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Personal Reputation in Organization: A Comparative Analysis of Early and Mid-career Employees in a Japanese Company

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We investigate the antecedents of personal reputation within organizations. Using social contagion theory and signaling theory, we analyze the effects of various antecedents, both with and without observable signals, moderated by the employee's career stage. Data were collected from two independent sources at two different time points. To compare differences in personal reputation across career stages, we selected employee groups that joined at two distinct times. Supporting our predictions, observable signals, such as a Ph.D. degree and self-efficacy, significantly impacted reputation. However, this impact was significant only during the early career stage. Human capital without observable signals had no significant impact on reputation in either early or middle career stages. Additionally, for mid-career employees, none of the introduced antecedents impacted reputation. The implications of these findings are discussed.

Keywords personal reputation, human capital, signaling theory, network analysis, Japanese company

1 Introduction

Personal reputation has been shown to be an important factor in evaluating an employee's value (Zinko et al., 2007). Over the last decade, a body of research has been conducted to un-

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derstand why employees wish to create a personal reputation within organizations (Foste and Botero, 2012; Zinko et al., 2010; Zinko et al., 2012a; Zinko, et al., 2012b; Zinko, 2013; Zinko and Rubin, 2015). Individuals with a positive reputation are perceived as more competent, as having higher status, and as trustworthy, all of which lead to positive outcomes for the focal employee (Ostrom, 2003; Zinko et al., 2007). Developing a positive reputation is particularly important for employees who aim to succeed within an organization.

According to Zinko et al. (2007), reputation is "perceptual identity formed from the collective perceptions of others, which is reflective of the complex combination of salient personal characteristics and accomplishments, demonstrated behavior directly and/or reported from secondary sources, which reduces ambiguity about expected future behavior" (p. 165). Zinko et al. (2007) defined personal reputation as a collective perception of an individual by certain referent others within an organization, influenced by the focal employee, and not emerging instantaneously but over a period of time. Furthermore, Zinko et al. (2007) noted that reputation possesses a predictive quality, increasing the likelihood of predicting the focal person's future behavior.

Although many studies have focused on the outcomes of personal reputation, little is known about its antecedents and how individuals develop their reputation (Foste and Botero, 2012). While some theoretical models present the antecedents and consequences of personal reputation within organizations (Zinko et al., 2007; Zinko and Rubin, 2015), there has been very little systematic empirical investigation into the antecedents of personal reputation at work. Furthermore, existing research fails to explore the differences in antecedents of reputation according to career stages. Although previous studies have assumed the persistency of these antecedents, it is highly possible that the factors determining reputation vary between early-career and mid-career employees.

In this paper, we examine the antecedents of personal reputation in a Japanese manufacturing company, focusing on the human and psychological capital employees possess. Using social contagion theory and signaling theory, we analyze the effects of human and psychological capital on personal reputation, which are further moderated by the employee's career stage. By testing these relationships, we contribute to the advancement of research on the antecedents of personal reputation. Zinko et al. (2007) proposed a model of the antecedents of personal reputation in organizations, emphasizing human and social capital, along with time and self-regulation. This paper seeks to investigate the effects of human and psychological capitals as antecedents.

2 Theoretical foundations and hypothesis development

2. 1 Researchers of personal reputation

Although researchers have historically discussed the term reputation at the corporate level (Ferris et al., 2003; Diermeier, 2011), a group of researchers has recently focused on personal reputation (Zinko et al., 2007). Tsui (1984; 1994) is often credited with first introducing personal reputation to the field of organizational behavior (Zinko and Rubin, 2015). She empirically demonstrated that individuals in organizations can have multiple reputations, which develop over time (Tsui, 1984). Additionally, she developed a model of the antecedents, mediators, and outcomes of personal reputation (Tsui, 1994). This model suggests that social, structural, and individual factors affect a manager's tendency toward responsiveness and the attainment of reputational effectiveness (Tsui, 1994).

About a decade after Tsui's seminal work, research on personal reputation gained renewed attention. Ferris et al. (2003) and Zinko et al. (2007) suggested that personal reputation represents an individual's collection of perceptions by other employees and results from a complex combination of personal characteristics, behaviors, and images observed directly and indirectly over time. Individuals with a high positive reputation are perceived as more competent, having higher status, and being trustworthy, which brings positive outcomes for the focal employees (Hochwarter et al., 2007; Zinko et al., 2007; De Cremer and Sedikides, 2008; Zinko and Rubin, 2015). As a result, employees use abilities such as political skill to assess what reputation may be appropriate for their organization and how to develop that reputation (Zinko and Rubin, 2015). Empirical research has suggested that reputation is developed through active engagement in political behaviors (Ammeter et al., 2002). Overall, existing research confirms that developing a positive reputation is beneficial for both employees and the organization (Zinko and Rubin, 2015).

