

The Effect of Supervisor Support on Employee Voice Behavior based on the Self-Determination Theory: The Moderating Effect of Impression Management Motive

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Abstract

Although numerous studies have adopted social exchange theory to investigate the mechanism through which leadership influences employee voice behavior, few studies have placed their focus on the mediation of employees' basic psychological needs. To address this research gap, this study adopted self-determination theory to explore how supervisor support encourages subordinates to engage in voice behavior. Furthermore, the moderating effect of impression management motive was clarified. This study adopted structural equation modeling and hierarchical regression approach to analyze 268 sets of data of a pair of supervisor and subordinate. The results revealed that basic psychological needs mediated the relationship between supervisor support and self-determined prosocial motivation, which, in turn, was positively related to voice behavior. In addition, subordinates' impression management motive weakens the positive relationship between self-determined prosocial motivation and voice behavior.

Keywords: Supervisor support; Basic psychological needs; Self-determined prosocial motivation; Voice behavior; Impression management motives

Introduction

Morrison [1] proposed a theoretical model of voice behavior, suggesting that voice is an intentional concept and that the perceived efficacy and perceived safety are two crucial factors of consideration influencing voice motivation and voice behavior. In other words, voice behavior is a type of "planned behavior" [2], in which the judgments of behavioral control or the perceived ease of performing a behavior are influenced by the chance to perform the behavior successfully and the belief regarding the accessibility of necessary resources [3]. Generally, employees engage in voice behavior only when they believe that speaking up is safe and would yield effective outcomes. To date, numerous studies have based their research on this perspective when examining the predictors and mechanisms of voice behavior. In particular, most studies have focused on the relationship between leadership and voice behavior, using the social exchange theory as the theoretical framework and reciprocity as the foundation for inducing voice behavior [4-9]. In fact, when determining whether to speak up, people cannot undergo a risky decision-making process entirely on the basis of social exchange. Some people are unwilling to express constructive opinions with regard to their respective unit's operations, even though they get along well with their supervisors and have established a relationship of trust with them. However, there are some people who have the courage to speak up even if they are situated in an unfavorable voice environment. Therefore, using the social exchange theory is insufficient for explaining the mechanism through which voice behavior is motivated. To answer this question, we must start with the process of individual intrinsic motivation because speaking up is an extra-role behavior in which employees proactively and voluntarily engage. People have the freedom to decide whether to speak up or not; they not only consider whether they should and whether they can, but also evaluate whether they are capable of speaking up. The present study asserts that when employees proactively decide to engage in voice behavior, and they perceive their ability to accomplish the task and have a strong sense of belongingness to their group [10], then these employees are intrinsically motivated to engage in voice behavior. Therefore, we propose that the perspective of self-determination should be adopted to extensively explore the "black

box" involved in the relationship between individuals and their voice behavior.

Self-determination theory concentrates on the extent to which human behavior is voluntary or self-determined. The theory asserts that motivation is the underlying reason behind a behavior and that behavioral motivation is dependent on social factors. Specifically, if social factors can facilitate building a supportive environment in which basic psychological needs are met, then self-determined motivation is induced and in turn improves behavioral performance [11,12]. According to theoretical perspectives, voice behavior is a form of self-regulation and self-determination because it is a self-initiated behavior [1] in which an individual consciously deliberates on the positive and negative consequences of a decision [13,14]. Consequently, the support provided in a working environment is the key factor motivating employees to become self-determined to engage in voice behavior. In a workplace, supervisors are highly influential, and employees generally regard supervisor support as an indicator of organizational support [15]. Therefore, supervisor support is crucial for employee interaction in a working environment. However, few studies have examined voice behavior from the perspective of self-determination. To bridge this research gap, the present study adopted a self-determination perspective centering on subordinates to explore the effect of supervisor support on employee voice behavior in an organizational setting.

