



# Roles of self-efficacy and transformational leadership in explaining voice-job satisfaction relationship

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Published online: 23 February 2018

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## Abstract

Little is known about the consequences of promotive and prohibitive voice. Addressing this issue, this study empirically examined the relationship between promotive and prohibitive voice and job satisfaction, as well as the mediating role of self-efficacy and the moderating role of transformational leadership. Results from 88 employee–supervisor dyads indicated that promotive and prohibitive voice were positively related to job satisfaction. Moreover, the relationship between promotive voice and job satisfaction was fully mediated by self-efficacy, whereas the relationship between prohibitive voice and job satisfaction was partially mediated by self-efficacy. Transformational leadership moderated the effect of prohibitive voice on self-efficacy. Findings enrich the voice literature and provide practical implications. Organizations should encourage employees to engage in voice behavior and strengthen their self-efficacy. Team leaders should be trained and guided to keep suitable leadership style.

**Keywords** Voice · Job satisfaction · Self-efficacy · Transformational leadership

## Introduction

Voice behavior, or “constructive change-oriented communication intended to improve the situation” (LePine and Van Dyne 2001, p. 326), contributes to organizational effectiveness (Hsiung and Tsai 2017). It is believed to be a multifaceted

construct (Maynes and Podsakoff 2014). According to Liang et al. (2012), voice can be divided into two types: *promotive and prohibitive*. Specifically, promotive voice aims to improve organizational functioning by putting forward innovative ideas and suggestions, while prohibitive voice attempts to prevent organizational failures by expressing concerns and worries. Both promotive and prohibitive voice are important for organizations (Lin and Johnson 2015), and how to stimulate promotive or prohibitive voice has drawn much attention from prior studies (e.g., Kakkar et al. 2016; Qin et al. 2014; Wei et al. 2015). However, little is known about the unique consequences of these behaviors, especially on the actors who engage in either promotive or prohibitive voice (Lin and Johnson 2015).

According to the voice literature (Bashshur and Oc 2015), the relationships linking voice to job attitudes (e.g., organizational commitment and organizational disidentification) have been examined. Prior research has suggested that if voice behavior occurs, the actors’ attitudes, especially their satisfaction in the workplace, tend to improve (Purcell 2003). Job satisfaction is one of the most studied job attitudes in organizational research (Currivan 2000), reflecting a person’s positive attitudes towards his or her job (Saari and Judge 2004). However, the effect of voice on job satisfaction does not receive enough attention (Holland et al. 2011), not to mention the consideration of the types of voice. Thus, the current research tries to clarify the influence of voice behavior on

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employees' job satisfaction under promotive and prohibitive voice framework.

Recently, theoretical arguments have emphasized psychological mechanisms, which help us better understand the linkages of voice to its outcomes (Ng and Feldman 2012). Previous research has suggested that promotive and prohibitive voice would trigger individuals' regulatory focus (Li et al. 2017a, b), which is a vital component of shaping individual motivations (Kark and Van Dijk 2007; Van Dijk and Kluger 2011). Self-efficacy, defined as "individuals' perceptions of their ability to execute a specific task" (Walumbwa et al. 2011, p. 204), is a motivational construct (Zhao et al. 2005) and has been proved as a significant antecedence to influence an individual's job satisfaction (Judge and Bono 2001). Accordingly, voice behavior may influence employee job satisfaction via self-efficacy. However, little work has been done to examine the mediating mechanisms linking voice behavior to outcomes, let alone the mediating effects of self-efficacy in this relationship. Therefore, self-efficacy is introduced as mediating mechanism whereby promotive and prohibitive voice may affect job satisfaction.

According to previous research, the process during which voice behavior works may be influenced by contextual factors, especially the leadership, but few studies explored this further (Bashshur and Oc 2015). Regulatory focus theory posits that employees may respond differently to a leader depending on the fit between the leader's style and their own regulatory orientation (Benjamin and Flynn 2006). If an employee's regulatory focus fits with the leader's behavior, the motivation of this employee will be enhanced; otherwise, the motivation will be weakened (Shin et al. 2017). Previous studies have suggested that transformational leadership encourages employees to pursue their goals in a way that fits with promotion focus but do not fit with prevention focus (Zhang et al. 2014). In this paper, promotive and prohibitive voice are expected to influence self-efficacy, a motivational construct, by stirring promotion focus and prevention focus respectively. Thus, in the context of transformational leadership, employees in a promotion focus will show greater self-efficacy, whereas those in a prevention focus will exhibit weaker self-efficacy. The effect of promotive and prohibitive voice on self-efficacy may be influenced by transformational leadership. This study focuses on the moderating role of transformational leadership in the relationships between two types of voice behavior and self-efficacy.

Several theoretical contributions may be devoted to the literature. First, we empirically examine how promotive and prohibitive voice affect the actor's job satisfaction. This study offers a finer-grained representation of voice behavior–job satisfaction relationship by applying the dualistic model of voice behavior, further extending previous research (Holland et al. 2011).

Second, to our knowledge, this study is one of the first studies to consider job satisfaction as an outcome of promotive and prohibitive voice. By introducing job satisfaction as

an outcome, this study responds to the recent calls to pay more attention to the consequence of promotive and prohibitive voice (Liang et al. 2012; Lin and Johnson 2015) and advances our knowledge about outcomes of the dual voice behaviors.

