What Shapes Information System Misuse Intention? The Role of Leadership Style and Perceived Organizational Justice

JungA Youn
Korea University - Korea, saj0311@nate.com

Frida F. Putri
Korea University - Korea, frida_putri@korea.ac.kr

Hovav Anat
Korea University Business School, anatzh@koea.ac.kr

What Shapes Information System Misuse Intention? The role of Leadership Style and Perceived Organizational Justice

JungA Youn
Business School, Korea University,
Seoul, South Korea

Frida F. Putri
Business School, Korea University,
Seoul, South Korea

Anat Hovav[1]
Business School, Korea University,
Seoul, South Korea

ABSTRACT

We introduce a model that examines the relationships between organizational justice, leadership style, organizational citizenry behavior, and misuse intention. We hypothesize that ethical and charismatic leadership will increase organizational citizenry behavior and subsequently reduce misuse intention, while perceived organizational injustice will increase misuse intentions. We suggest that the existence of sanctions will moderate the relationships between perceived leadership and misuse. The relationship between perceived organizational injustice and misuse intentions are moderated by organizational security awareness and the Security Education, Training and Awareness program.

Keywords: Security, IS misuse, Leadership, OCB, Organizational justice

INTRODUCTION

A majority of current research on user misuse of computing resources is based on General Deterrence theory or its variants (D'Arcy and Herath 2011). The premise is that users are less likely to engage in misuse behavior when some deterrence mechanism exists. The mechanism may be formal or informal, and internal or external. Conversely users are more likely to engage in misuse

---
[1] Corresponding author. anatzh@korea.ac.kr +82-2-3290-2818

behavior when they perceive such behavior as beneficial. Anecdotal data suggest that users are likely to circumvent security countermeasure or policies when such measures contradict other organizational structure, such as task performance. For example, when employees are paid by unit processed, they are less likely to logoff a system when they leave their station for short breaks. Prior research also shows that in some cultures, managers are more likely to engage in misuse behavior (Hovav and D'Arcy 2012). In organizations where managers have large influence on their subordinates, leaders actions are likely to influence misuse behavior. For example, when asked about piracy or sharing passwords, 54% stated they would not install illegal software on their machine or share their password. However, 66% said they would install such software or share their password if their managers requested it[2].

We posit that when task performance is hindered by security polices, users are likely to circumvent or ignore the policy, thus increasing misuse behavior. Conversely, an ethical and charismatic manager may be able to overcome or reduce such behavior in two ways: (1) evoke organizational loyalty, compliance and civic duty, which are components of Organizational Citizenry Behavior (OCB) and, (2) set an example of ethical behavior, which employees are likely to follow. Thus, the goal of this study is to understand the effect of task performance on misuse behavior in organizations lead by perceived ethical and charismatic managers. We use organizational justice theory as a lens to examine users' reactions to policies that are deemed disruptive.

INTENTION TO MISUSE IS

In the context of this study, IS misuse intention is defined as an individual's intention to use available resources in an unacceptable way or for an unapproved purpose. The rules are usually presented in an organizational information technology (IT) usage policy (D'Arcy et al. 2009; Magklaras et al. 2006). IS misuse in an organization can extensively vary. Sending an inappropriate e-mail, installing unlicensed software, unauthorized access to computerized data, unauthorized

---

[2] T-test difference significant at p<0.05

modification of computerized data, and password sharing (D'Arcy et al. 2009; D'Arcy and Hovav 2007) are examples of misuse in an organization.

PERCEIVED LEADERSHIP STYLE

The term leadership has been defined with respect to individual traits, leader behavior, interaction patterns, role relationships, follower perceptions, influence over followers, influence on task goals, and influence on organizational culture. The existence of varied definitions indicates that there is lack of agreement regarding the definition of a leader (Yukl 1989). For this reason, some researchers have been interested in reviewing leadership definitions and generating their own definition of leadership (Barker 2002; Rost 1993; Winston and Patterson 2006). In a meta-analysis of 160 articles and books, Winston and Patterson (2006) categorized leadership into ninety-one discrete dimensions. In this study, we define perceived leadership style as a second order construct. Perceived ethical leadership and perceived charismatic leadership are the corresponding first order constructs.

