

Internship Experience and Organizational Attractiveness: A Realistic Job Fit Perspective

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Abstract

Although job seekers often rely on indirect or inaccurate information to assess the attractiveness of potential employers, internship experience provides more realistic and accurate information, which may influence organizational attractiveness. Through the ex-ante and ex-post (i.e., pre-internship and post-internship) research design with a sample of Japanese undergraduate students in a university-sponsored internship program, we found that, although organizational attractiveness on average declined after the internship, skill variety and feedback from employees in the internship job were positively related to perceived needs-supplies (NS) fit beyond the effect of its pre-internship level. The NS fit, in turn, was related to organizational attractiveness beyond the effect of its pre-internship level. Moreover, some of the above mediating effects were stronger for interns with high social skill and/or high self-esteem. Our findings highlight the importance of the effect of internships on college students' school-to-work transition.

Keywords: Student internship experience, career transition, organizational attractiveness, fit perceptions, college students

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The school-to-work transition is crucial for graduating students as it can determine their career development and future career success. However, this type of transition is often difficult and challenging (Holton, 2001; Polach, 2004). Due to the limited work experience and professional networks, job-seeking students are often misled by inadequate and asymmetric information (e.g., interview process, website) when making career-related decisions (e.g., evaluating suitable employment options). Research evidence shows that, after entering the workforce, new graduates often feel disappointed and frustrated because they find that the reality of work is different from their anticipatory expectations (e.g., Holton & Russell, 1997), which have detrimental effects on their career satisfaction, career prospects, and career trajectory (McKee-Ryan & Harvey, 2011). Thus, it is vital for students who are seeking their first job to avoid being attracted to and eventually hired by the organization that does not fit very well, which results in the wretched career starts (e.g., Holton & Russell, 1997; Koen, Klehe, & Van Vianen, 2012).

Internships, defined as “structured and career-relevant work experiences obtained by students prior to graduation from an academic program” (Taylor, 1988, p. 393), are often viewed as a key component of the school-to-work transition (e.g., Hynie, Jensen, Johnny, Wedlock, & Phipps, 2011; Rose, 2018). Through internships, students can obtain realistic information about the nature of work performed in the sponsoring organization, which enables them to assess how attractive the sponsoring organizations are as future employers (Zhao, 2013). Research on realistic job previews (RJPs) suggests that providing realistic information (i.e., positive and negative information) about the job in the recruitment context results in various positive post-hire outcomes, such as higher job satisfaction and less voluntary turnover (Earnest, Allen, & Landis, 2011; Phillips, 1998; Premack & Wanous, 1985).

Compared with the conventional job search context for students wherein they rely on the company information in the brochures, websites, and recruiters to evaluate the suitability of the organizations as

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potential employers, internships provide students with unique and useful information that can be used to assess the attractiveness of the sponsoring organizations. In particular, in other job search contexts, job seekers can rarely obtain information that interns glean from the jobs assigned during the internships. However, the research examining which factors in the internship experience influence the attractiveness of sponsoring organizations is relatively sparse, with some exceptions that examined interns' job acceptance intentions and decisions (Beenen & Rousseau, 2010; Beenen & Pichler, 2014; Rose, Teo, Nguyen, & Nguyen, 2021; Rose, Teo, & Connell, 2014). Therefore, more research is needed to provide insight into the predictors of organizational attractiveness in the internship experience.

To address the research gap, we draw on the perspective of RJPs and integrate self-determination theory (SDT) and needs-supplies fit (NS) fit perspectives to theorize that the specific characteristics of internship jobs, namely, job autonomy, skill variety, and feedback from incumbent employees (Hackman & Oldham, 1980; Morgeson & Humphrey, 2006), influence interns' perceptions of NS fit, which in turn influences organizational attractiveness. We also examine individual difference factors that are theoretically relevant to SDT, namely, self-esteem and social skill of interns, as moderators that change the effect of internship work characteristics on NS fit and organizational attractiveness. We test our hypotheses by employing ex-ante and ex-post (i.e., pre-internship and post-internship) research design, using a sample of Japanese undergraduate students who participated in a university-sponsored internship program.

Theory and Hypotheses

Internships as Realistic Job Previews

In the conventional job-seeking situation, signaling theory is the dominant perspective used to understand how job seekers develop organizational attractiveness (Carpentier, Van Hove, & Weijters, 2019; Connelly, Certo, Ireland, & Reutzel, 2011). Job seekers often have little information about recruiting organizations, so they rely on signals that they receive from available information, such as job advertisements and company webpages, to make inferences about working conditions and other organizational

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characteristics (Pernkopf, Latzke, & Mayrhofer, 2021). However, because such information tells job seekers only indirectly about the nature of the jobs, the assessment of fit and resultant organizational attractiveness may be inaccurate (Connelly et al., 2011; Thorsteinson, Palmer, Wulff, & Anderson, 2004).

On the other hand, internship experience provides students with more realistic and accurate information about the nature of jobs performed in sponsoring organizations (Beenen & Pichler, 2014; Zhao, 2013). Therefore, the perceptions of fit and organizational attraction generated by internships may be based more on reality than those formed by signaling and company images. Thus, we argue that the characteristics of internship jobs as RJP's influences interns' perception of fit, i.e., NS fit in our study, which in turn influences the attractiveness of sponsoring organizations as potential employers.

