

Organizational Traits and Social Badging: Text Mining Application

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This paper, *employing a deductive research methodology approach*, explores the concept of social badging for organizations from employees' rating perspective in social media job portals (SMJP). This research attempts to identify the impact of monetary and non-monetary benefits as the antecedents and to explore the moderating effect of management support, organizational culture, and employee-perceived firm image on social badging in SMJPs. Relying on the signalling and person-environment fit theories, this study analyses more than 100,000 employee reviews from social media using text analytics techniques. The findings highlight the essential organizational traits to enhance favourable social badging for organizations. This study also has practical implications by underlying the critical drivers for reputational branding in social media.

Keywords: social badging; monetary benefits; non-monetary benefits; management support; organizational culture

1. Introduction

The practice of employees evaluating and grading organizations has recently emerged and is termed social badging¹. Current and past employees can share positive and negative reviews about their employers, assess them based on specific organizational characteristics, and allocate social badges to these companies on social media job portals (SMJPs)². A study by Glassdoor³ revealed that 83% of job applicants consider reviews from current or former employees. The Modern Job Search Report by iCIMS⁴ further highlighted that one-third of job seekers declined a job proposition because of negative employee feedback posted as reviews. These reviews serve a dual purpose, benefiting both the employee and the organization. From an employee perspective, employee reviews and their associated social badges offer a systematic approach to feedback, helping employees recognize their strengths, pinpoint areas for growth, and gauge how well they align with the company's objectives. Social badges often mirror

organizational traits for organizations, highlighting work culture, values, and management style⁵. Favourable social badges specifically serve as a reflection of an organization's positive work environment and employee satisfaction¹. Favourable social badges amplify internal employee morale, nurture trust and loyalty, and fortify an organization's reputation as a top employer⁶. However, the factors that influence positive employee feedback and the formation of favourable social badges can vary widely from one organization to another. Given this variability, there is a pressing need for a study to understand the driving factors behind favourable social badges. Therefore, as the primary research objective, this study investigates the factors determining favourable social badges on SMJPs.

Organizational traits are the backbone of a firm, directly influencing how employees perceive and interact with the organization. These traits determine not only the day-to-day operations but also the overall atmosphere and culture of the workplace⁷. According to the Signalling Theory⁸, organizational traits act as deliberate cues employers send about their work environment. In this regard, Schüller et al.⁹ postulated that certain organizational traits, like expected treatment or proactive climate, increase the likelihood of candidates accepting job offers. With that said, organizational traits act as signals that employees continuously interpret. These signals shape their perceptions, influencing their job satisfaction, commitment, and overall organizational engagement. Compensation is arguably the most crucial organizational trait shaping employee perceptions of a firm¹⁰. At its core, compensation reflects the tangible value a company places on its workforce. It serves as a direct indicator of how much an organization appreciates and rewards the efforts and skills of its employees. Compensation is not just about paying a salary. It encompasses bonuses, benefits, promotions, and opportunities for professional growth. A competitive compensation

package signals that the company values employees and recognizes their contribution to the organization's success. In this regard, a Society for Human Resource Management study found that adequate compensation, including monetary and non-monetary benefits, is among the most mentioned organizational traits employees state in their reviews¹¹. While existing literature suggests that monetary and non-monetary benefits boost the chances of candidates accepting job positions, it's equally crucial in our modern digital era to discern how these incentives drive employees to advocate for their employers on online job platforms. Therefore, the first question of this study is:

Q1. How do monetary and non-monetary benefits trigger employees to assign favourable social badges to their organizations on SMJPs?

Recent research indicates that while compensation remains pivotal, employees consider other organizational characteristics when evaluating a company. Key among these are a positive organizational culture and the level of managerial support¹². A pleasant organizational environment can make employees perceive their pay as more equitable, prompting them to voice their support for the company¹³. Furthermore, when leadership provides backing, employees tend to regard their remuneration as just and balanced¹². In this regard, the Person-Environment Fit (PEF) theory¹⁴ posits that individuals are most satisfied and productive when there is unity between their attributes and their work environment. The PEF emphasizes the importance of alignment between an employee's values, goals, and abilities with the workplace's characteristics, demands, and support. Drawing from the PEF theory, how employees view managerial behaviour, and the prevailing organizational culture can influence how monetary and non-monetary incentives shape their company stance, leading to endorsing online comments and affixing positive social badges¹⁵.

Moreover, an employee's review mirrors their perception of an organization². These viewpoints can be discerned through the emotional tone of their feedback¹⁶. Established research reveals that such sentiments play a role in an employee's assessment of company attributes, especially concerning compensation and perks¹⁶. Benitez et al.¹⁷ posited that grasping how employees perceive an organization's image equips firms to refine their characteristics actively, boosting employee contentment. While existing literature highlights that factors like organizational culture, management support, and employee-perceived firm image play pivotal roles in shaping favourable social badges on SMJP, there is a pressing need to examine their moderating effect on monetary and non-monetary benefits⁹. This is crucial because understanding these interactions provides a more nuanced view of employee behaviour. Employees may react differently to compensation packages based on their perceptions of organizational culture or the support they receive from management. By studying the moderating effects, organizations can more effectively tailor their compensation strategies, ensuring they resonate with the broader context of the employee experience. Therefore, to fill this gap, the second research question of this study is:

Q2. How do management support, organizational culture, and employee-perceived firm image moderate the relationships between monetary and non-monetary benefits and the concept of employees assigning favourable social badges to their organizations on SMJPs?

In this study, we analysed over 100,000 employee reviews collected from Glassdoor, an SMJP to satisfy the above research questions. Our contributions to this research are multi-fold. Theoretically and practically, this study conceptualized the phenomena of social badging in SMJPs as a novel contribution. Methodologically, we established a deductive multi-method research approach using structural equation

modeling (i.e., PLS-SEM) and text mining.

2. Theoretical Background

2.1. Social Badging

Social badges have emerged as a significant tool for organizations, and various studies have illuminated their effects. Employees sharing their badges on professional networks like LinkedIn or Glassdoor reflects positively on the organization¹. It showcases the company's commitment to continuous learning and employee development². Social badges also reflect A culture that recognizes and rewards continuous learning and achievements, which can be a significant draw for potential employees¹³. Moreover, current employees are more likely to stay with a company where their efforts and skills are acknowledged. In summary, the findings suggest that social badges offer a multifaceted advantage for organizations.

Several elements form a social badge for a particular organization. The employee's experience while working with the organization, such as the job itself, career advancements, recognition, fairness, inclusion, or pay, will form employee reviews and are considered the antecedents of shaping a social badge in social media¹. Reviews and satisfaction ratings can help organizations gauge their culture's positive and negative aspects and point to aspects that need improvement to enhance job satisfaction and raise organizational performance¹⁸. In addition, social badging offers many views, helping pinpoint a specific type of employee that can succeed in a particular firm¹⁹.

In prior research, online satisfaction ratings have been demonstrated to shape a favourable social badge in social media^{1,2}. Indeed, overall satisfaction ratings give a general view of employees' job experience with a firm. Employees can rate a firm with different metrics such as work-life balance, compensation, benefits, job security, job

advancement, management support, or organizational culture²⁰. Generally, an employee's key job satisfaction factors can be classified as monetary and non-monetary benefits¹. Monetary benefits include compensation, bonuses for joining, performance, retention, and incentives. Employees ultimately discuss compensation and associated monetary benefits on social media¹⁶. Non-monetary benefits include career growth opportunities such as fast-track promotions, job enrichment, and learning and development opportunities²¹. Certain employees value non-monetary benefits such as flexible work policy, maternal benefits, career breaks, excess leaves, or sabbaticals to help create a good reputation and a pleasant work culture²².