Ethical and Charismatic Leadership

Ethical leadership involves leading in a manner of respecting the rights and dignity of others (Treviño et al. 2003). Ethical leadership was constitutively defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown et al. 2005, p. 4). Hence, to be perceived as ethical, leaders have to be perceived as an attractive, credible, and legitimate role model who engages in normatively appropriate behavior and makes the ethics message salient (Brown et al. 2005).

Charismatic leadership refers to "the perception that a leader who possesses a divinely inspired gift and is somehow unique and larger than life" (Weber 1947, p. 328). Followers not only trust and respect the leader, but also idolize or worship the leader as a super being (Bass 1985). Charismatic leadership was operationalized with six behavior factors: strategic vision and

articulation behavior, sensitivity to the environment, unconventional behavior, personal risk, sensitivity to organizational members' needs, and action orientation (Conger and Kanungo 1994). Social learning theory demonstrated that observational learning exists in organizations (Bandura and Albert 1977). Based on the theory of charismatic leadership (House 1977), successful leaders in organizations have a positive effect on followers. A leader is inspirational to subordinates to "the extent the leader provides examples and patterns for the follower" (Bass 1985, p. 75). Therefore, a charismatic leader can be effective as a role model to their subordinates. Ethical leaders are also often imitated by employees because they are perceived as legitimate role models (Brown et al. 2005).

A leader who posses charismatic and ethical attributes could arouse followers' ethical behavior. Individuals are likely to imitate an ethical and inspiring role model's behavior by observing their actions' consequences (Bandura 1986). Therefore, we hypothesize that the mentioned learning mechanisms motivated by charismatic and ethical leadership can facilitate followers' compliant behavior. We define leadership style as a second order construct. For the sake of brevity, we present the hypotheses as follow:

> *H1a: Perceived ethical leadership in an organization will be negatively associated with misuse intention.*
>
> *H1b: Perceived charismatic leadership in an organization will be negatively associated with misuse intention.*

ORGANIZATIONAL CITIZENSHIP BEHAVIOR (OCB)

OCB was defined as behavior that contributes "to the maintenance and enhancement of the social and psychological context that supports task performance" (Organ 1997, p. 91). Graham (1991) defined OCB using three categories: organizational obedience (respect for rational structure of rules and regulations), loyalty (fidelity to both leader and organization), and participation (involvement in

organizational matters and events). Much like other traditionally good citizenship behavior, those actions are taken because they are considered as the right thing to do, and not because they are enforced by the law (Podsakoff and MacKenzie 1993). Particularly, a worker who is motivated to engage in obedience and loyalty will be more likely to comply with organizational rules and regulations, and less likely to violate them. Therefore, we hypothesize that OCB will reduce workers' misuse behavior.

> *H2: A user's organizational citizenship behavior will be negatively associated with misuse intention.*

LEADERSHIP AND OCB

Prior research found a positive relationship between leadership behaviors and OCB such that leader behavior increases OCB behavior (Organ et al. 2006). Employees are likely to enact the behavior emphasized by a leader (Schneider et al. 2005). Similarly, charismatic leaders' behavior can augment OCB by increasing the self-concept of followers, such as self-esteem, self-worth, self-efficacy, self-collective efficacy, personal identification with leader, social identification, and value internalization (Shamir et al. 1993). Therefore, we hypothesize:

> **H3:** *Perceived ethical and charismatic leadership in an organization will be positively associated with a user's organizational citizenship behavior.*

PERCEIVED ORGANIZATIONAL INJUSTICE

The term organizational justice was used initially by Greenberg (1987) to refer to the perception of fairness of an individual in organizations (Colquitt et al. 2005). Greenberg (1987) identified two independent dimensions of organizational justice, namely reactive-proactive and process-content. The reactive-proactive dimension is concerned with compensating injustice and striving to attain justice, while process-content dimension is focused on the ends achievement and the process used to acquire those ends. Similarly, Miles (2012) identified three main types of justice,

namely distributive justice (fairness perception of outcomes received), procedural justice (fairness perception of procedures to determine the outcome received), and interactional justice (fairness perception of the interpersonal treatment that one receives during the decision-making process and the outcome received).

