



The effects of organizational images on security compliance intention: focused on affection and job security in South Korea

Juyeon Oh¹ · Seunghwan Myeong² 

Accepted: 8 April 2024
© The Author(s) 2024

Abstract

This study investigates the factors influencing Korean corporate workers to increase their intention to comply with security voluntarily. Specifically, this study investigates whether organizational attractiveness affects employees' intention to comply with security. In addition, this study will examine whether affection and job security, which represent the Korean corporate image, affect organizational attractiveness. 477 data collecting online survey was used to test the research model. Participants for our survey were derived from workers and public officials in South Korea. The results were as follows. First, the symbolic image of being affectionate influences the instrumental image of job security. Second, an instrumental image has a significantly positive effect on corporate attractiveness. Third, it was found that job security increased the attractiveness of the organization perceived by the employees and, in turn, increased the intention of the employees to comply with the organization's security. Our findings can be used to develop strategies to enhance security compliance intention within firms.

Keywords Corporate image · Job security · Security compliance intention · Attractiveness · South Korea

✉ Seunghwan Myeong
shmyeong@inha.ac.kr

Juyeon Oh
juyeonoh07@gmail.com

¹ Strategy Planning Team, DK Ecofarm Co. Ltd., Seoul 05641, Korea

² Department of Public Administration, Inha University, Incheon 22212, Korea



Introduction

National Information Industry Confidentiality Protection Center in South Korea announced that 166 overseas technology leaks were detected over the 6 years from 2012 to 2017, and 22 of the leaked cases of national core technology were leaked (UPI News 2018). In addition, the National Intelligence Service in South Korea announced that 99 cases of technology leaks were detected over 5 years from 2017, and the damage was estimated at 22 trillion won (Kyunghyang News 2022a, b). One of the characteristics of these technology leak crimes is that technology leaks mainly by insiders. In fact, according to data from the National Police Agency in South Korea, 486 (84%) out of the 580 cases of industrial technology and trade secret leaks from 2014 to 2018 were reported by insiders (UPI News 2019).

Insiders' technology and trade secrets leak is more than just a problem for Korean companies. IBM reported that 60% of cybersecurity breaches were caused by former and current insiders in the 2016 Cyber Security Intelligence Index. Additionally, according to Accenture's 'The State of Cybersecurity and Digital Trust 2016' report, it was announced that insiders within the enterprise had a key role in data breaches. IT Chosun (2019) reported that the methods used for technology leakage by SMEs were email/portable storage media (60.8%), copying/theft (32.5%), and scouting key personnel (25.5%) from 2013 to 2018.

Combining the contents mentioned above, it was confirmed that the company's technology leakage is mainly done by insiders, not outsiders such as hackers. Siponen and Vance (2010) stated that security accidents caused by insiders can be prevented if there is an inducement for corporate employees to comply with internal security policies. In other words, even if security-related punishments within the company are strengthened and various security policies are established, it is only easy to see the effect of internal employees' voluntary security policy compliance. Considering that the main party to technology leakage is internal personnel and internal personnel are greatly influenced by psychological factors such as organizational satisfaction, research that considers psychological factors of organizational members needs to be done actively (Lee et al. 2021; Hwang and Lee 2016).

Previous studies related to the security compliance intention of employees proved that (1) administrative security activities such as company policies and regulations (Hwang and Kim 2016; Choi and Lee 2014), security education/security services (Kim et al. 2018a, b), and human control, policy control, and access control (Lee and Lee 2015), (2) physical security activities through cloud system architecture configuration (Ullah et al. 2013), and the monitoring and surveillance environment using a computer (D'Arcy and Greene 2014), and (3) multi-dimensional security activities of physical, technical, and managerial security (Kim et al. 2018a, b; Park and Yim 2012) affect security compliance intention of employees. Assefa and Tensaye (2021) recently reported that management commitments, awareness, training, accountability, and audit and monitoring affect security compliance intentions.

Most organizations are trying to control employees' security compliance behavior by introducing systems with security policies. However, they make



decisions and act considering the security environment and internal motivations (Hu et al. 2011). Therefore, to increase the level of security compliance in the organization, voluntary security compliance intention of employees is required, and the organization needs efforts to increase the voluntary security compliance intention of employees in organizations (Guo et al. 2011; Hwang 2021; West 2008). However, previous studies on security compliance have focused on factors that restrict and regulate the behavior of employees through compulsory security activities.

Therefore, this study aims to investigate the influencing factors to voluntarily increase the intention of Korean corporate workers to comply with security. Recently, Oh and Suh (2023) have identified the relationship between job satisfaction, relationship satisfaction, and leadership factors to create an organizational atmosphere in which members can voluntarily comply with security policies and enhance the intention to comply with security policies.

However, there needs to be more research on organizational psychological factors to increase security policy compliance intention. Therefore, this study investigates whether organizational attractiveness (psychological factor) affects employees' intention to comply with security. In addition, this study will examine whether affection and job security represent Korean organizational images affecting organizational attractiveness. For the above research, the following research questions were proposed.

RQ1 Does organizational attractiveness affect employees' security compliance intentions?

RQ2 Does Korean corporate image affect corporate attractiveness?

Research model and hypotheses development

Research model

This study aims to identify the relationship between corporate images, organizational attractiveness, security policy compliance intention and seek policy direction. To this end, this study examines psychological factors of being affectionate, job security, and organizational attractiveness, as well as the results of intention to comply with security policy. Based on the theoretical background on factors, a research model was established, as shown in Fig. 1.