Third, we propose that self-efficacy may implicate psychological mechanism that links two-dimensional voice behavior to job satisfaction. The voice literature suggests that nearly all research (e.g., Holland et al. 2011; Hung et al. 2012; Cheng et al. 2013) regarding the outcomes of voice behavior ignore the internal mechanisms. Hence, the current study fills this gap by examining mediating influences of self-efficacy between voice behavior and job satisfaction.

In addition, we consider the role of leadership in moderating the effect of two-dimensional employee voice. The voice literature has focused on contextual factors (e.g., organizational climate and work stressors) that moderate the effects of voice behavior (e.g., Chen and Hou 2016; Song et al. 2017), while neglecting those moderating mechanisms from the leadership perspective (Bashshur and Oc 2015). This research is one of the first studies to explore the role of leadership when voice occurs. Thus, the extant literature is enriched by incorporating transformational leadership as moderator.

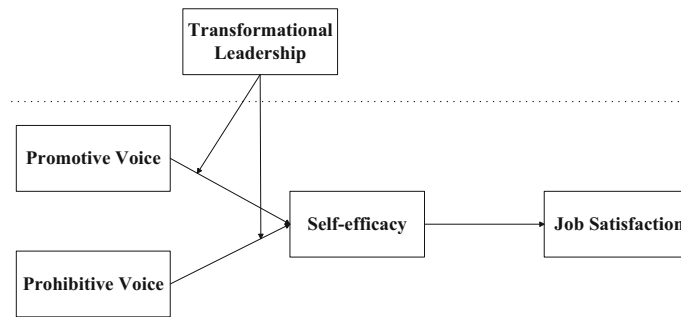
This study also provides several practical implications of improving employee's job satisfaction, which is one of the major determinants of organizational performance and effectiveness (Lok and Crawford 2004). First, our findings confirm the positive relationships between promotive as well as prohibitive voice, and job satisfaction, which highlights the importance of voice behavior in improving employee job satisfaction. Therefore, employee voice (i.e., promotive and prohibitive) should be encouraged in the organizations. Second, by showing self-efficacy as a mediator in the voice–job satisfaction relationship, our results indicate that managers should consider how to raise the level of employees' confidence when determining how to improve employee job satisfaction. Furthermore, our findings suggest that the positive effect of prohibitive voice depends on the leadership. Thus, to exert the positive role of prohibitive voice, leaders should be trained and be guided to keep suitable leadership style.

Figure 1 shows the theoretical model of this study. In the following sections, hypotheses development is presented. We then describe the research methodology and provide research findings. We finish up with a discussion of research findings from perspectives of theory and practice.

## Promotive Voice and Self-Efficacy

Promotive voice is defined as "employees' expression of new ideas or suggestions for improving the overall functioning of their work unit or organization" (Liang et al. 2012, p. 74). It is future-oriented and constructs a future ideal state for the organization (Loi et al. 2014), thereby driving the actors to set and

Fig. 1 Research model



pursue ideal goals. According to regulatory focus theory, promotion focus can be evoked when ideal goals (e.g., realizing the aspirations and ideals) are stressed (Neubert et al. 2008; Van Dijk and Kluger 2011). For employees who engage in promotive voice, their promotion focus is invoked. Such employees tend to be sensitive to potential opportunities and gains (Sacramento et al. 2013). Accordingly, they will take an eagerness strategy for opportunities and benefits, during which their needs for achievement are strengthened (Gu et al. 2017). As a result, these employees hold more confidence in their capability of influencing the situations, which further strengthens self-efficacy. Therefore, there is a positive association between promotive voice and self-efficacy.

### Prohibitive Voice and Self-Efficacy

Prohibitive voice refers to “employees’ expressions of concern about work practices, incidents, or employee behavior that are harmful to their organization” (Liang et al. 2012, p. 75). It aims to stop or prevent the organization from harm (Liang et al. 2012). Thus, the actor who expresses prohibitive voice focuses on losses and pursues for security. Regulatory focus theory suggests that prevention focus can be primed when security demands and attention to losses are highlighted (Neubert et al. 2008; Van Dijk and Kluger 2011). Therefore, the prevention focus of employees who engage in prohibitive voice is stimulated. These employees tend to have a strong sense of responsibility, thus taking a prudent strategy (e.g., avoid mistakes) in the workplace (Gu et al. 2017). By acquiring more knowledge and information to avoid committing mistakes, their work abilities are enhanced. With rich knowledge and information, these employees will hold more confidence in their working tasks (Hall et al. 2007). That is, employees will keep stronger self-efficacy. Hence, prohibitive voice is expected to positively impact self-efficacy.

### Self-Efficacy as Mediator

As self-efficacy increases, employees can more easily adapt to the changing environment (Bandura 1977). Thus, employees

with high self-efficacy tend to feel more positive to their vocation and working environment, which contributes to their job satisfaction. Moreover, employees with high self-efficacy tend to hold a high persistence in face of failures and overcome difficulties effectively (Li et al. 2017a, b). Hence, there exists high possibility in gaining valued outcomes (e.g., performance) and deriving job satisfaction (Judge and Bono 2001). Synthesizing the assumptions regarding the positive effects of promotive and prohibitive voice on self-efficacy leads to the conclusion that the effects of promotive and prohibitive voice on job satisfaction are mediated by self-efficacy.