However, little is known about how personal reputation is developed (Zinko and Rubin, 2015). Zinko et al. (2007) proposed a model of the antecedents of personal reputation in organizations, focusing on human capital, time, and self-efficacy. They argued that personal reputation is partly influenced by an employee's personal characteristics, including their human capital, which reflect observable qualities that contribute to their reputation. However, systematic investigation of the antecedents of personal reputation in organizations has been scarce and requires more extensive empirical study. This paper seeks to investigate the effects of human and psychological capital as antecedents.

2. 2 Reputation development as a social contagion

Although scientific examination of reputation development has been surprisingly neglected (Zinko et al., 2007), some existing theoretical research begins to illuminate the factors that contribute to the formation of personal reputation (Zinko et al., 2007; Zinko and Rubin, 2015). According to Zinko et al. (2007), social contagion theory is useful in explaining the formation of reputation in organizations. Social contagion theory is defined as "the spontaneous spread of emotional and behavioral reactions among a group of people" (Yukl, 1998, p. 307). People in organizations engage in social talk, which allows them to arrive at a shared and socially constructed interpretation of their social environment. This social talk enables them to collectively define the meaning of events in the organization (Degoey, 2000). Social contagion suggests that rumors are often believed more than formal communications within organizations (Robbins, 2000). Because personal reputation in an organization is socially constructed, its transference through informal social talk, such as gossip, is essential (Zinko et al., 2007; Zinko and Rubin, 2015). In the context of personal reputation, one of the most important mechanisms for determining reputation is the observation of behavior beyond what organizational norms typically prescribe. People in organizations transfer these observations to others through gossip dissemination (Zinko and Rubin, 2015). Information transferred through gossip is more readily perceived and accepted by others, unlike information received directly from the focal individual, which may be seen as self-serving and untrustworthy (Haviland, 1977). Conversely, personal reputation spread by gossip enables employees in an organization to effectively reduce uncertainty regarding another person's future behavior (Ferris et al., 2003). According to social contagion theory, agreed-upon interpretations of a person's evaluation are disseminated through gossip (Elmer, 1984; Zinko and Rubin, 2015).

The audience agreeing on the personal reputation of another employee is often not in direct contact with the reputation-building employee. Especially in large organizations, people often do not have reliable information about the quality (the ability of the person to fulfill the needs of the organization) of others. Social contagion in an organization occurs where information asymmetry between people is extremely high.

Signaling theory is useful for explaining behavior when two or more parties have access to different information (Connelly et al., 2011). It is fundamentally concerned with reducing information asymmetry between parties (Spence, 1973; Connelly et al., 2011). Information asymmetry arises when "different people know different things" (Stiglitz, 2002, p. 469). For example, Spence's seminal work on hiring focuses on the asymmetry between candidates and organiza-

tions (Spence, 1973). Organizations find it difficult to assess candidates' actual quality because this is unobservable before hiring (Spence, 1973). To infer candidates' unobservable quality, organizations look for visible attributes, such as educational background, as signals. According to signaling theory, certain signals, such as credentials, provide instant credibility and status for the focal person (Spence, 1973; 1974).

In the presence of information asymmetry, people compensate for the lack of information by focusing on observable attributes. Through social contagion processes, people in organizations infer others' quality through visible attributes. Employees with high quality distinguish themselves from low-quality prospects through observable and costly signals, such as higher education. Signaling theory differs from human capital theory as it deemphasizes the role of certain attributes, such as educational status, in increasing employee productivity, focusing instead on observable attributes as a means to communicate otherwise unobservable characteristics of the focal person (Weiss, 1995).