Research on social badging often references multiple foundational theories and frameworks from existing literature. Investigations grounded in the Self-Determination Theory indicate that badges can function as dual motivators, both intrinsic and extrinsic, propelling engagement and the honing of skills²³. Studies anchored in gamification principles contend that badges act as incentives, prompting individuals to reach specific milestones, even outside gaming environments²⁴. Research studies based on the Constructivist Learning Theory suggest that badges provide concrete markers of hands-on learning experiences²⁵. Meanwhile, studies using the Social Learning Theory emphasize the cascading motivational influence that badges can generate in communal settings²⁶.

The study of social badging has been approached using various methodological frameworks, reflecting its interdisciplinary nature. The most common research methodologies for social badging include quantitative surveys and content analysis. In this regard, many researchers use structured questionnaires to understand perceptions, attitudes, and behaviours related to badge reception and its impact on motivation and learning²⁷. Content analysis studies mainly study social badges' content, criteria, and

associated metadata to understand commonly recognized skills or achievements²⁸.

Understanding and exploring social badging is particularly pertinent in today's dynamic work environment. From an organizational standpoint, badges enhance reputation by emphasizing a commitment to continuous learning¹⁶. Furthermore, they provide a competitive edge, attracting talent in a marketplace that values visible credentials and constant upskilling. Social badging shapes employee perceptions, solidifies organizational reputation, and secures a competitive advantage in the modern workspace¹⁷.

Many SMJPs allow employees to evaluate and consequently rate their employer anonymously based on a series of organizational traits, leading to assigning a badge for each²⁹. The voices heard through employee reviews indicate the organization's work culture³⁰. A more favourable badge assigned to an organization on an employee review builds an image that a firm has a suitable workplace. It also reflects job satisfaction, job security, work-life balance, or salary, reflecting pleasant organizational culture²⁹. Table 1 provides detailed information on how social badging is measured and rated across various SMJPs.

Table 1. Social Badging on Social Media Job Portals

Social Media Job Portal	Factors Considered for Social Badging
Glassdoor	Career opportunities, compensation, benefits, cultural values, diversity and inclusion, senior management, work-life balance
Ambitionbox	Work-life balance, company culture, job security, skill development, work satisfaction, salary, benefits, promotions, appraisal
Indeed	Work-life balance, compensation, benefits, job security, advancement, management, culture
Naukri.com	Job security, skill development, work life, company culture work satisfaction, career growth, salary, benefits
Kununu	Salary, benefits, image, further education, working atmosphere, corporate culture, communication, co-workers, work-life balance, superior behaviour, interesting tasks
Comparbly	Gender, diversity, team culture, compensation, perks and benefits, office culture, professional development, happiness, leadership, work culture, working environment, working conditions, environmental awareness, social awareness, diversity
Thejobcrowd	Responsibility, work-life balance, environmental awareness, benefits, company culture, career progression, colleagues, training, enjoyment
Careerbliss	Company culture, growth opportunities, people you work with, the person you work for, rewards you receive, support you get, the way you work, work setting

Depending on the type of SMJP, several elements form a social badge for a particular organization²². Negative sentiments about these elements lead to unfavourable reviews, while positive sentiments lead to positive ones³¹. This study investigates the main leading organizational traits forming favourable social badging.

2.2. Signalling Theory

Signalling theory⁸ delves into the dynamics between signallers, receivers, and the signals they exchange. In specific uncertain scenarios, a subset of insiders, termed signallers, possesses exclusive information that could guide decision-making. These signallers determine the chunks of information to share with outsiders or receivers. Receivers, in turn, assess signals based on the inherent credibility of the signaller⁸. Historically, signalling theory has been leveraged to project positive organizational atmospheres⁹. From an organizational point of view, signallers are insiders who have information regarding the organization that outsiders cannot effortlessly find³². The source credibility of a signaller is an essential consideration for a receiver. A receiver is more likely to give attention to those signals they perceive as reliable³³.

Applied to the social badging context, candidates seeking a job rely on signals provided by employees, inferring an organization's working culture³². A positive signal, illustrated by a favourable social badge, enhances an organization's reputation. In contrast, a negative signal can damage the brand image and corporate reputation³¹. Thus, a favourable social badge has become essential for firms to attract qualified employees. This study uses signalling theory to examine the critical signals (i.e., monetary, non-monetary benefits, management support, organizational culture, and employee-perceived firm image) that impact forming a favourable social badge.

2.3. Person-Environment Fit Theory

The person-environment fit (PEF) framework asserts that people prefer an environment that matches their interests and characteristics³⁴. The PEF, in an organizational context, is a conceptual framework that delves into the alignment between individuals and their workplace settings. Central to this perspective is the idea that individuals will experience better work-related outcomes when there's a harmony between their attributes, including their skills, values, needs, and preferences, and the characteristics of their working environment, which encompass the job demands, organizational values, cultural nuances, and role expectations. The PEF theory suggests that when such alignment or fit is achieved, it can lead to various positive outcomes, such as heightened job satisfaction, lower intentions to quit, increased commitment to the organization, and superior job performance. Organizations always struggle to positively affect the employees' impression of the firm³⁵. Given the multifaceted nature of PEF, organizations increasingly recognize the importance of assessing fit from various angles during the recruitment process, onboarding, and even in ongoing developmental programs to ensure sustained alignment and positive outcomes.

The candidates and employees continuously look for their best fit while searching for relevant information from social media³⁶. Based on the PEF perspective, relying on employee reviews posted on SMJPs and their associated social badges, individuals will constantly assess their fit with the job environment through perceptions of management support, organizational cultural values, and overall perceived firm image³⁵.

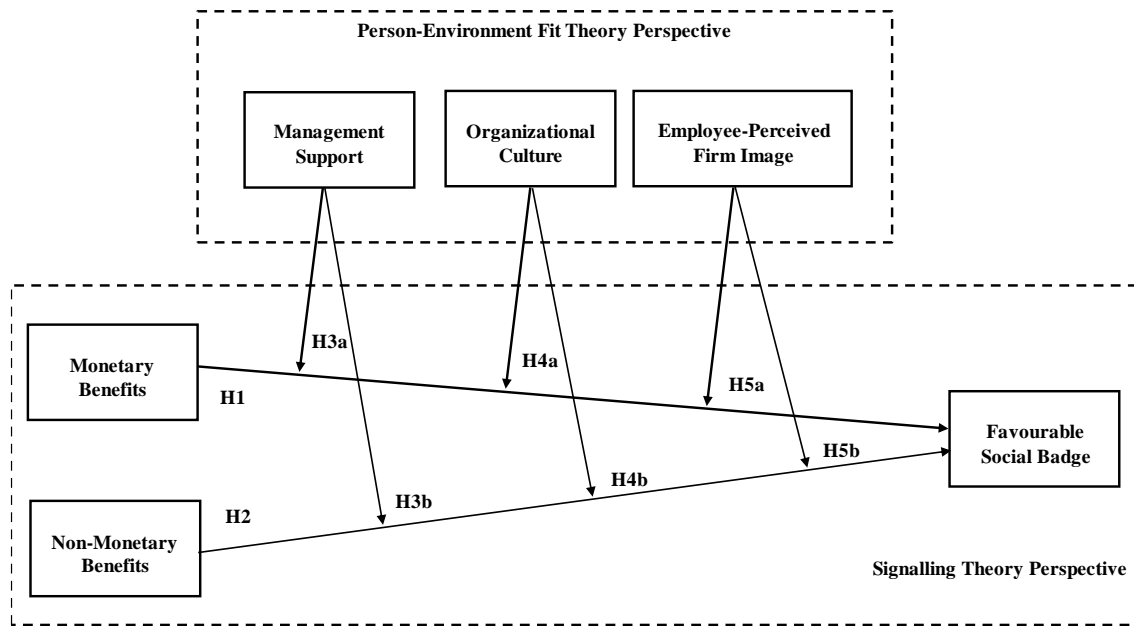
Management support indicates the extent of support managers provide for employees in the workplace³⁶. Organizational cultural fit indicates how much the employees and the firm's requirements share similar working traits³⁶. A positive employee-perceived firm image represents an employee's fit with the organization. If employees perceive that their managers are supportive, share similar cultural values, and have positive