Self-Determination Theory and Needs-Supplies Fit in Internships

Person-environment (PE) fit is a critical construct for the job search context, as well as for recruitment and selection (Uggerslev, Fassina, & Kraichy, 2012; Yu, 2014). While the research on the conventional job search context has tended to focus more on person-organization fit (PO fit) as an antecedent of organizational attractiveness (Dineen, Ash, & Noe, 2002; Swider, Zimmerman, & Barrick, 2015), relatively few studies have examined the effect of NS fit on organizational attractiveness despite the importance of NS fit from job seekers' perspective (Sekiguchi & Huber, 2011). The concept of NS fit represents the idea that people select environments that fulfill their needs in the context of job choice decisions (Diener, Larson, & Emmons, 1984).

SDT is a theoretical framework that can account for the relationship between PE fit and the attitudes and behaviors of job applicants (Deci, Olafsen, & Ryan, 2017). SDT suggests that various environmental factors, such as job design, pay contingencies, and managerial styles, influence individuals' motivations, and such a process is largely mediated by a small set of basic psychological needs, namely, needs for autonomy, competence, and relatedness (Deci et al., 2017). Research that applied SDT in the job search context showed that autonomous motivation, resulting from basic needs fulfillment, plays a vital role in the job search process

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(da Motta Veiga & Gabriel, 2016). Therefore, applying SDT, we posit that basic psychological needs for autonomy, competence, and relatedness are satisfied by the characteristics of internship jobs, and the fulfillment of the basic psychological needs influences the perception of NS fit among interns.

Work Characteristics, Needs-Supplies Fit, and Organizational Attractiveness

Based on SDT, we choose job autonomy, skill variety, and feedback from employees as work characteristics that are easily experienced, even in a short-term internship program. Job autonomy refers to the extent to which the job provides substantial freedom, independence, and discretion to employees in carrying out their work (Hackman & Oldham, 1980). Skill variety refers to the extent to which a job requires employees to use a wide range of skills, talents, and activities in performing the work (Hackman & Oldham, 1980). Feedback from employees in our research context reflects the degree to which employees in the organization provide information about the performance of interns (e.g., Morgeson & Humphrey, 2006).

The SDT literature suggests that psychological needs for autonomy, competence, and relatedness (Deci et al., 2017) are satisfied when a job provides high levels of job autonomy, skill variety, and feedback from employees. Specifically, a high level of job autonomy mainly satisfies the needs for autonomy. A high level of skill variety mainly satisfies the needs for competence, as performing a job requiring a variety of skills is challenging and stimulates the perception that using such skills demonstrates the intern's competence. A high level of feedback from employees mainly satisfies the needs for competence and relatedness by providing interns with opportunities to interact and communicate with regular employees and to obtain information about their competence. Therefore, we predict that these three job characteristics not only increase intrinsic motivation through meaningfulness of the work, sense of responsibility, and knowledge about the performance (Hackman & Oldham, 1980) but also increase perceived NS fit among interns.

Interns may develop the perception of NS fit before the internship. However, as we discussed earlier, the pre-internship NS fit is formed on the basis of the limited information from the sponsoring organization, which is vague and abstract. We argue that interns will adjust their level of NS fit during the

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internship based on more realistic and accurate information about the supplies from the job in the sponsoring organization. This is consistent with past research that showed job applicants change their fit perceptions during the recruitment process (Swider et al., 2015). Therefore, we predict that the characteristics of internship jobs influence the perception of NS fit after the internship above and beyond the pre-internship NS fit. Thus, we predict the following:

Hypothesis 1: After controlling for the pre-internship level of perceived needs-supplies fit, job autonomy, skill variety, and feedback from employees in an internship job are positively related to the intern's perception of needs-supplies fit.

The perception of fit is among the critical predictors of organizational attractiveness (Carless, 2005). In general, job seekers are more attracted to the organization and the job capable of satisfying their basic needs. In other words, job seekers are more attracted to an organization where they perceive a high level of NS fit. When interns perceive a high level of NS fit, they think that such a workplace is desirable. Thus, NS fit, in turn, influences the organizational attractiveness of the company. In some support, Resick, Baltes, and Shantz (2007) reported the correlation between NS fit and the intent to accept job offer and actual job offer acceptance among interns. Interns may perceive a particular level of organizational attractiveness before the internship. However, as discussed earlier, the pre-internship organizational attractiveness is based on the company's basic information, which is indirect and vague. We argue that interns will adjust their level of organizational attractiveness during the internship using the NS fit formed in their internship experience that enables the interns to make a more accurate and realistic assessment of the desirability of the sponsoring organization as a potential employer. Past research showed that, after the formal company visit during the recruitment process, job applicants change their beliefs about organizations that are closely related to organizational attractiveness (Slaughter, Cable, & Turban, 2014). Therefore, we predict that NS fit formed in the internship influences the organizational attractiveness after the internships beyond the effect of the pre-internship level of organizational attractiveness. Thus, we predict the following:

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Hypothesis 2: After controlling for the pre-internship level of organizational attractiveness, an intern's perception of needs-supplies fit on an internship job is positively related to the attractiveness of the sponsoring organization as a potential employer.

Hypotheses 1 and 2 suggest that there is a mechanism in which work characteristics of the internship jobs, such as job autonomy, skill variety, and feedback from employees, indirectly influence organizational attractiveness, mediated by an intern's perceived level of NS fit. Therefore, we predict:

Hypothesis 3: The positive relationships between work characteristics (job autonomy, skill variety, and feedback from employees) in an internship job and organizational attractiveness are mediated by the intern's perception of needs-supplies fit.