Regarding voice motivation, past studies have confirmed the relationship between prosocial motivation and voice behavior [16,17]. Prosocially motivated employees hold a strong sense of

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responsibility toward enhancing the well-being of their colleagues and the organization, which in turn increases their probability to commit to engaging in voice behavior. SDT posits that motivation can be classified according to the level of autonomy and they are autonomous motivation and controlled motivation. Controlled motivation is stimulated by external incentives, whereas autonomous motivation is induced internally making it equivalent to an intrinsic motivation. Autonomous motivation exhibits higher quality compared with controlled motivation [18]. Previous studies on voice behavior have focused primarily on the level or quantity of prosocial motivation, rarely discussing the quality of motivation. Specifically, the autonomous motivation proposed in SDT is often neglected in voice behavior studies or mistakenly integrated with controlled motivation. We therefore calculated the level of self-regulation in the present study by using the relative autonomy index (RAI) to score the self-regulation level (total scale score=intrinsic motivation identified motivation introjected motivation extrinsic motivation) [19]. This approach can manifest employees' self-regulated autonomy in demonstrating prosocial motivation. The present study referred to this type of prosocial motivation as self-determined prosocial motivation (SDPM).

In addition, recent studies have also suggested adopting a mixed-motive perspective in investigations on citizenship behavior [16,20]. Because humans by nature tend to prioritize their personal interests before anything else; they inherently act for the sake of protecting and improving their personal interests [21]. When people wish to maximize their personal benefits or protect their image, impression management is generally the measures they adopt [16,17]. Therefore, we assert that when employees are aware of others' impression of themselves (personal interest), they are likely to perceive that engaging in voice behavior, which has potential costs and risks, will jeopardize their own image, which weakens the predictive effects of prosocial motivation on voice behavior. Moreover, research results regarding the interactive relationship of these two types of motivation remain inconclusive [16,20]. In addition, Takeuchi et al. [20] emphasized that impression management motive exerts differing moderating effects in different social cultures. We therefore assert that the moderating effect of impression management motive on prosocial motivation and voice behavior merits further investigation.

This study provides several contributions to existing literature on voice behavior. First, in contrast to previous studies, the present study adopted SDT to examine the effects of supervisor support on subordinates' voice behavior and to propose the process through which supervisor support influences voice behavior through basic psychological needs and prosocial motivation, in order to manifest the relationship among social environment, psychology, motivation, and behavior. Second, the present study not only stressed the factors that influence autonomous motivation (basic psychological needs), but also employed the Relative Autonomy Index (RAI) to measure self-regulation of motivation at the individual level, which truly reflects

employees' level of self-determination in engaging in voice behavior. Third, the present study adopted the multiple motives (prosocial and impression management motives) perspective to extend the motivation model of SDT and investigate the effects that the interaction between other-oriented and self-oriented motives have on employees' voice behavior, thereby bridging the research gap in this field of study. Figure 1 illustrates the hypothetical relationship model.

Theoretical Background and Hypotheses Development

Supervisor support and voice behavior

Although voice behavior involves offering constructive advice, it is ultimately aimed at changing the current state. Therefore, voice behavior is often deemed as an act of challenging the current state and management authorities [13]. Because supervisors are the main entity receiving employees' voiced opinions, and holding the authority to evaluate employee performance, supervisors are often the main reason why employees are afraid of engaging in voice behavior [1]. Enabling employees to perceive supervisors' affirmation of their work [22] is extremely important for motivating employees to proactively engage in voice behavior. Perceived supervisor support refers to employees' perception of how much their supervisors value their efforts, are concerned about their welfare [22,23], and give them the support they need. Previous studies have verified that when employees perceive a high level of support and assistance from their supervisor, such perception facilitates improving employees' attitude toward work, which encourages employee to devote greater effort to their work and in turn motivates employees to do things that are beyond the scope of their duties [24]. Based on the aforementioned discussions, the present study proposed the following hypothesis:

Hypothesis 1. Perceived supervisor support significantly and positively influences employees' voice behavior

The mediating effect of basic psychological needs and self-determined prosocial motivation

SDT accentuates the level of self-determination in people's behavior, positing that the social environment can boost intrinsic motivation and promote the internalization of extrinsic motivation through satisfying the three basic psychological needs of autonomy, competence, and relatedness [18]. Individual work-related behavior and psychological health are in turn enhanced. The need for autonomy can be satisfied when an individual experiences a choice in the initiation, maintenance, and regulation of a behavior. The need for competence is satisfied when an individual succeeds optimally in challenging tasks and is able to attain desired outcomes. The need for relatedness is fulfilled when an individual is able to establish a sense of connectedness with significant people in his/her life [25]. The satisfaction of these three needs promotes optimal motivation [26]. According to SDT, if an organization wishes to motivate employees' active devotion and contribution by effectively satisfying their three basic psychological