perceptions about their organizations, they are more likely to feel appreciated, leading to a higher perception of employee fit with the organization.

3. Research Model and Hypotheses Development

Figure 1 illustrates the research model of this study.

Figure 1. Research Model



One of the popular reasons for employees to visit SMJPs is to check the compensation trends of the jobs in a particular organization. Glassdoor research shows that the primary information Glassdoor users look for when evaluating a job or an employer is compensation packages²². Employees judge the organization's monetary benefits, including compensation, bonuses, performance, retention, and sales incentives. The employee perception of unfair compensation drives high turnover rates²². Organizations lose valuable employees when they fail to treat monetary benefits expectations as their competitive advantage³⁷.

Recent studies show that employees discuss compensation and associated monetary benefits³⁸. Employees not only compare the peer companies in terms of salary

as a badge, but they also compare the two jobs in terms of their salaries. This information may lead to dissatisfaction with monetary benefits for existing employees, thus leading to negative sentiments resulting in an unfavourable social badge. In contrast, a positive opinion about the fairness of monetary benefits leads to higher ratings and a favourable badge¹⁹. If organizations meet their employees' perceived compensation expectations and associated benefits, the employee's reviews include positive sentiments³⁰. Thus:

H1: An employee's perceived monetary benefit is positively associated with a favourable assigned social badge on social media, such that a higher level of perceived monetary benefits inspires an employee to assign a favourable social badge.

The organizations' intangible benefits are critical to many people seeking jobs in those firms. Indeed, some people value non-monetary benefits more than monetary benefits³⁹. Data from employee reviews on Glassdoor show that career growth is far more important than compensation for the long-term job satisfaction of employees³. Kurtessis et al.⁴⁰ found that human resources practices related to non-monetary benefits, such as career growth opportunities, were positively related to employees' perceived organizational commitment to employees' growth, leading to higher employee satisfaction with a firm. According to the signalling theory, employees share their satisfaction or dissatisfaction with non-monetary benefits. Thus:

H2: An employee's perceived non-monetary benefit is positively associated with a favourable assigned social badge on social media, such that a higher level of perceived non-monetary benefits inspires an employee to assign a favourable social badge.

Employees express satisfaction and dissatisfaction with their relationship with management⁴¹. The positive actions of senior management in terms of inclusion, teamwork, autonomy, or decision-making are positively perceived by employees and are highlighted in social media reviews. Employees' positive perceptions of their managers often enhance employees' job satisfaction and lowering turnover rates⁴². When employees perceive management as supportive, employee sentiments shape the perception of a higher fit with such a firm⁴². Based on the PEF perspective, employees perceiving an organizational fit are likely to voice their satisfaction in support of management¹⁶. Interestingly, when management support is positive, even if employees get low monetary benefits, management support overrides dissatisfaction with monetary benefits, leading to a favourable social badge for the organization⁴². Thus:

H3a: An employee's perceived management support negatively moderates the relationship between the employee's perceived monetary benefit and the assigned social badge, such that positive perceived management support reduces the effect of monetary benefits on the employee's favourable social badge.

Employees who perceive fit with their supervisors, value the unique non-monetary benefits⁴³. Such employees are more likely to provide stability to the organization with their job continuity showing their commitment to their organizations⁴⁴. In addition, such employees, perceiving good non-monetary benefits and desirable management support, are more inclined to support their organization⁴⁵. Based on a PEF perspective, a positive perception of management support enhances the extent of employees' positive feelings and satisfaction towards their firm⁴⁶. Therefore, with a positive perception of management support, employees who get better non-monetary benefits are more likely

to provide a higher rating in employee reviews resulting in favourable social badges.

Thus:

H3b: An employee's perceived senior management support positively moderates the relationship between the employee's perceived non-monetary benefit and the assigned social badge, such that a higher level of perceived management support increases the effect of non-monetary benefits on the employee's favourable social badge.

A positive work culture drives employee engagement, attracts talent, influences organizational performance, and impacts the satisfaction and happiness of employees⁴⁷. Around 38% of CEOs on Glassdoor suggest that hostile work culture results in harmful interactions between employees and supervisors⁴⁷. According to research by Glassdoor, 65% of millennial employees in the U.S. are more concerned about work culture than with monetary benefits, compared to 52% of employees aged 45 and above. The same study also suggests that new applicants are often more interested in work culture than monetary compensation⁴⁸.

Organizational culture is attributed to intangible experiences such as autonomy, trust, care, and pride. From the PEF perspective, an employee with a good job fit highlights a pro-job environment culture and is more inclined to show her/his satisfaction with the organizational culture⁴⁹. Moreover, many employees value organizational culture over compensation. When employees experience positive work culture, this will mitigate the unsatisfactory monetary benefits offered by the organization⁴⁷. Employees with positive perceptions about their organizational culture are more inclined to provide higher ratings and more favourable social badges to their firms, even when the monetary benefits offered by the organization are not satisfactory¹.

Therefore, a positive perception of organizational culture reduces the effect of monetary benefit on the employee's rating of the organization. Thus:

H4a: An employee's perceived organizational culture negatively moderates the relationship between the employee's perceived monetary benefit and the assigned social badge, such that a positive perceived organizational culture reduces the effect of monetary benefits on the employee's favourable social badge.

Employees who experience a prosocial work culture are more likely to voice their satisfaction over the non-monetary benefits provided by the organization on social media¹. Based on the PEF theory, employees with good organizational fit often claim congruence with the corporate culture and are likely to have longer career duration at the organization⁵⁰. Similarly, employees experiencing organizational fit claim to link organizational culture with teamwork and collaborative work environment policies⁵¹. In SMJP reviews, employees connect the organizational culture dimensions with associated non-monetary benefits². A positive perception of organizational culture enhances an employee's perceptions of other organizational traits, including non-monetary benefits⁵⁰. Therefore, employee reviews with higher ratings in the organizational culture dimension, in the presence of satisfactory ratings on non-monetary benefits, are generally followed by a higher favourable social badge, compared with the reviews of employees who do not experience such a positive perception of their organizational culture but are offered with satisfactory non-monetary benefits⁵². Thus:

H4b: An employee's perceived organizational culture positively moderates the relationship between the employee's perceived non-monetary benefit and the assigned social badge, such that a positive perceived organizational culture

increases the effect of non-monetary benefits on the employee's favourable social badge.