Moderating Role of an Intern's Social Skill and Self-Esteem

Self-esteem is a fundamental self-concept that leads to many positive outcomes, and it is considered as one dimension of core self-evaluation (Kammeyer-Mueller, Judge, & Piccolo, 2008). Social skill represents the ability to effectively read, understand, and control social interactions (Ferris, Witt, & Hochwarter, 2001). Both factors are not only theoretically relevant to SDT but also considered to be signals of highly qualified job candidates (Ellis & Taylor, 1983). For example, self-esteem, together with other dimensions of core self-evaluation, is among the best dispositional predictors of job satisfaction and job performance (Kammeyer-Mueller et al., 2008). In the job search and career context, self-esteem was found to promote higher levels of job search behavior, high interview evaluations, more job offers, and perceptions of person-job fit (Ellis & Taylor, 1983; Kanfer, Wanberg, & Kantrowitz, 2001). Social skill has also been found to predict success in many different occupations (Seibert, Kraimer, & Liden, 2001).

We argue that individuals who are high in self-esteem have stronger needs for autonomy, competence, and relatedness. Research shows that people with high self-esteem try to adopt work roles consistent with their positive images of themselves, especially attempting to take on jobs perceived as being challenging, rewarding, and which society perceives as "high status" (Gottfredson, 1981). This suggests that

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individuals with high self-esteem tend to look for a workplace that can meet their strong basic needs, such as needs for autonomy, competence, and relatedness. Therefore, interns with high self-esteem prefer the environment that satisfies their basic needs and appreciates the work characteristics that fulfill their needs. Based on the argument above, we predict that interns with high self-esteem will be more likely to feel NS fit when the levels of job autonomy, skill variety, and feedback from employees are high. Thus, we predict the following:

Hypothesis 4a: An intern's self-esteem moderates the positive relationships between work characteristics (job autonomy, skill variety, and feedback from employees) in an internship job and perceived needs-supplies fit such that the relationships are stronger when an employee's self-esteem is high rather than low.

Interns who are high in social skill are more likely to interact with other people, such as regular employees during the internship. Under the high levels of job autonomy, skill variety, and feedback from employees, interns who are high in social skill are more likely to enjoy such work characteristics and take advantage of these characteristics to perform their assigned tasks. For example, they take advantage of job autonomy to interact with more people to perform their tasks, they take advantage of skill variety to learn by asking the permanent employees around them, and they take advantage of feedback from employees to improve their skills and performance. Therefore, interns high in social skill are more appreciative of such work characteristics and feel that their basic needs are fulfilled by the characteristics, resulting in a higher level of NS fit. Thus, we predict the following:

Hypothesis 4b: An intern's social skill moderates positive relationships between work characteristics (job autonomy, skill variety, and feedback from employees) in an internship job and perceived needs-supplies fit, such that the relationships are stronger when an employee's social skill is high rather than low.

Moderated Mediation Hypotheses

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Drawing on Hypothesis 3 as a mediation hypothesis and Hypotheses 4a and 4b as moderation hypotheses, we formally offer the hypotheses on moderated mediation or the conditional indirect effect. That is, we predict that the indirect effect of work characteristics on organizational attractiveness through NS fit is moderated by individual characteristics. Thus, we predict the followings:

Hypothesis 5a: An intern's self-esteem moderates the strength of the mediated relationships between work characteristics (job autonomy, skill variety, and feedback from employees) in an internship job and organizational attractiveness via perceived needs-supplies fit, such that the indirect relationship is stronger when an employee's self-esteem is high rather than low.

Hypothesis 5b: An intern's social skill moderates the strength of the mediated relationships between work characteristics (job autonomy, skill variety, and feedback from employees) in an internship job and organizational attractiveness via perceived needs-supplies fit, such that the indirect relationship is stronger when an employee's social skill is high rather than low.

Method

Sample and Procedure

We tested our hypotheses using a survey study with ex-ante and ex-post (i.e., pre-internship and post-internship) research design. Participants in this study were undergraduate students who enrolled in the internship program formally offered by a public university in Japan. This internship program consisted of pre-internship education with several sessions in the spring semester, an internship at the company during the summer vacation, and post-internship education in the fall semester. Surveys were administered twice, once before the students participated in internships and once after their internships were completed. We distributed the pre-internship survey to the 255 students who had enrolled in the course and 155 students completed the survey with a response rate of 61.5%. Other students decided not to participate in the internship. All of the 155 students who participated in the internship completed the post-internship survey with a response rate of 100%. All survey responses were usable. In the pre-internship survey, we collected information on perceived

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NS fit and organizational attractiveness (T1), as well as demographic variables. In the post-internship survey, we collected information about work characteristics of the internship, perceived NS fit, and organizational attractiveness (T2).

All participants were Japanese. The majority of them were male (82.6%) and third-year students (87.7%). As for their majors, 29.6% of the participants majored in economics and business, 25.8% in the foreign language and international relations, 20% in law, 18.1% in humanities, and 6.5% in regional development. There are three main sources of companies offering internships: 92.9% of the internships were with partner companies mediated by the university, 4.5% were offered through local internship promotion associations, and 2.6% were self-searched by the students. The sponsoring companies came from a wide range of industries, including food processing, travel agencies, trading companies, manufacturing, insurance, and telecommunications. When the university mediated the internships, students were allowed to choose their preferred company in advance. Specifically, students participating in this internship program were given a profile of all the sponsoring companies involved in the program. They were then instructed to select one or two companies from the list to apply for. Finally, the program coordinator matched companies and students based on the applications.

Measures

Unless otherwise specified, the scales used in our study were a seven-point Likert-type measure ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The items originally developed in English were translated into Japanese using the translation-back translation procedure (Brislin, Lonner, & Thorndike, 1973) to ensure that the original meanings of the items were retained after the translation.