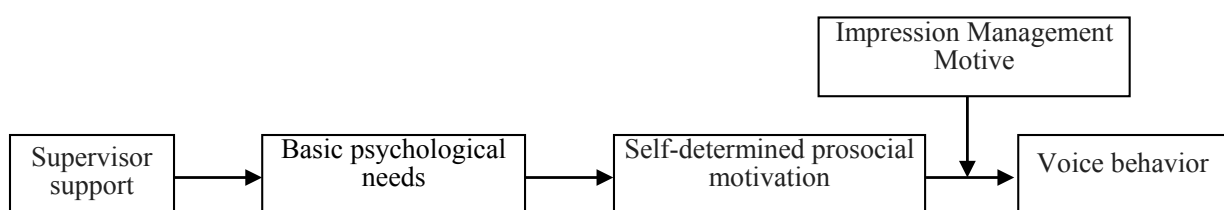


Figure 1: Hypothesized model of the study.

needs, then building a supportive working environment appears to be extremely important.

In an organization, workplace support is closely related to employees, and this type of support includes organizational support, supervisory support, and co-worker support [27]. In particular, supervisory support is the most direct and most important source of workplace support for employees because supervisors can provide tangible tools and intangible social emotional support, which can assist employees in integrating work-related and non-work-related needs, thereby alleviating the work stress employees experience [28]. When employees feel that their supervisor values their contributions and care about their well-being [22], this is equivalent to their supervisor affirming their job performance, which in turn makes employees feel a sense of achievement and recognize their value of existence. May et al. [29] indicated that supervisor support enables employees to feel that they are situated in an environment where they can work at ease and obtain feedback. Such perception boosts employees' confidence in completing a job, enhances employees' perception toward mutual support, increases their courage to take risks or even make mistakes and also encourages them to show agentic behavior. Furthermore, a supportive supervisor generally prefers to establish a high-quality leader-member exchange (LMX) relationship, which elevates employees' sense of belongingness and heightens their perception that they are capable of influencing the environment and hold greater control over their actions [30]. Based on the above illustration, the support from supervisor can indeed satisfy the basic psychological needs of the employees.

According to SDT, satisfaction of psychological needs is positively related to optimal individual operations, including intrinsic autonomous work motivation and willingness to volunteer spending time on work [31], intrinsic motivation, as well as positive attitudes and behaviors (e.g., being energetic and contributive; La Guardia et al. [32]; Vansteenkiste et al. [33]). This phenomenon reveals that when supervisor support satisfies employees' need for autonomy, this satisfaction can elicit employees' autonomous potentials, which then promotes them to actively engage in helping behaviors. When their need for competence is satisfied, they will be more confident in proposing a solution or solving the problems of others. When employees' need for a relationship is satisfied, stronger group identification and commitment are produced, increasing employees' desire to help others for the sake of others. Overall, satisfying employees' basic psychological needs prompts employees to freely, confidently identify with demonstrating prosocial motivation, with hopes of helping others. La Guardia et al. [32] indicated that people are inherently prosocial animals because adequate nourishment (e.g., an autonomy-supportive environment) guides people to pay attention to others, elicits their prosocial motivation, and entices people to engage in others-oriented behavior [31].

Some scholars view supervisor support as a critical work-related resource for employees [34,35], emphasizing that supervisor support at work facilitates enhancing work engagement [29,34]. Because a resourceful working environment provides a greater possibility for employees to experience psychological freedom (i.e., autonomy), interpersonal connection (i.e., relatedness), and effectiveness (i.e., competence) so that they could feel less exhausted and more energetic when working [36] and in turn demonstrate more extra-role behavior (e.g., voice). May et al. [29] maintained that supervisors who cultivate a supportive work environment generally display concern for employees' needs and feelings, provide positive feedback, and encourage employees to express their concerns, develop new skills, and solve

work-related problems. Such supportive behavior enhances employees' level of self-determination and interest in work, thereby elevating their work engagement. Work engagement represents a person's intrinsic motivation [32], suggesting that complete dedication and engagement in work naturally motivate employees to engage in voice behavior. Therefore, the following hypotheses are proposed:

Hypothesis 2. Supervisor support promotes the satisfaction of basic psychological needs.

Hypothesis 3. Satisfaction of basic psychological needs mediates the relationship between supervisor support and employees' SDPM.