According to signaling theory, there are two chief characteristics of an efficacious signal: observability and signal cost (Connelly et al., 2011). Observability refers to the extent to which outsiders can notice the signal. If an attribute is not readily observed by others, it is difficult for the focal person to use those attributes to communicate. Observability is necessary but not sufficient. Signal cost represents the fact that a person is in a better position than others to absorb the associated costs. For example, the costs associated with graduating from a prestigious university are high, as the process is time-consuming, making cheating or false signaling difficult (Connelly et al., 2011). Having a signal with high observability and cost tends to lead to a high reputation. This study focuses on the Ph.D. degree as a signal. Not only is this signal visible to others, but many believe it reflects the unobservable quality of the individual.

2. 3 Focus of the study: education and career stages

One focus of this study is years of education. According to Schmidt and Hunter (1998), the sheer amount of education has lower validity for predicting job performance than often assumed. However, this does not imply that education is irrelevant to occupational success. Years of education are a crucial determinant of the level of job an individual can obtain (Becker, 1962; Schmidt and Hunter, 1998). What their findings show is that among those applying for a particular job, years of education do not predict future performance very well. However, as an observable and high-cost signal, years of education are proposed to be an important antecedent of personal reputation. This study operationalizes years of education using the Ph.D. degree.

For Japanese manufacturing companies, especially those manufacturing precision machinery, having a Ph.D. degree is an important indicator during recruitment and selection. This is partly because it is believed to be a reliable signal of a candidate's abilities and skills. Although the attribute has not been strongly correlated with unobservable quality (McDaniel et al., 1988; Schmidt and Hunter, 1998), many people believe it correlates with employees' unobservable quality.

However, differences exist between early-career and mid-career individuals. According to Ferris et al. (2003), reputation must be built over time through the consistent demonstration of distinctive behaviors. Because personal reputation is shared and disseminated by gossip, it can be assumed that the longer an individual group has been in the same organization, the more likely they will share the same image of a highly reputable person. For employees with only a few years of tenure, reputation will be determined by limited information based on observations of a small number of actions.

As discussed, signaling theory explains behavior when parties have access to different information (Connelly et al., 2011). Conversely, an observable and high-cost signal is useful only when parties have difficulty accessing enough information (Connelly et al., 2011). If people have reliable information about another person's quality, they simply access and use that information. For employees with long tenure in the same organization, social contagion occurs in a situation where information asymmetry is relatively low because they have extensive formal and informal networks. Thus, a signal's "easy to find effect" is more likely when people lack sufficient information about another person's performance.

Hypothesis 1a: For early-career employees, having a Ph.D. degree will positively relate to personal reputation as a high performer.

Hypothesis 1b: For mid-career employees, having a Ph.D. degree will not relate to personal reputation as a high performer.[1)]

2. 4 Self-efficacy and personal reputation

In order for employees to influence their personal reputations, they need to communicate effectively with those around them in a manner consistent with the reputations they want to develop (Spence, 1974). Additionally, they must believe that they can control their environment and the important elements within it. Such competence is indicative of social control and efficacy. Because reputation is a social and cognitive phenomenon, it is essential for building and

maintaining an individual's reputation (Zinko et al., 2012a). Individuals lacking social control and competence may misconstrue how others perceive them and may fail to develop a positive reputation due to inaccurate self-assessments. This research operationalizes social control and competence using self-efficacy, following Zinko et al. (2012a)'s recommendation.

Bandura (1997) defined self-efficacy as a person's belief in their capability to perform a particular task successfully and suggested that one of the motivators for building a personal reputation is self-fulfillment (Bandura and Adams, 1977, Bandura, 1997). Furthermore, Cohen (1959) stated that individuals wish others to see them as they see themselves, implying that those with a strong self-image will want others to see them in the same positive light and acknowledge their abilities. These suggestions align with signaling theory, which posits that employees who try to build personal reputation send signals to others regarding how they see themselves, and such signals are efforts to influence perceptions and meaning (Spence, 1974).

According to psychological capital researchers, employees with higher self-efficacy have been shown to perform at higher levels (Stajkovic and Luthans, 1998; Luthans et al., 2004), resulting in the development of personal reputations based on those actions. Self-efficacy not only serves as a signal but also as a psychological capital that influences individual work performance. Among various psychological capitals, self-efficacy is considered the most important and powerful factor for predicting work performance (Luthans et al., 2007). Since work performance is itself an observable and high-cost signal that estimates personal quality (Connelly et al., 2011), possessing abundant self-efficacy could be an antecedent of reputation for both early-career and mid-career employees.

Hypothesis 2a: For early-career employees, self-efficacy will positively relate to personal reputation as a high performer.