Korean corporate images and organizational attractiveness

The image was derived from the Latin word 'imago,' and its importance is emphasized in various fields such as advertising, marketing, and recruiting. Kotler (1997) defined an image as individuals' and groups' beliefs about objects. A corporate image can be defined as people's overall company perspective (Oh and Kim 2012a).



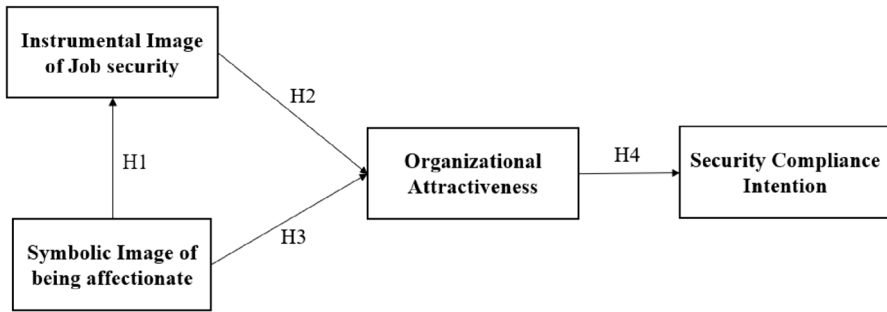


Fig. 1 Research model

This corporate image positively affects customers' purchase decision-making (Hsieh et al. 2004), corporate financing, and talent recruitment (Winter 1986). In addition, a favorable corporate image positively affects public opinions about the company and enables active social support in various corporate activities (Dean 2003–2004; David et al. 2005).

A Korean employment information provider 'Incruit Corporation' surveyed the company that university students want to work for in 2021 and 'Kakao Corp.'¹ It was selected as the company university students want to work for most (UNN News 2021). In addition, respondents who chose 'Kakao Corp.' mentioned the reasons for 'high business value and promising growth potential (21.2%)' and 'growth and development potential (16.1%)', which means symbolic and instrumental images. Samsung Electronics ranked second in the company that university students would most like to work for, and respondents who chose Samsung Electronics said that they are satisfied with the salary and compensation system (55.6%), which means instrumental images. The factors respondents considered most important when choosing a job were income, stability, aptitude, and interest, and the workplaces preferred by young people were large corporations (27.4%), public enterprises (18.2%), and government agencies (16.2%) (Chungnamilbo 2023).

As in the case above, there are several studies (e.g., Kashive and Khanna 2017; Lievens and Highhouse 2003; Lievens et al. 2005 2007; Oh and Kim 2012a, 2012b; Van Hoye and Saks 2011; Van Hoye et al. 2013; Rai 2020) have supported the relations between corporate image (symbolic, and instrumental images), and corporate attractiveness. Corporate attractiveness is a favorable evaluation of employees about the company and is important in attracting excellent talent (Turban and Greening 1997). In addition, corporate attractiveness is a concept that employees comprehensively evaluate their company positively (Oh and Kim 2012a).

For example, applicants want to work for companies because they are providing(having) high salary (Lievens and Highhouse 2003; Rai 2020), good

¹ Kakao (Korean: 카카오) is a South Korean Internet company established in 2010. The company has gained further prominence from KakaoTalk, a free mobile instant messaging application with free text and call features (source: WIKIPEDIA, <https://en.wikipedia.org/wiki/Kakao>).



location (Lievens and Highhouse 2003), take diversity (Lievens et al. 2005), social/team activities (Lievens et al. 2005; Van Hoye and Saks 2011; Rai 2020), job security (Oh and Kim 2012b; Oh and Myeong 2021), supporting system (Oh and Kim 2012b) advancement opportunities (Van Hoye and Saks 2011; Rai 2020) or they are having a innovative image (Lievens and Highhouse 2003), a competent image (Lievens and Highhouse 2003; Lievens et. al 2007; Oh and Kim 2012a; Oh and Kim 2012b; Van Hoye et al. 2013; Rai 2020), an exciting image (Lievens et al. 2005 2007; Oh and Kim 2012a; Van Hoye and Saks 2011), a cheerful image (Lievens et al. 2005; Lievens et. al 2007), a sincere image (Oh and Kim 2012a, 2012b; Van Hoye and Saks 2011; Rai 2020), an affectionate image (Oh and Kim 2012a), a sophisticated image (Oh and Kim 2012a), a prestige image (Van Hoye and Saks 2011; Rai 2020).

As discussed above, many types of research on recruitment have focused on whether instrumental and symbolic images were positively related to a company's attractiveness. However, studies on the direct relationship between functional and symbolic images are rare. Oh, and Myeong (2021) recently found a new relationship between symbolic and instrumental images. Specifically, the symbolic image of being sincere, the symbolic image of being successful, and the symbolic of being kind affected the instrumental image of job security. However, Oh and Myeong's (2021) research was a study of workers working at ten companies in Korea, and it is difficult to say that it is a study representing all workers working in Korean companies. Therefore, this study attempts to reconfirm the results by verifying the relationship between instrumental, symbolic images and organizational attractiveness. In particular, this study aims to conduct a more in-depth study focusing on affection.²(we call affection Jeong in South Korea) which represents Korean companies' image (Oh and Myeong 2021) and job security. Since there is an increasing tendency for young people to place importance on job security when choosing a job in Korea (UNN News 2022a, b), HRM managers need to pay more attention to job security than before to recruit young people and retain human resources. Based on the previous studies mentioned above, the following hypotheses were established in this study.

