

Joint Effects of Two Leadership Styles on Organizational Citizenship Behavior

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Introduction

Importance of Leadership:

- Recognized for significant contributions to organizational functioning and performance (House 1996; Schriesheim et al. 1999).
- Shapes organizational culture and influences employee attitudes and behaviors.

Key Leadership Styles in Public Administration: Transactional and Transformational leadership

- Transactional Leadership: Management by exception and contingent reward.
- Transformational Leadership: Individual consideration, idealized influence, intellectual stimulation, and inspirational motivation.
- **Significant research into these styles' origins and consequences** (Oberfield 2014; Rusi & Wang 2017).

Research trends

- Dual Importance: Both styles are essential in public administration.
- Previous studies often emphasize one style over the other, creating an imbalance (Oberfield 2014; Rusi & Wang 2017); Tendency to focus exclusively on transactional or transformational leadership; Positive bias towards transformational leadership.
- **Overlooking the foundational role of transactional leadership** (Van Wart 2014; Caillier 2014).

Full-Range Leadership Theory

- Developed by Bass and colleagues to provide a more integrated framework (Avolio & Bass 1991; Bass & Riggio 2006).
- Recognizes the complementary nature of leadership styles, suggesting that transformational leadership builds on the foundations laid by transactional leadership
- Addresses the limitations of focusing on a single leadership style.
- Highlights how transactional and transformational leadership are not mutually exclusive but rather complementary (Bass & Avolio, 1994). Encourages exploration of the interplay between leadership styles.
- Promotes a more holistic understanding of leadership effectiveness in public administration (Jensen et al. 2019; Neilsen et al. 2019)
- **The Full-Range Leadership Theory provides a valuable framework for exploring this interplay, ultimately leading to more effective and balanced leadership practices.**

Full-Range Leadership Theory

Complementary Roles:

- Transformational leadership builds on transactional leadership.
- Transformational leadership enhances positive outcomes.
- Transactional leadership provides essential managerial functions.

Research Implications:

- Combining both styles leads to better organizational outcomes.
- Empirical studies support the additive and complementary effects (Jensen et al. 2019).

Previous Focus:

- Isolated examination of leadership components.
- Need for Comprehensive Investigation: Explore synergies and combined effects; Understand the multifaceted dynamics of leadership interplay.
- Most previous studies assume a linear relationship between leadership theories and organizational outcomes

Broader Contexts:

- Extend research to non-western settings

Research Objectives

- Empirically examine the interplay of leadership styles on Organizational Citizenship Behavior (OCB) using the case of South Korea

Leadership Styles and Employee Behavior

- Among the various leadership theories, the transactional and transformational paradigms have received the most significant attention (Bass & Riggio 2006; Adams et al. 2018)

Transformational leadership Impacts:

- Transformational theory & social learning theory (Bandura 1977)
- Inspires and motivates followers to exceed standard performance levels (Burns 1978; House 1976; Bass 1985)
- Four components: idealized influence, inspirational motivation, intellectual stimulation, individualized consideration (Bass & Avolio 1993; Northouse 2021)
- Positive impact on extra-role behaviors and OCB (Podsakoff et al. 1990; Krishnan & Arora 2008)

H1. The relationship between transactional leadership and OCB is nonlinear, indicating that different levels of transactional leadership have varying impacts on OCB.

Leadership Styles and Employee Behavior

Transactional leadership Impacts:

- Social exchange relationship aiming to advance agendas (Bass & Riggio 2006; Northouse 2021)
- Two factors: contingent reward and management-by-exception

Encouraging OCB:

- Clear responsibilities and fair rewards foster OCB (Jacobsen & Andersen 2017)
- Positive reinforcement through high-quality social exchanges (Ahmad et al. 2019)

H2: The relationship between transformational leadership and OCB is nonlinear, suggesting that the influence of transformational leadership on OCB changes at different levels of transformational leadership.