Hypothesis 2b: For mid-career employees, self-efficacy will relate to personal reputation as a high performer.

2. 5 Human capital theory and personal reputation

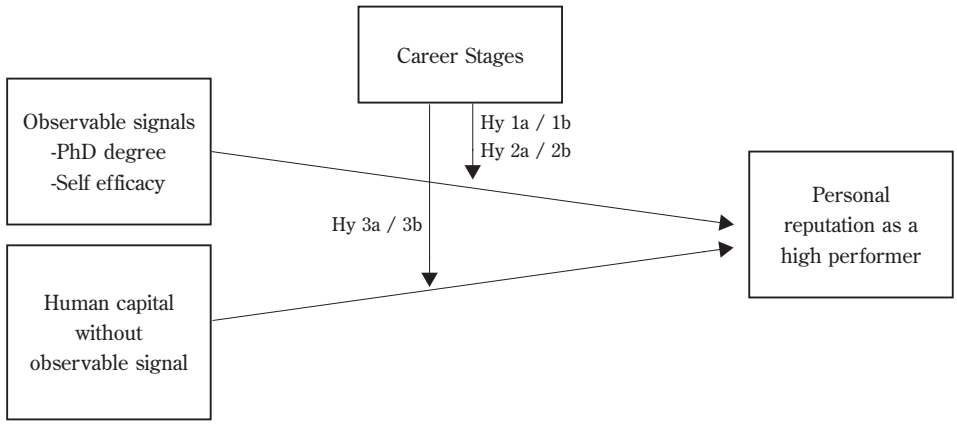
Human capital theory argues that individuals generate increased worth or value for themselves by acquiring knowledge, skills, and abilities through educational and experiential attainments (Becker, 1962; 1993). Attainment of additional education and experiences are important inputs for achieving high work outcomes. However, according to signaling theory, holding human capital without observable signals does not necessarily lead to a high personal reputation.

While human capital theory predicts that having rich human capital without observable signals can predict high work performance, it does not necessarily predict a reputation as a high performer. It is possible that observable signals reflect some of the human capital individuals hold, but the degree to which the signal reflects a person's unobservable quality varies considerably (Connelly et al., 2011). For example, if a person's education level is used as a signal to determine their quality, it is possible that the signal does not reflect the person's ability to fulfill the needs of the organization at all. Whether a visible attribute acts as a signal depends largely on the degree to which people believe that the attribute correlates with unobservable quality, not on the degree to which the attribute actually correlates with unobservable quality. Therefore, human capital without observable signals will not be an antecedent of reputation for early-career employees.

Hypothesis 3a: For early-career employees, human capital without observable signals will not relate to personal reputation as a high performer.

However, for mid-career employees, the opposite hypothesis can be presented. As existing research has shown, human capital is a significant predictor of work performance (Becker, 1962; 1993). It is highly likely that employees with high human capital will continue to achieve high work performance over time. Since work performance itself is an observable and high-cost signal that people use to estimate another person's quality (Connelly et al., 2011), possessing abundant human capital could be an antecedent of reputation on a long-term basis. These hypotheses are summarized in Figure 1.

Figure 1 Analytical model



Hypothesis 3b: For mid-career employees, human capital without observable signals will relate to personal reputation as a high performer.

3 Methods

3. 1 Sample and procedure

Data were collected from two independent sources across two time points. To measure personal reputation and its antecedents within an organization, we selected employees from a Japanese manufacturing company located in Kyoto. Like many large Japanese companies, almost all employees in this company start their careers simultaneously after graduating from university or graduate school. The employee turnover rate in this company is only about 1% in the ten years after joining. Additionally, about 100 employees who joined the company at the same time know each other well because most of them work in the same headquarters office located in Kyoto city. This number falls within Dunbar's number (Dunbar, 1992), which is a cognitive limit to the number of people with whom one can maintain stable social relationships. According to existing research, intimate relationships and mutual knowledge are possible within a group size under Dunbar's number, which has been proposed to lie between 100 and 250, with a commonly used value of 150 (Dunbar, 1992). Therefore, this company is well-suited for examining how employee reputation changes over time.

To compare differences in personal reputation at different career stages, we selected employee groups that joined at two different times. The first group consisted of 108 people who joined the company in 2014 (i.e., their tenure in this company is about five years), and the second group consisted of 96 people who joined the company in 1998 (i.e., their tenure in this company is about twenty years). All data were used exclusively for this research project to ensure confidentiality. First, participants received their first-round surveys (August 2019: Time 1), which measured social capital, human capital, and demographics. About five months later, we invited participants to answer second-round surveys (December 2019: Time 2), which measured personal reputation and demographics.