Hypothesis 4. Satisfaction of employees' basic needs and, in turn, SDPM, mediates the relationship between supervisor support and voice behavior.

Moderating effect of impression management motive

Impression management motive refers to the motivation of a person to raise and protect his or her image as perceived by others (in the organization). Therefore, when people practice impression management to realize their own goals, they will endeavor to avoid demonstrating negative responses and criticisms, while refining their behavior in order to satisfy the requirement of a social context and the behavioral norms expected by others. Grant and Mayer [16] determined that impression management motive strengthens the positive relationship between prosocial motivation and affiliative citizenship. Employees express citizenship in ways that both "do good" and "look good." However, Takeuchi et al. [20] recently re-examined the interaction between various types of motivation. Their results showed that impression management motive weakens the positive relationship between prosocial value and organizational citizenship behaviors toward individuals or groups (OCBI). They believed that such inconsistency in the moderating effect of impression management motive is attributed to cultural differences in the research context. In a collectivist culture, workplaces often exhibit "a bird in the lead is always shot down" phenomenon, and peers sometimes believe that people who present overly exceptional performance or who attract attention are not as devoted to their job, causing impression management motive to inhibit proactive behavior.

In addition, although voice behavior is a prosocial behavior, such challenging behavior that attempts to alter the current situation also has risks. To prevent damaging their interpersonal relationship and personal image (to be regarded as a troublemaker or complainer), which may influence their career development, employees are likely to engage in self-protective behavior and reduce constructive voice behavior. Grant and Mayer [16] verified that a strong impression management motive does not steer employees toward a riskier citizenship behavior (e.g., voice behavior). Instead, it guides employees toward affiliative citizenship behavior, such as helping, being courteous, and taking initiatives, that supports the current state. For this reason, the present study proposes the following hypothesis:

Hypothesis 5. Employees' impression management motive will moderate the relationship between SDPM and voice, such that its positive relationship will be weaker when impression management motive is high.

Methods

Sample and procedure

Participants of the study involve subordinates and their immediate

supervisors in multiple companies located in Taichung, Taiwan. Each subordinate completed an assessment of the immediate supervisor's support, self-reported basic psychological needs, self-determined prosocial motivation, impression management motive and personal information. Supervisors rated subordinates' voice behavior. A total of 400 subordinate questionnaires and 85 supervisor questionnaires were distributed, among which 323 subordinate questionnaires and 78 supervisor questionnaires were returned. The overall response rate was 81%. Excluding unpaired questionnaires and incomplete questionnaires (missing answers and questions that were carelessly answered such as selecting the same answers for all questions or not providing a reverse answer to reverse-worded questions), we obtained 268 valid, paired questionnaires for a valid response rate of 67%. As a show of gratitude for their participation, a voucher worth NT\$50 was gifted to the respondents along with the questionnaire. Reminder emails and troubleshooting (e.g., problems related to not receiving the pre-stamped envelope) were administered two and four weeks after questionnaire distribution.

The research participants were mostly involved in the manufacturing industry (53.4%), followed by the service industry (21.3%) and information industry (12.7%). By nature of work, the participants were primarily working in the marketing/sales (20%) and research and development/design (19%) departments, followed by manufacturing (18%) and human resource (16%) departments. Among the samples, 50.7% of the participants were women; 48.5% had attained a bachelor's degree; 53.4% were married; the average age was 35.24; and their average years of service were 6.22.

Measures

Voice behavior: The present study adopted the Voice Behavior Scale, which was developed by Liang et al. [2]. For this scale, the supervisor assesses employees' performance in voicing innovative and constructive advices. The scale contains five items (e.g., the employee provides active and constructive advice for problems that may influence the department). A 5-point Likert scale was adopted (1=*never* to 5=*always*). The Cronbach's α was .93.

Supervisor support: Supervisor support was measured using the Supervisor Support Scale proposed by Kottke and Sharafinski [22]. The scale has four items (e.g., my direct supervisor is very concerned about my welfare) and adopts a 6-point Likert scale (1=*strongly disagree* to 6=*strongly agree*). One of the items was a reverse-worded item, which was scored in reverse. The Cronbach's α was 0.89.

