온라인 기업 리뷰 플랫폼에서 리뷰 질적인 측면이 리뷰 유익성에 미치는 영향

Effects of Qualitative Factors in Reviews on Job Seekers' Perceptions: Empirical Analysis of Online Employer Reviews*

우성준(주저자) · 엄다예(공저자) · 조우제(교신저자) Sung Jun Woo(First Author) · Daye Um(Co-Author) · Wooje Cho(Corresponding Author)

서울대학교 경영학과 Seoul National University, Graduate School of Business(sungjunwoo@snu.ac.kr) 서울대학교 경영학과 Seoul National University, Graduate School of Business(umdaye@snu.ac.kr) 서울대학교 경영학과 Seoul National University, Graduate School of Business(woojecho@snu.ac.kr)

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Compared with online product reviews, employer reviews include unique dimensions, such as reviewer demographics and evaluations of various organizational attributes. This study explores the role of qualitative factors within reviews on the perceived helpfulness of the review. To identify determinants of the helpfulness of employer reviews, we use a publicly accessible dataset from Glassdoor. For the analysis, a Tobit regression model is used, which is suitable for dealing with our left-censored data distribution. Our findings highlight the crucial influence of review readability, review comprehensiveness, review completeness, and the managerial response on the helpfulness of employer reviews. By proposing new measures for review comprehensiveness and completeness, this research enhances our knowledge of the qualitative factors that underpin the helpfulness of employer review in the realm of online employer reviews.

Keyword: Online employer review, helpfulness of employer review, qualitative factors in reviews, review comprehensiveness, review completeness

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I. Introduction

In today's digital economy, online reviews have become a pivotal decision-making tool

not only for consumers but also for job seekers. The influence of such reviews extends beyond the realm of products and services to the evaluation of employers and workplaces. The increasing reliance on these reviews under-

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scores their critical role in shaping perceptions and influencing decisions. Employer reviews have become an important source of information for job seekers just as consumers' online reviews and the managers' response to the reviews are useful to the potential shopper. Yet, there is an aspect often overlooked in the literature: the substantial impact of qualitative factors of online reviews on the job seekers' perception.

Recent research indicates that managerial responses to consumer reviews significantly sway potential buyers' purchasing decisions. which reveals a dynamic interplay between customer feedback and firm engagement (Chen et al., 2019; Guo et al., 2022). In the context of employment, this dynamic becomes nuanced as well. Much like customer reviews, employer reviews carry substantial weight in the job market. Prospective employees meticulously scrutinize these reviews, seeking authentic insights into company culture and work environment. In response, managers increasingly engage with such reviews, understanding that their reactions can serve as a decisive factor for potential applicants (Liang et al., 2021; Schuckert et al., 2019).

This study delves into the growing importance of online employer reviews and managerial responses therein, establishing a connection that is critically underrepresented in current literature. It specifically examines how qualitative factors of reviews and managerial responses to employer reviews on platforms such as Glassdoor can influence job seekers' perceptions. These platforms provide invaluable insights into prospective employers, offering a unique lens into workplace environments. In this context, well-organized and pertinent online information plays a pivotal role in the decision-making process of job seekers, shaping their perceptions of desirable workplaces. These perceptions are no longer solely shaped by the companies themselves but also by external third-party sources. Job seekers now turn to online review platforms where employees, motivated by the desire to provide honest feedback (Lerner and Tirole, 2002), share their evaluations of employers. In fact, according to a Glassdoor (2019) report, more than 80% of job seekers read these reviews before applying and consider them more credible than company accolades.

This study aims to contribute to the broader understanding of online reputation management from the perspective of firm behavior and its repercussions in the labor market. Our study is positioned to fill a significant gap by exploring the content of reviews and the reactions they elicit from management. This dual focus provides a more comprehensive view of the e-recruitment landscape. It offers insights that extend beyond the established knowledge of electronic word-of-mouth (eWOM) in consumer behavior. By applying the theoretical frameworks of signaling theory and

information foraging theory, we investigate the effects of qualitative factors in online employer reviews and the concomitant managerial responses on the perceived helpfulness of these reviews to job seekers. We use signaling theory to support the significance of the qualitative factors in employer reviews and information foraging theory to explain job seekers' behavior on the online review platform. Therefore, we aim to answer two fundamental questions: (1) how do qualitative attributes such as readability, comprehensiveness, and completeness of online employer reviews contribute to their usefulness for job seekers, and (2) what is the degree of impact that these qualitative attributes have on the perceived value of the reviews by potential employees?

Our study shows that the comprehensiveness and completeness of employer reviews are significantly associated with the helpfulness of the reviews. We also find that the readability of reviews and responses of the management matter for the helpfulness of reviews in the domain of the online employer review platform. We contribute to the online review literature by delving into the quality dimensions of online employer reviews and by proposing new measures of review comprehensiveness and completeness.