### Transformational Leadership as Moderator

Based on regulatory focus theory, Higgins (2000) developed regulatory fit theory. Moreover, Righetti and his colleagues (2011) proposed a more specific conception, termed interpersonal regulatory fit, which refers to “fit between a person’s regulatory focus and that of his or her interaction partner” (Shin et al. 2017, p. 4). As a special interpersonal regulatory fit (Shin et al. 2017), leader-follower regulatory fit is especially important. Employees tend to experience various levels of leader-follower regulatory fit and will react differently (Benjamin and Flynn 2006). When employees’ regulatory orientation is consistent with that of their interaction partner (e.g., the leader), their motivation to achieve goals will be stronger (Righetti et al. 2011). Vice versa, employees’ motivation to achieve goals will be weakened, when the degree of matching is low.

Transformational leadership is defined as a style of “articulating a shared vision of the future, intellectually stimulating subordinates, providing a great deal of support to individuals, recognizing individual differences, and setting high expectation” (Kirkman et al. 2009, p. 744). It has four components: performance expectations, individualized consideration, core transformational leadership behaviors, and intellectual stimulation (MacKenzie et al. 2001). Specifically, by setting performance expectations, transformational leaders express their high expectations on employees’ performance (Callow et al. 2009). By

individualized considerations, transformational leaders focus on meeting employees' individual needs with respect (Gumusluoglu and Ilsev 2009). By using core transformational leadership behaviors, a vision is articulated, an appropriate behavioral model is exhibited, and employees are fostered to accept the group goals (Bettencourt 2004). In addition, by intellectual stimulation, employees are stimulated to rethink work-related issues (e.g., existing problems) in new ways (Gumusluoglu and Ilsev 2009).

From above, transformational leaders are future-oriented, and care about gains (e.g., high performance outcomes), as well as emphasize that goals should be achieved by innovative strategies, which are consistent with the characteristics of promotion focus. Hence, transformational leadership fits with promotion focus but do not fit with prevention focus (Zhang et al. 2014). If an employee's regulatory focus fits with the leader's behavior, the motivation of this employee will be enhanced; otherwise, the motivation will be weakened (Shin et al. 2017). Promotive voice improves employees' self-efficacy by priming the actor's promotion focus whereas prohibitive voice improves employees' self-efficacy by stimulating the actor's prevention focus. As transformational leadership matches with employees in a promotive focus, employees who engage in promotive voice achieve stronger self-efficacy. By contrast, transformational leadership matches with employees in a prevention focus, thus self-efficacy of employees who exhibit prohibitive voice is weakened. Therefore, we predict that transformational leadership enhances the effect of promotive voice on self-efficacy, whereas such leadership will diminish or eliminate the effect of prohibitive voice on self-efficacy.

Taken together, we predict:

Hypothesis 1a. Promotive voice is positively related to self-efficacy.

Hypothesis 1b. Prohibitive voice is positively related to self-efficacy.

Hypothesis 2a. Promotive voice has an indirect effect, mediated through self-efficacy on job satisfaction.

Hypothesis 2b. Prohibitive voice has an indirect effect, mediated through self-efficacy on job satisfaction.

Hypothesis 3a. The relationship between promotive voice and self-efficacy is positively moderated by transformational leadership, such that the relationship is stronger with high transformational leadership and weaker with low transformational leadership.

Hypothesis 3b. The relationship between prohibitive voice and self-efficacy is negatively moderated by transformational leadership, such that the relationship is weaker with high transformational leadership and stronger with low transformational leadership.

## The Present Study

Both promotive and prohibitive voice are important to the organization. However, very little is known about their consequences (Lin and Johnson 2015). Voice literature (Bashshur and Oc 2015) suggests the effect of voice on job attitudes has begun to draw scholars' interest. Yet, the question of how voice influences job satisfaction does not receive enough attention (Holland et al. 2011), not to mention consideration of the types of voice. Hence, the first purpose of the current study is to develop and examine a theoretical model linking promotive and prohibitive voice to job satisfaction through the psychological mechanism of self-efficacy. Second, note that the process during which voice works may be influenced by contextual factors, especially the leadership; however, limited related research has been done (Bashshur and Oc 2015). Given this, the second purpose of this study is to test the moderating role of transformational leadership on the relationship between voice (i.e., promotive and prohibitive) and self-efficacy.

Previous empirical research on employee voice has been successfully conducted in the setting of a bank. For example, Kong et al. (2016) based on data from one local commercial bank and two electronic companies in China tested the effect of need for affiliation on voice behavior by incorporating LMX as mediator and group cohesion as a moderator. Likewise, based on data from a major bank in US, Walumbwa and Schaubroeck (2009) revealed the underlying mechanisms through which ethical leadership influences voice behavior. Furthermore, Yen and Niehoff (2004) empirically examined the relationship between organizational citizenship behaviors (e.g., voice behavior) and organizational effectiveness within Taiwanese banks. These results suggest that it is appropriate to conduct empirical research regarding voice in the context of bank.