Furthermore, Colquitt (2001) subdivided interactional justice into informational justice and interpersonal justice. Informational justice is concerned with the fairness perception of adequate justification for decisions. Interpersonal justice is concerned with fairness perception for the degree to which people are treated with dignity and respect. Organizational justice may have different behavioral outcomes. The key outcomes are categorized as task performance and employee compliance, withdrawal behavior, and counterproductive work behavior (Conlon et al. 2005).

In this study, the perception of injustice is related to task performance within the boundaries of organizational security policy. If employees believe that the fact that organizational security policy hinders task performance is unjust, they might try to compensate their injustice perceptions by disobeying those rules and regulations. For example, employees may choose to circumvent an organization's security policy because complying with the policy disrupts their main task (Herath and Rao 2009). Furthermore, security is considered as a secondary task that people tend to ignore compare to their immediate goal (West 2008). Therefore, we posit that users are likely to circumvent policies they perceive as unjust or may hinder their task performance.

H4: Perceived organizational injustice will be positively associated with a user's misuse intention.

PERCEIVED SANCTIONS

Based on General Deterrence Theory (GDT), perception of certainty and severity of punishment can deter illegal acts (Gibbs 1975; Straub and Welke 1998; Tittle 1980). The certainty of sanctions refers to the probabilities of being punished, and the severity of sanctions refers to the

degree of punishment (Tittle 1980). In the context of IS misuse intention in organizations, prior research empirically found that both perceived certainty and severity of sanctions were negatively associated with IS misuse intention (D'Arcy et al. 2009; Hovav and D'Arcy 2012).

Sanction may affect employees' perception of morality (Nyborg 1999) such that it provokes people to do what is considered morally ''right'' (Mulder et al. 2009). In some cultures, users' awareness of procedural countermeasures increases moral behavior (Hovav and D'Arcy 2012). In addition to the legitimate exemplar of moral behavior given by ethical leaders, the existence of sanctions may indicate that non-compliance behavior is morally wrong (Mulder et al. 2009). Therefore, we argue that leadership with sanctions will be more effective in deterring IS misuse behavior because it strengthens the employees' moral perception derived from their leaders. Therefore, we hypothesize:

H5: Perceived sanctions will increase the effect of perceived ethical and charismatic leadership in an organization on a misuse intention.

SETA (SECURITY EDUCATION, TRAINING, AND AWARENESS)

Information security policy and guidelines will be less effective if there is no program in place to make employees aware of their rights and responsibilities toward organization's information asset (Peltier 2005). SETA programs can be defined as an educational program that aims to reduce the number of accidental security breaches in organization by people who come into contact with information assets (Whitman and Mattord 2008). The SETA program does not simply encompass employee's awareness building of security policy, but also delivers knowledge about information risk in an organization, consequences for security violation, and employees' awareness building of their responsibilities toward information assets (D'Arcy et al. 2009). We argue that SETA will foster acceptance of security policy by conveying knowledge to employees about the reasons why the policy is established and why procedures have to be followed. Using the concept of informational

justice, employees would have higher perceived justice when they are provided with explanations why procedures were used in a certain way or why outcomes were distributed in a certain fashion (Colquitt et al. 2001). Previous research demonstrated that adequate reasoned explanation for pay cut mitigated the negative effects associated with it, i.e. employee pilferage (Greenberg 1990). In the context of IS security in an organization, sufficient explanation about security policy that is perceived as unfair might decrease the likelihood of negative consequences such as counterproductive work behavior. Therefore, we suggest that the more users understand the process and content of organizational security policies, the less likely they are to circumvent them.

H6: User awareness of the SETA program will decrease the effect of perceived organizational injustice on misuse intention.

