Error Reporting and Interpersonal Perception

Bin Ling
Business School, Hohai University

ABSTRACT

Individuals are reluctant to report errors because they fear their personal image may be damaged. However, we found this fear is misplaced. We used three online experiments and one survey study to test our hypothesized relationships. The results demonstrate that participants perceive those who proactively report errors as more competent and warmer than those who do not. This effect is positively mediated by positive affect and positivity ratio and is moderated by error management climate. Participants perceive those who report errors as more competent and warmer in error-management climate rather than in error-averse climate.

Introduction & Hypotheses

Errors in organization are essentially unintended deviations from goals and standards that can yield either positive (eg., learning from error, innovation) or negative (e.g., stress, failure, catastrophes) consequences. It is very important for organizations to disclose errors so that they can understand the causes of errors and prevent future failures or learn from errors. However, research suggests that people are reluctant to report their own errors for a variety of reasons (Frese & Keith, 2015; Naveh & Lei, 2019; Zhao & Olivera, 2006). One of the reasons comes from concerns about impression management, that is, afraid of being perceived as incompetent (Zhao & Olivera, 2006). However, they necessarily don't get a negative perception or labels if they report errors proactively. We believe that reporting errors can lead to positive perception and evaluation.

In the current study, we aim at providing empirical evidences that error reporting can increase perceptions of competence and warmth of error reporter. Importantly, these positive perceptions will be mediated by positive affect and positivity ratio based on the broaden-and-build theory and be moderated by error management climate. For mediation, we suggest that error reporting can elicit relatively more positive emotions of evaluator (it refers to leader in this study), followed by a more positive perception of competence and warmth. For moderation, we hypothesize that reporting errors leads to more perceptions of competence and warmth in an error-management climate compared with in an error-averse climate.

OVERVIEW OF STUDIES

| STUDY | RESEARCH DESIGN | SUBJECT POOL | TOTAL SAMPLE | CONDITION | | | | MEASUREMENT | |
				No error reporting	Error reporting	Error-management	Error-averse	Mediator	DV
Pilot	Online experiment	MTurk	173	●	●				competence warmth
1A	Online experiment	MTurk	195	●	●			PA	competence warmth
1B	Online experiment	MTurk	311	●	●			PA NA	competence warmth
2	Online experiment	MTurk	231	●	●	●	●		competence Warmth
3	Field survey	Company staff	190	●	●	●	●		competence warmth

PA = positive affect
NA = positive affect

RESEARCH MATERIALS

Error reporting manipulation (pilot, study 1a, 1b, 2): We asked them to read a scenario and put themselves in the shoes of a chief operating officer (COO) described at a community health center. In the scenario, there is a protagonist named Peter Spencer—your subordinate who is the focal error reporter or non-reporter. This scenario was modified from Weiss and Morrison (2019) and Lee et al. (2017).

Error reporting questionnaire (study 3) : It includes three items from Lee et al. (2017). α = 0.86.

Error-management climate manipulation (study 2): It was modified from Gronewold, Gold, and Salterio (2013) and Perreault, Wainberg, and Luippold (2017).

Error-management climate manipulation	Error-averse climate manipulation
The overall climate of this institution is noted for an "open for improvement" mentality that reflects the organization's own beliefs and actions. Your institution has historically handled internal control exceptions positively by turning the mistakes into learning experiences for the responsible employees. That is to say, if Peter chooses to report this issue to management, it is very unlikely that his opportunities for advancement within the company would be impacted.	The overall climate of this institution is noted for a "getting it right the first time" mentality that reflects the organization's own beliefs and actions. Your institution has historically handled internal control exceptions negatively by turning the mistakes into humiliating experiences for the responsible employees. That is to say, if Peter chooses to report this issue to management, it is very likely that his opportunities for advancement within this organization would be impacted.

Error-management questionnaire (study 3): It includes 17 items from Van Dyck, Frese, Baer, and Sonnentag (2005). α = 0.96.

Positive affect (study 1-2) & negative affect (study 1b, 2): It contains five positive adjectives to measure positive affect and five negative adjectives to measure negative affect. Positivity ratio equals the ratio between the frequency of positive and negative affective states.