II. Theoretical Foundation and Model

Online employer reviews have become an important source of information for job seekers. One way to understand how people use this information is to apply information foraging theory, which explains how individuals search for and utilize information in environments that mimic the strategies of food foraging in the wild (Pirolli and Card, 1999). This theory posits that job seekers, akin to foragers, seek to maximize their returns - in this case, valuable employment information - with minimal cognitive effort. In online settings where there is a vast amount of information available. people tend to use cues from the environment, such as specific keywords or the depth of content in a review, to determine where to look next. This behavior is crucial for efficiently finding relevant information amidst the abundance of options.

Signaling theory presents a complementary perspective to the behavior of the information seeker when it comes to the content of the information (Spence, 2002). Here, reviews do not just serve as a passive source of information but carry signals that communicate underlying qualities about the employer to the job seeker. It would be costly for an employee to provide high-quality reviews about the employer because only employees with enough experience or knowledge about the employer

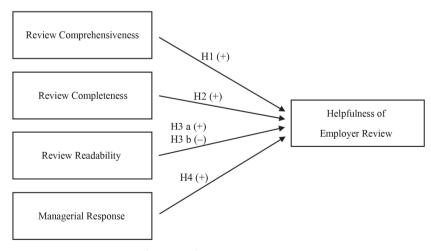
can provide high quality information. Thus, high-quality reviews can give job seekers reliable signals that they were written by someone with enough experience or knowledge. For instance, a comprehensive review may deliver a reliable signal about an organizational culture. Managerial response may verify signals via an employer's commitment to transparency and communication. By conveying such attributes, the qualitative factors within reviews effectively reduce information asymmetry between current or prospective employees (the receivers) and the employers (the signalers).

This research presents a holistic model that accounts for the dynamics of information seeking and processing. Job seekers forage for helpful information, guided by signals embedded within the content of employer reviews. The proposed model in Figure 1, therefore, incorporates con-

structs from both information foraging and signaling theory to explain the significance of qualitative factors on perceived helpfulness of employer reviews.

2.1 Helpfulness of Employer Review

For job seekers, it is important to explore which online employer reviews are helpful to them. Online users can utilize the "Helpful?" icon to indicate how useful a website review is by clicking on it. The helpfulness of employer reviews has been widely adopted by online businesses to gauge how customers believe a review affects their decision-making process (Mudambi and Schuff, 2010). The helpfulness vote reflects users' evaluation of the value and utility of a review (Huang et al., 2015). Numerous variables affect how helpful an online review is (Rietsche et al., 2019).



(Figure 1) Research model

Previous research has examined the impact of both the reviewer and review features on the helpfulness of reviews (Zheng. 2021). Reviewer-related features include source credibility (Li et al., 2013), expertise (Siering et al., 2018), the reviewer's information disclosure (Forman et al., 2008), the reviewer's reputation (Lee and Choeh, 2016), and membership tiers (Fu et al., 2018). Review-level features include the message (information) quality (Liang et al., 2014), subjectivity (Agnihotri and Bhattacharya, 2016), credibility (Filieri, 2015), readability (Liang et al., 2019), completeness (Racherla and Friske, 2012), number of reviews (Lee and Choeh, 2016), rating score, and length (Eslami et al., 2018).

2.2 Qualitative Factors of Reviews

2.2.1 Review Comprehensiveness

Review comprehensiveness refers to "the extent to which review content is sufficiently complete and exhaustive, and a comprehensive review discusses in detail a wide variety of product dimensionality" (Fang et al., 2022). Providing comprehensive information about a product or service can be extremely helpful for consumers in making informed decisions (Jiang and Benbasat, 2004). The decision-making process often involves uncertainty stemming from different facets of the product or service. Online reviews that comprehensively

cover unique aspects of the product or service are likely to effectively address the uncertainty across these diverse facets. As such, a comprehensive review is considered sufficient and valuable in this context.

Filieri (2015) introduced the concept of "information depth." which refers to the detailed information provided within a review about various attributes of a product or service. This depth of information has been shown to strongly influence the perceived helpfulness of a review. Similarly, in-depth reviews that encompass a comprehensive examination of various employer attributes consistently assist consumers in their evaluation processes and are perceived as highly helpful. Additionally, comprehensive employer reviews offer valuable expertise and knowledge about the employer enhancing source credibility (Hovland et al., 1953). Source credibility, characterized by consumers perceiving the information as trustworthy and authoritative (Coursaris and Van Osch, 2016), is a critical element that contributes to the perceived helpfulness of reviews. Review comprehensiveness affects people's decision making (Zhao et al., 2015), determines the diagnosticity of the review (Li et al., 2017), and contributes significantly to the information quality of the review (Filieri, 2015). Therefore, we hypothesize the following:

H1: Review comprehensiveness is positively associated with the helpfulness of

employer reviews.