After matching responses and addressing missing data and outliers, 116 effective questionnaires were collected. Of the participants, 48 joined the company in 2014, and 58 joined in 1998. Among the 116 respondents, 83.8% are male, 55.4% have master's or doctoral degrees, 49.0 % are in the engineering division, and 14.7% are in the sales division. A comparative analysis using a Chi-square test on demographics between respondents and non-respondents showed no significant differences.

3. 2 Measures

Personal reputation: One of the most important challenges in personal reputation research is the need to develop an adequate measurement tool. Unfortunately, most existing research fails to measure personal reputation as a collective perception of an individual by referent others in an organization (e.g., Tsui, 1984; Foste and Botero, 2012; Zinko et al., 2012a). As discussed above, their methods can measure personal reputation as perceived by a specific other employee, but they ignore the nature of personal reputation as a collective perception within an organization.

An exception is Zinko et al. (2012a). Their participants were business undergraduates at a public university in the U.S., enrolled in negotiation/conflict resolution courses. Their method involved employees rating other employees from "best" to "worst" in provided categories. Specifically, respondents were asked to consider their classmates and their personal reputations and to name up to five classmates they thought were the "best negotiators," focusing solely on performance. Respondents were presented with names and pictures of all class members to aid in their evaluations. After the questionnaires were completed, a personal reputation score for each student was calculated by totaling the number of times a respondent's name was mentioned in a specific category (e.g., "best negotiator"). This score was then divided by the number of respondents in the class to determine the reputation score.

Although their method measures the nature of personal reputation as a collective perception in an organization, it has several problems. Their method assumes that every respondent has equal weight in naming others. For example, suppose John Smith and Mike Davis are both named by ten employees. If John is named by individuals with high reputations, while Mike is named by average individuals, can we assume that John and Mike enjoy the same level of personal reputation? Research on communication flow within organizations has confirmed that individuals have different levels of influence in the communication network (Katz and Lazarsfeld, 1955; Allen and Cohen, 1969). Some individuals significantly impact the social contagion process more than others (Katz and Lazarsfeld, 1955). Similarly, in the formation of personal reputation within an organization, such differences in influence cannot be ignored.

In this paper, we explicitly measure the collective nature of personal reputation using network analysis, following Hattori et al. (2022)'s recommendation. In network science, networks often feature nodes with a large number of links, called hubs (Barabasi, 2016). This type of network is typically observed in the World Wide Web (WWW). "PageRank" was invented by Google's founders to calculate the importance of a web page as a hub in the WWW (Brin and

Page, 1998). PageRank is usually used to determine the order in which web pages are displayed in Google search results. The PageRank algorithm is also applied to various contexts, such as determining the importance of a company in a business-to-business transaction network (Ohnishi et al., 2009).

The key feature of the PageRank algorithm is that it "is based on the idea that a node should be highly ranked if other highly ranked nodes contain direct links to it" (Ohnishi et al., 2009, p. 158). In other words, rather than simply ranking employees who have been evaluated by many others highly, the evaluations from highly ranked employees are given greater weight. This feature is desirable for evaluating reputation in this paper because it allows global ratings to be ranked higher than those within local groups.

As described above, we selected employee groups that joined the company at the same time. The group consists of 116 people who joined the company in April 2014. At Time 2, respondents were asked to think about people who joined the company in the same year and their personal reputation as high performers. They were instructed to provide the names of those they considered to be the "best performers." Respondents were free to name individuals they thought performed the best, without the cue of employee lists.

A personal reputation score was calculated using the PageRank method with R version 3.6.2's "igraph" package. When a participant rated another participant, we considered that rating as a link for the PageRank calculation. In the "igraph" package, "the calculation is an iterative process; the algorithm stops after a given count of iterations or if the PageRank value differences between iterations are less than a predefined value." In this paper, we use each person's PageRank as a proxy variable for their personal reputation score.

Having Ph.D degree: The information about having Ph.D degree was from HR record. This is dummy variable, that is 1 indicates having Ph.D degree and 0 indicates having no Ph.D degree.