Competence & warmth (all studies): Six items were used to measure competence and warmth, respectively. This scale was derived from Kim, Messersmith, and Allen (2020).

RESULTS (main effects)

Table 1 The results of main effects of error reporting on competence and warmth

| | Competence | | | | Warmth | | | |
	Error reporting	No error reporting	Statistics	Effect size	Error reporting	No error reporting	Statistics	Effect size
Pilot	4.86(1.31)	3.84(1.46)	23.43***	d = 0.73	5.37(1.22)	3.42(1.36)	98.17***	d = 1.51
Study 1a	5.13(1.31)	3.92(1.29)	43.25***	η^2_p = .18	5.61(1.03)	3.59(1.31)	143.47***	η^2_p = .43
Study 1b	5.15(1.09)	4.08(1.16)	69.25***	η^2_p = .18	5.44(0.96)	3.78(1.10)	201.32***	η^2_p = .39
Study 2	5.37(1.04)	4.14(1.33)	65.79***	η^2_p = .23	5.78(0.97)	3.67(1.37)	194.38***	η^2_p = .48
Study 3	0.33[a]		8.05***	R^2 = .26	0.30[a]		7.93***	R^2 = .25

Note: ***$p < .001$; The values in parentheses are standard deviations; a refers to unstandardized coefficients of regression; statistic in the row of pilot, study 1a, 1b, and 2 is F value, while that in the row of study 3 is t value.

RESULTS (mediating effects)

Table 2 The bootstrapping results of mediating effects

| | | Competence | | | Warmth | | |
Study	Mediator	Coef.	95% lower bound	95% upper bound	Coef.	95% lower bound	95% upper bound
Study 1a	PA	.13	.03	.27	.16	.06	.28
Study 1b	PA	.11	.02	.22	.10	.01	.20
	PR	.10	.02	.19	.09	.01	.19

Note: PA = positive affect, PR = positivity ratio.
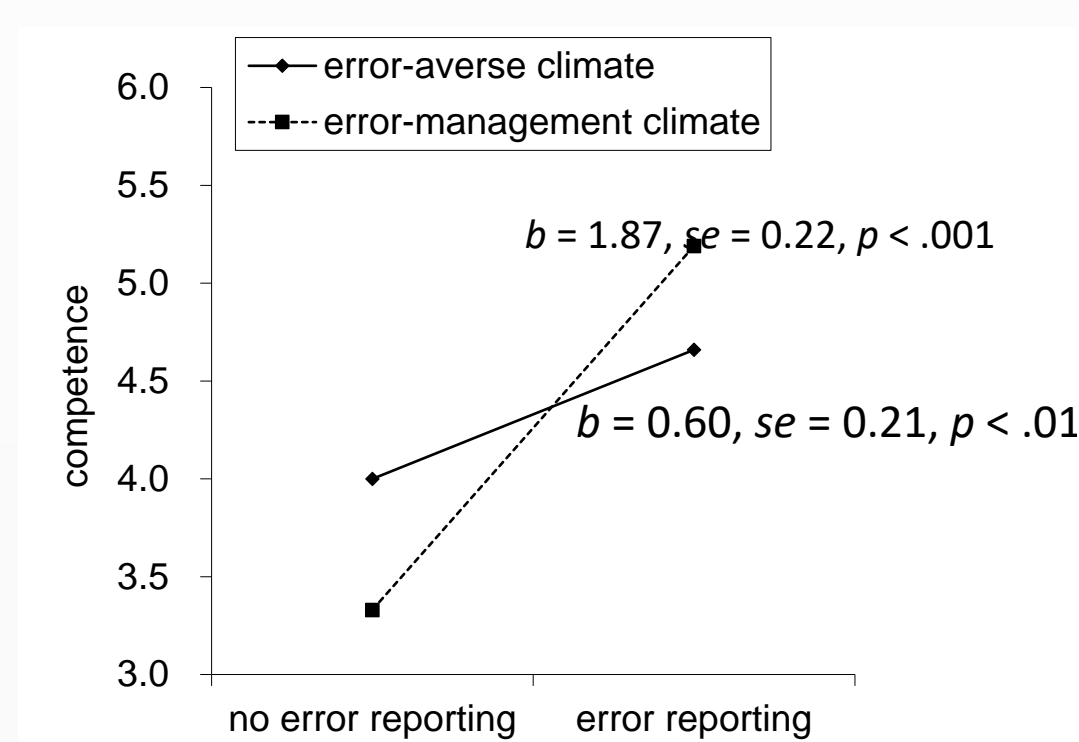
RESULTS (MODERATION EFFECT)