2.2.2 Review Completeness

The concept of completeness, as applied to online reviews, has been extensively investigated and established by researchers. Completeness. as elucidated by Luo et al. (2013), pertains to the extent to which an online review provides satisfactory information. The literature further suggests that review completeness has a significant impact on the credibility of an online review. When an online review is perceived as being complete, it not only enhances the quality of information but also strengthens the overall argument presented within the review (Cheung et al., 2009). Consequently, when recipients perceive online reviews as having valid and complete arguments, they are more likely to regard these reviews as positive and credible sources of information. Therefore, within the scope of this study, we propose that review completeness is positively linked to the helpfulness of employer reviews.

H2: Review completeness is positively associated with the helpfulness of employer reviews.

2.2.3 Review Readability

Previous research has shown that the qualitative characteristics of online product re-

views do affect a consumer's assessment of the value of a specific review (e.g., Armstrong, 2010: Korfiatis et al., 2012). Moreover, when information is presented in an easily understandable manner, readers are more likely to exert additional effort in comprehending it (Armstrong, 2010). This enhanced understanding, in turn, leads to a more readily accessible evaluation of the star rating, ultimately aiding in the decision-making process (Korfiatis et al., 2012).

Review readability refers to how well a person can comprehend and assimilate information pertaining to products or services, ultimately influencing the acceptance of the information provided (Zakaluk and Samuels, 1988), Liu and Park (2015), as well as Fang et al. (2016), through their respective research utilizing online reviews on Yelp and Tripadvisor, found a positive correlation between the readability of reviews and the perception of their usefulness. Thus, review readability can work in predicting how well readers understand reviews and how helpful reviews are to review readers. To empirically examine the impact of readability on the helpfulness of online employer reviews, we propose the following:

H3a: The ease of understanding is positively associated with the helpfulness of employer reviews.

H3b: The textual complexity is negatively associated with the helpfulness of

employer reviews.

2.2.4 Managerial Response

Managerial responses to online reviews have a far-reaching influence, affecting the reviewer and future review readers who encounter these responses (Chen et al., 2019). Providing online responses can reinforce perceptions about business trustworthiness and commitment to customer care (Sparks et al., 2016). Moreover, constructive responses from a company can positively influence perceptions of the company's trustworthiness (Könsgen et al., 2018). These responses signal that the company values user feedback, whether the company is endorsing reviews or addressing issues raised (Xie et al., 2014). According to recent studies, reacting to even unfavorable employer reviews may be more advantageous than remaining silent because it may change the attitudes and intentions of potential employees (Carpentier and Van Hoye, 2021; Könsgen et al., 2018). Despite this finding, there is a dearth of research on how managerial responses influence the perceived helpfulness of employer reviews. Consequently, we hypothesize a positive relationship between the managerial response and the helpfulness of employer reviews.

H4: The managerial response is positively associated with the helpfulness of employer reviews.

III. Research Method

3.1 Data Collection

The Glassdoor dataset used in this study was sourced from the Kaggle website. The data was gathered from North and South America, Europe, Africa, Asia, and Oceania between 2012 and 2019. Notably, Parameswaran et al. (2023) previously used the Glassdoor dataset in a study examining the effects of reviews and review anonymity on the helpfulness of employer reviews. The selection of this dataset was grounded in three core rationales: (1) Glassdoor's reputation as an employer review platform, (2) the website's provision of a multifaceted representation of employer conditions, and (3) the robustness of Glassdoor's fraud detection algorithms and human moderation team.

The dataset underwent a preprocessing stage in which redundant entries and non-English reviews were eliminated, leaving a total of 67,021 observations used for this research. In addressing missing data within the job experience control variable, we used mean imputation to resolve issues. This approach replaces missing values with the mean of the data collected for that variable. This technique preserved the original distribution of Job Experience while handling the missing data.

We assumed the data were missing completely at random. We also implemented a winsorization technique to reduce outliers and their potential distortions. According to the data frequency, we applied winsorization at 0.5% for the two readability variables, the Flesch Reading Ease index (FRE) and the Coleman-Liau index (CLI), and 0.2% for the helpfulness count variable. We replaced values below 0.5% (or 0.2%) and above 99.5% (or 99.8%) with the respective percentile values. This method preserved data distribution while decreasing extreme observations, making it more robust.

3.2 Variables

Review comprehensiveness is measured by the number of optional ratings/questions a reviewer or employer filled out. These categories were (1) review ratings, including career opportunities, company benefits, cultural values, senior management, work-life balance, CEO approval, business outlook, and recommend: (2) reviewer information, including reviewer job experience and location; and (3) advice to management (see Figure 2). Including these optional elements in a review augments the perception of trustworthiness and expertise.

We differentiated between comprehensiveness and completeness. Review completeness focuses on the inclusion of specific job-related keywords within the review text: work, culture, money, reward, leisure, health, risk, and time. These keywords were selected for their holistic encapsulation of employee experiences and perceptions within the workplace. Jung and Suh (2019) identified 30 job satisfaction factors using data from jobplanet.co.kr, including work intensity and efficiency, working hour, work-life balance, working area, salary, financial support, general welfare, growth and profitability, and attitude to change. These categories broadly encompass the primary concerns and focal points of an employee.