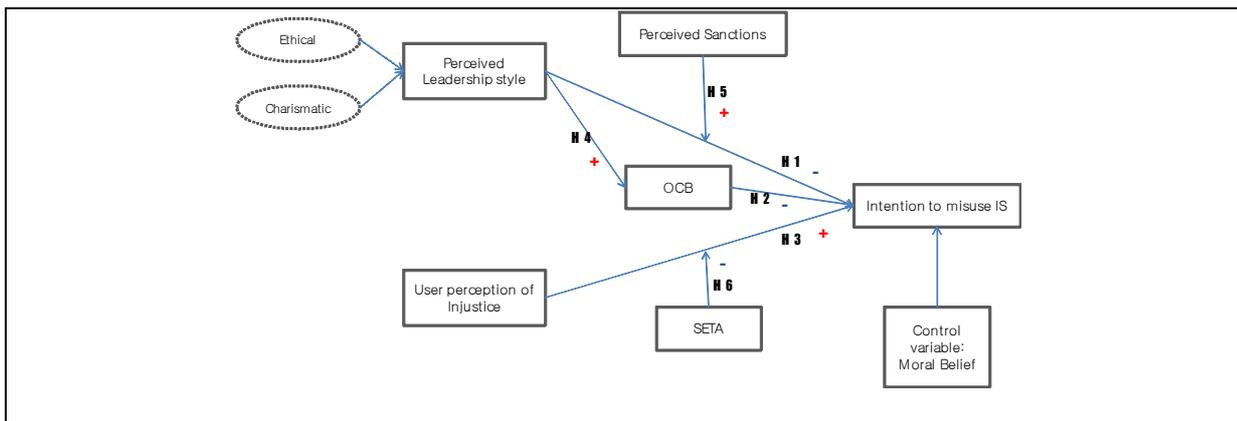Figure 1 illustrates the conceptual model and associated hypotheses for this study.

Figure 1. Conceptual Model

RESEARCH METHODOLOGY

To test the above model, this study will use a survey methodology for data collection. Survey measurements were designed to capture a user's IS misuse intention, perceived leadership, organizational citizenship behaviors, perceived organizational injustice, perceived sanctions, and SETA. We will follow D'Arcy et al. (2009) to measure the intention to misuse IS by using a two-item scale per scenario. The proposed scenarios are: (1) password sharing; (2) use of unlicensed

(pirated) software; (3) taking organizational data off the premises via an external device (USB); and (4) failing to log-off. Perceived ethical leadership will be measured by using a 10 item scale known as the Ethical Leadership Scale (ELS) (Brown et al. 2005).Perceived charismatic leadership will be measured with a seven items scale by utilizing a revised C-K Scale of Charismatic Leadership (Conger et al. 1997). Organizational citizenship behavior will be measured by twenty items scale for obedience and loyalty developed by Van Dyne et al. (1994). Perceived organizational injustice scale will be adapted from Colquitt (2001). We are applying a four-factor structure of perceived injustice. However, we are excluding interpersonal justice because our study context does not focus on the interaction between the decision-maker and the user. In addition to equity norms, distributive justice is also deemed relevant to the user's needs (Deutsch 1975). Therefore, we apply multiple norms to determine distributive justice (Colquitt et al. 2005). We exclude the two control-based procedural justice items and correct ability from the procedural justice scale because employees normally do not posses control over organizational policy creation and modification. In total, we use twelve items for the measurement. Perceived sanction will be measured by using the scale from D'Arcy et al (2009). SETA will be measured with a six-item scale adapted from D'Arcy et al. (2009). Additionally, we use moral belief as a control variable because IS misuse intention is susceptible to an employee's moral belief. The conceptual model constructs and their measurements are summarized in Appendix A. All survey items are provided in Appendix B.

SUMMARY

This study aims to demonstrate the effect of perceived leadership and perceived organizational injustice on employees' intention to misuse IS. We argue that OCB might mediate the effect of perceived leadership on intention to misuse IS. In addition, this study considers the moderating effects of user's perceived sanctions and SETA in deterring user's intention to misuse IS. Based on this research model, we developed a set of hypotheses and adapted measurements for each

construct. As collect data and analyze the above model, we hope to enrich the literature about IS

misuse behavior in an organization.

In addition, organizations may encourage leaders to adopt a more ethical leadership style.