## Method

### Sample and Procedures

Consistent with earlier studies on voice (e.g., Kong et al. 2016; Walumbwa and Schaubroeck 2009), the data of this survey was collected from banks. The respondents in our study were from 11 banks in central China. To increase participation, we asked help for from a banking executive in some bank as bridge. This banking executive was an on-job doctoral candidate on our research team and he helped us contact those bank executives in those banks. These bank executives who showed interest in our research permitted employees to complete questionnaires during work hours. There were two versions of questionnaires, leader's and employee's. Team members were asked to evaluate their leader's transformational leadership behaviors and their individual voice behaviors, self-efficacy and job satisfaction. Team tenure and size were reported by their team leaders.

During the pilot phase, we distributed paper-based questionnaires to team leaders and attached a cover letter to explain the purpose of our study in sealed envelopes. Team leaders were asked to fill in the leader version questionnaires, and then send a different version of questionnaires to team members. This process of handing out questionnaires has been applied in previous research on teams (e.g., Srivastava et al. 2006). To increase response rate and guarantee that participants can answer the questionnaire without pressure, we promised that participants did not provide identity information (Hu et al. 2017a). To match a team leader's response with his team members', a specific code was generated, showing in the first page of each questionnaire. To ensure confidentiality, we asked each team leader to collect the questionnaires into a sealed envelope and hand it to our researchers directly.

Questionnaires were distributed among 560 employees from 90 teams; 500 valid employee questionnaires and 88 valid team leader questionnaires were collected, leading to response rates of 89.3% and 98.8%, respectively at the individual and team level. There were 28 teams (31.8%) which existed for less than 4 years, 27 teams (30.7%) for more than 6 years, and 33 teams (37.5%) between 4 to 6 years. As for the team size, 33 teams (37.5%) had less than 10 members, 53 teams (60.2%) had 11 to 15 members, and only 2 teams (2.3%) had more than 15 members. The mean of team size was 5.69 members per team. The employee sample included 211 men (42.2%) and 289 women (57.8%). There were 49 members (9.8%) completing short-cycle courses, 375 (75.1%) with a bachelor degree, and 76 (15.2%) with a master degree or above. There are 357 members under the age of 30 (71.4%), 32 members over the age of 41 (5.4%), and the rest between 30 to 40 years old (23.2%).

## Measures

All measurement scales came from the existing empirical research. In this questionnaire, items were rated on a 5-point Likert-type scale (from 1 = strongly disagree to 5 = strongly agree). The original measures for promotive-prohibitive voice, self-efficacy, job satisfaction and transformational leadership were published in English. Following the procedures of translation and back-translation procedures, all English measurements were first translated into Chinese and then back into English. This process can effectively avoid some semantic discrepancies in these two versions of scales. Also, according to specific research context, some items were modified as appropriate.

**Promotive and Prohibitive Voice** Promotive and prohibitive voice were assessed with Liang et al. (2012) 10-item scales (5 promotive items, 5 prohibitive items). Sample items of promotive voice included: “proactively develop and make suggestions for issues that may influence the team” and “make constructive suggestions to improve the team's

operation”. Sample items of prohibitive voice included: “speak up honestly with problems that might cause serious loss to the team, even when/though dissenting opinions” and “proactively report coordination problems in the workplace to the management”. Cronbach's alpha ( $\alpha$ ) for promotive and prohibitive voice are 0.87 and 0.84 respectively.

**Self-Efficacy** A 3-item scale to measure self-efficacy was adapted from Zhang and Bartol (2010). Sample item was as follows: “I am confident about my ability to do my job” and “I have mastered the skills necessary for my job”. Cronbach's alpha ( $\alpha$ ) is 0.78.

**Transformational Leadership** The 14-item transformational leadership measure of MacKenzie et al. (2001) was adapted for this study. The scale was composed of four subscales (performance expectations, individualized consideration, core transformational leadership behaviors and intellectual stimulation). Sample items included “My supervisor makes it clear to me that she or he expects me to give 110 percent of the time” (performance expectations); “My supervisor shows respect for my personal feelings” (individualized consideration); “My supervisor challenges me to think about old problems in new ways” (intellectual stimulation) and “My supervisor articulates a version” (core transformational leadership behaviors). Cronbach's alpha ( $\alpha$ ) is 0.77.

**Job Satisfaction** Job satisfaction was measured by using a 4-item scale from Currivan (2000) with sample items such as “I find enjoyment in my job” and “I feel dissatisfied with my job (reverse item)”. Cronbach's alpha ( $\alpha$ ) is 0.75.

**Control Variables** Three employee demographic variables—age, gender and educational and two team variables—tenure and size were controlled.

## Data Aggregation

Following prior research (e.g., Wang et al. 2016; Zhang et al. 2014), transformational leadership in this study is defined as a team-level variable. To further verify that the aggregation of individual perception to the team level was adequate, we performed between-team variability and within-team agreement. First, ICC(1)—the intra-class correlation, of transformational leadership was 0.29, while ICC(2) —reliability of the mean, of transformational leadership was 0.57. They were up to the standards in existing research on aggregation (e.g., Kirkman et al. 2009), supporting that transformational leadership differed across teams. Second, the  $R_{wg}$  mean for transformational leadership was 0.96 and exceeded the 0.70 criterion (Feng et al. 2016), suggesting a high-level within-team agreement. Taken together, it was reasonable to aggregate transformational leadership to team level.