Interplay of two leadership styles

Combined Impact:

- Potential interplay between transactional and transformational leadership amplifies or diminishes effects (Venus et al. 2013)

Previous Findings:

- Mixed results on the combination of styles (House 1990; Schriesheim et al. 2006)
- Need for understanding nonlinear dynamics (Nielsen et al. 2019)
- **H3: The interplay between transactional and transformational leadership has a complex effect on OCB, revealing interaction dynamics that go beyond simple additive or multiplicative models.**

Explanation of Nonlinear Relationships

- Captures Complexity:

Nonlinear relationships allow us to model more complex dynamics between leadership styles (transactional and transformational) and OCB. Unlike linear relationships, which assume a constant rate of change, nonlinear relationships can depict curves, providing a more accurate representation of how leadership styles influence OCB at different levels.

- Flexibility:

Examining nonlinear relationships accommodates various shapes of relationships, such as U-shaped or inverted U-shaped, which might better represent how leadership impacts OCB in reality.

- Beyond Interaction Terms:

Traditional interaction terms in linear models can capture the combined effect of two variables but may not adequately represent the complexity of their interplay. Nonlinear relationships offer a more nuanced approach by allowing each leadership style to interact with itself and the other style in a complex manner.

Data

- Data: 2021 Public Employee Perception Surveys by the Korea Institute of Public Administration (KIPA)
 - ✓ Annual survey covers various organizational aspects such as work environment, personnel systems, organizational management, and the attitudes, motivations, and behaviors of public employees in Korea (KIPA 2022)
- Samples
 - ✓ 47 central administrative agencies and 17 local governments
 - ✓ # of respondents: 4,133

Descriptive Statistics

Total # of $N=4,133$		obs. (%)
Org. Type	Central Gov.	1,890 (45.7%)
	Local Gov.	2,243 (54.3%)
Gender	Male	2,394 (57.9%)
	Female	1,739 (42.1%)
Age	20s	311 (7.5%)
	30s	1,052 (25.5%)
	40s	1,519 (36.7%)
	above 50	1,251 (30.3%)
Education	~ High school	153 (3.7%)
	Associate degree	235 (5.7%)
	Bachelor degree	2,940 (71.1%)
	Master degree	692 (16.7%)
	Ph.D. degree	113 (2.7%)

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	Bachelor degree	2,940 (71.1%)
	Master degree	692 (16.7%)
	Ph.D. degree	113 (2.7%)
Marital status	Married	2,732 (66.1%)
	Unmarried	1,401 (33.9%)
Having children	No	1,678 (40.6%)
	Yes	2,455 (59.4%)
Working yrs. (tenure)	~5 yrs.	816 (19.8%)
	6~10yrs.	747 (18.1%)
	11~15yrs.	569 (13.8%)
	16~20yrs.	723 (17.5%)
	21~25yrs.	348 (8.4%)
	26yrs.~	930 (22.5%)
Rank	Grade 1~4	458 (11.1%)
	Grade 5	1,058 (25.6%)
	Grade 6~7	2,251 (54.5%)
	Grade 8~9	365 (8.8%)

Methods

- Polynomial Regression:
 - statistical technique used to explore complex, nonlinear relationships between variables, especially when these relationships are influenced by an additional moderating variable
 - Allows for modeling more realistic, complex relationships that linear models cannot capture.

$$OCB = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2 + b_x(Controls) + e$$

X: Transactional leadership; Y: Transformational leadership

Variable measurement

OCB		1) I help my colleagues who are absent or have lots of workloads 2) I listen to my colleagues' problems and concerns
Transactional Leadership	Contingent Rewards(a)	1) My supervisor clearly explains the rewards/benefits I will receive if the goals are achieved 2) My supervisor specifically tells me what I need to do to obtain rewards/benefits based on job performance
	Mngt. by exception-Active(b)	1) I regularly receive feedback on my performance from my supervisor 2) My supervisor helps me understand how I contribute to the organizational goals
	Mngt. by exception-Passive(b)	1) My supervisor takes action only when problems become serious
Transformational Leadership		1) My supervisor presents a clear vision that I should aim for in the future 2) My supervisor motivates me to work hard 3) My superior encourages me to perform tasks from a new perspective 4) My supervisor assists me in my self-development

Descriptive Statistics & Correlation

	Mean	SD	OCB	(a)	(b)~	(c)	Transforma tional~
OCB	3.58	0.64	(0.75)				
Contingent rewards (a)	3.13	0.84	0.24	(0.91)			
Mngt. by exception – active (b)	3.29	0.79	0.29	0.71	(0.85)		
Mngt. by exception – passive (c)	2.52	0.92	-0.09	-0.30	-0.32	-	
Transformational ~	3.27	0.81	0.27	0.77	0.75	-0.39	(0.93)

Notes: Alpha-reliability coefficients are on the diagonal.