Organizational attractiveness. Organizational attractiveness was measured in pre-internship (T1) and post-internship (T2) surveys using the four items. Three items, derived from Carless (2005), assessed perceptions of the attractiveness of working for the organization. Carless (2005) reported reliability of the scale with Cronbach's alpha of .77, supporting its use in measuring organizational attractiveness. The fourth

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item, adapted from Cable and Judge (1996), assessed participants' overall rating of organizational attractiveness by asking participants to rate the likelihood that they would accept a job offer from the organization if it were offered. In the present study, Cronbach's alphas were .87 for T1 and .91. for T2.

Perceived needs-supplies (NS) fit. Participating students' perceptions of NS fit was measured in pre-internship (T1) and post-internship (T2) surveys, using the three-item needs-supplies fit scale developed by Cable and DeRue (2002). To adapt this scale to our study, we slightly changed the wording of original scale items to fit the internship situation. For example, one of the original items was "There is a good fit between what my job offers me and what I am looking for in a job." We changed "what my job offers me" to "what the internship job offers me." Cable and DeRue (2002) reported reliability of the scale, with Cronbach's alphas of .89 and .93 in a single-firm sample and a multiple-firm sample respectively, supporting its use to measure perceived NS fit. In the present study, the Cronbach's alphas were .81 for T1 and .86. for T2.

Job autonomy. The degree of job autonomy was measured using the three-item scale developed by Hackman and Oldham (1980) and modified by Idaszak and Drasgow (1987). To adapt this scale to the context of the internship, we replaced the word "job" with "internship job" in the original items. A sample item was "I have significant autonomy in determining how I do my internship job." Idaszak and Drasgow (1987) reported reliability of the scale, with Cronbach's alphas of .79 and .80 in two studies, supporting its use to measure job autonomy. In the present study, the Cronbach's alpha for this scale was .75.

Skill variety. We used the three-item scale adapted from Morgeson and Humphrey (2006) to measure the degree of skill variety. To adapt this scale to fit the internship situation, we replaced the word "job" with "internship job" in the original items. One sample item was "The internship job requires me to utilize a variety of different skills in order to complete the work." Morgeson and Humphrey (2006) provided good internal consistency with a Cronbach's alpha of .86, supporting its use to measure skill variety. In the present study, the Cronbach's alpha for this scale was .92.

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Feedback from employees. The degree of getting feedback from employees was measured using the two-item scale derived from Morgeson and Humphrey (2006). One of the original items was “I receive a great deal of information from my manager and coworkers about my job performance.” To adapt this scale to our study, we changed “from my manager and coworkers about my job performance” to “from the employees of the company about my internship job performance.” Morgeson and Humphrey (2006) provided good internal consistency with a Cronbach’s alpha of .86, supporting its use to measure feedback from employees. In the present study, the Cronbach’s alpha for this scale was .66. Considering that the number of items has a significant effect on the alpha, this alpha deemed acceptable because the scale was based on a two-item scale (Cortina, 1993).

Social skill. We assessed participants’ social skill using the seven-item measure adapted from Ferris et al. (2001). A sample item was “In social situations, it is always clear to me exactly what to say and do.” Previous studies (Ferris et al., 2001; Wu et al., 2015) have provided evidence of the scale’s high reliability and quality with Cronbach’s alphas of .77 and .89, respectively, supporting its use to measure social skill. In the present study, the Cronbach’s alpha of this scale was .67, which was generally acceptable.

Self-esteem. Self-esteem was measured using four items from Rosenberg’s (1965) 10-item scale, which had the greatest face validity for participants. Participants were asked to indicate their agreement with such statements as, “I feel that I have a number of good qualities” and “I take a positive attitude toward myself.” We believe that this measure is valid even in the Japanese cultural context for the following two reasons. First, the reliability and validity of the same scale has been established in previous studies such as Sekiguchi and Hayashi (2014) using Japanese student samples, with Cronbach’s alphas of .77 and .80 in the two studies. Second, self-esteem has been extensively studied in Japan (e.g., Kobayashi & Brown, 2003; Piccolo, Judge, Takahashi, Watanabe, & Locke, 2005), and although some studies have used different scales, we are unaware of any evidence showing that the concept has different meanings in the Japanese culture. In the present study, the Cronbach’s alpha of this scale was .81.

Control variables. We introduced several control variables into our analyses to minimize the potential influences of exogenous variables. Students' demographic information comprised our primary controls, including gender (coded as 0 = male, 1 = female) and school year (in years). We also controlled for NS fit and organizational attractiveness at T1 when examining the post-internship NS fit and the post-internship organizational attractiveness as dependent variables.

RESULTS

Table 1 presents the means, standard deviations, and correlations among the variables used in this study. Prior to the main analyses, we conducted a confirmatory factor analysis to test the measurement model. The hypothesized nine-factor measurement model, which included organizational attractiveness (T1 and T2), NS fit (T1 and T2), skill variety, job autonomy, feedback from employees, social skill, and self-esteem, provided a good fit to the current data ($\chi^2 [524] = 763.29, p < .05$, TLI = .88, CFI = .90, SRMR = .07, RMSEA = .06). This model was superior to other models, including a seven-factor model with organizational attractiveness at T1 and T2 as one factor and NS fit at T1 and T2 as another factor ($\chi^2 [539] = 1122.81$, TLI = .72, CFI = .75, SRMR = .11, RMSEA = .09; $\Delta\chi^2 [15] = 359.52, p < .01$), a seven-factor model with organizational attractiveness at T1 and NS fit at T1 as one factor and organizational attractiveness at T2 and NS fit at T2 as another factor ($\chi^2 [539] = 943.00$, TLI = .81, CFI = .83, SRMR = .09, RMSEA = .08; $\Delta\chi^2 [15] = 179.71, p < .01$), and a null model with all items loading on one factor ($\chi^2 [560] = 2074.53$, TLI = .31, CFI = .35, SRMR = .15, RMSEA = .15; $\Delta\chi^2 [36] = 1311.24, p < .01$).