H1 A symbolic image of being affectionate will have a positive effect on an instrumental image of job security.

H2 Instrumental image of job security will positively affect attractiveness.

H3 Symbolic image of being affectionate will have a positive effect on Organizational attractiveness.

² The Encyclopedia of Korean National Culture can define affection as a feeling that arises from the feeling of an object or object (<http://encykorea.aks.ac.kr>). That is why Korean people call Korea an 'affection society' when defining Korean culture.



Organizational attractiveness and security compliance intention

Security compliance is the intention of organizational members to protect the organization's potential security threats (Bulgurcu et al. 2010) and the organization's information resources from internal and external security threats (Vance et al. 2012). In other words, the security compliance intention means the voluntary compliance intention of the organization members to protect the organization from threats.

Some studies have been conducted to increase the level of safety compliance of these workers. For example, organizations enact policies or regulations related to security within the company (Hwang and Kim 2016; Choi and Lee 2014), provide security education for workers to increase security compliance (Kim et al. 2018a, b), control access to secure facilities (Lee and Lee 2015), and monitoring using a computer system (D'Arcy and Greene 2014).

Most organizations use systems to control and manage the behavior of their members against security threats. However, organizational members want to make decisions and act voluntarily, considering the security environment and the intrinsic motivation surrounding them (Hu et al. 2011). Therefore, efforts for employees to increase their willingness and intentions to comply with security are required (Guo et al. 2011) to increase security compliance inside an organization.

Many studies have proven that the attitude variables of employees (e.g., organizational commitment, Job satisfaction) have positively affected organizational effectiveness (e.g., job performance and organizational citizenship behavior). The positive attitude of organizational members toward their jobs is a factor that organizations need to pay close attention to because it ultimately leads to positive behavior in response to organizational demands (Robbins and Judge, 2011). In addition, TAM (Technology Acceptance Model) developed by Fred Davis (1989) and Richard Bagozzi explained that Attitude Toward Using affects the Behavioral Intention to Use, which leads to Actual System Use.

Some studies have identified a positive relationship between organizational commitment(attitude) and security compliance intention(intention). Hwang and Kim (2016) found that organizational commitment is a factor that reinforces security compliance intention in the relationship between the establishment of a physical system within an enterprise and security compliance intention. Hwang and Heo (2018) found that organizational commitment positively affects workers' intention to comply with security regulations. In other words, workers with high organizational commitment try to achieve the security performance desired by the organization. Recently, Lee et al. (2021) proved that organizational commitment positively affects security compliance intention through empirical analysis. Therefore, based on the existing research between organizational commitment and security compliance intention, this study established a hypothesis between organizational attractiveness(attitude) and security compliance intention(intention).

If workers perceive organizations as attractive, then workers will act positively for organizational performance. In this respect, workers can increase their security compliance intention because they perceive their organization as attractive. The following exploratory hypotheses were established based on the assumptions mentioned above.



H4 Organizational attractiveness will have a positive effect on security compliance intentions.

Research methodology

Measure

As in previous studies Lievens and Highhouse (2003), Lievens et al. (2005, 2007), Oh and Kim (2012a, 2012b), Oh and Myeong (2021), we defined the organizational images as Instrumental and symbolic images. Our study focused on the Korean symbolic image of being affectionate, which was developed by Kim (2012a). The study measures the following attributes of symbolic images of an organization: kind, affectionate, and servable, developed by Oh and Kim (2012a).

Instrumental images have measured the extent to which individuals perceived an organization to provide various functions such as job security. We used three items for measuring the factor of job security by Lievens and Highhouse (2003), Lievens et al. (2005), Oh and Kim (2012b), and Oh and Myeong (2021). For example, some items were "The company I work for offers job security" and "The company I work for offers the possibility of getting a better stable job."

Four items proposed by Highhouse et al. (2003), Lievens et al. (2005), Oh and Kim (2012b), and Oh and Myeong (2021) were used to measure organizational attractiveness, which means the overall perspective of people related to a company (Oh and Kim 2012b). Some items were "For me, the company I work for is a good place to work" and "The company I work for is attractive to me as a place of employment."

For measuring the security compliance intention, which can be defined as the voluntary compliance intention of organizational members to protect the organization from threats, this study used a scale verified in the study of Park and Yim (2012) and Herath and Rao (2009). The following sentences measured items: "I will continue to follow the company's security policy in the future" and "I am confident that I will abide by the company's security policy."

All items were measured on a 5-point rating scale, ranging from "strongly disagree" (1) to "strongly agree" (5).

Data collection and analysis

Data were collected online from April 1, 2022, to April 15, 2022, through an online survey targeting organizational members working in the private and public sectors in South Korea to verify the research model. To ensure research ethics, an overview of the study, including the purpose and content of the study, was provided to the participants in writing before starting the survey. The principle of confidentiality was specified in the consent form for participation in the research, and the written consent form was prepared after confirming the participant's willingness to participate voluntarily.