The FRE and CLI are used as measures of review readability (Liu and Park, 2015). The FRE is a readability formula that measures the average number of syllables in each word and the average length of sentences (Kincaid et al., 1975). In contrast, the CLI is calculated by the average number of letters per 100 words and the average number of sentences per 100 words (Coleman and Liau, 1975). The FRE scores show how easy it is to read each review, whereas the CLI scores show how complex it is to understand the text (Liu and Park, 2015).

Control variables are selected to account for additional factors that might influence the dependent variable – in this case, the perceived helpfulness of employer reviews to job seekers. The rationale behind control variables in review analysis encompasses several factors. The review length is believed to influence its perceived helpfulness based on the

amount of the information provided, though excessive length might reduce its utility by overwhelming the reader. The employment status may play a role, with current employees potentially offering a different perspective than former employees, affecting the review's perceived relevance and authenticity. The emotional tone of the review may also influence the reader perception, where positive tones may boost credibility, but overly negative tones could suggest bias. The rating serves

as a quick measure of review quality, which is not always a straightforward indicator, as extremely high or low ratings might invite skepticism. The elapsed time refers to the time elapsed since a review was posted. More recent reviews are likely deemed more relevant to a job searcher. Lastly, a reviewer's job experience can signify their credibility and knowledge, influencing how much trust readers place in their review. Table 1 describes variables used in this study.

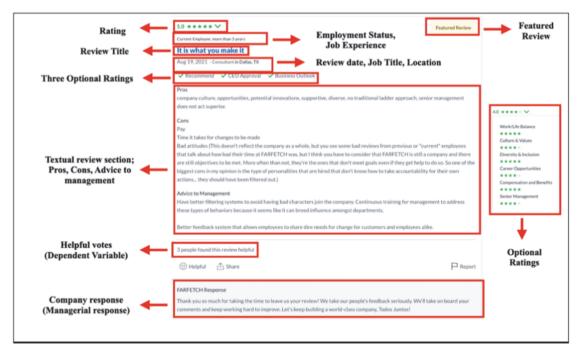
(Table 1) Description of variables

	Variable	Definition				
DV	Helpfulness of employer reviews	Number of helpfulness votes a review receives				
IV	Review Comprehensiveness	Number of optional ratings or questions a reviewer fills out (maximum score of 11). Optional rating or question items: (1) review ratings, including career opportunities, company benefits, cultural values, senior management, work - life balance, CEO approval, business outlook, and recommend: (2) reviewer information, including reviewer job experience and location; and (3) advice to management				
	Review Completeness	Number of keyword categories included in a review (maximum score of 8). Keyword categories: work, culture, money, reward, leisure, health, risk, and time				
	Review Readability	Measurement of the degree to which a piece of text is understandable to readers based on its syntactical elements and style (Liu and Park, 2015)				
	Managerial Response	Whether an employer responds to a review				
CV	Review Length	Word count in pros, cons, title, advice to management, company response sections				
	Employment Status	Whether a reviewer is currently working at a company or not				
	Tone	Emotional tone in pros, cons, title, advice to management, company response sections				
	Rating	Linear overall rating of the review				
	Optional Rating	Quadratic overall rating of the review				
	Elapsed Time	Difference between the data collection year and the year the review was written				
	Job Experience	Job experience of the reviewer in years				

By controlling these variables, we aim to isolate the specific effects of the qualitative factors on the perceived helpfulness of employer reviews. In addition, each control variable has been evidenced in literature to bear significance. For instance, Salehan and Kim (2016) suggests that the review length correlates positively with perceived helpfulness, validating its inclusion as a control variable in our model. Similarly, the impact of emotional tone on the perceived trustworthiness of a review is well-documented, which supports our choice to control for this variable (Liang et al., 2019).

We used the Linguistic Inquiry and Word

Count (LIWC-22) program to gauge the prevalence of categories in the reviews and measure the tone. The LIWC-22, which utilizes natural language processing algorithms, analyzes textual data and assigns scores to each keyword, quantifying its presence. In particular, LIWC-based sentiment analysis offers a systematic and quantitative way to assess the emotional tone of reviews, categorizing it as either positive or negative (Boyd et al., 2022). This approach introduces a novel method to enhance our understanding of employee considerations and review diagnosticity. Figure 2 illustrates the components of a Glassdoor employer review and related variables in this study.



(Figure 2) Illustration of variables in an online employer review

IV. Analysis and Results

4.1 Analysis

Tobit regression model presents several benefits, especially when dealing with censored dependent variables (Siering and Rajagopalan, 2018), and we used the Tobit model to examine the proposed effects. The distribution of our dependent variable is left-censored, meaning a large number of observations accumulate at the lower boundary and are recorded beneath a certain threshold, which is zero. Such a pattern violates the standard assumptions of homoscedasticity and normally distributed errors associated with ordinary least squares (OLS), rendering the Tobit model a more suitable choice for this type of data distribution.