Preliminary Analysis

The results show that the perception of NS fit after the internship ($M = 4.45$) was significantly lower than the one before the internship ($M = 4.88; t = 6.07, p < 0.01$) and organizational attractiveness after the internship ($M = 4.68$) was significantly lower than the one before the internship ($M = 5.45; t = 9.68, p < 0.01$). These results indicate that, on average, interns' perceptions of NS fit and organizational attractiveness declined after the internship. Although we did not explicitly hypothesize, this result is consistent with the

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prior RJP literature showing that the effects of RJP on organizational attractiveness and job choice tend to be negative (Premack & Wanous, 1985; Wiesner, Saks, & Summers, 1991).

Insert Table 1 about here

Insert Figure 1 about here

Tests of Hypotheses 1–3

We tested hypotheses 1 to 3 with structural equation modeling (SEM) using the R package “lavaan” (Rosseel, 2011). The result for our proposed model shows a good fit ($\chi^2 [256] = 377.46$; CFI = .93; TLI = .92; RMSEA = .06). Given that work characteristics and NS fit and organizational attractiveness after internships were all measured in Time 2, we tested an alternative model in which the causal direction between NS fit and organizational characteristics was reversed. The alternative model also obtained a good fit ($\chi^2 [256] = 382.45$; CFI = .93; TLI = .92; RMSEA = .06). However, this model’s fit indices are not significantly better than those of Model 1 ($\Delta\chi^2 [2] = 2.31$, n.s.). Further, we compared the two models by calculating Akaike Information Criteria (AIC) values and found that AIC of the main model is lower than that of the alternative model, which suggests that our main model provides a better fit to the data. The path coefficients of the main model 1 are shown in Figure 1.

As shown in Figure 1, when looking at the paths from work characteristics to NS fit in T2, the path from skill variety to NS fit (T2) and the path from feedback to NS fit (T2) were both significant, even after the NS fit in T1, gender, and school year were controlled for ($\beta = .25$, $\beta = .35$, respectively). On the other hand, the path from job autonomy to NS fit was not significant. Therefore, Hypothesis 1 was partially supported. Next, looking at the path from NS fit to organizational attractiveness in T2, it was significant even after the organizational attractiveness at T1, gender, and school year were controlled for. Therefore, Hypothesis 2 was supported.

To test the mediating relationship involving work characteristics, NS fit, and organizational attractiveness, we performed a non-parametric bootstrapping method (5,000 bootstrapping sample) (Tingley,

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Yamamoto, Keele, & Imai, 2014). The confidence interval for the estimated indirect effect of skill variety on organizational attractiveness via NS fit and the estimated indirect effect of feedback from employees on organizational attractiveness via NS fit did not contain zero (.12—.37, .12—.38, respectively). Therefore, Hypothesis 3 was partially supported.

Tests of Hypotheses 4–5

We then tested the moderation effect of social skill and self-esteem on the significant indirect effects founded by the above analysis. First, we performed multiple regression analyses to test Hypotheses 4a and 4b. The results are shown in Table 2.

Insert Table 2 about here

As shown in Table 2, in Step 1, gender, school year, and NS fit (T1) were included as control variables. In Step 2, we entered skill variety as one of the major independent variables into the model. In Steps 3a–3b, we entered the interaction terms between skill variety and the moderator (i.e., social skill and self-esteem). The interaction terms involving skill variety and social skill and self-esteem were all statistically significant ($\beta = .17, p < .05$; $\beta = .18, p < .05$, respectively). In Step 4, we entered another independent variable (feedback from employees) into the model. In Steps 5a–5b, we entered the interaction terms between feedback from employees and the moderator (i.e., social skill and self-esteem). The interaction term involving feedback from employees and social skill was statistically significant ($\beta = .15, p < .05$), whereas the interaction term involving feedback from employees and self-esteem was not significant ($\beta = .08, ns$). We plotted these interactions using the approach suggested by Aiken and West (1991). To save space, we show only one of these plots in Figures 2. The other plots have a similar shape to it. The figures suggest that the higher the levels of social skill and self-esteem, the stronger are the relationships between skill variety and/or feedback from employees and NS fit. Therefore, Hypotheses 4a and 4b were partially supported.

Insert Figure 2 about here

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To test the moderated mediation or the conditional indirect effect predicted by Hypotheses 5a and 5b, we used the non-parametric bootstrapping approach (5,000 bootstrapping samples) suggested by Tingley et al., (2014). The results are shown in Table 3.

Insert Table 3 about here

As for the indirect effect of skill variety to organizational attractiveness through NS fit, the 95% confidential interval of the estimated indirect effect did not include zero (.15—.56) when social skill was high (mean+1SD), whereas the confidence interval included zero (-.04—.26) when social skill was low (mean-1SD). Likewise, the 95% confidence interval of the estimated indirect effect did not include zero (.14—.53) when self-esteem was high, whereas the confidential interval included zero (-.04—.31) when self-esteem was low. As for the indirect effect of feedback from employees on organizational attractiveness through NS fit, the 95% confidence interval of the estimated indirect effect did not include zero (.17—.58) when social skill was high, whereas the confidence interval included zero (-.02—.25) when social skill was low. The above results suggest that the indirect effect of skill variety is observed only when social skill and/or self-esteem are high, and the indirect effect of feedback from employees is observed only when the social skill is high. Therefore, Hypotheses 5a and 5b were partially supported.