477 questionnaires were used for the analysis, excluding two copies of insincere responses. Participants were derived from workers at private companies and public officials working at public organizations. Of all the respondents, 235(49.3%) were public officials and 242(50.7%) were workers. The gender was 249(52.2%) for males and 228(47.8%) for females. By age group, 179(37.5%) for 30–39 years old and 147(30.8%) for 40–49 years old accounted for almost 70%. In the case of education level, most of the respondents have a bachelor's degree or higher. After that, the questionnaire items were divided into questions about workers and public officials. The demographic characteristics are shown in Table 1.

For analysis, this study used PLS-SEM (partial least squares-structural equation modeling), which is suitable for exploratory research to identify causal relationships between organizational attractiveness and security compliance intention. PLS-SEM is sensitive to the assumption of multivariate normal distribution. It is more suitable for exploratory research when the collected data is small or not normally distributed (Chin 1998b; Ringle et al. 2012). Additionally, PLS-SEM makes it easy to analyze formative and reflective measurement models (Hair et al. 2011). SmartPLS 3.0 software was used for analysis.

Results

Measurement model

For analysis of measurement models, the Internal consistency reliability was assessed by Cronbach Alpha(α) and composite reliability. In the case of Cronbach Alpha(α), it is judged that there is no problem with the reliability among the measurement items when it is 0.6 or higher. The composite reliability is higher than 0.7, which indicates that the reliability is appropriate (Henseler et al. 2009). Meanwhile, using the convergent validity method, we checked whether the factor loading and Average Variation Extracted (AVE) were significant. The value of the factor loading scores should be 0.7 or more; it can be considered statistical significance, and the scores of the AVE should be higher than 0.5 (Chin 1998a). As a result of implementing the internal consistency and convergence validity methods related to reliability, Table 2 shows that the measurement models' reliability and convergence validity are satisfied. The constructs and items of the model verify that it is satisfied by meeting the criteria for Cronbach's Alpha (Above 0.6), Composite Reliability (CR) (above 0.7) regarding internal consistency and Factor Loading (above 0.7), and Average Variance Extracted (AVE) (above 0.5) regarding convergence validity.

Also, we used the Fornell–Larcker criterion to assess the discriminative validity of the measurement model on the construct level (Chin 1998a). Suppose the square roots of each construct's AVE that the diagonal of the correlation matrix is higher than its correlations with other constructs, which means there is a discrimination validity in the model (Chin 1998a). Therefore, we compared the correlation coefficient between the latent variables to verify that the square roots of each latent variable's AVE are higher than the correlation coefficient between one latent variable



Table 1 Demographic information (N = 477)

	Frequency	%	Frequency	%
<i>Job type</i>				
Public officials	235			
Worker	242			
<i>Age</i>				
20 to 29 years old	82	17.2		
30 to 39 years old	179	37.5		
40 to 49 years old	147	30.8		
50 to 59 years old	64	13.4		
60 or older	5	1.0		
<i>Participants for workers (company information)</i>				
<i>The main business of the company you are working for</i>				
Manufacturing	29	12.0		
Construction	13	5.4		
Real estate	7	2.9		
Rental	2	0.8		
Wholesale/retail	16	6.6		
Food/restaurant	2	0.8		
Transportation/passenger/lodging	13	5.4		
Leisure service	16	6.6		
Broadcasting/pressing/publishing	5	2.1		
Information and communication	14	5.8		
Financial	12	5.0		
Education service	39	16.1		
<i>Gender</i>				
Male	235		249	52.2
Female	242		228	47.8
<i>Education level</i>				
High school graduates	82	17.2	32	6.7
Bachelor	179	37.5	331	69.4
Master	147	30.8	94	19.7
Ph.D	64	13.4	20	4.2
	5	1.0		
<i>Total revenues in 2020</i>				
<US\$1 million	29	12.0	66	27.3
\$ 1 million-5 million	13	5.4	52	21.5
\$ 5 million-10 million	7	2.9	Million	13.6
\$ 10 million-50 million	2	0.8	27	11.2
> = \$50million	16	6.6	64	26.4
<i>Job role</i>				
General affairs/public relations/education/personnel	13	5.4	51	21.1
Accounting	16	6.6	30	12.4
Legal/patent	5	2.1	4	1.7
Internal security	14	5.8	6	2.5
Planning	12	5.0	28	11.6
R&D	39	16.1	21	8.7



Table 1 (continued)

	Frequency	%	Frequency	%
Medical/health/social welfare	33	13.6	Computing/IT	11
Other	41	16.9	Marketing/sales	19
<i>Size</i>			Purchasing	1
Major enterprise	75	31.0	Production/quality control	31
Middle market enterprise	74	30.6	Consulting	8
Small and medium enterprises (SMEs)	93	38.4	Other	32
<i>Job position</i>			<i>Number of full-time employees</i>	
Staff	67	13.2	Less than 10 people	18
Assistant manager	93	27.7	10 to 19 people	22
Manager/deputy general manager	62	38.4	20 to 49 people	35
General manager	14	25.6	50 to 99 people	28
Executive or higher	6	5.8	100 to 299 people	39
			300 or more people	100
<i>Participants for public officer</i>				
<i>Government type</i>			<i>Working year</i>	
Central government	105	44.7	Less than 5 years	68
Local government	130	55.3	5 to 10 years	51
<i>Job role</i>			10 to 15 years	39
Administration	131	55.7	15 to 20 years	32
Social welfare	19	8.1	20 or more years	45
Computing	6	2.6		
Other	79	33.6		