Consequently, in this study, we formulated the Tobit regression model as follows:

$$Helpfulness = \beta_0 + \beta_1 *FRE + \beta_2 *CLI$$

- + β_3 *Comprehensiveness + β_4 *Completeness
- + β_5 *ManagerialResponse + β_6 *ReviewLength
- + \(\beta\)7*EmploymentStatus + \(\beta_8\)*Tone
- + β_0 *Rating + β_{10} *Rating² + β_{11} *ElapsedTime
- + $\beta_{12}*JobExperience + \varepsilon$.

Table 2 presents the descriptive statistics, and Table 3 shows the correlations between variables. We calculated the variance inflation factors (VIFs) for the explanatory variables to assess the risk of multicollinearity. The VIFs were below the indicated cutoff of 10, except the rating and the quadratic rating, showing that multicollinearity was not a problem (Guo and Zhou, 2017). The rating and the quadratic

(Table 2) Descriptive statistics

	Variables	Mean	Std. Dev.	Min	Max
DV	Helpfulness of employer reviews	0.9132	2.3741	0	22
IV	Review Readability (FRE)	42.7570	26.6444	-52.38	89.58
	Review Readability (CLI)	14.9352	5.4477	5.25	34.33
	Review Comprehensiveness	9.7295	1.7302	0	11
	Review Completeness	2.8521	1.5197	0	8
	Managerial Response	0.0935	0.2912	0	1
CV	Review Length	66.1990	82.1488	6	2202
	Employment Status	0.6180	0.4858	0	1
	Tone	74.8172	33.1877	1	99
	Rating	3.8211	1.2883	1	5
	Optional Rating	16.2607	8.4761	1	25
	Elapsed Time	1.0326	1.5783	0	11
	Job Experience	2.2257	2.6597	0	10

⟨Table 3⟩ Correlation analysis

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Helpfulness of employer reviews	1												
(2) Review Length	0.3898	1											
3) Employment Status	-0.0674	-0.0385	1										
(4) Tone	-0.1534	-0.0928	0.1298	1									
5) Rating	-0.3263	-0.1930	0.2760	0.4214	1								
(6) Optional Rating	-0.2842	-0.1578	0.2745	0.4011	0.9827	1							
7) Elapsed Time	0.0641	0.0133	-0.0379	-0.0063	-0.0573	-0.0732	1						
(8) Job Experience	-0.0247	-0.0332	0.0274	-0.0265	-0.0209	-0.0386	0.0429	1					
9) FRE	0.1238	0.2430	-0.0068	-0.0010	-0.0481	-0.0185	-0.0153	-0.0899	1				
10) CLI	-0.1523	-0.3292	0.0042	0.0094	0.0612	0.0275	-0.0137	0.0716	-0.8365	1			
(11) Review Comprehensiveness	0.1063	0.1852	0.0379	0.0047	-0.0511	-0.0321	-0.0596	0.0353	0.0567	-0.0937	1		
12) Review Completeness	0.2876	0.6263	-0.0214	-0.0027	-0.1880	-0.1678	0.0408	0.0207	0.0956	-0.1715	0.1927	1	
13) Managerial Response	0.1041	0.0989	0.0326	0.0047	-0.0127	0.0001	-0.0742	-0.0188	0.0475	-0.0573	0.0561	0.0726	1

rating are highly correlated because the quadratic term is derived from the original linear term. This is a common issue when including polynomial terms in a regression model.

Though the feature scaling of variables is not generally required in regression models, ranges of the variable values in this study are very heterogeneous as seen in Table 2. Feature scaling can provide balanced influence and enhance numeric stability, which makes it easier to compare the effects of multiple factors. Thus, we also provide results of the Tobit regression with normalized variables.

The results of Tobit regression with normalized variables are presented in Table 5. In comparing results between Table 4 and Table 5, the magnitude of the coefficients of individual factors varies depending on the degree of scaling in the normalization, but the direction and significance of both results are consistent.

4.2 Results

Table 4 shows the results of Tobit regressions, which demonstrate significant effects that sup-

W	((1)	(2)		
Variable	Coef.	t-Value	Coef.	t-Value	
Constant	3.7364	27.69***	0.6560	2.33**	
Review Comprehensiveness			0.2151	13.81***	
Review Completeness			0.4314	22.79***	
Readability (FRE)			0.0038	2.48**	
Readability (CLI)			-0.4455	-5.42***	
Managerial Response			1.4858	20.38***	
Review Length	0.0188	75.60***	0.0122	38.06***	
Employment Status	0.5747	11.39***	0.4955	9.86***	
Tone	0.0025	3.27**	-0.0003	-0.42	
Rating	-4.3982	-46.39***	-3.9787	-41.88***	
Optional Rating	0.4949	34.01***	0.4428	30.33***	
Elapsed Time	0.3568	25.42***	0.3883	27.56***	
Job Experience	-0.0453	-4.79***	-0.0525	-5.56***	
$p \rangle \chi^2$		<0.001***		(0.001***	
Pseudo R^2		0.0905		0.0990	
$ abla$ Pseudo R^2				+0.0085	