All correlations are significant, $p < 0.001$

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results

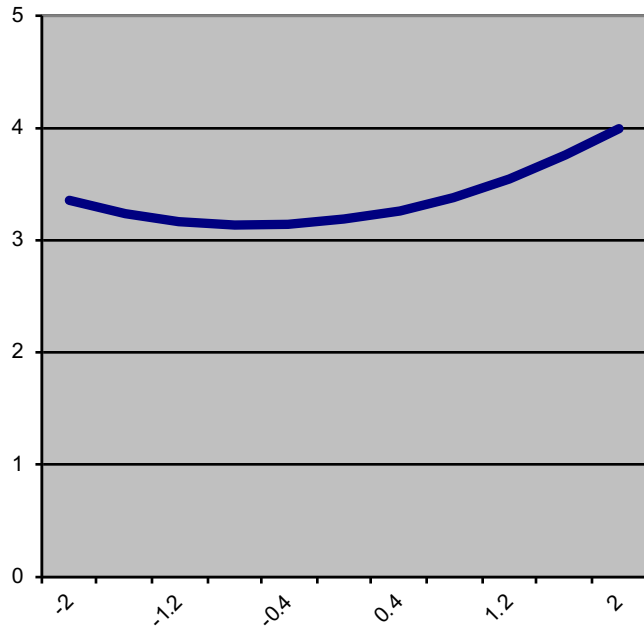
- Polynomial Regression

of N=4,133

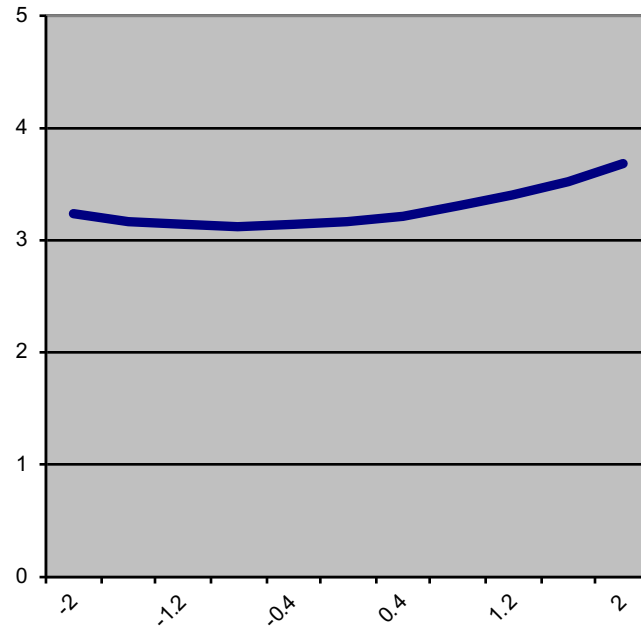
Control variables:
gender, age, education,
current job rank, tenure,
organization type,
working hours per one-
week, marriage, children