Basic psychological needs: Satisfaction of basic psychological needs was measured using the Basic psychological needs scale proposed by La Guardia et al. [32]. This scale is used to measure the satisfaction of employees' psychological needs, including autonomy, competence, and relatedness. Each dimension has three items, with a total of nine items (e.g., measure of autonomy: I feel free to be myself; measure of competence: I think I am a capable person; measure of relatedness: I feel loved and cared for). The sum of the scores for each item under a specific dimension is the score for that dimension; the sum of the

scores for the three dimensions represents the total basic psychological needs score. A 7-point Likert scale was adopted (1=*strongly disagree* to 7=*strongly agree*). One of the questions for each dimension is a reverse-worded item. The Cronbach's α of the overall scale was 0.92.

Self-determined prosocial motivation: The operational measures for motivation to prosocial behavior were adopted based on several validated Self-Regulation scales selected from Deci and Ryan [12], which measures the level of self-determination employees exhibit in engaging in actions beneficial or helpful to others. According to the SDT continuum for manifesting the different patterns of motivation in an individual behavior, motivation can be classified into external, introjected, identified, and internal motivation depending on the levels of autonomy. Twenty-three items of this scale were selected and revised (e.g., extrinsic motivation: I will be rewarded; introjected motivation: If I don't behave as such, I will feel ashamed of myself; identified motivation: Behaving as such is important to me; intrinsic motivation: Behaving as such is a happy thing). A 7-point Likert scale was adopted (1=*strongly disagree* to 7=*strongly agree*).

To display the level of self-determination in self-regulation, this study adopted RAI to score the scale. The total scale score internal motivation identified motivation-introjected motivation-external motivation [19]. When RAI is a negative value, a large absolute value represents a tendency of controlled motivation; when RAI is a positive value, a large absolute value represents a tendency of autonomous motivation. The Cronbach's α of the overall scale and the four sub-scales was 0.89, 0.81, 0.86, 0.92, and 0.95, respectively.

Impression management motive: The "Impression Management Motive Scale" in the Citizenship Motives Scale developed by Rioux and Penner [17] was employed to measure impression management motive. The scale has six items (e.g., I will avoid being punished by my supervisor) and adopts a 7-point Likert scale. The Cronbach's α was 0.77.

Control variables: According to a review of related literature [13,37,38], the variables of gender, educational attainment, department tenure, marital status, and age were controlled.

Research Results

Scale reliability and validity

Regarding content validity, this study asked three Level-1 and Level-2 supervisors with more than 5 years of work experience to examine the preliminarily drafted scale items, including the semantics in both Mandarin and English, semantic appropriateness, and readability. After the contexts were revised according to the supervisors' suggestions, the preliminary questionnaire was developed. Therefore, the scales used in this study should exhibit a certain degree of content validity. This study constructed a hypothesized five-factor model (i.e., supervisor support, basic psychological needs, SDPM, voice behavior, and impression management motive). Subsequently, a chi-square different test was conducted on the proposed model and three competing models. As shown in Table 1, the fit indices support that the hypothesized 5-factor model, $\chi^2=320.08$; $df=143$;

Model	χ^2	df	$\Delta\chi^2$	CFI	TLI	RMSEA
1-Factor (all items load on a single factor)	1973.15	152	1653.07*	0.42	0.35	0.21
3-Factor (SDPM, IMV and BPN merged)	627.95	149	307.87*	0.85	0.83	0.11
4-Factor (SDPM & IMV merged)	362.33	146	42.25*	0.93	0.92	0.074
5-Factor (expected model)	320.08	143		0.94	0.93	0.068

Note: N=268; The χ^2 difference was compared with the value of the five-factor model (our proposed model); SS=Supervisor Support; BPN=Basic Psychological Needs; SDPM=Self-Determined Prosocial Motivation; IMV=Impression Management Motive; * $p<0.001$.

Table 1: Alternative model test results for the study variables.

RMSEA=0.068; CFI=0.94 and TLI=0.93, yielded a better fit to the data than the four-factor, three-factor and one-factor models. These CFA results also provide support for the distinctiveness of the five study variables for subsequent analyses. Except for the average variance extracted (AVE) for the impression management motive, which was slightly low but still acceptable (0.46), the AVE values of other research variables were satisfactory with a maximum of 0.72 and minimum of 0.60. Regarding composite reliability, the maximum value was 0.93 and minimum value was 0.83, both of which were higher than the recommended value (0.60); concerning the construct reliability, the maximum value was 0.93 and minimum value was 0.83, both exceeding the recommended value of 0.50 [39]. These results indicate that the five research variables examined in the present study exhibited construct reliability, discriminant validity, and composite reliability.