Human capital: Human capital was measured using 10 items from Lepak and Snell (2002)'s value of human capital measure. Lepak and Snell (2002) developed this measure grounded in existing theoretical work. As discussed above, human capital is valuable to the extent that it contributes to a firm's competitive advantage. The value of human capital scale was intended to capture the extent to which a particular form of human capital has value for company's competitive advantage. We extracted four items from the viewpoint of validity and used them for

analysis. This index was measured on a 5-point Likert scales ranging from 1（strongly disagree）to 5（strongly agree）and consist of the mean value for the multiple items comprising this index. These items include “I have skills that are instrumental for creating innovations” and “I have skills that are directly affect organizational efficiency and productivity”. The reliability of this scale was 0.807.

Self-Efficacy: Self-efficacy was measured using Luthans et al.（2007）measure. We extracted four items from the original measure for validity and used them for analysis. This index was measured on a 5-point Likert scale ranging from 1（strongly disagree）to 5（strongly agree）and consisted of the mean value of the multiple items comprising this index. These items include “I feel confident analyzing a long-term problem to find a solution” and “I feel confident in representing my work area in meetings with management.” The reliability of this scale was 0.772.

Control Variables: To avoid alternative explanations, we controlled for several variables. We controlled for age, sex, educational background, and respondents’ function, as these may influence the perception of reputation（Zinko et al., 2012a）. Reputation takes time to develop because observers need to perceive consistent behavioral evidence across occasions（Zinko et al., 2012b）. The more time an employee spends in an organization, the better they are able to evaluate their surroundings. As Zinko et al.（2012a）empirically suggested, time positively relates to personal reputation. Thus, we controlled for the respondents’ career stages. In this paper, we operationalized “0＝mid-career employee” as people who joined the company in 1998 and “1＝early-career employee” as people who joined the company in 2014. In Japanese companies, the recruitment of new graduates employs those who graduated from school at the same time, so all employees who joined in the same year have the same tenure.

3. 3　Analytical strategy

The hypotheses were tested using an ordered probit regression model. The Ph.D. dummy variable, human capital, and self-efficacy predicted the extent to which an employee has a personal reputation using the following equation. The model was intended to compare the effect sizes of several dependent variables on the personal reputation of early-career and mid-career employees, with mid-career employees chosen as the comparison baseline.

$$\begin{aligned} \textit{Personal reputation} = {} & \alpha_1 \times \textit{Ph.D} + \alpha_2\ \textit{Ph.D} \times \textit{Time} + \alpha_3 \times \textit{Human Capital Value} \\ & + \alpha_4\ \textit{Human Capital Value} \times \textit{Time} \\ & + \alpha_5 \times \textit{Efficacy} + \alpha_6\ \textit{Efficacy} \times \textit{Time} + \varepsilon \\ & + \alpha_7 \times \textit{Time} + \alpha_{8\sim10} \times \textit{control variables} \end{aligned}$$

In this model, the dependent variable y was personal reputation. α_8 to α_{10} were all control variables. α_8 was women dummy, and α_{10} was sales person dummy (0=other, 1=sales occupation). α_9 was engineer dummy (0=other, 1=engineering occupation). α_7 was dummy variable about time (0=employee with mid-career, 1=employee with early career). If the estimated coefficient of α_7 was statistically significant, it could be concluded that the order of reputation in early career employee samples are different from that of the mid-career samples. α_1 was having Ph. D dummy (0=employee without Ph.D degree, 1=employee without Ph.D degree). α_2 was interaction of Ph.D dummy and time. α_3 was human capital and, α_4 was interaction of human capital and time. Similarly, α_5 was self-efficacy and, α_6 was interaction of self-efficay and time. If the estimated coefficient of α_1 or α_3 or α_5 were statistically significant, the effect of these variables on personal reputation would be significant in mid-career samples. On the contrary, if the estimated coefficient of α_2 or α_4 or α_6 were statistically significant, the effect of these on personal reputation would be significant in early-career samples.

4 Results

The convergent validity of the measurement was investigated using confirmatory factor analysis with two latent factors (Human Capital Value and Efficacy) for a total of 8 items (Table 1). All items loaded sufficiently and significantly on their respective factors. The goodness-of-fit indices were acceptable in terms of the cutoff criteria. Table 2 presents the descriptive statistics and correlation matrix for the variables.

As seen in Table 3, the Ph.D. dummy variable exhibited no significant effect on personal reputation. However, the interaction between Ph.D. and time was significant (5.62, $p < .05$).