Second, organizations should set policies that align with users' tasks and performance. Third, SETA

program should incorporate informational and procedural justice motif (e.g., how and why certain

policies are created) as it could reduce employees' injustice perceptions of security.

REFERENCES

Bandura, A. 1977. *Social Learning Theory*. NJ: Prentice Hall.
Bandura, A. 1986. *Social Foundations of Thought and Action*. NJ: Englewood Cliffs.
Barker, R.A. 2002. *On the Nature of Leadership*. Univ Pr of Amer.
Bass, B.M. 1985. *Leadership and Performance Beyond Expectations*. Free Press.
Brown, M.E., Treviño, L.K., and Harrison, D.A. 2005. "Ethical Leadership: A Social Learning Perspective for Construct Development and Testing," *Organizational Behavior and Human Decision Processes* (97:2), pp. 117-134.
Colquitt, J.A. 2001. "On the Dimensionality of Organizational Justice: A Construct Validation of a Measure," *Journal of applied psychology* (86:3), pp. 386-400.
Colquitt, J.A., Conlon, D.E., Wesson, M.J., Porter, C.O.L.H., and Ng, K.Y. 2001. "Justice at the Millennium: A Meta-Analytic Review of 25 Years of Organizational Justice Research," *Journal of applied psychology* (86:3), pp. 425-445.
Colquitt, J. A., Greenberg, J., and Zapata-Phelan, C. P. 2005. "What Is Organizational Justice? A Historical Overview," in: *Handbook of Organizational Justice*. Greenberg, J.E., and Colquitt, J.A (eds). Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers, pp. 3-56.
Conger, J.A., and Kanungo, R.N. 1994. "Charismatic Leadership in Organizations: Perceived Behavioral Attributes and Their Measurement," *Journal of Organizational Behavior* (15:5), pp. 439-452.
Conger, J.A., Kanungo, R.N., Menon, S.T., and Mathur, P. 1997. "Measuring Charisma: Dimensionality and Validity of the Conger-Kanungo Scale of Charismatic Leadership," *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration* (14:3), pp. 290-301.
Conlon, D. E., Meyer, C. J., and Nowakowski, J. M. 2005. "How Does Organizational Justice Affect Performance, Withdrawal, and Counterproductive Behavior," in: *Handbook of Organizational Justice*. Greenberg, J.E., and Colquitt, J.A (eds). Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers, pp. 301-327.
D'Arcy, J., and Herath, T. 2011. "A Review and Analysis of Deterrence Theory in the Is Security Literature: Making Sense of the Disparate Findings," *European Journal of Information Systems* (20:6), pp. 643-658.
D'Arcy, J., Hovav, A., and Galletta, D. 2009. "User Awareness of Security Countermeasures and Its Impact on Information Systems Misuse: A Deterrence Approach," *Information Systems Research* (20:1), pp. 79-98.
D'Arcy, J., and Hovav, A. 2007. "Towards a Best Fit between Organizational Security Countermeasures and Information Systems Misuse Behaviors," *Journal of Information*

System Security (3:2), pp. 3-30.

Deutsch, M. 1975. "Equity, Equality, and Need: What Determines Which Value Will Be Used as the Basis of Distributive Justice," *Journal of social issues* (31:3), pp. 137-149.

Gibbs, J.P. 1975. *Crime, Punishment, and Deterrence*. Elsevier New York.

Graham, J.W. 1991. "An Essay on Organizational Citizenship Behavior," *Employee Responsibilities and Rights Journal* (4:4), pp. 249-270.

Greenberg, J. 1987. "A Taxonomy of Organizational Justice Theories," *Academy of Management Review* (12:1), pp. 9-22.

Greenberg, J. 1990. "Employee Theft as a Reaction to Underpayment Inequity: The Hidden Cost of Pay Cuts," *Journal of Applied Psychology; Journal of Applied Psychology* (75:5), pp. 561-568.

Herath, T., and Rao, H.R. 2009. "Protection Motivation and Deterrence: A Framework for Security Policy Compliance in Organisations," *European Journal of Information Systems* (18:2), pp 106-125.