Supplementary Analyses

Based on the preliminary finding that NS fit and organizational attractiveness declined after the internship, we conducted supplementary analyses to examine the influence of time (i.e., the time between before and after the internship) on perceived NS fit and organizational attractiveness. We performed multiple regression analyses, wherein the level of organizational attractiveness was regressed onto time, NS fit after the internship, and the interaction of the two, including gender and school year as control variables. The results show that the interaction of time and NS fit after the internship was significant ($\beta = .67, t = 5.47, p < .01$). The plot of the interaction is depicted in Figure 3.

Insert Figure 3 about here

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As shown in the figure, the extent to which organizational attractiveness declined after the internship was smaller, when interns' NS fit after the internship is high rather than low. Simple slope analyses showed that, while organizational attractiveness after the internship was significantly lower than its pre-internship level for the interns with a low level of NS fit ($t = -9.49, p < .01$), organizational attractiveness after the internship was not significantly lower than its pre-internship level for those with a high level of NS fit ($t = 1.27, n.s.$). Because our main analysis indicated that perceived NS fit was influenced by work characteristics, the results suggest that the quality of work characteristics indirectly mitigate the negative effect of the internship on organizational attractiveness through the perception of NS fit.

Discussion

By integrating the perspectives of RJP, SDT, and NS fit, the current study investigated what factors and process influence the attractiveness of sponsoring organizations through the internship experience and whether the effects of those factors and the process extend beyond the pre-internship level of interns' perceptions about the organizations, which are based on the indirect and limited information. Although internship experience had an overall downward influence on organizational attractiveness, which is consistent with the past literature on RJP (e.g., Wiesner et al., 1991), skill variety and feedback from employees in the internship job positively influenced the interns' perceived NS fit, which in turn positively influenced organizational attractiveness. Also, interns' self-esteem and social skill moderated the indirect effects of skill variety and feedback from employees on organizational attractiveness through NS fit. Overall, our findings highlight the importance of internship work characteristics as a realistic source of organizational attractiveness, which contributes to attracting high-potential interns.

We did not find evidence that job autonomy in the internship job exerts an indirect influence on organizational attractiveness through enhancing interns' perception of NS fit, nor did we find evidence of the moderating role of self-esteem and social skill on the mediating process. It may be possible that undergraduate interns may appreciate specific instructions and guidance to perform their assigned jobs rather

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than being left alone in the name of autonomy. In addition, self-esteem was not found to moderate the effect of feedback from employees on perceived NS fit. Future research should examine the reasons for these insignificant findings, theoretically and methodologically.

Contributions to the Literature

Our findings contribute to the literature on internships in several ways. First, our study examined the effectiveness of internship programs in terms of their effect on organizational attractiveness, which is a key determinant of job seekers' career choices and career development (Super, 1980). Particularly, our study complements the recent study by Harris and Pattie (2020) that found the effect of the interns' perceptions of HR practices on PO fit, demands-abilities fit, and intention to join. While Harris and Pattie (2020) focused on the HR practices, our study focused on the characteristics of internship jobs, and while their study examined the mediating role of PO fit and DA fit, our study examined the mediating role of NS fit. Thus, findings from our study and Harris and Pattie (2020) advance the understanding of how the working environment in the internship experience influences organizational attractiveness through various dimensions of fit.

Second, by integrating SDT and NS fit perspectives, our study extends the previous literature on fit and organizational attractiveness by providing evidence that SDT is a useful framework to understand how and why work characteristics of organizations influence perceived fit and subsequent organizational attractiveness. Our study also extends the study of Schmidt, Chapman, and Jones (2015), which investigated the effect of job advertisements on applicant attraction, mediated by NS fit. Although their study examined the effect of job advertisements as the determinants of NS fit, using internships as a research context enabled us to examine the antecedents of NS fit more concretely and accurately, which strengthens the validity of the mediating role of NS fit between the work environment and organizational attractiveness.

Third, our findings identified the boundary conditions of the effect of work characteristics on NS fit and organizational attractiveness, namely, self-esteem and social skill of interns, which are theoretically relevant and practically important. Because these moderators are theoretically relevant to SDT, the

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statistically significant findings of their moderating effects strengthen the validity of applying SDT to the areas of internships and organizational attractiveness. Because self-esteem and social skill are also indicators of desirable job candidates (e.g., Ellis & Taylor, 1983), our study highlights the importance of work characteristics of internships that contribute to attracting high-potential interns from the employer perspective.

Implications for Practice

Our study and findings also have meaningful practical implications for both college students and organizations engaging in internships as an effective means for the school-to-work transition. First, our study shows that work-related characteristics experienced from internships affect interns' perception of NS fit and organizational attractiveness. This finding suggests that college students should pay more attention to work-related factors in addition to learning relevant skills when participating in internships so that they can understand what kind of work environment and what kind of job content is suitable for them and to have a better understanding of their needs. This will help college students to have a clearer career development path.

Second, companies providing internship opportunities can benefit from enriching the work characteristics of internships to attract high-potential interns because our findings suggest that the effect of enriching work characteristics on organizational attractiveness is stronger for more qualified interns (e.g., those with high self-esteem and/or social skill). Moreover, the organizational attractiveness engendered through direct internship experience that is realistic and accurate would lead to positive post-hire outcomes as the literature on RJPs suggests (Earnest et al., 2011; Phillips, 1998).