Correlation coefficient matrix

Table 2 lists the mean, standard deviation, and correlation coefficients of each research variable, showing that the coefficients did not exceed the 0.7 standard. This result indicated low to moderate correlation.

Hypothesis Testing

This study adopted the most streamlined path relationship (i.e., full mediation) as the basic model, proposing two alternative models (Table 3). First, Alternative Model 1 incorporated the path of supervisor support to voice behavior into the basic model, whereas Alternative Model 2 incorporated the path of supervisor support to SDPM into Alternative Model 1. Table 3 reveals that the three models exhibited good fit, and Alternative Model 2 has better relative appropriateness. Table 4 shows the path coefficients of the variables in Alternative Model 2. Table 4 reveals that the effect of supervisor support on voice behavior achieved a significant level ($\beta=0.28$, $p<0.001$). Therefore, H1 was supported. The effect of supervisor support on basic psychological needs achieved a significant level ($\beta=0.74$, $p<0.001$). Therefore, H2 was supported.

Finally, this study adopted two types of mediation test analysis (lower half of Table 4). First, concerning the mediating effects of basic psychological needs on supervisor support and SDPM, the Z value of total effects was 5.269 (>1.96); therefore, the mediating effect was significant. The Z value of indirect effects was 2.266 (>1.96); therefore, the indirect effect was significant. The Z value of direct effects was 1.540 (<1.96); according to the bootstrap results, the lower and upper direct effects for the bias-corrected and percentile methods contained zero, suggesting a full mediation. Regarding the mediating effects of basic psychological needs and SDPM on supervisor support and voice behavior, the products of coefficients were all greater than 1.96 for each effect, and the lower and upper values for both bias-corrected and percentile methods contained no zero. Therefore, mediating effect was exerted. In other words, both H3 and H4 were supported.

Table 5 presents the verification of the moderating effective. The control variables, SDPM and impression management motive, and the cross-multiply items of SDPM and impression management motive were inputted into the regression equation. The cross-multiply items exhibited significant negative predictive effect on voice behavior ($\beta=-0.12$, $R^2=0.13$, $p<0.05$). To ascertain the direction of the moderating effect, an interaction diagram was plotted. Figure 2 shows that a high impression management motive weakens the positive relationship between SDPM and voice behavior. This result indicates that in a context involving high impression management motive, employees' SDPM negatively influence their voice behavior. Therefore, H5 was supported.

Discussion and Implications

This study was aimed at using SDT to investigate the effects of supervisor support on employee voice behavior and to determine the moderating effect of impression management motives on the relationship between SPDM and voice behavior. As we hypothesized, basic psychological needs and SPDM sequentially mediated the relationship between supervisor support and voice behavior. In

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
Supervisor support	4.43	0.93	-0.89								
Basic Psychological Needs	4.87	1.11	0.67*	-0.92							
SDPM	3.99	2.27	0.33*	0.33*	-0.89						
Voice behavior	3.15	0.97	0.32*	0.31*	0.23*	-0.93					
Impression Management Motive	5.46	0.82	0.12*	0.15*	-0.05	0.03	-0.83				
Gender	0.49	0.5	-0.04	0.02	-0.05	0.12	0.01				
Marital status	0.47	0.5	-0.04	-0.15**	-0.1	-0.18**	-0.02	-0.01			
Age	35.24	8.12	-0.11	0.01	0.13*	0.12*	-0.06	0.1	-0.49**		
Education	15.35	1.75	0.13*	0.02	0.01	0.11	0.15*	0.01	0.13*	-0.35*	
Departmental tenure	6.22	6.2	-0.11	0.05	0.04	0.1	-0.09	0.04	-0.40**	0.63**	-0.36**

Note: N=268; Value in parenthesis indicates the Cronbach's α of the scale; In terms of gender, 1 represents male and 0 represents female; Education in ascending order was represented by 9 years for junior high school or below; 12 years for senior high or vocational school; 14 years for college; 16 years for university and 18 years for graduate or above; SDPM=Self-Determined Prosocial Motivation; * $p<0.05$; ** $p<0.01$.

Table 2: Mean, Standard deviation, reliabilities, and correlations among study variables.