Figure 1. Effect of error reporting on competence at Error-averse and –management climate (study 2)
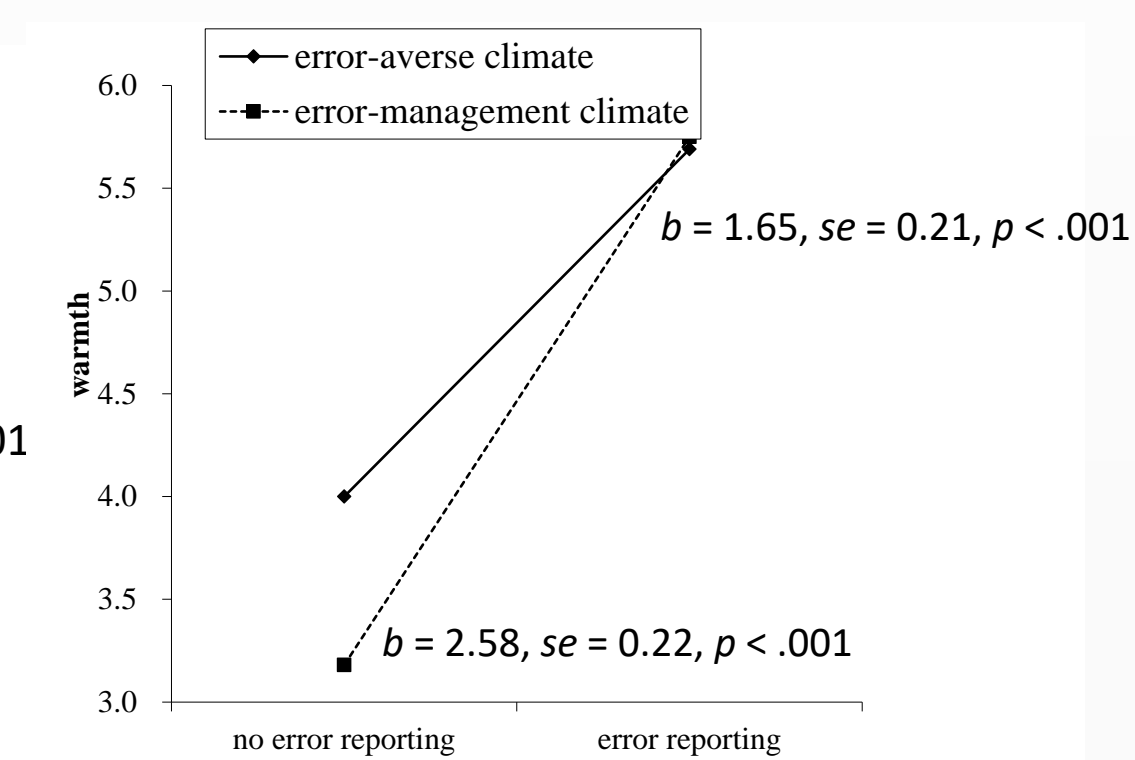