## Results

### Validity and Reliability

To assess the reliability and validity of the scales, we performed confirmatory factor analysis. Cronbach's alpha ( $\alpha$ ) ranged from 0.75 to 0.87, which demonstrated that all variables had acceptable reliability. Table 1 showed loadings, composite reliability, and average variance extracted (AVE). All item loadings were higher than the 0.60 criterion. Composite reliability varied from 0.85 to 0.96, which exceeded the 0.70 recommended levels. All construct's average variance extracted (AVE) scores ranging from 0.59 to 0.74, were higher than the 0.5 criterion (e.g., Shin and Biocca 2017). These results indicated that the convergent validity of our measurement instrument was good. This study also compared the relationship between the correlations among constructs and square root of the AVE scores to assess the discriminant validity of the items. Table 2 indicated that the square root of the AVE scores for each construct was greater than the correlations among the constructs, thus confirming the discriminant validity.

### Descriptive Statistics and Intercorrelations

Table 2 summarized the means, standard deviations, and correlations for all variables. As indicated in Table 2, promotive voice was positively related to self-efficacy ( $r = 0.39$ ,  $p < 0.001$ ) and job satisfaction ( $r = 0.26$ ,  $p < 0.001$ ). Prohibitive voice showed significant positive correlation with self-efficacy ( $r = 0.38$ ,  $p < 0.001$ ) and job satisfaction ( $r = 0.30$ ,  $p < 0.001$ ). Self-efficacy showed significant positive correlations with job satisfaction ( $r = 0.44$ ,  $p < 0.001$ ). These results were consistent with and provided initial support for our hypotheses.

### Hypothesis Testing

**Individual-Level Results** Hierarchical multiple regression analysis was conducted to test Hypotheses 1a to 2b. First, the

**Table 1** Loadings, composite reliability, and average variance extracted (AVE)

Variables	Loading	Composite reliability	AVE
Job satisfaction	0.67–0.87	0.85	0.59
Promotive voice	0.73–0.84	0.91	0.67
Prohibitive voice	0.74–0.89	0.89	0.67
Self-efficacy	0.74–0.92	0.89	0.73
Transformational leadership	0.74–0.92	0.96	0.74

independent variable was significantly related to the dependent variable and the mediator, respectively. Second, the mediator was significantly related to the dependent variable. Finally, the coefficient of the independent variable became smaller when the mediator was incorporated into the regression equation. The variance inflation factors during hierarchical regression analyses were from 1.00 to 1.42, below the cutoff of 10, indicating that multicollinearity problems were not a major problem in this study.

As shown in Table 3, promotive ( $\beta = 0.14$ ,  $p < 0.001$ , Model 4) and prohibitive voice ( $\beta = 0.25$ ,  $p < 0.001$ , Model 4) were significantly related to job satisfaction. Second, promotive ( $\beta = 0.27$ ,  $p < 0.001$ , Model 2) and prohibitive voice ( $\beta = 0.25$ ,  $p < 0.001$ , Model 2) were significantly related to self-efficacy. Third, when self-efficacy was included in the regression equation, the effect of promotive voice on job satisfaction ( $\beta = 0.04$ , *ns*, Model 5) was not significant whereas the effect of self-efficacy on job satisfaction was significant ( $\beta = 0.37$ ,  $p < 0.001$ , Model 5), indicating that the relationship between promotive voice and job satisfaction was fully mediated by self-efficacy. Similarly, the effect of prohibitive voice on job satisfaction ( $\beta = 0.15$ ,  $p < 0.01$ , Model 5) was still significant but smaller, whereas the effect of self-efficacy on job satisfaction was significant ( $\beta = 0.37$ ,  $p < 0.001$ , Model 5) when self-efficacy was included in the regression equation, showing that self-efficacy partly mediated the relationship between prohibitive voice and job satisfaction. Thus, Hypothesis 1a, 1b, 2a and 2b were supported.

We adopted the bias-corrected bootstrapping procedure developed by Preacher and Hayes (2008) to further test Hypotheses 2a and 2b.

Table 4 showed that the indirect effects of promotive voice (indirect effect = 0.11, 95% CI = 0.07 to 0.18) and prohibitive voice (indirect effect = 0.09, 95% CI = 0.05 to 0.14) on job satisfaction via self-efficacy were positive and significant, which were excluded zero. Thus, Hypotheses 2a and 2b were supported. The model was significant, adjusted  $R^2 = 0.21$ ,  $F(5, 495) = 25.60$ ,  $p < 0.001$ .