Table 2 Results of the reliability and convergent validity tests

Constructs	Items	Loadings	Composite reliability	Cronbach's α	AVE
Symbolic image of being affectionate	Aff1	0.878	0.923	0.875	0.799
	Aff2	0.918			
	Aff3	0.885			
Functional image of job security	Js1	0.896	0.948	0.928	0.821
	Js2	0.896			
	Js3	0.924			
	Js4	0.912			
Organizational attractiveness	Attr1	0.904	0.952	0.933	0.832
	Attr2	0.938			
	Attr3	0.912			
	Attr4	0.895			
Security compliance intention	Sci1	0.947	0.948	0.889	0.900
	Sci3	0.950			

All loadings were significant at the 0.001 level

Table 3 Correlation matrix and results of the discriminant validity test

Constructs	AFF	JS	ATTR	SCI
AFF	0.894			
JS	0.674	0.906		
ATTR	0.729	0.728	0.912	
SCI	0.436	0.463	0.502	0.949

Bold numbers on the diagonal are the square roots of AVE

AFF Symbolic Image of being affectionate, JS Functional Image of job security, ATTR Organizational Attractiveness, SCI Security Compliance Intention

and any other latent variable. Based on Table 3, our measurement model satisfied the discriminant validity.

Structural model

We calculated the T-statistics and R-square value to analyze our structural model using the bootstrapping function in SmartPLS 3.0. The results of the hypothesis test for structural model analysis are shown in Fig. 2.

First, H1 is about whether a company's symbolic image of being affectionate affects the functional image of job security. In our study, we verified that the symbolic image of being affectionate (H1: $t = 16.286, P < 0.01$) has effects on the functional image of job security. Therefore, H1 was accepted. Second, the functional image of job security was a significant determinant of organizational attractiveness (H2: $t = 11.782, P < 0.01$). Third, the symbolic image of being affectionate



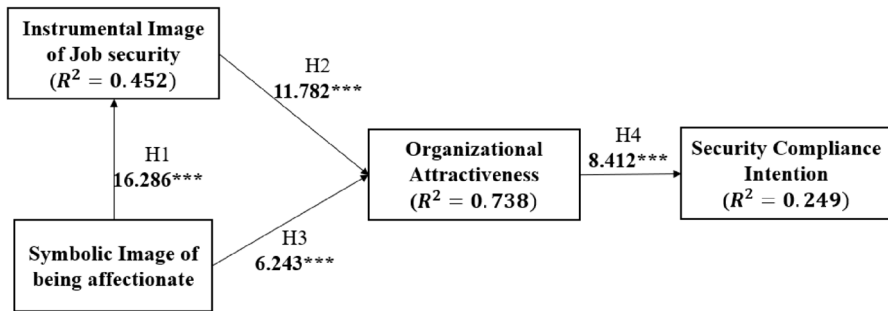


Fig. 2 Results of the proposed research model. Note) **Significant at $P < 0.05$ level, ***Significant at $P < 0.01$ level and the paths with dotted lines are insignificant

was also a significant determinant of organizational attractiveness (H3: $t = 6.243$, $P < 0.01$). Therefore, H2 and H3 were also statistically significant. Fourth, organizational attractiveness affects security compliance intention (H4: $t = 8.412$, $P < 0.01$). Thus, H4 was accepted. In conclusion, it was found that all other hypotheses were accepted.

In addition, this study used Zhao et al.'s (2010) method of estimating direct and indirect effects using the PLS bootstrap to verify whether there is a mediating effect of organizational attractiveness between job security and security compliance intention. The mediating effect was found to be significant ($t = 7.663$, $P = 0.001$). Considering that it was verified that the direct effect between job security and security compliance intention was significant ($t = 8.478$, $P = 0.000$), organizational attractiveness can be determined to play a partial mediating role (Zhao et al. 2010).

Discussion and implications

The main purpose of this research is to explore the relationship between Korean corporate images, corporate attractiveness, and security compliance intention. This research is one of the first studies examining corporate image factors significantly affecting employees' intention to comply with security. This study sheds light on motivation factors for employees to comply with security in organizations.

The study revealed important findings as follows. First, this study proved that the symbolic image of affectionates the instrumental image of job security found in a previous study (e.g., Oh and Myeong 2021) conducted in only ten companies. Therefore, this research is a meaningful study that once again confirmed and generalized the relationship between symbolic and functional images. According to Hofstede's (2006) cultural dimension theory, Korea has a stronger tendency toward a collectivist culture than an individualistic culture. Although an individualistic culture now coexists, in many organizations, members still rejoice and grieve together on special days such as employees' marriages or deaths of employees' family members. Many companies worldwide suffered a management crisis due to the COVID-19 pandemic, and Korean airlines experienced the same



difficulties. All employees of Asiana Airlines and EASTAR Jet in South Korea overcame the crisis by voluntarily reducing their salaries by 33% to 40% to overcome the company's difficulties together (new1 2020). Therefore, HR managers must prepare to create an organizational culture in which employees can increase commitment and identification. It is important to build this culture by constantly communicating with employees.

Second, according to previous studies, an instrumental image significantly affects corporate attractiveness (Myrden and Kelloway 2015; Van Hoye and Saks 2011; Kashif and Khanna 2017). Many people take the tests to become public officers because of job security in South Korea. The Ministry of Human Resources and Innovation of Korea mentioned that the average competition rate for the national exam of public officers scored 93.1 to 1 in 2011, and it was considered a dream job for young people looking for a stable job (Maekyung 2022). The national civil service examination competition rate for 5 years was 41 to 1 in 2018, 39.2 to 1 in 2019, and 35 to 1 in 2021. Therefore, these results empirically support the Korean job market (Maekyung 2022). Therefore, a company's HR manager must provide job security to employees and build a system and culture in the organization that allows employees to demonstrate their abilities to the fullest for a long time. To this end, building trust between employees, the organization, and superiors and forming an organizational culture where employees can directly participate in establishing an organizational performance system and trust the results is important.