Model	χ^2 (df)	GFI	CFI	AGFI	RMSEA	$\Delta\chi^2$ (Δdf)
Basic model	102.56 (59)**	0.946	0.983	0.916	0.053	Baseline
Alternative Model 1 ^a	84.17 (58)*	0.954	0.99	0.928	0.041	18.39 (1)
Alternative Model 2 ^b	81.41 (57)*	0.955	0.99	0.928	0.04	2.76 (1)

Note: N=268; ^a. Alternative Model 1 incorporated a path of supervisor support to voice behavior into the basic model; ^b. Alternative Model 2 incorporated the path of supervisor support to self-determined prosocial motivation (SDPM) into Alternative Model 1; * $p<0.05$; ** $p<0.001$.

Table 3: Model comparison results.

Relationship		Direct Effect	Indirect Effect	Total Effect
Supervisor support →Basic psychological needs		0.736***		0.736***
Supervisor support →SDPM		0.174	0.179*	0.353**
Supervisor support →Voice behavior		0.285***	0.061*	0.346**
Basic psychological needs →SDPM		0.243*		0.243*
Basic psychological needs → Voice behavior			0.042*	0.042*
SDPM → Voice behavior		0.173*		0.173*

Variable		Estimates	Product of Coefficient		Bootstrapping			
			SE	Z	Bias-Corrected 95%CI		Percentile 95%	
					Lower	Upper	Lower	Upper
X-M1-M2	Total Effects	0.353	0.067	5.269	0.254	0.472	0.218	0.477
	Indirect Effects	0.179	0.079	2.266	0.058	0.319	0.025	0.34
	Direct Effects	0.174	0.113	1.540	-0.025	0.361	-0.06	0.395
X-M1-M2-Y	Total Effects	0.346	0.059	5.864	0.241	0.435	0.22	0.458
	Indirect Effects	0.061	0.029	2.103	0.019	0.118	0.008	0.126
	Direct Effects	0.285	0.066	4.318	0.173	0.39	0.151	0.412

Note: N = 268; SDPM = Self-determined prosocial motivation; *p<0.05; **p<0.01; ***p<0.001.

Table 4: Path coefficient and result of mediation effect analysis.

Variable	Voice behavior
Step 1 (Control variables)	
Gender	0.12*
Age	0.02
Marital status	-0.12
Education	0.15*
Departmental tenure	0.08
R ²	0.07
F (5,262)	3.96**
Step 2 (Main effects)	
SDPM	0.21**
Impression management motive	0.04
R ²	0.12
F (7,260)	4.93**
Step 3 (Interaction effects)	
SDPM×Impression management motive	-0.12*
R ²	0.13
F (8,259)	4.90**

Note: N=268; Numbers in the table are standardized β coefficients; SDPM=Self-determined prosocial motivation. *p<0.05; **p<0.01.

Table 5: Results of moderated regression analysis of Self-determined prosocial motivation and impression management motive on voice behavior.

addition, impressive management motive exhibited a weakening moderating effect on the relationship between SPDPM and voice behavior.

Theoretical contribution

The findings of our study contribute to existing knowledge in the following ways. First, previous studies have adopted the social exchange theory, asserting that “supervisors and employees establish their relationship on the principle of reciprocity and that when supervisors treat employees with a positive attitude and behavior, employees tend to return the favor with a positive approach (e.g., voice behavior).” However, reciprocity involves an exchange of satisfaction, and it is also deemed as a sense of obligation to return favors to others [23]. Such behavior is likely to be passive rather than voluntarily. The present study is one of the few studies to adopt an SDT perspective to investigate employee’s level of self-determination in exhibiting voice behavior by constructing the process of influence of supervisor