**Cross-Level Interactions** Hierarchical linear modeling (HLM) was used to test cross-level hypotheses for several reasons. First, the data in the present study were nested and multilevel in nature. Previous research (Ou et al. 2017) suggested to analyze the nested data by hierarchical linear modeling (HLM). Second, the data in this study was multilevel, transformational leadership at the team level, voice behavior, self-efficacy and job satisfaction at the individual level. HLM was considered as the most appropriate analytical method for multilevel data structure (Hofmann et al. 2003). It allowed the integration of hypothesized influences of one level of team hierarchy on another level with influences within a given level of the

**Table 2** Means, standard deviations, and correlations

Variables	Mean	s.d.	1	2	3	4	5	6	7
Individual-level variables									
1. Gender	–	–							
2. Age	–	–	–0.01						
3. Education	–	–	0.04	–0.14**					
4. Job satisfaction	3.65	0.59	–0.07	–0.09*	0.09*	(0.77)			
5. Promotive voice	3.88	0.53	–0.03	0.01	–0.01	0.26***	(0.82)		
6. Prohibitive voice	3.65	0.62	0.02	0.03	–0.11*	0.30***	0.49***	(0.93)	
7. self-efficacy	3.83	0.56	–0.03	0.08	–0.03	0.44***	0.39***	0.38***	(0.85)
Team-level variables									
1. Team size	–	–							
2. Team tenure	–	–	0.56***						
3. Transformational leadership	3.70	0.27	–0.14	–0.13	(0.86)				

Employee’s *N* = 500; Team’s *N* = 88. \* *p* < 0.05, \*\* *p* < 0.01. Values in parentheses are square roots of *AVE*

team hierarchy while accounting for their different sources of variance (Shanock and Eisenberger 2006). Third, Hypotheses 3a and 3b in this study were cross-level interaction hypotheses. HLM was particularly well suited for estimating the type of cross-level interactions (Hofmann et al. 2003). Thus, in consistent with prior research (e.g., Hahn and Lee 2016; Hu et al. 2017b; Schaubroeck et al. 2016), slopes-as-outcomes models in HLM were used to test the moderating effect of transformational leadership among the two types of employee voice and self-efficacy.

A null model with no predictive variables was entered in Step 1. The individual-level variables (Step 1) were entered in Step 2. Finally, the two-way interaction term was introduced into the multilevel model. The coefficients of cross-level interactions should be significant based on the final model. In

above process, except for age, gender and education, individual-level (level 1) variables were group-mean-centered. To avoid the problem of multicollinearity, team-level (level 2) variables were not group-mean-centered but grand-mean-centered.

Results of the cross-level analysis were shown in Table 5. Transformational leadership ( $\beta = -0.43, p \leq 0.05$ ) negatively and significantly moderated the relationship between prohibitive voice and self-efficacy. Thus, Hypothesis 3b was supported. Figure 2 showed that prohibitive voice was more positively related to self-efficacy when transformational leadership was low rather than high. Accordingly, Hypothesis 3b was supported. However, the moderating effect of transformational leadership ( $\beta = -0.045, ns$ ) in the relationship between promotive voice and self-efficacy is insignificant. Accordingly, Hypothesis 3a was not supported in this study.

**Table 3** Results of the mediating effects of Self-efficacy

Variable	Self-efficacy		Job satisfaction		
	Model 1	Model 2	Model 3	Model 4	Model 5
Gender	–0.03	–0.03	–0.07	–0.07	–0.06
Age	0.08	0.07	–0.08	–0.08	–0.11**
Education	0.01	0.04	0.09	0.11	0.10*
Promotive voice		0.27***		0.14**	0.04
Prohibitive voice		0.25***		0.25***	0.15**
Self-efficacy					0.37***
<i>R</i> <sup>2</sup>	0.07	0.21	0.02	0.13	0.24
$\Delta R^2$	0.07	0.20	0.02	0.11	0.11
<i>F</i>	1.11	25.60***	3.30*	15.17***	26.51***
$\Delta F$	1.11	61.91***	3.30*	32.34***	72.27***

Employee’s *N* = 500; Team’s *N* = 88. \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001

**Table 4** Indirect effects of employee voice (via self-efficacy) on job satisfaction

Path	Promotive voice → Self-efficacy → Job satisfaction	Prohibitive voice → Self-efficacy → Job satisfaction
Bootstrap-indirect effect	0.11	0.09
Standard error	0.03	0.02
Lower limit 95% <i>CI</i>	0.07	0.05
Upper limit 95% <i>CI</i>	0.18	0.14

Employee’s *N* = 500; Team’s *N* = 88. *Adjusted R*<sup>2</sup> = 0.21, *F* (5, 495) = 25.60, *p* < 0.001. Confidence intervals are bias-corrected based on 10,000 bootstrap samples. Control variables: Individual-level Gender, Age and Education

**Table 5** HLM results for cross-level analysis

Variable	Coefficient	s.e.	t	$\chi^2$	Model deviance
Null model					
Intercept	3.82***	0.03	124.71	143.256	826.16
Level 1 variables					
Intercept	3.54***	0.18	19.60	182.15	773.88
Gender	-0.04	0.04	-1.00		
Age	0.08*	0.03	2.31		
Education	0.04	0.05	0.77		
Promotive voice	0.30***	0.05	6.08		
Prohibitive voice	0.17**	0.06	3.00		
Level 2 variables					
Team size	-0.00	0.01	-0.37	150.278	771.10
Team tenure	-0.00	0.01	-0.38		
Transformational leadership	0.46**	0.12	3.70		
Cross-level interactions					
Promotive voice×Transformational leadership	-0.045	0.18	-0.25	151.09	767.46
Prohibitive voice×Transformational leadership	-0.43*	0.19	-2.31		