Employees' Personal experiences, in line with the PEF, create sentiments and will be reflected in employees' reviews of their organization on social media¹⁹. According to research by Glassdoor³, 62% of prospective employees state that their opinions on a particular company changed after reading employee reviews on social media, even if the firm offered them a satisfactory monetary benefit³. This finding suggests that the significance of employees' sentiments attached to online reviews on social media is a critical factor in affecting the decisions of employees of a firm. A positive employee-perceived firm image denotes a higher fit with the organization⁵². Positive emotions and sentiments override other benefits gained, specifically monetary benefits, and encourage an employee to support her/his organization. Therefore, an employee impressing her/his flattering fit with an organization would care less about the monetary benefits gained from such a firm⁵³. Hence, employees with a positive perception of their firm are more inclined to provide higher ratings and more favourable social badges to their firms, even when the monetary benefits offered by the organization are not satisfactory. Thus:

H5a: An employee-perceived firm image negatively moderates the relationship between the employee's perceived monetary benefit and the assigned social badge, such that a positive employee-perceived firm image reduces the effect of monetary benefits on the employee's favourable social badge.

In the context of PEF, when employees experience a positive fit, they become more willing to support their organizations by posting positive reviews on SMJPs¹⁹. In the presence of the employee-perceived firm image, stated by positive reviews, the effect of non-monetary benefits would be more highlighted by employees, specifically through their reviews and ratings¹. Hence, with a positive employee-perceived firm image, the

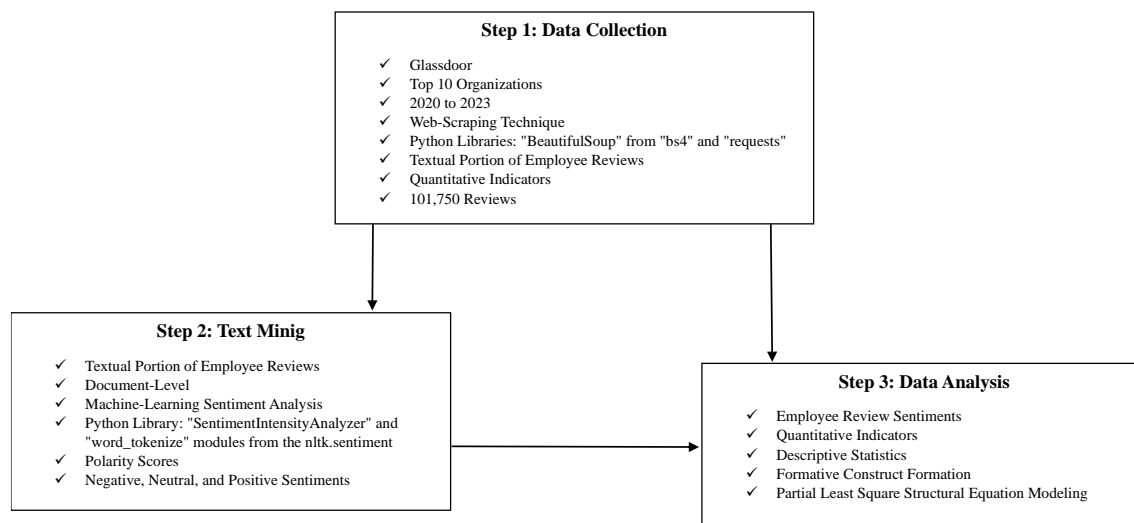
effect of satisfactory ratings on non-monetary benefits in providing a favourable social badge would be higher. Thus:

H5b: An employee-perceived firm image positively moderates the relationship between the employee's perceived non-monetary benefit and the assigned social badge, such that a positive employee-perceived firm image increases the effect of non-monetary benefits on the employee's favourable social badge.

4. Research Methodology

Figure 2 depicts the methodology used in this study.

Figure 2. Research Methodology



4.1. Data Collection

This study uses secondary data collected from an SMJP, Glassdoor, which allows employees to share reviews and provide feedback on their employers. Glassdoor critically evaluates companies through a data-based platform where individuals provide their reviews through textual opinions and quantitative scores. Glassdoor comprises the largest database of employee ratings covering more than 600,000 organizations worldwide. Furthermore, it provides ratings for other factors unique to itself and

unavailable on other platforms. It comprehensively represents the work culture and the pros and cons of working in a particular organization. Every review undergoes a robust procedure with data integrity checks while subjected to technical and human touch reviews. Most importantly, only Glassdoor displays data related to employee recommendations. Hence, the researchers conducting this study collected employee review data from Glassdoor.

This study used a web-scraping technique to collect employee reviews available on Glassdoor. To achieve this, we utilized web scraping methods with the aid of two Python libraries: "BeautifulSoup" from "bs4" and "requests". Our script was designed to extract employee reviews from Glassdoor. Initially, we pinpointed the specific URL on Glassdoor that housed the employee reviews for a given company. Following that, with the help of the "BeautifulSoup" library, we processed the HTML content of that page to retrieve the relevant employee reviews. The scraped unprocessed data included textual content of employees' reviews on the pros and cons of their employer, which was subsequently used to extract employees' sentiments toward their employer. This study also collected the available employees' ratings on a set of available quantitative variables to assess their employers. To analyse the proposed hypotheses in the research model of this study, we have collected data on the top 10 organizations on Glassdoor for a period of 3 years (i.e., 2020-2022). This study also controlled data collection for industry and organization size⁵⁴. In total, we collected a dataset of 101,750 employee reviews. Table 2 summarizes the constructs in the research model and their associated indicators for this study.

Table 2. Constructs and Their Indicators

Construct	Type	Indicators
Monetary Benefits	Formative	Compensation Benefits
Non-Monetary Benefits	Formative	Career Opportunities
Management Support	Formative	Senior Management
Organizational Culture	Formative	Cultural Values

		Diversity Inclusion Work-Life Balance
Employee-Perceived Firm Image	Formative	Employee Review of the Organization's Pros Sentiment Employee Review of the Organization's Cons Sentiment Overall Employee's Review Sentiment
Favourable Social Badging	Formative	Employee's Rating

4.2. Text Mining to Extract Employee-Perceived Firm Image

Several studies have applied text-mining techniques to explore online employee reviews. This study followed the Eslami et al.⁵⁵ recommendations to understand employee-perceived firm image by extracting the sentiments of the textual portion of the employees' reviews. To that end, we selected an appropriate sentiment analysis technique using the guidelines provided by Eslami et al.⁵⁵. According to Eslami et al.⁵⁵, the proper choice of sentiment analysis technique depends on several factors, including the study's intention, the level of analysis, and the methodology type.

To select a proper level of sentiment analysis, in alignment with the above guidelines, primarily because our interest lies in gauging the overarching sentiment of employees towards their organizations, we checked three different types of sentiment analysis. Sentiment analysis can be performed at various levels, each focusing on a different text granularity⁵⁶. The three primary levels of sentiment analysis are document-level, sentence-level, and aspect-level. At the document level, sentiment analysis is performed on the entire document. The objective is to classify the overall sentiment of the document. At the sentence level, analysis focuses on the sentiments expressed in individual sentences. The aim is to determine the sentiment of each sentence within the document. Researchers identify sentiments towards specific entities or aspects mentioned within the text at the aspect level. It identifies the sentiment and links it to specific entities or features discussed in the text⁵⁶. In alignment with these guidelines, our study adopted a document-based analysis, primarily because our

interest lies in gauging the overarching sentiment of employees towards their organizations.