Table 1. Confirmatory factor analysis (CFA) results of measurement models

Models	χ^2	*df*	χ^2/df	CFI	SRMR	RMSEA
2-factor model	277.3	28	9.90	0.930	0.070	0.096
1-factor model	335.2	36	9.31	0.657	0.143	0.195

Notes: N=100.2-factor model: each variable was loaded on a single factor; 1-factor model: all variables were loaded on a single factor.

Table 2. Descriptive statistics

Variable	*M*	*SD*	1	2	3	4	5	6	6
1. Gender	0.11	0.31	–						
2. Engineer	0.58	0.50	−0.22 *	–					
3. Salesperson	0.14	0.35	0.04	−0.47 ***	–				
4. Time	0.58	0.50	−0.02	0.34 ***	0.23 *	–			
5. Ph.D	0.03	0.17	−0.06	0.03	−0.07	0.03	–		
6. Human Capital Value	3.14	0.62	−0.09	0.00	−0.07	−0.11	0.04	–	
7. Efficacy	3.08	0.72	0.07	0.08	0.12	0.48 ***	0.04	0.30 **	–
8. Reputation									0.30 **

Notes: $N=100$.

Table 3. Estimation of ordered probit regression model

		Reputation			
		Model (1)		Model (2)	
		B	(SE)	B	(SE)
α_1	Ph.D	−0.88	(1.53)	−1.26	(1.56)
α_2	Ph.D×Time	4.90	(1.95) *	5.62	(1.99) **
α_3	Human Capital Value	0.37	(0.31)	0.40	(0.31)
α_4	Human Capital Value×Time	−0.16	(0.49)	−0.26	(0.50)
α_5	Efficacy	−0.36	(0.39)	−0.37	(0.36)
α_6	Efficacy×Time	1.93	(0.72) **	1.99	(0.73) **
α_7	Time	−7.03	(2.26) **	−6.80	(2.31) **
α_8	Gender			−0.51	(0.63)
α_9	Engineer			−0.71	(0.47)
α_{10}	Salesperson			0.24	(0.68)
	AIC	629.33		631.12	

These results support Hypotheses 1a and 1b. A similar pattern was observed for self-efficacy. As shown in Table 2, self-efficacy exhibited no significant impact on personal reputation. However, the interaction between self-efficacy and time was significant (1.99, $p<.05$). Thus, Hypothesis 2a was supported, although Hypothesis 2b was not.

Both human capital value and the interaction between human capital value and time were not significant. These results support Hypothesis 3a but not Hypothesis 3b. As Zinko et al. (2012a) indicated, time positively relates to personal reputation. The more time employees spend in their organization, the better they enjoy high reputational status.

5 Discussions

5. 1 Theoretical and practical implications

In support of our predictions, observable signals such as a Ph.D. degree and self-efficacy had a significant impact on reputation. However, their impact was significant only during the early stages of an employee's career. Human capital without observable signals had no significant impact on reputation at both early and middle career stages. Furthermore, for mid-career employees, none of the antecedents we introduced had an impact on reputation. By testing these relationships, this paper makes several contributions.

First, we contribute to the advancement of research on the antecedents of personal reputation. Zinko et al. (2007) proposed a model of the antecedents of personal reputation in organizations, which focused on human capital, along with time and self-regulation. This paper seeks to investigate the effect of human capital with and without observable signals as antecedents. Moreover, our results show the importance of considering career stage as a moderator when understanding the relationship between personal reputation and its antecedents. The importance of human capital as a determinant of personal reputation is described by Zinko et al. (2007; 2012a). The results of this paper indicate that these effects are somewhat limited.

Observable signals such as a Ph.D. and self-efficacy are important determinants of reputation, at least for employees who have been in the company for less than five years. Personal reputations are the result of social interactions within an organization (Zinko & Rubin, 2015). When several employees who enter the company at the same time equally meet their organization's or market needs, the employee with observable signals is most likely to be given the opportunity to perform key tasks (Call et al., 2015). Additionally, self-efficacy is instrumental for gaining access to new resources that help individuals achieve high performance (Luthans et al., 2004).