	Dependent variable: Organizational Citizenship Behavior (OCB)						
	M1	M2	M3	M4	M5	M6	M7
	(a) Contingent rewards		(b) Mngt. by exception-Active		(c) Mngt. by exception-Passive		
Transactional Leadership (X)		0.053*** (0.02)	0.086*** (0.02)	0.157*** (0.02)	0.171*** (0.02)	0.013 (0.01)	-0.016 (0.01)
Transformational Leadership (Y)		0.166*** (0.02)	0.159*** (0.02)	0.095*** (0.02)	0.112*** (0.02)	0.214*** (0.02)	0.212*** (0.02)
X ²			0.090*** (0.02)		0.077*** (0.02)		0.063*** (0.01)
X*Y			-0.098** (0.04)		-0.019 (0.03)		-0.017 (0.02)
Y ²			0.123*** (0.02)		0.074*** (0.02)		0.064*** (0.02) (0.02)
(Constant)	3.355*** (0.09)	3.266*** (0.08)	3.184*** (0.08)	3.257*** (0.08)	3.163*** (0.08)	3.273*** (0.08)	3.174*** (0.08)
R ²	0.04	0.11	0.14	0.12	0.15	0.10	0.14
adj. R ²	0.03	0.10	0.13	0.12	0.15	0.10	0.14
<u>ΔR²</u>			0.03***		0.03***		0.04***
F	9.011	19.669	24.234	21.374	27.904	19.572	25.307
Mean VIF	3.67	3.57	3.87	3.54	3.74	3.44	3.22