(Table 4) Results of the Tobit model regression analysis

^{**}p < .01; ***p < .001

port our hypothesis. We found that the comprehensiveness of reviews is positively associated with the helpfulness of employer reviews ($\beta_3 = 0.2151$, $p \langle 0.001$), corroborating Hypothesis 1. In conjunction with the review comprehensiveness, the review completeness positively influences the helpfulness ($\beta_4 = 0.4314$, $p \langle 0.001$), supporting Hypothesis 2. Furthermore, the FRE significantly and positively affects the helpfulness of employer reviews ($\beta_1 = 0.0038$, $p \langle 0.01$), whereas the CLI exerts a negative impact ($\beta_2 = -0.4455$, $p \langle 0.001$). This result shows that reviews

with superior readability are perceived as more beneficial to readers, thus substantiating Hypotheses 3a and 3b. The review completeness holds a very high coefficient, suggesting that the completeness of a review is a critical factor when readers perceive a review as helpful. The managerial response significantly and positively influences the helpfulness of employer reviews ($\beta_5 = 1.4858$, $p \langle 0.001$). This finding supports for Hypothesis 4. Finally, control variables exhibited significant effects in Models 1 and 2, except for the tone, which was not significant in Model 2.

(Table 5) Results of the Tobit model regression analysis with normalized variables

Variable -	((1)	(2)		
variable –	Coef.	t-Value	Coef.	t-Value	
Constant	0.1281	1.65	-3.1349	-10.88***	
Review Comprehensiveness			2.4215	14.14***	
Review Completeness			3.4767	22.95***	
Readability (FRE)			0.5401	2.42*	
Readability (CLI)			-1.3082	-5.48***	
Managerial Response			1.5043	20.62***	
Review Length	41.3857	75.59***	26.8124	37.91***	
Employment Status	0.5747	11.39***	0.4955	9.86***	
Tone	0.2725	3.52**	-0.0182	-0.23	
Rating	-13.4770	-50.63***	-12.2284	-45.88***	
Optional Rating	8.0017	34.36***	7.1537	30.62***	
Elapsed Time	3.8888	25.17***	4.2445	27.38***	
Job Experience	-0.4142	-4.38***	-0.4947	-5.24***	
$p ightarrow \chi^2$		<0.001***		<0.001***	
Pseudo R^2		0.0898		0.0984	
∇ Pseudo R^2				+0.0086	

^{*}p < 0.05; **p < .01; ***p < .001.

V. Conclusions

This research makes two significant contributions to existing research. First, it delves into the qualitative dimensions of employer reviews, which are valuable to job seekers pursuing detailed information in the realm of online employer reviews. Second, we propose new measures for two variables, the review comprehensiveness and the review completeness in the context of online employer reviews. These measures provide important criteria for evaluating the reviews.

This research also offers three practical implications. First, online employer review platforms can enhance user experiences by prominently featuring helpful reviews, and thereby providing easy access to more readable, comprehensive, and complete information. Implementing a scoring system can incentivize users to contribute high-quality reviews, which can enhance platform credibility. Second, online employer review platforms can identify and showcase the most helpful reviews based on qualitative factors. Third, a company's response to reviews can build positive relationships with job seekers and potential employees of the company.

While our findings advance the field, this study is not without limitations. One limitation is the exclusion of reviews in languages other than English. The decision to omit these

reviews was based on the premise that the inclusion of multiple languages could introduce complexity and variability in the interpretation of qualitative factors. However, this approach may overlook valuable insights from non-English reviews that could enhance the generalizability of the findings. In future studies, researchers could employ translation services to convert non-English reviews into English, thereby broadening the scope and applicability of the analysis.

Additionally, the dataset did not include Glassdoor's Diversity & Inclusion ratings, a potentially significant factor in the current employment climate. Future research could enrich this area of study by manually scraping and analyzing such data. Exploring CEO approval and Business Outlook as independent variables could also offer more profound insights into what influences job seekers' perceptions of employer attractiveness.

Another area ripe for future exploration is the individual contribution of the numerous optional ratings and questions included in reviews. This study's approach was to verify their presence as a whole, but a granular examination could reveal the specific aspects of employer reviews that job seekers find most valuable. Furthermore, advances in natural language processing and topic modeling could be leveraged in future work to increase the precision of content analysis. Instead of relying on predefined keyword categories, directly applying topic modeling to the review content

could offer a more nuanced understanding of the factors that constitute a helpful review. Future research can continue to refine our understanding of the dynamics at play in online employer review platforms and their impact on job seekers' decision-making processes.