Next, three prominent methodologies were explored to discern the sentiment polarity within employee reviews: lexicon-based, rule-based, and machine learning. The first two approaches depend on a lexicon to gauge a text's sentiment. However, these methods' limitations are tied to the lexicon's comprehensiveness. This is where machine learning algorithms, such as deep learning methods, come into play. They enhance the quality and accuracy of sentiment extraction by learning directly from the text and its associated sentiment labels. Essentially, the data is divided into training and testing subsets. A machine learning model is then trained using sentiment labels derived from lexicon or rule-based techniques. This trained model can then predict sentiments on new, unseen data, which can be cross-verified against actual sentiments for improved accuracy⁵⁵.

Using the above principles, we developed a document-based machine learning classifier in Python, which sorts employee reviews into positive, negative, or neutral sentiments using the nltk sentiment library. Specifically, we integrated the "SentimentIntensityAnalyzer" and "word_tokenize" modules from the nltk.sentiment library and utilized the "VADER" lexicon, optimized for informal texts like social media, for sentiment analysis. After setting up the SentimentIntensityAnalyzer, we designed a function to integrate the collected employee reviews. This text was then tokenized, and with the "polarity_scores" function from the SentimentIntensityAnalyzer, sentiments for each token were derived. The final step involved consolidating and presenting the sentiment scores for each token, leveraging the machine-learning capabilities of the pre-trained VADER lexicon model.

Using the above criteria and a document-based machine-learning sentiment analysis classifier, we classified employee reviews towards their employers as positive, neutral, or negative. To check the correctness of sentiments assigned by the methods employed, two authors independently assessed the sentiments for a randomly selected 300 employees' reviews to cross-validate the implemented classifier's results. This study computed Cohen's kappa to ensure the inter-rater reliability of the assigned sentiments. The results showed a 0.92 inter-rater reliability, meeting the requirements of an acceptable threshold of 0.6 for similar studies⁵⁷. Two raters computed the sentiments of employees' reviews commutatively to resolve the discrepancies between the authors. Finally, the assigned argument frames by the two raters were compared with those assigned by the implemented classifier. The comparison showed a 96% accuracy between the raters' and the classifier's assigned argument frames for employees' reviews of their employers. This accuracy is significantly higher than the accepted threshold of 80% specified by the extant literature⁵⁵. *The above results ensured that the methodology employed to extract employee review argument frames toward their employers is reliable and can be used for further analyses of this study.*

5. Data Analysis and Results

5.1. Descriptive Statistics

Table 3 summarizes the descriptive statistics for this study's research model constructs' indicators. *It is worth noting that means and standard deviations in Table 3 pertain to the individual indicators that compose the constructs within our model. These values provide detailed insight into the constructs' characteristics.*

Table 3. Summary of Descriptive Statistics for Indicators of Constructs in the Research Model

Indicators	Mean	Median	Standard Deviation	Min	Max
<u><i>Compensation Benefit (Monetary Benefits Indicator)</i></u>	3.53	4	1.182	1	5

<u>Career Opportunities (Non-Monetary Benefits Indicator)</u>	3.78	4	1.15	1	5
<u>Senior Management (Management Support Indicator)</u>	3.38	4	1.26	1	5
<u>Work-Life Balance (Organizational Culture Indicator)</u>	3.41	4	1.30	1	5
<u>Cultural Values (Organizational Culture Indicator)</u>	3.82	4	1.20	1	5
<u>Diversity Inclusion (Organizational Culture Indicator)</u>	4.04	4	1.107	1	5
<u>Employee Review of the Organization's Pros Sentiment (Employee-Perceived Firm Image Indicator)</u>	1.59	1.5	1.16	-2.1	16.95
<u>Employee Review of the Organization's Cons Sentiment (Employee-Perceived Firm Image Indicator)</u>	-0.31	-0.25	0.95	-4	14.3
<u>Overall Employee's Review Sentiment (Employee-Perceived Firm Image Indicator)</u>	-0.09	0	1.04	-5	5
<u>Employees' Rating (Favourable Social Badge Indicator)</u>	3.84	4	1.08	1	5

Total Number of Employees Reviews Collected = 101750

5.2. Validating Measurement Model

In this study, we used PLS-SEM to analyse our proposed hypotheses on the scrapped date. After conducting sentiment analysis to ascertain the sentiments from textual data on Glassdoor, these sentiment scores, alongside other quantifiable indicators collected, were employed as formative indicators of our constructs.

All the constructs in the research model of this study are formative. PLS-SEM allows us to handle formative measurement models and does not require the restrictive assumptions of normality and equal distribution of errors that are typical in covariance-based SEM. The constructs were validated as formative, using the guidelines provided by Hair et al.⁵⁸. According to Hair et al.⁵⁸, to validate a formative construct, the following two analyses should be conducted: (i) indicator collinearity analysis and (ii) indicators statistical significance analysis. Table 4 depicts the correlations among the constructs of this study.

Table 4. Correlation Among Latent Variables

	<u>CA</u>	<u>CR</u>	<u>AVE</u>	Monetary Benefits	Non-Monetary Benefits	Org. Cul.	Manag. Support	Employee-Perceived Firm Image	Favourable Social Badging
Monetary Benefits	<u>1</u>	<u>1</u>	<u>1</u>	1					

Non-Monetary Benefits	<u>0.98</u>	<u>0.98</u>	<u>0.98</u>	0.58	1				
Organizational Culture	<u>0.96</u>	<u>0.97</u>	<u>0.97</u>	0.536	0.542	1			
Management Support	<u>1</u>	<u>1</u>	<u>1</u>	0.565	0.561	0.291	1		
Employee-Perceived Firm Image	<u>0.97</u>	<u>0.98</u>	<u>0.98</u>	0.232	0.295	0.307	0.279	1	
Favourable Social Badging	<u>1</u>	<u>1</u>	<u>1</u>	0.587	0.591	0.587	0.59	0.312	1

CA stands for Cronbach's Alpha; CR Stands for Composite Reliability; AVE Stands for Average Variance Explained; Org. Cul. stands for Organizational Culture; Manage. Support stands for Management Support

As shown in Table 4, the collected data for this study has no collinearity among the constructs' indicators of its research model. Moreover, the results of confirmatory factor analysis show that the proposed model demonstrates an acceptable fit to the observed data, indicating that the constructs and their corresponding indicators are well-defined and accurately reflect the underlying theoretical framework. This suggests the robust measurement model, providing a reliable foundation for further hypothesis testing and analysis within the research study.

Next, we examined the significance of the indicators of this study's formative constructs. According to Gefen and Straub⁵⁹, T-values and outer model weights indicate the significance of formative construct indicators. Table 5 illustrates the findings. The results suggest that all indicators satisfy the requirements for shaping the formative constructs in our research model.