Third, our research finds factors that motivate employees to comply with security voluntarily. Previous research has mainly focused on compulsory and disciplinary policies and systems for security compliance such as company policies and regulations (Hwang and Kim 2016; Choi and Lee 2014), security education/security services (Kim et al. 2018a, b), and human control, policy control, and access control (Lee and Lee 2015), cloud system architecture configuration (Ullah et al. 2013), the monitoring and surveillance environment using a computer (D'Arcy and Greene 2014). Since there are limits to coercive factors that change human behavior, this study focused on identifying factors that change human behavior. Specifically, it was found that job security increased the attractiveness of the organization perceived by the employees and, in turn, increased the intention of the employees to comply with the organization's security. Recently, employees of Samsung Electronics, a world-renowned Korean company, were put on trial on charges of opening a consulting company in Japan and leaking technology. Prosecutors believe that this employee, who worked at Samsung Electronics for over 20 years, leaked information from Samsung Electronics' internal meetings after setting up a company in Japan with a Japanese business partner in 2011 (MBC News 2024). Samsung Electronics has established its goal of securing a super gap in system semiconductors based on its competitiveness in memory semiconductors. It has recently been experiencing a steady stream of technology leaks (BizFact 2023). In this situation, strong punishment for technology leaks is only an after-the-fact measure, and technology leaks require a system or alternative as a preemptive prevention measure more than anything else. Therefore, HR managers must establish corporate brand marketing, form a corporate culture, and establish attractive HR policies and systems so employees can feel attractive to the organization. These efforts strengthen employees'



psychological factors toward the company and increase the likelihood that they will not engage in actions that cause financial damage to the company.

Considering the study's motivation and derived implications comprehensively, the study's significance can be explained as follows. This study approached causal variables to increase organization members' intention to comply with security policies from the perspective of the organizational behavior field of business administration. From this perspective, corporate image (affectionate, job stability) and organizational attractiveness improved security compliance intention. The contribution of the research can be found in that it has proven the possibility of being utilized. This contribution is expected to be meaningful in that it provided an opportunity to expand the scope to consider psychological factors to increase the intention of organizational members to comply with security policies.

Limitations and future directions

Despite the new findings, this study has some limitations that should be addressed in future studies. First, this research survey was conducted for Korean companies and public institutions workers. Therefore, the results of this study have limitations in that they can be applied only to Korean companies and public institutions. In the future, it is necessary to conduct a study targeting workers in various countries and cultures and compare the results. Second, this study needs to focus on job security among the corporate image factors that affect employees' intention to comply with security. Therefore, a more comprehensive study on corporate image factors that affect future security compliance intentions is needed. Third, the research model shows only the basic structure between major variables. Therefore, it is judged that future research needs to refine the theoretical framework further by utilizing new parameters or control variables.

Funding This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea(NRF-2022S1A5C2A03093690).

Declarations

Conflict of interest Authors Juyeon Oh and Seunghwan Myeong declare that We have no conflict of interest.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.