Figure 2. Effect of error reporting on warmth at error-averse and –management climate (study 2)
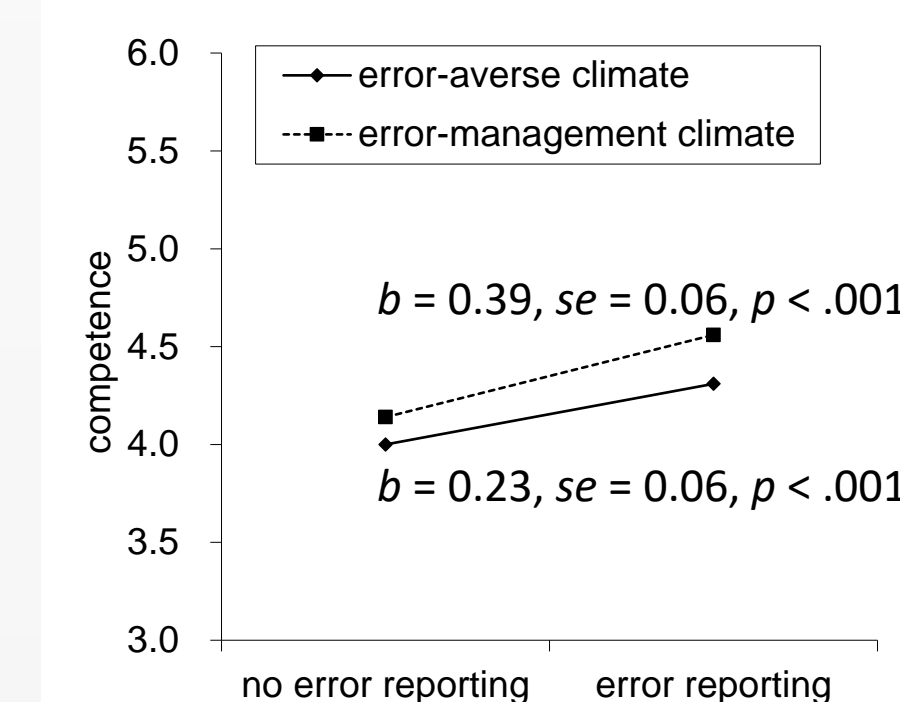

Figure 3. Effect of error reporting on competence at error-averse and –management climate (study 3)
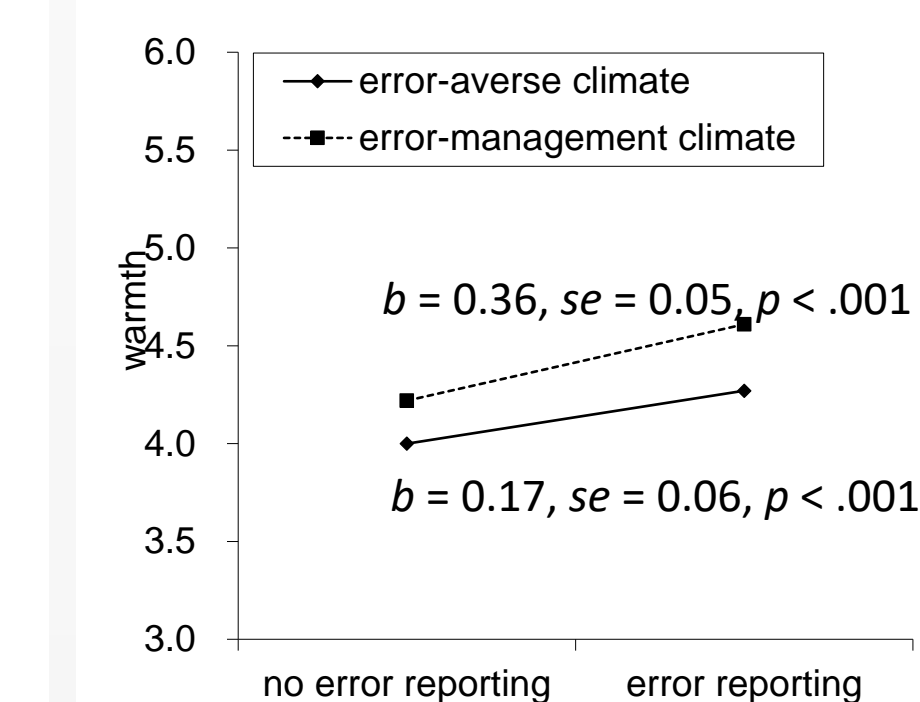

Figure 3. Effect of error reporting on warmth at error-averse and –management climate (study 3)

CONCLUSIONS

- Results of Main effects:
  - Error reporting is positively associated with perception of competence.
  - Error reporting is positively associated with perception of warmth.
- Results of Mediating effects
  - Positive emotion significantly mediates the effects of error reporting on competence and warmth.
  - Positivity ratio significantly mediates the effects of error reporting on competence and warmth.
- Results of moderating effect
  - Effect of error reporting on competence becomes stronger in error-management climate compared with in error-averse climate.
  - Effect of error reporting on warmth becomes stronger in error-management climate compared with in error-averse climate.