House, R.J. 1977. "A 1976 Theory of Charismatic Leadership," in: *Leadership: The Cutting Edge* J.G. Hunt and L.L. Larson (eds.). Carbondale: Southern Illinois University Press, pp. 189-207.

Hovav, A., and D'Arcy, J. 2012. "Applying an Extended Model of Deterrence across Cultures: An Investigation of Information Systems Misuse in the Us and South Korea," *Information & Management* (49:2), pp. 99-110.

Magklaras, G., Furnell, S., and Brooke, P. 2006. "Towards an Insider Threat Prediction Specification Language," *Information management & computer security* (14:4), pp. 361-381.

Miles, J.A. 2012. *Management and Organization Theory: A Jossey-Bass Reader*. San Francisco: John Wiley & Sons.

Mulder, L.B., Verboon, P., and De Cremer, D. 2009. "Sanctions and Moral Judgments: The Moderating Effect of Sanction Severity and Trust in Authorities," *European Journal of Social Psychology* (39:2), pp. 255-269.

Nyborg, K. 1999. "Informational Aspect of Environment Policy Deserves More Attention: Comment on the Paper by Frey," *Journal of Consumer Policy* (22:4), pp. 419-427.

Organ, D.W. 1997. "Organizational Citizenship Behavior: It's Construct Clean-up Time," *Human performance* (10:2), pp. 85-97.

Organ, D.W., Podsakoff, P.M., and MacKenzie, S.B. 2006. *Organizational Citizenship Behavior: Its Nature, Antecedents, and Consequences*. Sage Publications, Inc.

Peltier, T.R. 2005. "Implementing an Information Security Awareness Program," *EDPACS* (33:1), pp. 1-18.

Podsakoff, P.M., MacKenzie, S. B. 1993. "Citizenship Behavior and Fairness in Organizations: Issues and Directions for Future Research," *Employee Responsibilities and Rights Journal* (6:3), pp. 257-269.

Rost, J.C. 1993. *Leadership for the Twenty-First Century*. Praeger Publishers.

Schneider, B., Ehrhart, M.G., Mayer, D.M., Saltz, J.L., and Niles-Jolly, K. 2005. "Understanding Organization-Customer Links in Service Settings," *The Academy of Management Journal*(48:6), pp. 1017-1032.

Shamir, B., House, R.J., and Arthur, M.B. 1993. "The Motivational Effects of Charismatic Leadership: A Self-Concept Based Theory," *Organization science* (4:4), pp. 577-594.

Straub, D.W., and Welke, R.J. 1998. "Coping with Systems Risk: Security Planning Models for Management Decision Making," *Mis Quarterly*(22:4), pp. 441-469.

Tittle, C.R. 1980. *Sanctions and Social Deviance: The Question of Deterrence*. Praeger New York.

Treviño, L.K., Brown, M., and Hartman, L.P. 2003. "A Qualitative Investigation of Perceived Executive Ethical Leadership: Perceptions from inside and Outside the Executive Suite,"

Human Relations (56:1), pp. 5-37.

Van Dyne, L., Graham, J.W., and Dienesch, R.M. 1994. "Organizational Citizenship Behavior: Construct Redefinition, Measurement, and Validation," *Academy of management Journal* (37:4), pp. 765-802.

Weber, M. 1947. *The Theory of Social and Economic Organization, Tr. By Am Henderson and Talcott Parsons, Ed. With an Introd. By Talcot Parsons.* New York.

West, R. 2008. "The Psychology of Security," *Communications of the ACM* (51:4), pp. 34-40.

Whitman M. E., Mattord H. J. 2008. *Management Of Information Security (2nd ed.).* Course Technology.

Winston, B.E., and Patterson, K. 2006. "An Integrative Definition of Leadership," *International journal of leadership studies* (1:2), pp. 6-66.

Yukl, G. 1989. "Managerial Leadership: A Review of Theory and Research," *Journal of management* (15:2), pp. 251-289.