References

- Accenture & HfS Research. 2016. The State of Cybersecurity and Digital Trust 2016. https://www.accenture.com/t20160802T065312_w_us-en/_acnmedia/PDF-23/Accenture-State-Cybersecurity-and-Digital-Trust-2016-Executive-Summary-June.pdf.
- Assefa, T., and A. Tensaye. 2021. Factors Influencing Information Security Compliance: An Institutional Perspective. *SINET: Ethiopian Journal of Science* 44 (1): 108–118.
- BizFact. 2023. 'Super Gap' is also Busy... The Reason Why Samsung Electronics Continues to Leak Technology. <https://news.tf.co.kr/read/economy/2023778.htm>. Accessed 27 Feb 2024
- Bulgurcu, B., H. Cavusoglu, and I. Benbasat. 2010. Information Security Policy Compliance: An Empirical Study of Rationality-based Beliefs and Information Security Awareness. *MIS Quarterly* 34 (3): 523–548.
- Chin, W.W. 1998a. Issues and Opinion on Structural Equation Modeling. *Management Information Systems Quarterly* 22 (1): 7–16.
- Chin, W.W. 1998b. *Modern Methods for Business Research*. Brighton: Psychology Press.
- Choi, P., and M. Lee. 2014. The Effects of Industrial Security Activities of Local Institution on the Technology Outflow Prevention -Focused on the Mediator Effect of the Security Recognition. *National Association of Korean Local Government*. 16 (1): 119–141.
- Chungnamilbo. 2023. When Choosing a Job, "Priority is Given to Income, Safety, Interest, etc.". <https://www.chungnamilbo.co.kr/news/articleView.html?idxno=742341>. Accessed 13 Nov 2023
- D'Arcy, J., and G. Greene. 2014. Security Culture and the Employment Relationship as Drivers of Employees' Security Compliance. *Information Management & Computer Security* 22 (5): 474–489.
- David, P., S. Kline, and Y. Dai. 2005. Corporate Social Responsibility Practices, Corporate Identity, and Purchase Intention—A Dual Process Model. *Journal of Public Relations Research* 17 (3): 291–313.
- Davis, F.D. 1989. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly* 13 (3): 319–340.
- Dean, D.H. winter 2003–4. Consumer Perception of Corporate Donations. *Journal of Advertising*, 32(4), 91–102.
- Guo, K., Y. Yuan, N. Archer, and C. Connelly. 2011. Understanding Nonmalicious Security Violations in the Workplace: A Composite Behavior Model. *Journal of Management Information Systems* 28 (2): 203–236.
- Hair, J.F., C.M. Ringle, and M. Sarstedt. 2011. PLS-SEM: Indeed, a Silver Bullet. *Journal of Marketing Theory and Practice* 19 (2): 139–152.
- Henseler, J., C.M. Ringle, and R.R. Sinkovics. 2009. The Use of Partial Least Squares Path Modeling in International Marketing. In *New Challenges to International Marketing (Advances in International Marketing, 20)*, ed. R.R. Sinkovics and P.N. Ghauri, 277–319. Bingley: Emerald Group Publishing Limited.
- Herath, T., and H.R. Rao. 2009. Protection Motivation and Deterrence: A Framework for Security Policy Compliance in Organisations. *European Journal of Information Systems* 18 (2): 106–125.
- Highhouse, S., F. Lievens, and E.F. Sinar. 2003. Measuring Attraction to Organizations. *Educational and Psychological Measurement* 63: 986–1001.
- Hofstede, G. 2006. What did GLOBE Really Measure? Researchers' Minds versus Respondents' Minds. *Journal of International Business Studies* 37: 882–896.
- Hsieh, M.H., S.L. Pan, and R. Setiono. 2004. Product-, Corporate- and Country Image Dimensions and Purchase Behavior: A Multicountry Analysis. *Journal of the Academy of Marketing Science* 32 (3): 251–270.
- Hu, Q., Z. Xu, T. Dinev, and H. Ling. 2011. Does Deterrence Work in Reducing Information Security Policy Abuse by Employees? *Communications of the ACM* 54 (6): 54–60.
- Hwang, H.D., and C.M. Lee. 2016. A Study on the Relationship between Industrial Espionage, Self-Control, and Organizational Commitment. *Korean Journal of Industry Security* 47: 171–197.
- Hwang, I.H., and S.H. Hu. 2018. A Study on the Influence of Information Security Compliance Intention of Employee: Theory of Planned Behavior, Justice Theory, and Motivation Theory Applied. *Journal of Digital Convergence* 16 (3): 225–236.
- Hwang, I.H., and S.H. Hu. 2021. The Effect of Psychological Empowerment on IS Compliance Intention: Focusing on the Moderating Effect of Trust and Justice. *Journal of Digital Convergence* 16 (3): 225–236.