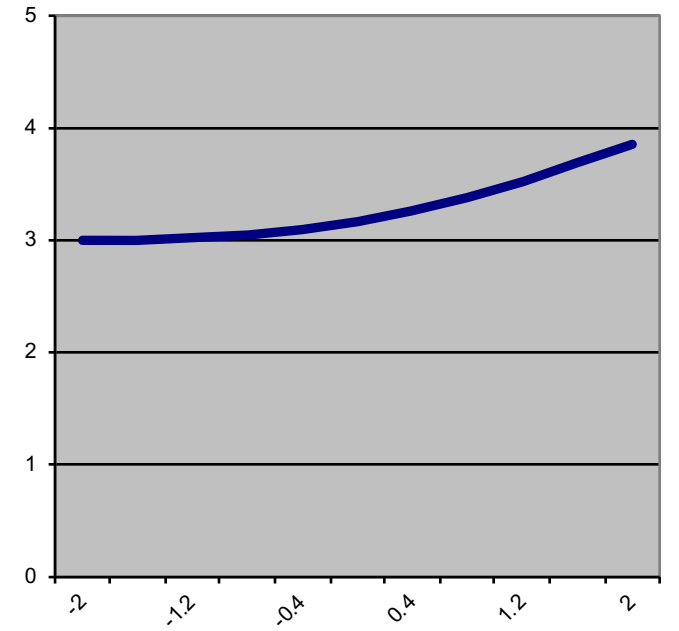
Transformational Leadership & OCB



M3



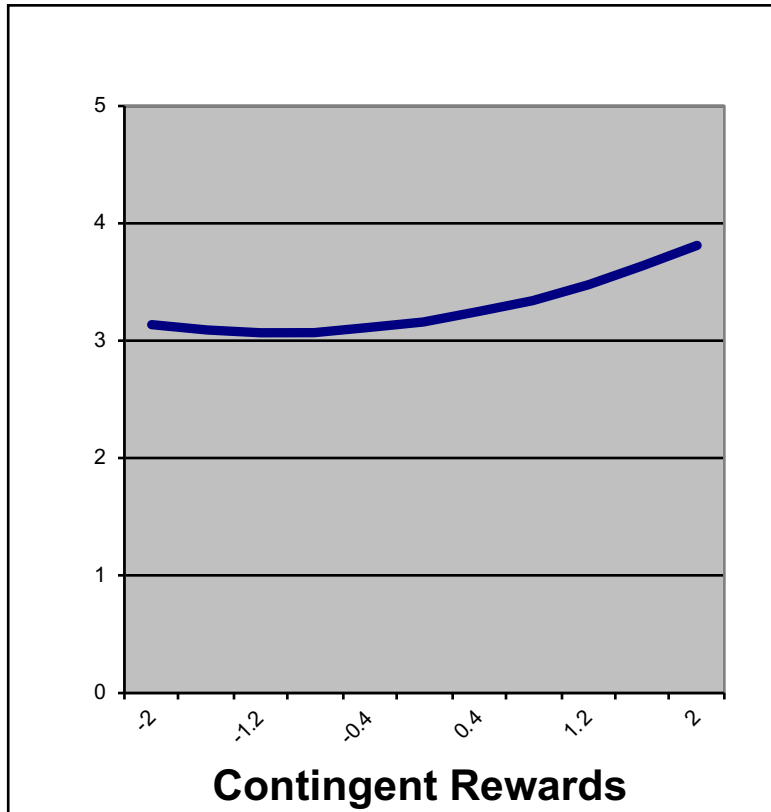
M5



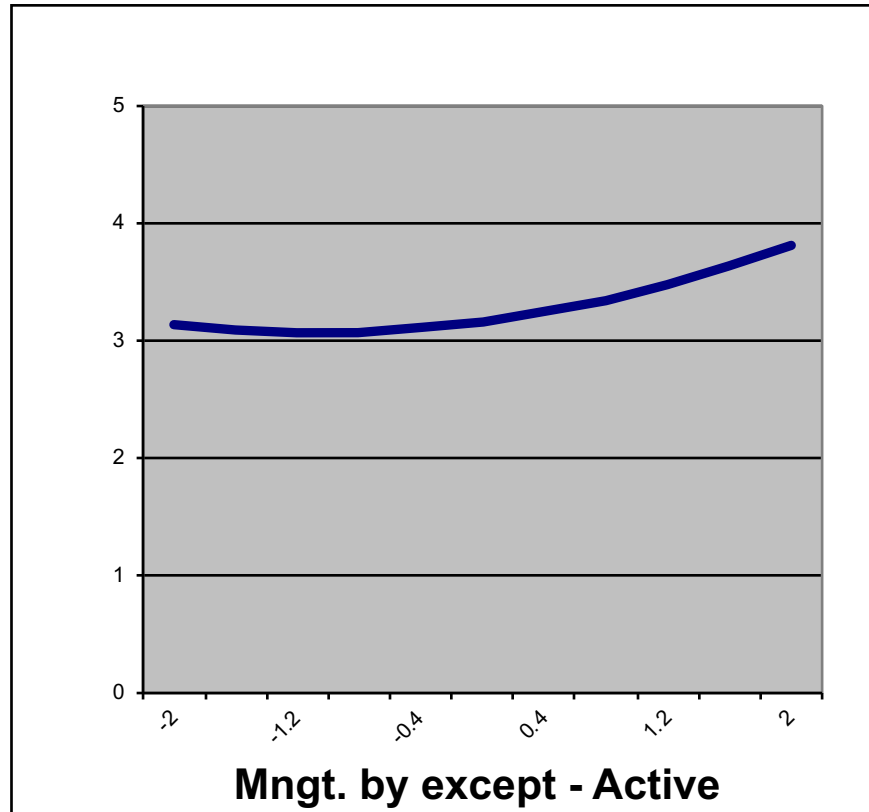
M7

Transactional Leadership & OCB

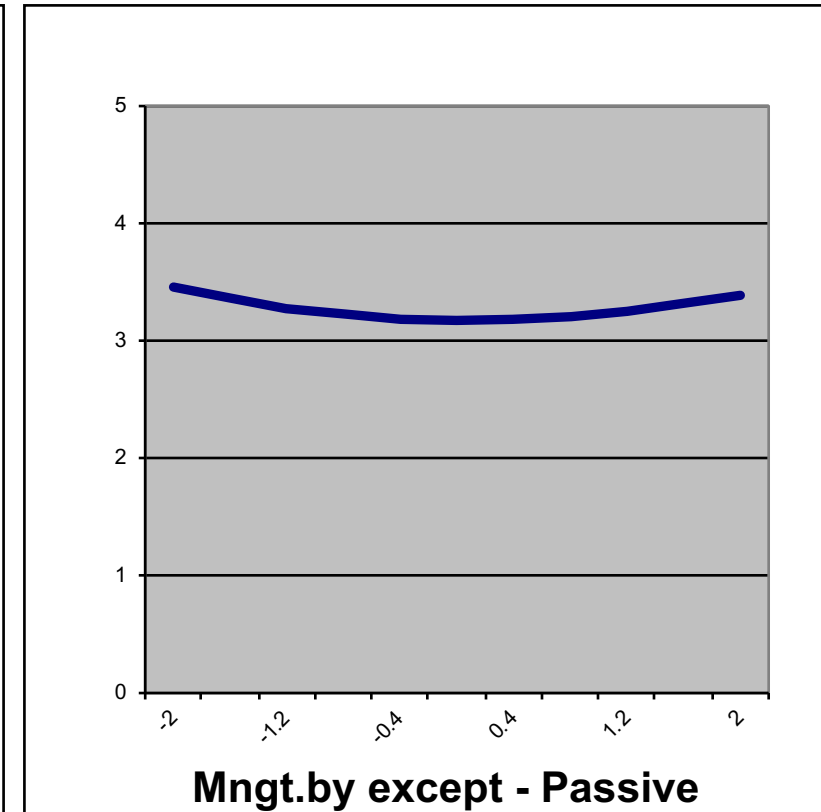
M3



M5



M7



Response Surface Analysis