APPENDIX A - CONSTRUCTS AND MEASUREMENTS

Constructs	Measurements
Intention to Misuse IS	D'Arcy et al. 2009
Ethical Leadership	Brownetetal. 2005
Charismatic Leadership	Congeretetal. 1997
Organizational Citizenship Behavior	Van Dyneetetal. 1994
Organizational Injustice	Colquitt 2001 and Deustch 1975
Certainty Sanctions	D'Arcy et al. 2009
Severity Sanctions	D'Arcy et al. 2009
SETA	D'Arcy et al. 2009

APPENDIX B - SURVEY ITEMS

Intention to Misuse IS (INT)

1. If you were the person in the above scenario, what is the likelihood that you would…?
2. I could see myself engage in such behavior if I were in the same situation as the person in the above scenario

Perceived Ethical Leadership (PEL)

1. Listens to what employees have to say
2. Disciplines employees who violate ethical standards
3. Conducts his/her personal life in an ethical manner
4. Has the best interests of employees in mind
5. Makes fair and balanced decisions
6. Can be trusted
7. Discusses business ethics or values with employees
8. Sets an example of how to do things the right way in terms of ethics
9. Defines success not just by results but also the way that they are obtained
10. When making decisions, asks "what is the right thing to do?"

Perceived Charismatic Leadership (PCL)

1. Provides inspiring strategic and organizational goals
2. Inspirational; able to motivate by articulating effectively the importance of what organizational members are doing
3. Influences others by developing mutual liking and respect
4. Shows sensitivity for the needs and feelings of the other members in the organization
5. Takes high personal risks for the sake of the organization
6. Often incurs high personal cost for the good of the organization
7. In pursuing organizational objectives, engages in activities involving considerable personal risk

Organizational Citizenship Behavior (OCB)

Loyalty:
1. Represents organization favorably to outsiders
2. Does not go out of way to defend an organization against outside threats
3. Does not tell outsiders this is a good place to work
4. Does not defend an organization when employees criticize it
5. Actively promotes an organization's products and services
6. Would accept a job at competing organizations for more money
7. Would not urge coworkers to invest money in an organization
8. Is not involved in outside groups for benefit of an organization
9. Keeps informed about products and services and tells others
Obedience:
10. Works so that personal appearance is attractive and appropriate
11. Rarely wastes time while at work

12. Produces as much as capable of at all times
13. Always comes to work on time
14. Regardless of circumstances, produces highest quality work
15. Does not meet all deadlines set by an organization
16. Is mentally alert and ready to work when arrives at work
17. Follows work rules and intrusions with extreme care
18. Sometimes wastes organizational resources
19. Keeps work area clean and neat
20. Sometimes misses work for no good reason

Perceived Organizational Injustice (PIJ)

Procedural justice:
1. Have the procedures to determine policy been applied consistently?
2. Have those procedures been free of bias?
3. Have those procedures been based on accurate information?
4. Have those procedures upheld ethical and moral standards?
Distributive justice:
5. Is the policy appropriate to your need in accomplishing your task?
6. Is the policy appropriate for the effort you have to spend to complete your work?
7. Is the policy justified, given your effort?
Informational justice:
8. Has the authorized person been candid (truthful) in his/her communications about the policy with you?
9. Has an authorized person explained why particular rules exist?
10. Were the explanations regarding the procedures reasonable?
11. Were the explanations communicated in a timely manner?
12. Were the explanations tailored to individuals' specific needs?

Perceived Certainty Sanctions (PC)

1. Eventually, a person would probably be caught after misusing IS
2. The likelihood that the organization would discover a person who misused IS is low or high

Perceived Severity Sanctions (PS)

1. If caught misusing IS, the person involved in the scenario would be severely reprimanded
2. If caught misusing IS, the punishment of the person involved in the scenario would be severe or not severe

SETA

1. My organization provides training to help employees improve their awareness of computer and information security issues
2. In my organization, employees are briefed on the risk of sharing passwords to other employees
3. My organization provides employees with education on computer software copyright laws
4. In my organization, employees are briefed about the risk of taking organization's data on an external device (e.g., USB) off the premise
5. In my organization, employees are briefed on the importance of logging-off while away from their computer
6. My organization educates employees on their computer security responsibilities