- Hwang, I.H., and D.J. Kim. 2016. The Effect of Organizational Information Security Environment on the Compliance Intention of Employee. *The Journal of Information Systems* 25 (2): 51–77.
- IT Chosun. 2019. Technology Leakage to Small and Medium-Sized Enterprises is Serious, and the Damage Alone Amounts to 800 Billion Won. http://it.chosun.com/site/data/html_dir/2019/10/04/2019100401652.html. Accessed 1 Aug 2022
- Kashive, N., and V.T. Khanna. 2017. Study of Early Recruitment Activities and Employer Brand Knowledge and Its Effect on Organization Attractiveness and Firm Performance. *Global Business Review* 18 (3): 1–19.
- Kim, B., J. Lee, and B. Kim. 2018a. Effect of Information Security Training and Services on Employees' Compliance to Security Policies. *Information Policy* 25 (1): 99–114.
- Kim, K., J. Park, and S. Jung. 2018b. Effects of SEM Industrial Technology Protection Activities on the Industrial Security Policy Compliance Commitment—Focus on the Mediation Effect of Security Awareness. *The Korean Association for Research of Industrial Security* 8 (1): 75–111.
- Kotler, P. 1997. *Marketing Management: Analysis, Planning, Implementation, and Control*, 9th ed. NJ: Prentice Hall.
- Kyunghyang News. 2022. 99 Attempts to Leak Domestic Technology Overseas for 5 Years...Estimated 22 Trillion Won.. https://news.v.daum.net/v/20220402140816257?x_trkm=t#none. Accessed 1 Aug 2022
- Lee, M.H., J.W. Hwang, T.H. Na, and J.Y. Oh. 2021. The Effect of Corporate Security Activities on Security Compliance Intention: Focusing on the Mediating Effects of Organizational Commitment and Self-Efficiency. *Korean Journal of Industry Security* 11 (1): 91–115.
- Lee, M., and J. Lee. 2015. Effect of Administrative Security Activities and Security Personnel Expertise on the Technology Outflow Prevention. *Korean Association for Public Security Administration* 12 (2): 165–182.
- Lievens, F., and S. Highhouse. 2003. The Relation of Instrumental and Symbolic Attributes to a Company's Attractiveness as an Employer. *Personnel Psychology* 56 (1): 75–102.
- Lievens, F., G. Van Hoye, and F. Anseel. 2007. Organizational Identity and Employer Image: Towards a Unifying Framework. *British Journal of Management* 18: 45–59.
- Lievens, F., G. Van Hoye, and B. Schreurs. 2005. Examining the Relationship Between Employer Knowledge Dimensions and Organizational Attractiveness: An Application in a Military Context. *Journal of Occupational and Organizational Psychology* 78 (4): 553–572.
- MaeKyung. 2022. "You have to Beat 100 People to Pass" is an Old Saying... Competition Rate for 9th Grade Civil Servants 'Lowest' in 30 Years. <https://www.mk.co.kr/news/society/view/2022/04/297446/>. Accessed 17 Oct 2022
- MBC news. 2024. "Technology Leaked by Setting up a Consulting Company in Japan" All Samsung Electronics Employees were Arrested and Indicted. https://imnews.imbc.com/news/2024/society/article/6574675_36438.html. Accessed 27 Feb 2024
- Myrden, S., and K. Kelloway. 2015. Young Workers' Perception of Brand Image: Main and Moderating Effects. *Journal of Organizational Effectiveness: People and Performance* 2: 267–281.
- new1. 2020. 'Corona, 19 Incident' 33% of All Asiana Employees' Salaries are Returned. <https://www.news1.kr/photos/view/?4082847>. Accessed 15 Nov 2023
- Oh, J.Y., and Y.K. Kim. 2012a. A Development of Tentative Measuring Items of Korean Corporate Symbolic Image using brand personality. *Journal of the Korea Society Industrial Information System* 17 (3): 83–94.
- Oh, J.Y., and Y.K. Kim. 2012b. A Study on the Effect of Instrumental Image and Symbolic Image on the Proactive Behavior—Focusing on Moderating Effect of Organizational Commitment. *Global e-Business Association* 13 (4): 3–27.
- Oh, J.Y., and S.H. Myeong. 2021. What Matters for Job Security? Exploring the Relationships among Symbolic, Instrumental Images, and Attractiveness for Corporations in South Korea. *Sustainability* 13: 4854.
- Oh, J.Y., and W.J. Suh. 2023. The Relationships among LMX, Relationship Satisfaction, Job Satisfaction, and Security Policy Compliance Intention. *Korean Journal of Industry Security* 74: 23–44.
- Park, C., and M. Yim. 2012. An Understanding of Impact of Security Countermeasures on Persistent Policy Compliance. *The Journal of Digital Policy & Management* 10 (4): 23–25.
- Rai, A. 2020. An Application of the Instrumental-Symbolic Framework in Maritime Industry: A Study on Employer Branding among Seafarers. *Management Research Review* 43 (3): 270–292.
- Ringle, C.M., M. Sarstedt, and D. Straub. 2012. Editor's Comments: A Critical Look at the Use of PLS-SEM in "MIS Quarterly." *MIS Quarterly* 36 (1): 3–14.



- Robbins, S.P., and T.A. Judge. 2011. *Organizational Behavior*. Boston, MA: Prentice Hall.
- Siponen, M., and A. Vance. 2010. Neutralization: New Insights into the Problem of Employee Systems Security Policy Violations. *MIS Quarterly* 34 (3): 487–502.
- Turban, D., and D. Greening. 1997. Corporate Social Performance and Organizational Attractiveness to Prospective Employees. *Academy of Management Journal* 40 (3): 658–672.
- Ullah, K. W., A. S. Ahmed, and J. Ylitalo. 2013. Towards Building an Automated Security Compliance Tool for the Cloud, in *2013 12th IEEE International Conference on Trust, Security, and Privacy in Computing and Communications*, IEEE, 1587–1593.
- UNN News. 2021. *For the Second Year in a Row, College Students Want To Get a Job at the Top of the List. "Kakao is Going Well"*. <http://news.unn.net/news/articleView.html?idxno=512827>. Accessed 1 Aug 2022
- UNN News. 2022. *Young People in Their 20s Place Importance on 'Employment Stability' When Choosing a Job*. <https://news.unn.net/news/articleView.html?idxno=531042>. Accessed 1 Oct 2022
- UPI News. 2018. *166 Cases of Overseas Technology Leaks Have Been Detected in the Past Six Years...22 National Core Technology Leaks*. <https://www.upinews.kr/newsView/upi201810090016>. Accessed 1 August 2022
- UPI News. 2019. *71 Cases of Overseas Leakage of Industrial Technology and Trade Secrets...1st Place in China, 2nd Place in Japan*. <http://www.upinews.kr/newsView/upi201910020011>. Accessed 1 Aug 2022
- Van Hove, G., T. Bas, S. Cromheecke, and F. Lievens. 2013. The Instrumental and Symbolic Dimensions of Organisations' Image as an Employer: A Large-Scale Field Study on Employer Branding in Turkey. *Applied Psychology* 62: 543–557.
- Van Hove, G., and A.M. Saks. 2011. The Instrumental-Symbolic Framework: Organizational Image and Attractiveness of Potential Applicants and their Companions at a Job Fair". *Applied Psychology: An International Review* 60: 311–335.
- Vance, A., M. Siponen, and S. Pahlila. 2012. Motivating IS Security Compliance: Insights from Habit and Protection Motivation Theory. *Information & Management*. 49: 190–198.
- West, R. 2008. The Psychology of Security. *Communications of the ACM* 51 (4): 34–40.
- Winter, L.C. 1986. The Effects of Brand Advertising on Company Image: Implications for Corporate Advertising. *Journal of Advertising Research* 26 (2): 54–59.
- Zhao, X., J.G. Lynch, and Q. Chen. 2010. Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research* 37 (3): 197–206.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