References

- Agnihotri, A., and Bhattacharya, S.(2016), "Online review helpfulness: Role of qualitative factors," Psychology & Marketing, 33(11), pp.1006–1017
- Armstrong, J. (2010). Persuasive advertising: Evidence-based principles. Springer.
- Carpentier, M., and Van Hoye, G.(2021), "Managing organizational attractiveness after a negative employer review: Company response strategies and review consensus," *European Journal of Work and Organizational Psychology*, 30 (2), pp.274-291.
- Chen, W., Gu, B., Ye, Q., and Zhu, K. X.(2019), "Measuring and managing the externality of managerial responses to online customer reviews," *Information Systems Research*, 30 (1), pp.81-96.
- Cheung, M. Y., Luo, C., Sia, C. L., and Chen, H. P.(2009), "Credibility of electronic word-of-mouth: Informational and normative determinants of online consumer recommendations,"

 International Journal of Electronic Commerce, 13(4), pp.9-38
- Coleman, M., and Liau, T. L.(1975), "A computer readability formula designed for machine

- scoring," *Journal of Applied Psychology*, 60 (2), pp.283-284.
- Coursaris, C. K., and Van Osch, W.(2016), "A Cognitive-Affective Model of Perceived User Satisfaction (CAMPUS): The complementary effects and interdependence of usability and aesthetics in IS design," *Information & Management*, 53(2), pp.252-264.
- Eslami, S. P., Ghasemaghaei, M., and Hassanein, K. (2018), "Which online reviews do consumers find most helpful? A multi-method investigation," Decision Support Systems, 113, pp.32-42.
- Falk, S., Hammermann, A., Mohnen, A., and Werner, A. (2013), "Different degrees of informational asymmetry on job markets and its impact on companies' recruiting success," *Journal of Business Economics*, 83, pp.295–317.
- Fang, B., Ye, Q., Kucukusta, D., and Law, R. (2016), "Analysis of the perceived value of online tourism reviews: Influence of readability and reviewer characteristics," *Tourism Management*, 52, pp.498-506.
- Fang, J., Hu, L., Liu, X., and Prybutok, V. R. (2022), "Impact of air quality on online restaurant review comprehensiveness," *Electronic Commerce Research*, 22, pp.1035–1058.
- Filieri, R.(2015), "What makes online reviews helpful? A diagnosticity-adoption framework to explain informational and normative influences in e-WOM," *Journal of Business Research*, 68(6), pp.1261-1270.
- Forman, C., Ghose, A., and Wiesenfeld, B.(2008), "Examining the relationship between reviews and sales: The role of reviewer identity disclosure in electronic markets," *Information Systems Research*, 19(3), pp.291–313.
- Fu, D., Hong, Y., Wang, K., and Fan, W. (2018),

- "Effects of membership tier on user content generation behaviors: Evidence from online reviews," *Electronic Commerce Research*, 18. pp.457-483.
- Glassdoor(2019), "A Guide to the Ultimate Candidate Experience," available at: https://www. glassdoor.com/employers/blog/a-guide-tothe -ultimate-candidate-experience/
- Guo, B., and Zhou, S. (2017), "What makes population perception of review helpfulness: An information processing perspective," *Electronic Commerce Research*, 17, pp.585-608.
- Hovland, C. I., Janis, I. L., and Kelley, H. H. (1953).

 Communication and Persuasion; Psychological

 Studies of Opinion Change. Yale University

 Press, New Haven, CT.
- Huang, A. H., Chen, K., Yen, D. C., and Tran, T. P.(2015), "A study of factors that contribute to online review helpfulness," *Computers in Human Behavior*, 48, pp.17–27.
- Jiang, Z., and Benbasat, I.(2004). "Virtual product experience: Effects of visual and functional control of products on perceived diagnosticity and flow in electronic shopping," *Journal of Management Information Systems*, 21(3), pp.111-147.
- Kincaid, J. P., Fishburne, R. P., Jr., Rogers, R. L., and Chissom, B. S. (1975), Derivation of New Readability Formulas (Automated Readability Index, Fog Count and Flesch Reading Ease Formula) for Navy Enlisted Personnel, Research Branch Report 8-75, Naval Technical Training Command, Millington, TN.
- King, R. A., Racherla, P., and Bush, V. D.(2014), "What We Know and Don't Know About Online Word-of-Mouth: A Review and Synthesis of the Literature," *Journal of Inter*-