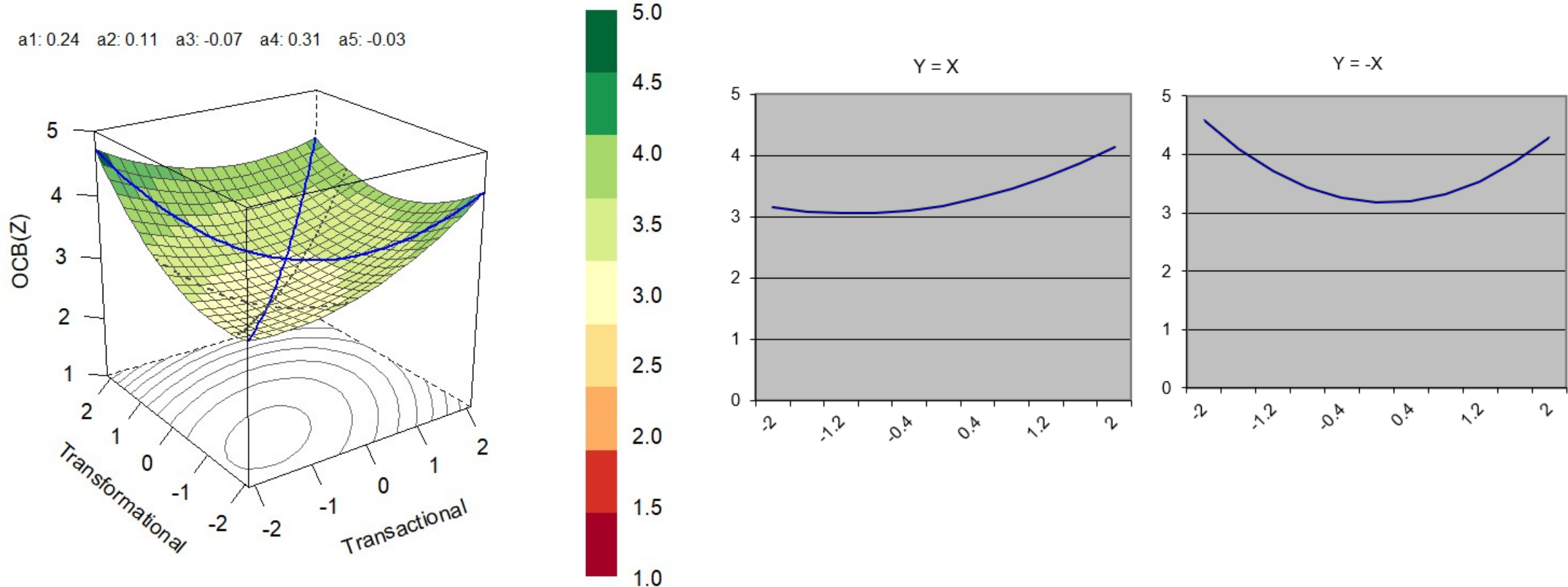
- Testing Slopes and Curves

	X=Y		X=-Y	
	Slope (a ₁)	Curvature (a ₂)	Slope (a ₃)	Curvature (a ₄)
(a) Contingent rewards	0.24***	0.12***	-0.07*	0.31***
(b) Management by exception-active	0.28***	0.13***	0.06	0.17***
(c) Management by exception-passive	0.20***	0.11***	-0.23***	0.14