Table 5. Formative Construct Validation

Relationship	Weight	T-Value	Decision To Keep/Drop
Cultural Values → Organizational Culture	0.655	43.59	Keep
Diversity Inclusion → Organizational Culture	0.205	13.85	Keep
Work-Life Balance → Organizational Culture	0.271	21.51	Keep
Employee's Pros Sentiment → Employee-Perceived Firm Image	0.481	19.49	Keep
Employee's Cons Sentiment → Employee-Perceived Firm Image	-0.378	12.22	Keep
Employee's Overall Sentiment → Employee-Perceived Firm Image	0.759	38.25	Keep

Employees significantly perceive an organization's cultural values to be the dominant factor in forming the concept of organizational culture, compared with diversity inclusion and work-life balance. Interestingly, it was also found that employees' overall sentiments are perceived to be the most significant factor in forming the concept of the employee-perceived firm image.

We also checked for the multicollinearity effects. According to our findings, all the VIF levels were below 3, stating that the data collected for this study does not suffer from multicollinearity issues⁶⁰. For the final step before the structural model analysis, we checked for the discriminant validity of this study's measurement model. Upon evaluating discriminant validity through the Heterotrait-Monotrait ratio (HTMT) approach, we found that the HTMT values for each pair of constructs fell beneath the stringent benchmark of 0.85. This outcome points to a satisfactory level of discriminant validity amongst our constructs. This analysis affirms the robustness of the HTMT estimates. Therefore, these results revealed that this study does not suffer from discriminant validity issues.

5.3. The Goodness of Fit Analysis

Finally, we tested the goodness of fit of the collected data to the research model of this study and its associated hypotheses. The findings of this analysis are shown in Table 6 and based on the accepted range for a good model in PLS-SEM analysis, it is concluded that this study does not suffer from data fitness with the proposed research model.

Table 6. Goodness of Fit Indices

<u>Goodness of Fit Index</u>	<u>Weight</u>
<u>SRMR</u>	<u>0.019</u>
<u>d_{ULS}</u>	<u>0.0</u>
<u>d_G</u>	<u>0</u>
<u>Chi-Square</u>	<u>4367.9</u>
<u>NFI</u>	<u>0.989</u>

5.4. Structural Model Analysis and Hypotheses Testing

Using SmartPLS 3.3.2 and a bootstrapping method with a 10000-re-sampling technique, the proposed research model and its associated hypotheses were tested.

Figure 3 illustrates the results of this analysis.

Figure 3. Research Results

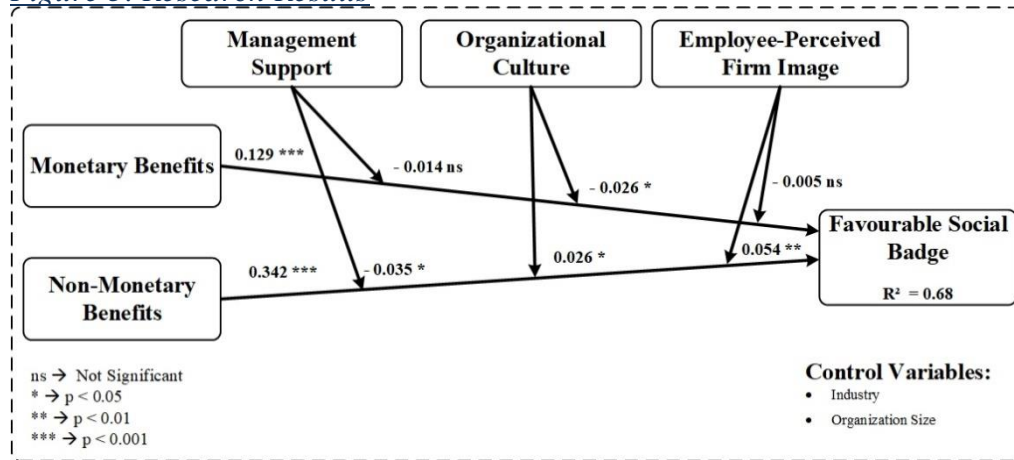
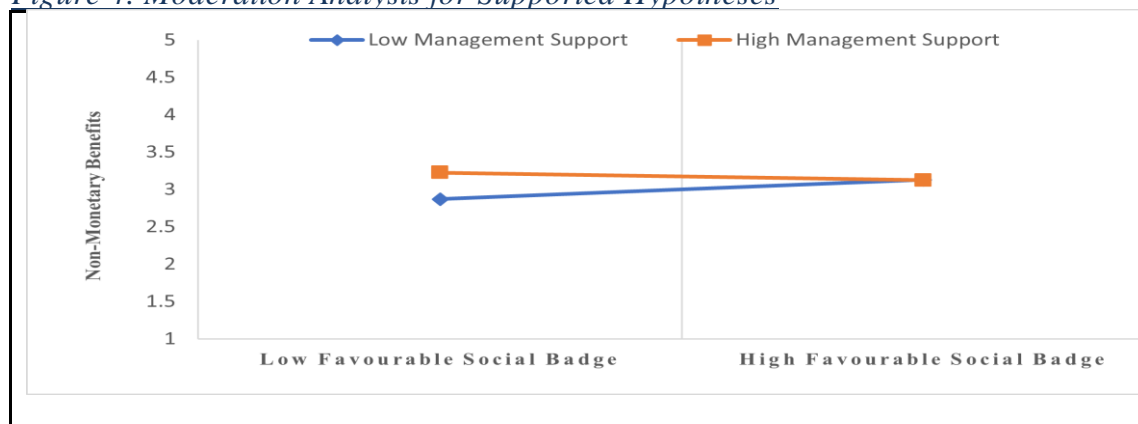