However, there are critical differences between early-career and mid-career employees. According to Ferris et al. (2003), reputation must be built over time through the consistent demonstration of distinctive behaviors on repeated occasions. Since personal reputation is shared and disseminated through gossip, it can be assumed that the longer an individual group has been in the same organization, the more likely they will share the same image of highly reputable individuals. For a group of employees with only a few years of tenure, reputation is determined by limited information based on observations of a small number of actions. This supports Spence's (1973) notion that having observable signals means an individual is more likely

to be recognized as a high performer when discussed. The results of this paper suggest that the "easy to find effect" is more likely to occur when people do not have enough information about another person's performance and personal characteristics.

Our results showed that human capital without observable signal is ineffective at both early and middle career stages. As we assumed, for early-career employees, human capital may not be clearly visible to others. However, the fact that human capital is ineffective even for mid-career employees requires further explanation. One possible reason is the abundance of antecedents in mid-career. When people have reliable information about the quality of their peers, the social contagion process within the organization operates in an environment where information asymmetry is relatively low. Employees have access to sufficient formal and informal information to evaluate others' quality, allowing them to use this information effectively. Moreover, reputations shared over time become stable and difficult to change. Thus, even if a person performs well due to their human capital, this alone may not affect their reputation.

Our results have different implications for employees and management. Although some existing research theoretically and empirically posits that investment in human capital is somewhat important to attain a high reputation (Zinko et al., 2007; 2012a), our results suggest that not every type of capital is always important. It is crucial for employees to invest in human capital with observable signals early in their careers to increase their reputation within the organization. While we do not deny the importance of investing in human capital without such signals, doing so, at least in terms of reputation, is not sufficient. To build a high personal reputation, the order of investment in various types of capital is important. Specifically, human capital with observable signals and other visible types of capital, such as social capital, should be prioritized. These are the managerial implications for individual employees.

The managerial implications of this paper differ slightly. The results of this study show that people in organizations have a bias to view individuals with observable signals as "excellent," especially in the early stages of their careers. Theoretically, employees with observable signals enjoy a good reputation partly because of the "easy-to-find effect." As discussed above, having such a signal means that they are more likely to be considered a candidate when people discuss "who is a high performer." This "easy-to-find effect" is more likely to occur when people do not have enough information about another person's performance and personal characteristics. Existing empirical research has confirmed that high reputation brings social power in organizations, making it possible that employees with a reputation as high performers but who actually have low job performance may have strong power and presence as a result of the social conta-

gion process. It is important for human resource departments and managers to understand such social constructions of "high performers."

5. 2 Limitations, and future research

A limitation of our study is the use of only two employee groups that joined at different times, assessing personal reputation within groups at the same career stage. This allows the measurement of reputation within a particular group but eliminates the effects of reputation formed by people outside the group. Additionally, it is highly possible that there are other types of personal reputation besides reputation as a high performer. Given the importance of dimensionality, we must seriously consider the existence of various dimensions of reputation in the future.

In the future, we must increasingly investigate human and other types of capital, such as social capital, as antecedents of reputation. Social capital tends to create opportunities (Call et al., 2015). For example, when several employees equivalently meet their organization's needs, the employee with relevant social capital might be most likely to be given the opportunity to perform the task. Similarly, when several individuals equivalently meet a market need, the relevant social capital might determine the chosen individual (Call et al., 2015). An employee's social ties are likely to influence their opportunities in contexts where talent identification is ambiguous (O'Boyle and Aguinis, 2012; Call et al., 2015). Furthermore, social capital is instrumental in gaining access to new resources or opportunities that help individuals obtain human capital (Coleman, 1988). Social capital, manifested as access to advisors or mentors, supports personal development and connects people to desirable job opportunities (Granovetter, 1973) and promotions (Burt, 2001; 2005). Consequently, social capital positively relates to human capital and is self-generating. Merton (1968) proposed the "Matthew Effect" to describe how those with existing advantages are more likely than less advantaged people to obtain additional resources (e.g., opportunities). Therefore, highly visible employees with high reputations tend to get (a) more credit than others for producing similar work and (b) more opportunities for future work, providing the basis for the axiom "the rich get richer." Finally, we must acknowledge our lack of knowledge regarding the antecedents of mid-career reputation. We need more empirical and theoretical research that considers differences in antecedents for various career stages.

Notes

1) Making this kind of hypothesis is equivalent to making a null hypothesis. In this case, if the p-value of the independent variable in question is above the significance level, the null hypothesis is

accepted and it is concluded that the independent variable has no significant effect on the dependent variable.

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