Y. (2012), lavaan: An R package for structural equation modeling and more, Retrieved from <http://lavaan.org/>
- Schweiger, D. M. & Denisi, A. S. (1991), Communication with employees following a merger: A longitudinal field experiment, *Academy of Management Journal*, 34(1), 110–135.
- Self, D. R., Armenakis, A. A., & Schraeder, M. (2007), Organizational change content, process, and context: A simultaneous analysis of employee reactions, *Journal of Change Management*, 7(2), 211–229.
- Seo, M., Tyler, M. S., Hill, N. S., Zhang, X., Tesluk, P. E., & Lorinkova, N. M. (2012), The role of affect and leadership during organizational change, *Personnel Psychology*, 65(1), 121–165.
- Settles, I. H., Jellison, W. A., & Pratt-Hyatt, J. S. (2009), Identification with multiple social groups: The moderating role of identity change over time among women-scientists, *Journal of Research in Personality*, 43(5), 856–867.
- Shin, J., Taylor, M. S., & Seo, M. (2012), Resources for change: The relationship of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change, *Academy of Management Journal*, 55(3), 727–748.
- Sparr, J. L. (2018), Paradoxes in organizational change: The crucial role of leaders' sensegiving, *Journal of Change Management*, 18(2), 162–180.
- Spreitzer, G. M., & Mishra, A. K. (2002), To stay or to go: Voluntary survivor turnover following an organizational downsizing, *Journal of Organizational Behavior*, 23(6), 707–729.
- Stegmann, S., van Dick, R., Ullrich, J., Charalambous, J., Menzel, B., Egold, N., & Wu, T. T.-C. (2010), Der Work Design Questionnaire, *Zeitschrift für Arbeits- und Organisationspsychologie A&O*, 54(1), 1–28.
- Subramony, M. (2009), A meta-analytic investigation of the relationship between HRM bundles and firm performance, *Human Resource Management*, 48(5), 745–768.
- Swissmem. (2016), Skilled labour: Women/families. Retrieved from <http://www.swissmem.ch/en/industry-politics/skilled-labour/womenfamilies.html>
- Terry, D. J., Callan, V. J., & Sartori, G. (1996), Employee adjustment to an organizational merger: Stress, coping and intergroup differences, *Stress Medicine*, 12(2), 105–122.
- Tett, R. P., & Meyer, J. P. (1993), Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings, *Personnel Psychology*, 46(2), 259–293.
- Väänänen, A., Pahkin, K., Kalimo, R., & Buunk, B. P. (2004), Maintenance of subjective health during a merger: The role of experienced change and pre-merger social support at work in white- and blue-collar workers, *Social Science and Medicine*, 58(10), 1903–1915.
- Vakola, M. (2016), The reasons behind change recipients' behavioral reactions: A longitudinal investigation, *Journal of Managerial Psychology*, 31(1), 202–215.
- Van Dam, K. (2005), Employee attitudes toward job changes: An application and extension of Rus-bult and Farrell's Investment Model, *Journal of Occupational and Organizational Psychology*, 78, 253–272.
- Van Dam, K., Oreg, S., & Schyns, B. (2008), Daily work contexts and resistance to organisational change: The role of leader-member exchange, development climate, and change process characteristics, *Applied Psychology*, 57(2), 313–334.
- Van den Heuvel, M., Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2013), Adapting to change: The value of change information and meaning-making, *Journal of Vocational Behavior*, 83(1), 11–21.

Wanberg, C. R., & Banas, J. T. (2000), Predictors and outcomes of openness to changes in a reorganizing workplace, *Journal of Applied Psychology*, 85(1), 132–142.

Woodward, C. A., Shannon, H. S., Lendrum, B., Brown, J., McIntosh, J., & Cunningham, C. (2000), Predictors of job stress and satisfaction among hospital workers during re-engineering: Differences by extent of supervisory responsibilities, *Healthcare Management Forum*, 13(1), 29–35.

Endnotes

¹ The bundle empowerment-enhancing practices (Lepak et al., 2006; Subramony, 2009) includes practices that “empower employees to use their skills and motivation to achieve organizational objectives” (Jiang et al., 2012: 1267), such as participation, autonomy, and communication (Kehoe & Wright, 2013; Lepak et al., 2006). By bundling different HR practices, which complement each other, Subramony (2009) found stronger effects on performance and retention than by analyzing each individual HR practice separately.

² In addition to the SEM mediation test, we run hierarchical regressions with residual change scores (Gollwitzer et al., 2014). The findings support the results of SEM largely. We found only few differences: (a) a non-significant effect of T1 LMX on Δ job satisfaction in the regression analysis vs. a significant effect in SEM, and a marginally significant effect of T1 Participation on Δ job satisfaction ($p < .1$) in the regression analysis vs. a significant effect in SEM; (b) the regression analysis for Δ LMX and Δ empowerment-enhancing practices on Δ job satisfaction supported findings from SEM. Testing the different perspectives with regression analysis did not allow us to use a latent variable for empowerment-enhancing practices including participation, autonomy, and communication.

Lea Rutishauser, Dr., is Senior Research Associate and Lecturer at the University of Lucerne/CH, Center for Human Resource Management (CEHRM)

Address: Center for Human Resource Management (CEHRM), University of Lucerne, Frohburgstrasse 3, 6002 Lucerne, Switzerland, E-Mail: lea.rutishauser@unilu.ch

Steffen R. Giessner, Prof. Dr., is Professor for Organisational Behaviour and Change at the Rotterdam School of Management, Erasmus University/NL.

Address: Rotterdam School of Management, Erasmus University, Burg. Oudlaan 50, 3062PA Rotterdam, The Netherlands, E-Mail: sgiessner@rsm.nl