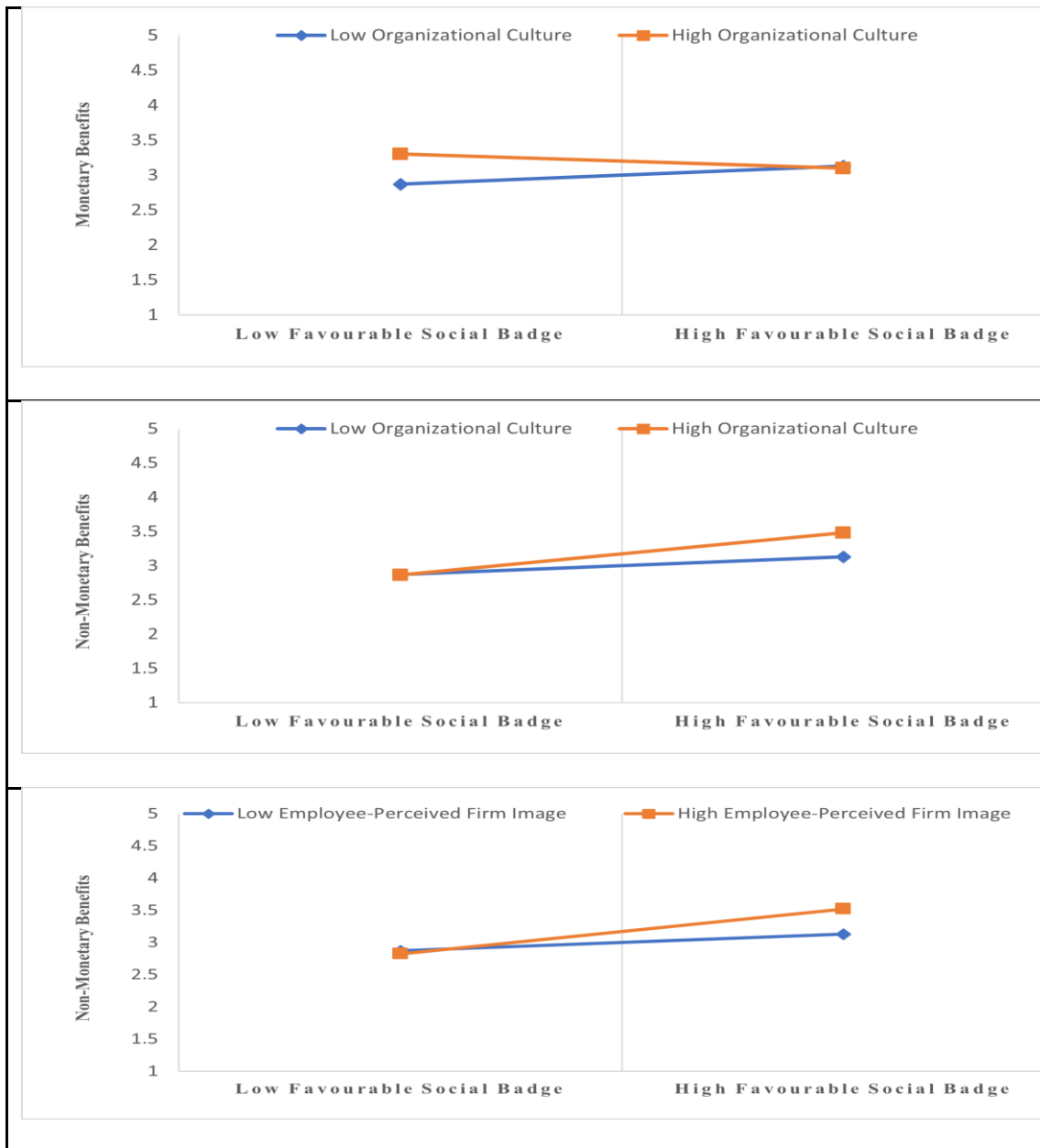
Figure 3 shows that the collected dataset supports H1, implying that an employee's perceived monetary benefit is positively associated with the assigned favourable social badge on social media. It was also found that the scraped data supported H2, implying that an employee's perceived non-monetary benefits are positively associated with the assigned favourable social badge on social media. We also checked to understand the most prominent factor affecting employees' favourable social badges. Specifically, we checked the f-square value as the effect size indicator⁶¹. This analysis revealed that non-monetary factors are perceived to be more critical than monetary factors for an employee to give a better social badge to an organization.

Additionally, as shown in Figure 3, the r-squared for this study showed the value of 0.68, exceeding the requirement for the accepted r-squared range, which implies that the proposed research model and the collected dataset for this study were primarily able capture the concept of employees' social badges given to their organization on SMJP. These findings satisfied the first research question of this study.

We also checked for the effect of the presence of the moderators (i.e., management support, organizational culture, and employee-perceived firm image). Our analysis revealed that management support does not moderate the relationship between monetary benefits and favourable social badging (H3a). However, interestingly, it was found that management support reduces the effect of non-monetary benefits on favourable social badging (H3b). *Figure 4* illustrates the moderating effects. Findings on H4a and H4b confirmed our hypotheses. The analyses revealed that a positively perceived organizational culture lowers the effect of monetary benefits on employees' rankings of their employers. A positively perceived organizational culture increases the effect of non-monetary benefits on the employee's ranking of the organization. The data for this study does not support H5a, realizing that a positive employee-perceived firm image will not affect the employee's ranking based on an organization's monetary benefit. However, H5b was supported, implying that a positive employee-perceived firm image increases the effect of non-monetary benefits on the employee's ranking.

Figure 4. Moderation Analysis for Supported Hypotheses





6. Discussion

As its primary research objective, this study delved into the dynamics behind forming favourable social badges for organizations. In today's digital age, the concept of social badging is of paramount importance. Stakeholders, especially employees, are swayed by evaluations articulated as online reviews on SMJPs. Our research sought to unpack the determinants that drive favourable social badges.

To explore the first research question of this study, we first investigated how various compensation elements (i.e., monetary, and non-monetary) shape the social

badging landscape through reviews on SMJPs. Based on our research findings, it is evident that both monetary and non-monetary benefits significantly influence the formulation of favourable social badges. Monetary benefits, especially those connected to job compensations, stand out as explicit rewards for employees, highlighting their tangible contributions and importance within an organization. In line with our findings, the literature shows that monetary benefits are pivotal in shaping employees' perceptions and satisfaction with their organizations³.

Non-monetary incentives, especially career advancement opportunities, testify to an organization's commitment to recognizing and actively investing in its employees' growth and development. When employees identify a clear trajectory for their career within a company, coupled with an environment that supports their aspirations, it fosters a more profound sense of loyalty and belonging. This connection and satisfaction drive them to share their positive experiences and perspectives on social media. In line with our findings, extant literature suggests that intangible rewards, especially career advancement opportunities, are pivotal in prompting employees to endorse their employers positively on platforms and forums⁹.

To address this study's second research question, we examined the interplay of management support, organizational culture, and the employees' perception of the company's image. These factors moderate between tangible and intangible job benefits and the tendency to assign positive social badges. Central to our findings is the belief that the compatibility between an employee and an organization plays a significant role in the conferral of a social badge.

In this regard, our study unveiled nuanced dynamics between monetary rewards, management support, and the bestowal of favourable social badges. While management support played a pivotal role in many aspects of employee satisfaction, it did not seem

to moderate the correlation between monetary benefits and the granting of favourable social badges. This finding suggests that, regardless of the level of management support, the perception of monetary rewards remains a distinct factor influencing employees' decisions to endorse their organizations positively. Our study found a deviation from the prevailing literature that posits management support as a moderating factor between monetary benefits and the issuance of favourable social badges⁹. Despite expectations based on prior research, we observed no significant moderating effect of management support on this relationship in our findings.

Further emphasizing this dynamic, when employees recognized the value of non-monetary benefits, especially those related to career advancement, coupled with robust management support, their inclination to assign favourable social badges to their organizations significantly increased. Consistent with the extant literature, our findings reaffirm the pivotal role of management support in amplifying the positive relationship between career advancement opportunities and the assignment of favourable social badges²¹.

In alignment with the extant literature, our observations underscored organizational culture's pivotal role in shaping employees' attitudes toward benefits and endorsements¹³. A robust, positive organizational culture lessens the weight employees give to monetary benefits when assigning favourable social badges and positively moderates the relationship between non-monetary benefits and such badges. Essentially, when employees sense they are enveloped in a proactive and supportive organizational culture, not only do financial rewards become less central in their endorsement decisions, but the intangible, non-monetary benefits are amplified, leading to increased positive social recognition.

Finally, our research highlighted that a favourable employee perception of the firm's image does not alter the impact of monetary benefits on the organization's social badge. Moreover, this positive perception of the firm's image significantly amplifies the effects of non-monetary benefits, especially those related to career advancement opportunities. These findings suggest that while monetary incentives have their standalone influence, combining a firm's positive image and non-monetary benefits, such as opportunities for career growth, creates a synergistic effect, enhancing the likelihood of receiving favourable social badges.

7. Contributions, Limitations, and Future Research

7.1. Theoretical Contributions

This study conceptualizes social badging as an emerging phenomenon in SMJP for organizations. While the literature discusses the influence of job satisfaction factors such as monetary and non-monetary benefits resulting in corporate reputation, we found evidence that employees with PEF improved their organization's social badge.