Employee's  $N = 500$ ; team's  $N = 88$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

## Discussion

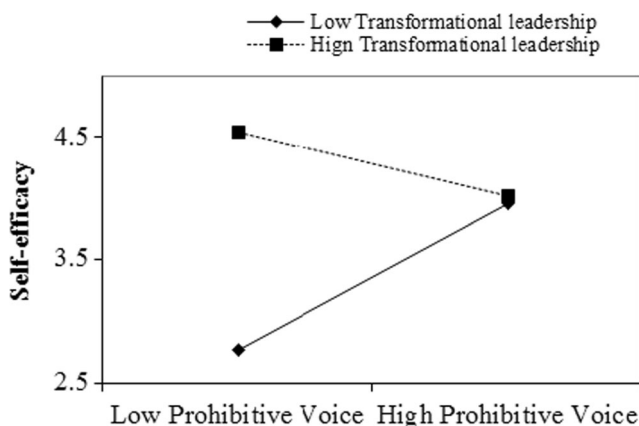
There were two aims in this study. The first aim is to develop and examine a theoretical model linking promotive and prohibitive voice to job satisfaction through the psychological mechanism of self-efficacy. The second aim is to test the moderating role of transformational leadership on the relationship between voice (i.e., promotive and prohibitive) and self-efficacy. Consistent with the hypotheses, both promotive and prohibitive voice are found to be positively related to employee job satisfaction. Moreover, these relationships are mediated by self-efficacy. Our results also show that transformational leadership moderates the effect of prohibitive voice on self-efficacy. However, in the relationship between promotive

voice and self-efficacy, the moderating effect is not significant. The theoretical and practical implications of our findings are discussed below, along with limitations.

## Theoretical Implications

This is one of the first studies to investigate the voice-job satisfaction relations using the dualistic model of voice behavior (promotive and prohibitive voice; Liang et al. 2012) and is one of the first studies that investigated the underlying mechanisms of these relationships.

This study's findings contribute to the voice literature. First, relatively few studies have tested how and why direct voice relates to job satisfaction with one exception conducted by Holland et al. (2011) that empirically examined the relationship between direct voice and job satisfaction. They found that direct voice contributes to employee job satisfaction. According Kim et al. (2010), both promotive and prohibitive voice are direct voice because they reflect the extent to which employees directly influence management. By identifying the positive roles of promotive and prohibitive voice in job satisfaction, our findings provide additional support for research conducted by Holland et al. (2011). Moreover, this is one of the first studies to investigate the voice-job satisfaction relations using the dualistic model of voice behavior (promotive and prohibitive voice; Liang et al. 2012). By applying the dualistic model of voice behavior, this study offers a finer-grained representation of voice behavior–job satisfaction relationship.



**Fig. 2** Plot of interaction between prohibitive voice and transformational leadership on self-efficacy



Second, we identify positive relationships between promotive and prohibitive voice and employee job satisfaction. To our knowledge, this study is the first to consider job satisfaction as an outcome of promotive and prohibitive voice. There has been a growing of interest in the antecedents of these two types of voice, including leader behaviors (e.g., Kong et al. 2016), psychological factors (e.g., Liang et al. 2012; Qin et al. 2014), contextual factors (e.g., Wei et al. 2015), and dispositional factors (e.g., Kakkar et al. 2016; Ward et al. 2016). However, little is known about the consequences of promotive and prohibitive voice, especially on the employee who exhibits promotive or prohibitive voice (Lin and Johnson 2015). Only a few studies explored the relationships between promotive and prohibitive voice and ego depletion (Lin and Johnson 2015) and performance outcomes (Chamberlin et al. 2017; Li et al. 2017a, b; Mo and Shi 2016). Thus, by identifying job satisfaction as consequence, this study responds to the recent calls (Liang et al. 2012; Lin and Johnson 2015) for more attention to the outcomes of promotive and prohibitive voice and extends our knowledge about outcomes of the dual voice behavior.

Third, effect intensity of promotive and prohibitive voice on job satisfaction is different, although findings indicate that promotive and prohibitive voice are both positively related to employees' job satisfaction. By path coefficients test, we find that prohibitive voice is more strongly positively related to employees' job satisfaction than promotive voice ( $t = 3.02$ ,  $p < 0.01$ ). It provides additional empirical evidence for the distinctive effects of promotive and prohibitive voice. Prior research (e.g., Chamberlin et al. 2017; Li et al. 2017a, b; Mo and Shi 2016) on promotive and prohibitive voice mainly focuses on whether the effect of promotive and prohibitive voice is positive or negative neglecting the effect intensity. This research is only a beginning of comparing the effect intensity between the two types of voice.