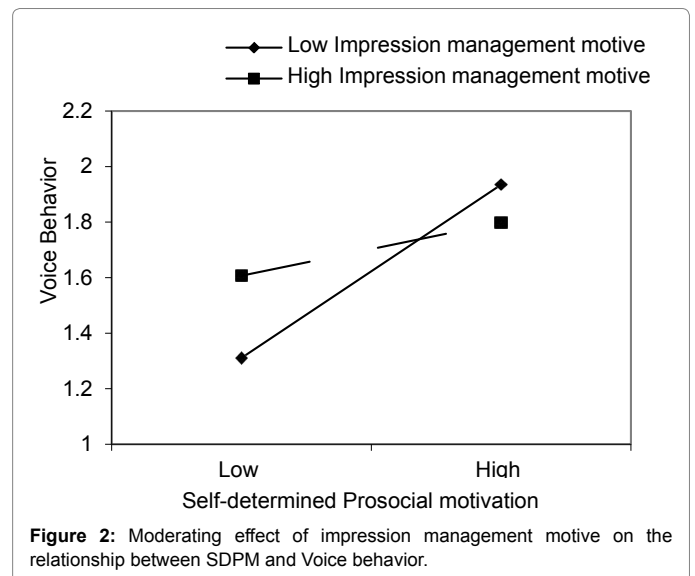


Figure 2: Moderating effect of impression management motive on the relationship between SDPM and Voice behavior.

support [10,18] and found that supervisor support can effectively satisfy subordinates’ basic psychological needs, which in turn nurture SPDPM, thereby encouraging employees to demonstrate voice behavior. However, previous studies have not examined the relationship between supervisor support and voice behavior from an SDT perspective. In addition to gaining empirical support, the present study also applied the self-determination theory in an organizational context, as recommended by Greguras and Diefendorff [40].

Furthermore, previous studies primarily examined the effects of prosocial motivation (quantity) on voice behavior, whereas we focused on the effects of the quality of prosocial motivation on voice behavior. To demonstrate employee’s level of autonomy in showing prosocial motivation, we adopted RAI to measure prosocial motivation. The findings indicated that when employees are prosocially and autonomously motivated, they are more likely to demonstrate voice behavior. Such finding not only reveals the importance of autonomous motivation, but also unveils the underlying motivation of voice behavior [41].

Finally, this study explored the effect that the interaction between

impression management motive (self-oriented) and prosocial motivation (other-oriented) has on employee voice behavior. As expected, subordinates' impression management motive weakens the positive relationship between SDPM and voice behavior. This result verifies the viewpoints of Grant and Mayer [16] that impression management motive guides employees toward affiliative citizenship behavior (supporting the current state) rather than toward challenging citizenship behavior (simulating change). Moreover, the result also resonates with the assertion of Takeuchi et al. [20] that in a collectivist culture, employees with a high degree of other-oriented motives are likely to feel conflicted about engaging in Organizational citizenship behavior (OCB) because of impression management (self-oriented) motives. In other words, high impression management motive weakens, rather than strengthens, the positive effect of other-oriented motives and voice behavior. In theory, the aforementioned findings provide an insight into the mechanisms of mixed-motives under different cultural contexts [Appendix].

Implications for practice

From SDT perspective, this study verified that supervisor support can effectively satisfy employees' basic psychological needs, inducing a high level of SDPM, which in turn encourages them to demonstrate extra-role voice behavior that is beneficial to their organization. Meanwhile, this study verified the moderating effect of impression management motive on the relationship between SDPM and voice behavior. This study provides the following four managerial implications.

First, organizations can create a supportive environment and climate to nurture employees' basic needs, specifically supervisor support for employees' work and emotions. Second, the need for autonomy and competence can evoke intrinsic motivation, whereas the need for relatedness is crucial for internalization of a behavior [18]. Therefore, an organization should ensure the satisfaction of all three basic psychological needs because a higher degree of need satisfaction is more likely to elicit individual autonomy and promote the motivation to increase collective benefits or benefits for others. Third, the human resource department should ascertain employees' self-regulation or state of work motivation regulation by adopting the Self-Regulation Scale to design a more accurate Basic Psychological Needs Satisfaction Plan for employees. Fourth, because a high level of impression management motive weakens the positive relationship between SDPM and voice behavior, supervisors hoping that their subordinates would demonstrate more voice behavior should not only stimulate employees' prosocial motivation, but also discourage their employees from having overly high impression management motive. In other words, in employee management and performance evaluation, supervisors should make employees aware and believe that being a "good soldier who seeks to help others and the organization" is better than being a "good actor who attempts to create favorable images in the eyes of others."

Research Limitations and Future Research

This research involved a cross-sectional study, in which the data of all variables were collected at the same time point. Future studies can adopt a longitudinal research approach to conduct measurements at different time points. In addition, this study included only supervisor support as the variable representing social support. We recommend future studies to incorporate colleague support and organizational support to elucidate the differences in employees' basic psychological

needs, motivation, and voice behavior when employees perceive different sources of support provided to them.

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