Limitations and Future Research Directions

The current study has several limitations that provide opportunities for future research. First, our study sample consisted of Japanese undergraduate students from the same university, and more than 80% of the participants were male, while less than 20% were female. Therefore, the generalizability of our findings to environments beyond the study site and Japan is not guaranteed. In addition, whereas undergraduate interns are typically inexperienced in work, other types of interns such as MBA interns are more experienced

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(Beenen & Rousseau, 2010). Therefore, it might be possible that the role of internship experience as RJP might be less strong for experienced interns who already have considerable real work experience. Future research may constructively replicate and extend our findings by conducting research in other regions and countries as well as with different types of internships. Future research also could examine the potential moderating role of gender that might influence the effect of the internship found in this study.

Second, although we used an ex-ante and ex-post (i.e., pre-internship and post-internship) research design to capture the changes of the levels of NS fit and organizational attractiveness, the variables during and after the internship were both measured at Time 2. The causal relationship between NS fit and organizational attractiveness could be reciprocal such that the increase of NS fit causes the increase of organizational attractiveness, which in turn causes the increase of NS fit. The recent PE fit research from the temporal and dynamic perspective suggests this possibility (e.g., Sylva, Mol, Den Hartog, & Dorenbosch, 2019). Future research could further investigate this issue with more rigorous methodologies, such as a multi-wave longitudinal study. In addition, the Cronbach's alpha values for the measures of employee feedback (.66) and social skills (.67) were relatively low although alpha values below .7 are not uncommon in published studies (DeVellis, 2011). This may be due to the number of items (Cortina, 1993) and the small number of participants in this study. Future research could address this issue by using alternative measures and using large samples.

Finally, the current study did not go beyond examining organizational attractiveness as an outcome of internships. Future research could examine the effectiveness of internships from a broader perspective by integrating SDT and NS fit into other relevant variables, such as career development, job search, and other recruitment outcomes. In conclusion, the current and future research on internships are expected to strengthen the view that realistic job fit through internship experience matters for both students' career development and organizational effectiveness.

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Table 1: Descriptive statistics and correlations among variables used in this study

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender	.83	.38	—										
2. School year	2.88	.43	-.05	—									
3. Organizational attractiveness (T1)	5.45	1.00	-.04	.16	(.87)								
4. Organizational attractiveness (T2)	4.68	1.40	-.04	.07	.34**	(.91)							
5. Needs-supplies fit (T1)	4.88	.89	-.08	.07	.61**	.23**	(.81)						
6. Needs-supplies fit (T2)	4.45	.96	-.04	-.04	.27**	.65**	.40**	(.86)					
7. Job autonomy	4.13	1.23	-.13	.23**	.09	.03	.07	.18*	(.75)				
8. Skill variety	3.73	1.36	-.07	.15	.27**	.22**	.23**	.37**	.49**	(.92)			
9. Feedback from employees	5.00	1.20	-.08	.13	.30**	.31**	.25**	.38**	.36**	.43**	(.66)		
10. Social skill	4.30	.64	-.14	.01	.21**	.08	.27**	.16	.19*	.24**	.14	(.67)	
11. Self-esteem	4.22	.98	-.16	-.05	.20**	.11	.24**	.07	.18*	.10	.19*	.54**	(.81)

Cronbach's alpha estimates are shown in parentheses on the diagonal.

Note. $N = 155$. * $p < 0.05$; ** $p < 0.01$.

Table 2: Multiple regression analysis to test moderations

Variable	Dependent variable: Needs-supplies fit (T2)						
	Step 1	Step 2	Step 3a	Step 3b	Step 4	Step 5a	Step 5b
Control variables							
Gender	-.02	.06	.07	.07	.04	.05	.03
School year	-.07	-.12	-.12	-.13	-.09	-.07	-.09
Needs-supplies fit (T1)	.40**	.35**	.31**	.37**	.32**	.29**	.33**
Independent variables							
Skill variety		.32**	.32**	.31**			
Feedback from employees					.32**	.32**	.31**
Moderators							
Social skill			.04			.01	
Self-esteem				-.00			-.07
Interactions							
Skill variety × social skill			.17*				
Skill variety × self-esteem				.18*			
Feedback from employees × social skill						.15*	
Feedback from employees × self-esteem							.08
Model <i>F</i>	9.62**	11.92**	9.16**	9.31**	11.32**	8.75**	7.99**
<i>R</i> ²	.16	.26	.29	.30	.25	.28	.26
ΔR^2		.10**	.13**	.14**	.09**	.12**	.10**