- a_1 , a_2 : test whether the line of congruence(X=Y, LOC) is linear or curvature
 - ✓ **Significant positive a_1 & significant a_2** : a non-linear relationship along the LOC
- a_3 , a_4 : test whether the line of incongruence(X=-Y, LOIC) is linear or curvature
 - ✓ **Significant positive a_3** : positive curvature along LOIC
 - ✓ **Significant positive a_4** : a convex surface, As discrepancy increases, performance increases (U-shape)

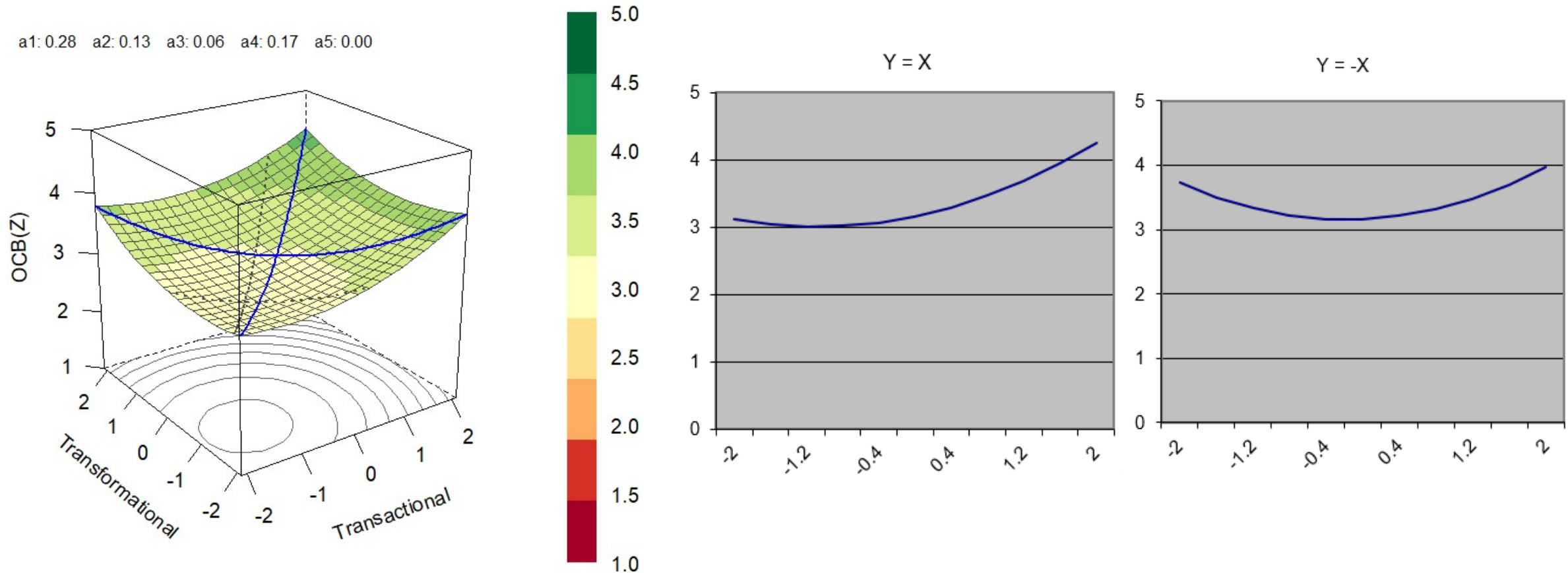
Response Surface Analysis- Graphs (1)