This study also extended the current literature by emphasizing the importance of perceived support received by the employees from management, organizational culture, and employee-perceived firm image influencing the concept of social badging in social media.

This research pioneers the understanding of social badging, presenting it as a developing yet influential business trend. The extant literature on Human Resources has explored the role of various job satisfaction determinants, including both monetary and non-monetary incentives, in sculpting an organization's reputation. We explicitly extended the literature by shedding light on how employee-organization fit can be a pivotal determinant in enhancing an organization's social badge. Moreover, building

upon the foundational knowledge in the field, our study broadens the discourse in management literature. Explicitly, we accentuate the critical role of elements such as the perceived managerial support, the prevailing organizational culture, and the perceived image of the firm by employees in the realm of social badging on digital platforms.

Further, we extended the literature by employing signalling and PEF theories to the context of social badging. Utilizing the lens of PEF, we delineated how pillars like management support, an affirming organizational culture, and a firm image as perceived by employees collectively contribute to positive social badge attributions. This comprehensive exploration of favourable social badge factors enhances current understanding in both social media and human resource literature, providing a more integrated perspective on employee feedback processes and the nuanced interplay of organizational portrayal in online reviews.

This study also evidenced that in the presence of positive management support, organizational culture, and employee-perceived firm image, the effect of monetary incentives for employee rating would be less significant than non-monetary benefits. Moreover, with work and workplaces moving to digital space, online reviews are critical for talented employees when deciding to join or stay in an organization. Consequently, our results broaden the existing body of knowledge on talent attraction and HRM theories centred on employer branding. Simultaneously, they contribute value to the discourse on employee engagement determinants within social media reviews. This article further broadens the human resource management literature by showcasing the relevance of emerging research methodologies, particularly text mining. This study also utilized secondary data in social badging and human resource management contexts, a new contribution extending the extant literature. Using secondary data and

text mining allows scholars and firms to indirectly understand the actual and honest employees' feelings, extending the existing literature on the applicability of newer research methodologies in these contexts.

7.2. Practical Implications

This paper has several implications for managers, organizations, and society. We introduced the concept of social badging in social media by identifying its antecedents. We noticed monetary and non-monetary benefits as significant factors influencing the social badge of an organization. *The financial perks of monetary benefits often correlate directly with an employee's feelings of security, motivation, and overall job contentment. Recognizing their worth through competitive salaries and bonuses enhances employees' affiliation with the organization and motivates them to advocate for the company. This advocacy often manifests as favourable social badges in the age of online reviews and social media.*

This study also showed that the correlation between monetary and non-monetary benefits with favourable social badges could be moderated by management support, organizational culture, and employee-perceived firm image. In this regard, even if employees experience robust management backing, their feelings regarding monetary compensation retain a standalone influence on their inclination to award positive social badges. Moreover, an organization might not excel in delivering outstanding non-monetary perks, but the weight of genuine management support can still tip the balance, leading employees to reward the organization with higher social badge ratings. A more nuanced takeaway for organizations could be prioritizing delivering significant non-monetary benefits, especially career growth opportunities, and ensuring these are complemented by empathetic and proactive management support to maximize favourable social badge endorsements. The current study's

findings are critical for employer branding, talent selection, and employee engagement perspective, as social badging becomes a critical indicator of job satisfaction.

The anonymity of SMJP allows employees to express their views freely, offering an unfiltered look into their genuine sentiments and concerns. *In an era of increasing digital interactivity, these candid reflections become an essential pulse of the employee's experience.* The collective views then form a significant element that needs to be addressed by managers, *especially in a rapidly evolving corporate landscape where employee satisfaction can directly impact organizational success. In many scenarios, employees do not express their opinions directly to their managers, possibly due to fear of reprisals or the belief that their feedback might be overlooked. Instead, they use SMJP as a platform to voice their concerns, indicating a shift in the traditional feedback mechanism.* Therefore, companies must consider the significance of data-driven decision-making inferred through online employee reviews in shaping their brand personality, particularly when fostering a culture of trust, transparency, and mutual respect.

Organizations should understand employees' sentiments based on data obtained from social media. Employees have different expectations concerning job satisfaction. Some want to work in organizations offering an adequate work-life balance for their employees. Ambitious employees need challenging jobs and fast-track career growth. Some employees prefer job stability, while older employees seek job security and social benefits. All this information is now available for organizations at the click of a button on their social media pages. Organizations must respond to feedback posted by current and past employees on SMJP. When organizations act upon their employees' reviews, employees feel valued and optimistic about their employer and themselves, resulting in job satisfaction.

Moreover, organizations should create a presence on SMJP by understanding the information dynamics of their practices available on these platforms. Thus, organizations can publicize their brand image on social media and enhance their reputation. Finally, understanding the above conditions and organizational traits, including monetary and non-monetary benefits, diversity and inclusion, cultural values, management support, and work-life balance, allows a firm to foster a pleasant working environment. Such a working environment helps employees generate a positive perception of their employer, which could lead to lower turnover rates, higher employee performance, and better chances of talent acquisition.

7.3. Limitation and Future Research

In this study, we used Glassdoor as the SMJP from which we collected the data. Future studies could collect data from other SMJPs (e.g., LinkedIn, Indeed) and assess whether the findings of this study can be generalized to other types of SMJPs. In this study, we have collected data from the top 10 organizations on Glassdoor, which are big-size organizations, mainly from the I.T. and automotive sectors, have many employees, and have received many reviews from their current and past employees. Future research endeavours might benefit from expanding the dataset to include a broader range of organizations, possibly spanning more than ten entities across varied sectors. This would help ascertain the applicability and generalizability of our study's findings to diverse industrial contexts.

The present research delved into two primary antecedents and scrutinized three moderating variables. Future studies have a substantial scope to encompass broader organizational characteristics, like diversity, equity, and inclusion practices or leadership styles. Such an expansive approach could unveil deeper insights into the multifaceted nature of organizations and further enrich our understanding of the

determinants influencing their outcomes.

Next, we used secondary data to analyse the hypotheses. One major limitation of secondary data is that the researchers are limited to the constructs and indicators available on the platform used to get the data. These limitations include the availability and choice of constructs or their indicators, which may result in the selection of single-item constructs. Although the selection of single-item constructs is widely accepted in extant literature, it might introduce bias to the results. Moreover, utilizing secondary data combined with text mining presents a unique set of trade-offs. Text mining and NLP allow for the automated analysis of large volumes of text from such secondary data, extracting valuable insights and patterns that might be impossible to discern manually. While text mining is powerful for processing and analysing information at scale, the trade-off comes from potential biases in the data, the need for extensive preprocessing, and the complexity of accurately capturing context and sentiment, which can be particularly challenging with nuanced human language.

8. Conclusion

The emergence of social badging of employers on social media has augmented the impact of online employee reviews on organizations' value. This research also marks a shift of control from organizations to their human resources regarding their employer identity and branding on SMJP. This research suggests that employee reviews posted on SMJPs are influenced by monetary and non-monetary factors and other moderators like organization culture, management support, and employee-perceived firm image portraying their overall impression of a firm. While supportive management and favourable organizational culture bring a higher reputation for an organization, positive reviews help such a firm prepare an attractive workforce.

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