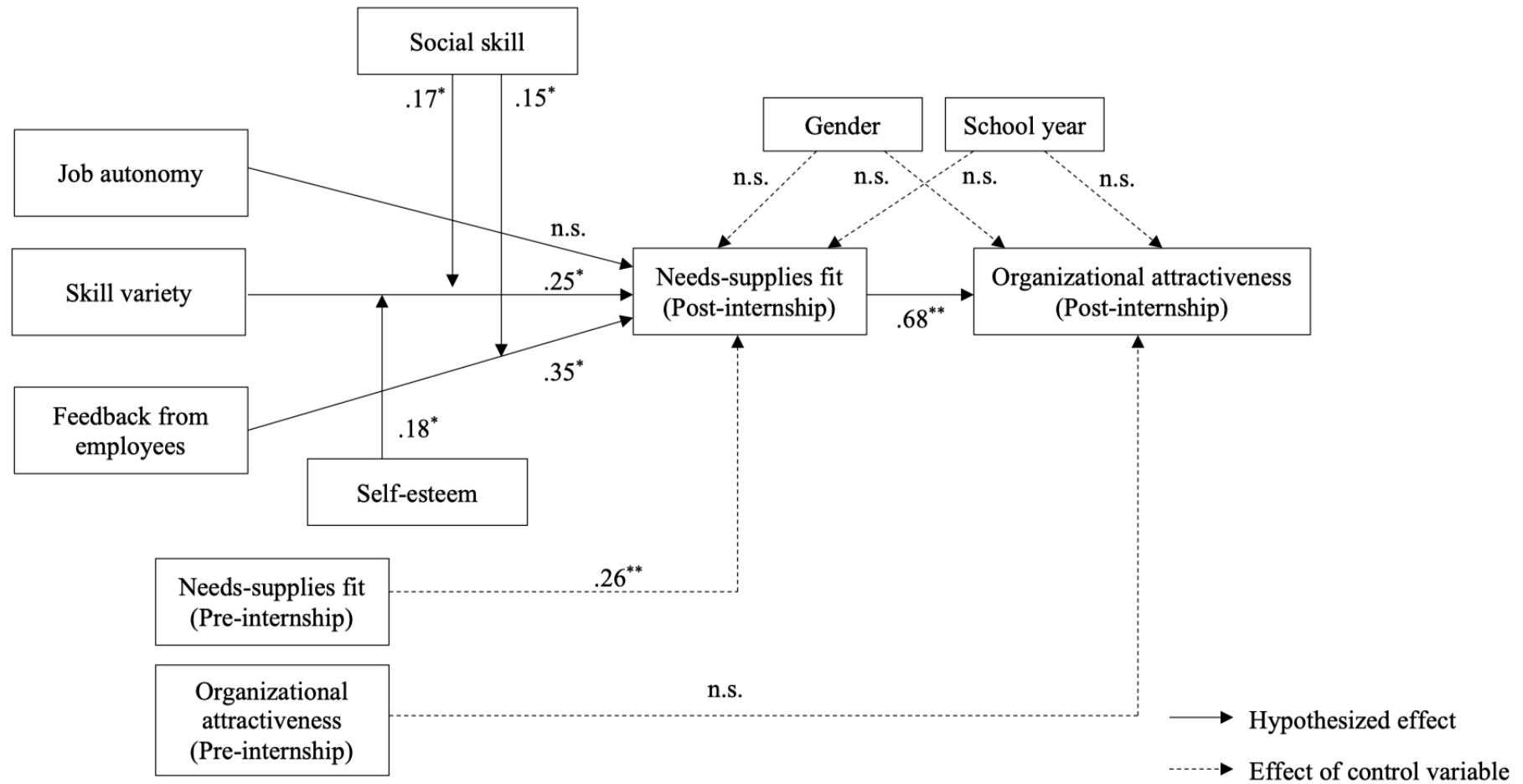
Note. *N* = 155. * *p* < 0.05; ** *p* < 0.01.

Table 3: Test of the moderated mediation models

Mediation model	Moderator	<i>B</i>	LO95%	HI95%	p value
Skill variety → Needs-supplies fit → Organizational attractiveness	High social skill (mean + 1SD)	.33	.15	.56	p < .01
	Low social skill (mean – 1SD)	.12	-.04	.26	n.s.
Skill variety → Needs-supplies fit → Organizational attractiveness	High self-esteem (mean + 1SD)	.32	.14	.53	p < .01
	Low self-esteem (mean – 1SD)	.13	-.04	.31	n.s.
Feedback → Needs-supplies fit → Organizational attractiveness	High social skill (mean + 1SD)	.35	.17	.58	p < .01
	Low social skill (mean – 1SD)	.11	-.02	.25	n.s.

Note. 5,000 bootstrapping samples

Figure 1: Structural equation modeling results



Note. The paths from social skill and self-esteem are based on the moderated regression analyses shown in Table 3.

Figure 2: Interaction of skill variety and social skill on needs-supplies fit

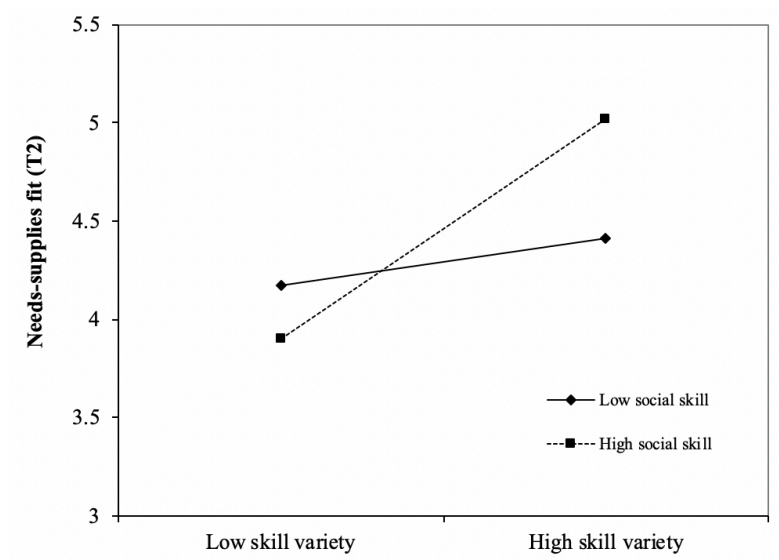


Figure 3: Interaction of time (from pre-internship to post-internship) and needs-supplies fit on organizational attractiveness