- active Marketing, 28(3), pp.167-183.
- Könsgen, R., Schaarschmidt, M., Ivens, S., and Munzel, A.(2018), "Finding meaning in contradiction on employee review sites—Effects of discrepant online reviews on job application intentions," *Journal of Interactive Marketing*, 43(1), pp.165-177.
- Korfiatis, N., García-Bariocanal, E., and Sánchez-Alonso, S.(2012), "Evaluating content quality and helpfulness of online product reviews: The interplay of review helpfulness vs. review content," *Electronic Commerce Research and Applications*, 11(3), pp.205-217.
- Lee, S., and Choeh, J. Y.(2016), "The determinants of helpfulness of online reviews," *Behaviour & Information Technology*, 35(10), pp.853-863.
- Lerner, J., and Tirole, J.(2002), "Some simple economics of open source," *The Journal of Industrial Economics*, 50(2), pp.197-234.
- Li, J., Ge, Y., Hong, Y., Cheema, A., and Gu, B. (2017), "Textual review dimensionality and helpfulness: A multi-method study," Available at SSRN 2931934.
- Li, M., Huang, L., Tan, C. H., and Wei, K. K. (2013), "Helpfulness of online product reviews as seen by consumers: Source and content features," *International Journal of Electronic Commerce*, 17(4), pp.101-136.
- Liang, S., Schuckert, M., and Law, R.(2019), "How to improve the stated helpfulness of hotel reviews? A multilevel approach," *International Journal of Contemporary Hospitality Management*, 31(2), pp.953-977.
- Liang, Y., DeAngelis, B. N., Clare, D. D., Dorros, S. M., and Levine, T. R. (2014), "Message characteristics in online product reviews and consumer ratings of helpfulness," *Southern*

- Communication Journal, 79(5), pp.468-483.
- Liu, Z., and Park, S.(2015), "What makes a useful online review? Implication for travel product websites," *Tourism Management*, 47, pp.140-151
- Luo, C., Luo, X. R., Schatzberg, L., and Sia, C. L. (2013), "Impact of informational factors on online recommendation credibility: The moderating role of source credibility," *Decision* Support Systems, 56, pp.92-102.
- Mudambi, S. M., and Schuff, D.(2010), "Research note: What makes a helpful online review? A study of customer reviews on Amazon.com," MIS Quarterly, 34(1), pp.185-200.
- Mukherjee, P., Parameswaran, S., and Valecha, R. (2021), "Investigating the effect of multi-dimensional review text and anonymity on review helpfulness: An empirical investigation in the context of employer review sites," 54th Hawaii International Conference on System Sciences.
- Pirolli, P., and Card. S.(1999), "Information foraging," *Psychological Review*, 106(4), pp.643-675.
- Parameswaran, S., Mukherjee, P., and Valecha, R. (2023), "I Like My Anonymity: An Empirical Investigation of the Effect of Multidimensional Review Text and Role Anonymity on Helpfulness of Employer Reviews," *Information Systems Frontiers*, 25(2), pp.853–870.
- Racherla, P., and Friske, W.(2012), "Perceived 'usefulness' of online consumer reviews: An exploratory investigation across three services categories," *Electronic Commerce Research and Applications*, 11(6), pp.548-559.
- Rietsche, R., Frei, D., Stöckli, E., and Söllner, M. (2019), "Not all reviews are equal—A literature review on online review helpfulness," *European*

- Conference on Information Systems, Stockholm-Uppsala, Sweden.
- Salehan, M., and Kim, D. J.(2016), "Predicting the performance of online consumer reviews: A sentiment mining approach to big data analytics,"

 Decision Support Systems, 81, pp.30-40.
- Siering, M., Muntermann, J., and Rajagopalan, B. (2018), "Explaining and predicting online review helpfulness: The role of content and reviewer-related signals," *Decision Support Systems*, 108, pp.1-12.
- Sparks, B. A., So, K. K. F., and Bradley, G. L. (2016), "Responding to negative online reviews: The effects of hotel responses on customer inferences of trust and concern," *Tourism Management*, 53, pp.74-85.
- Spence, M.(2002), "Signaling in retrospect and the informational structure of markets," *American Economic Review*, 92(3), pp.434-459.
- Xie, K. L., Zhang, Z., and Zhang, Z.(2014), "The business value of online consumer reviews and management response to hotel performance,"

 International Journal of Hospitality Management, 43, pp.1–12.
- Zakaluk, B. L., and Samuels, S. J. (1988), Readability: Its Past, Present, and Future, ERIC No. ED292058, International Reading Association, Newark, DE.
- Zhao, X., Wang, L., Guo, X., and Law, R. (2015), "The influence of online reviews to online hotel booking intentions," *International Journal of Contemporary Hospitality Management*, 27(6), pp.1343-1364.
- Zheng, L.(2021), "The classification of online consumer reviews: A systematic literature review and integrative framework," *Journal of Business Research*, 135, pp.226-251.

- The author Sung Jun Woo is currently working at the US-based health-tech startup, Need. He graduated from Hanyang University Business School and earned a Master of Science degree in Management Information Systems from the Graduate School of Business at Seoul National University. His primary research areas include the macroeconomic impact of IT, big data analysis, and data-driven decision-making in startups.
- The author Daye Um is a Ph.D. candidate at Seoul National University. She graduated from the Georgia Institute of Technology and earned a Master's degree from Seoul National University. Her main research interests include social media analysis, AI-based platform analysis, and data network effects.
- The author Wooje Cho is an associate professor of SNU Business School at the Seoul National University, He earned his Ph.D. in business administration from the University of Illinois at Urbana-Champaign. His recent research interests include M&A with IT firms, AI and decision-making, impact of ICT on income equality, and strategic IT management.