(a) Contingent Rewards



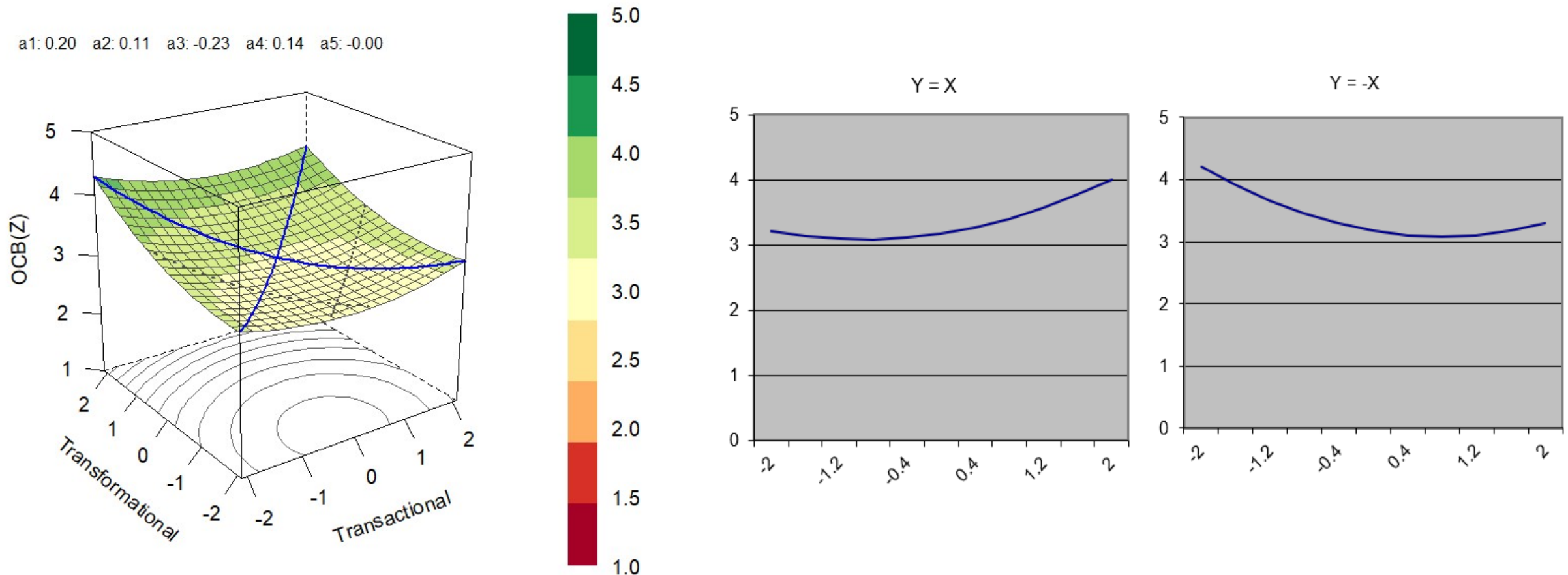
Response Surface Analysis- Graphs (2)

(b) Management by exception - Active



Response Surface Analysis- Graphs (3)

(c) Management by exception - Passive



Findings

- The study shows significant non-linear relationships between transformational and transactional leadership styles and OCB.
- The line of congruence (LOC) and line of incongruence (LOIC) tests reveal that these relationships are not simply linear but involve complex interactions.
- The response surface analysis indicated a U-shaped curve along the line of congruence for transformational leadership, implying that as congruence in leadership perception increases, OCB also increases after an initial decrease. For transactional leadership, a positive curvature along the line of incongruence suggests that discrepancies in leadership perceptions might actually enhance certain types of OCB.
- Active management by exception, where leaders proactively set standards and monitor performance, shows a slight increase in OCB as alignment with expectations increases. Conversely, passive management by exception, characterized by leaders stepping in only after problems arise, was linked with a less favorable OCB outcome.

Limitation & Implication

- Policies that encourage leaders to maintain high congruence in leadership styles may lead to enhanced employee outcomes. This might include policies around transparency, consistent leadership practices, and regular feedback mechanisms.
- Further studies could explore the thresholds at which leadership style incongruences begin to adversely affect OCB, or how different organizational contexts might alter these dynamics.
- Cross-sectional Design: Longitudinal designs would provide stronger evidence of causal relationships by tracking changes over time
- The complexity of interpreting non-linear relationships and curvilinear effects may lead to potential misunderstandings or oversimplifications of how different leadership styles interact with employee behaviors