Fourth, this study documents the mediating role of self-efficacy in the relationship linking promotive and prohibitive voice to job satisfaction. This is one of the first studies that investigated the underlying mechanisms of these relationships, which deepens our understanding of the mechanism through which voice influences job satisfaction further. According to the voice literature, nearly all research (e.g., Holland et al. 2011; Hung et al. 2012; Cheng et al. 2013) regarding the relationship between employee voice and outcomes only focus on the direct effect of employee voice but ignore the internal mechanisms. This study fills this gap in the literature by empirically proving that self-efficacy is an important psychological mechanism linking employee voice to job satisfaction. We also respond to the call from Ng and Feldman (2012) for attention to the importance of the psychological processes underlying the use of voice.

Fifth, our finding provides some evidence for leadership as moderator in the relationship between voice behavior and

outcomes. Specifically, transformational leadership is found to negatively moderate the relationship between prohibitive voice and voicer's self-efficacy. However, unexpectedly, we find that transformational leadership is not a significant moderator in the promotive voice—self-efficacy relationship. The positive effect of promotive voice on employees' self-efficacy is not enhanced when the level of transformational leadership is high. This non-significant finding might be explained by the fact that promotion focus stimulated by promotive voice is relatively stable, and is not susceptible to external influence (e.g., transformational leadership). Our findings by examining the moderating effect of transformational leadership add to our understanding of the process that voice influences employees' self-efficacy. The voice literature has focused on contextual factors (e.g., organizational climate and work stressors) that moderate the effect of voice behavior (e.g., Chen and Hou 2016; Song et al. 2017), while neglecting those moderating mechanisms from leadership perspective (Bashshur and Oc 2015). This research is one of the first studies to explore the role of leadership where voice occurs and thus expands perspectives on boundary conditions of the voice process by introducing transformational leadership as a moderator.

Our findings on the moderating role of transformational leadership also enriches the leadership literature. Recently, a limited but growing literature has begun to examine leadership's moderating effect. For example, Jansen et al. (2008) confirmed the moderating role of transformational leadership in the relationship between effectiveness of senior team social integration and contingency rewards. Similarly, Zhang et al. (2014) explored how transformational and transactional leadership influence the mediating effect of justice in the relationship between stressor and performance. Following this research trend, transformational leadership is introduced as a team-level moderator in the process of voice. By doing so, our knowledge of the role of leadership is further broadened and this study responds to the calls for more attention in multilevel leadership (Walumbwa et al. 2008).

## Practical Implications

Job satisfaction is one of the major determinants of organizational performance and effectiveness (Lok and Crawford 2004). How employee's job satisfaction can be improved is a key issue in the modern organization and management. The present research provides some practical implications to respond to this question. First, our findings confirm the positive relationship between promotive as well as prohibitive voice, and job satisfaction, which highlights the importance of voice behavior in improving employee job satisfaction. Hence, employee voice (i.e., promotive and prohibitive) should be encouraged in the organizations. For example, institutionally, voice behavior can be considered as a performance assessment index (Hung et al. 2012). Employees who take either

promotive or prohibitive voice should get proper material rewards. Moreover, the organization should provide effective channels to give employees the opportunities to express opinions (Song et al. 2017), including direct (e.g., regular meetings, briefing groups) and indirect mechanisms (e.g., union voice) or a combination both (Bryson 2004). Furthermore, it is also worthwhile for organizations to create a favorable climate where employees' ideas are respected (Hsiung and Tsai 2017).

Second, by showing self-efficacy as mediators in the voice-job satisfaction relationship, our results indicate that, when determining how to improve employee job satisfaction, managers should consider how to raise the level of employees' confidence. Once strong self-efficacy is achieved, employees are likely to be satisfied with their jobs. The organization can assign a systematic self-management training which helps employees to set realistic goals, keep organized and improve the time-management skills, thereby fostering self-confidence (Alessandri et al. 2015).

Third, our findings showed significant and negative interactive effect between prohibitive voice and transformational leadership on self-efficacy, suggesting that the positive effect of prohibitive voice depends on the leadership. Thus, to exert the positive role of prohibitive voice, leaders should be trained and be guided to keep suitable leadership style. Especially in the context where prohibitive voice is encouraged, leaders should try not to follow the mode of transformational leadership. Meanwhile, organizations should get the right person for the leadership roles.

### Limitations and Future Research

First, all variables in this study are collected by self-report, which may lead to common method variance. Harmon one-factor test (Podsakoff and Organ 1986) is employed to test this question. Results show that 7 factors accounting for 71.35% of variance are extracted and the first factor accounts for 13.81%. Thus, common method variance is not a major problem in this research. However, the validity of Harmon one factor test has been questioned (Podsakoff et al. 2003). We also acknowledge that our results might be influenced by common method variance. To avoid this problem, we suggest that future research collects data from multiple sources. Second, our research design is cross-sectional, which cannot be used for cause-consequence analysis (Song et al. 2017). Longitudinal or experimental design in the future can make up this shortfall. Third, based on regulatory focus theory, we argued that promotive and prohibitive voice will prime promotion focus and prevention focus, respectively, thereby influencing self-efficacy and job satisfaction. However, we did not assess promotion and prevention focus. Future research should measure these two focuses and explore their roles in the relationship between two types of voice behavior

and job satisfaction. Fourth, the data was only collected from a single type of organization (i.e., banks), raising generalizability problems. Future research is therefore encouraged to replicate findings in this study in other organizational contexts with diverse samples.

### Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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