

**An Analysis of the effectiveness of anti-harassment laws in the workplace:
Focusing on Job Planet data**

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Abstract: In the case of overseas countries, there has been early attention to workplace harassment and efforts to establish legal regulations to actively address the issue of harassment of victims. In contrast, in the domestic context, until before 2017, there was no specific law regulating workplace harassment, and the issue was primarily dealt with by labor unions. The issue of workplace harassment gained significant attention domestically with the 2014 incident involving Korean Air's "nut rage," which became known as "gabjil" (a Korean term for abusive conduct in hierarchical workplaces), and it served as a trigger for bringing to light the problem of workplace harassment that had been latent in our society. By actively demanding improvements in unfair treatment arising from hierarchical workplace relationships, it gained public sympathy, leading to the enactment of the Workplace Harassment Prohibition Act in July 2019, providing legal grounds to prevent workplace harassment and protect victims. However, doubts have been raised regarding the effectiveness of the legal framework for prohibiting workplace harassment. In reality, when examining the status of reported workplace harassment cases in the approximately three years following the enactment of the law as investigated by the Ministry of Employment and Labor, there were positive responses indicating the spread of a compliance atmosphere. However, it can be observed that the perception of the seriousness of workplace harassment did not decrease significantly. In other words, it seems that the effects of the legal amendment are not being perceived in actual industrial settings. Compared to existing studies on the effects of the Workplace Harassment Prohibition Act, there has not been sufficient research on the impact of the law on workplace harassment at the legal level. Therefore, this study verifies the effectiveness of the Workplace Harassment Prohibition Act by using review data from Jobplanet, examining whether actual harassment has decreased as a result of the enactment of the law and whether this decrease in harassment has improved job satisfaction and its impact on job performance. Specifically, by analyzing the review data from Jobplanet using text mining methods to measure workplace harassment and

analyzing its impact on job satisfaction, the study estimates the effectiveness of the prohibition law. The research results of both studies on the "direct effect" of the law's enactment showed that the Workplace Harassment Prohibition Act has a positive effect in reducing workplace harassment. Regarding the "indirect effect" of the legal framework, Study 1 found that the Workplace Harassment Prohibition Act not only reduces workplace harassment but also has a positive impact on key organizational outcomes and satisfaction dimensions, such as job autonomy, leadership satisfaction, organizational culture satisfaction, collaboration/communication satisfaction, organizational performance, and life satisfaction. This finding aligns with the expected results that the study aimed to verify. Study 2 analyzed the overall keyword frequencies in 2021 and 2022, more than a year after the enforcement of the law in the second half of 2019, and found a decrease in frequency. The theoretical implications of this study lie in expanding previous research by providing legal factors that reduce workplace harassment, which is different from the focus of most previous studies that mainly examined the impact of workplace harassment on job performance and organizational outcomes. Additionally, the study collected review data and utilized text mining techniques to measure workplace harassment and employed a difference-in-differences analysis to verify the effectiveness of policies and regulations, which contributes to the methodological aspects of organizational research.

1. Introduction

Workplace harassment is defined as behavior that involves individuals or groups harassing a specific person within the workplace, resulting in their social exclusion or negatively impacting their job performance. It is particularly defined as "harassment" when negative behaviors persist and are repeated over a certain period of time (Einarsenet, Zapf, & Cooper, 2013). According to a survey conducted in Korea, workplace harassment and conflicts are frequent occurrences, with over 80% of employees reporting such experiences (Yu, 2015; Jung, 2022). Workplace harassment not only depletes an individual's resources and causes stress (Livne & Goussinsky, 2018), but also negatively affects organizational effectiveness at the organizational level (Smit & Plessis, 2016). In foreign countries, workplace harassment has been recognized early on and legal regulations have been established to actively address harassment issues (Byun, 2020).

However, in Korea, prior to 2017, there was no specific legislation addressing workplace harassment, and the issue has been primarily dealt with by labor unions. The issue of workplace harassment gained attention in Korea with the Korean Air "nut rage"

incident in 2014, which triggered the recognition of workplace harassment that had been latent in our society. Demands for improvement in unfair treatment within hierarchical workplace relationships gained public sympathy, leading to the enactment of the Workplace Harassment Prevention Act in July 2019, which established legal grounds for preventing workplace harassment and protecting victims. The phenomenon of harassment or bullying has received attention as a specific social issue because even though such behaviors may not reach the level of illegal or criminal acts within the existing legal framework, they result in physical, mental, sexual harm, as well as infringement of basic rights for the recipients of these behaviors. Workplace harassment initially starts with mild rudeness, which gradually escalates over time. Since rudeness often lacks clear intent from the perpetrator, making it difficult to perceive, it is challenging to establish management systems or enforce measures to prevent such behavior, resulting in its continuous existence and potential evolution into more severe forms (Ghosh, Jacobs, & Reio, 2011).

The impact of workplace harassment on employees is extensive, ranging from mental to physical health. At the individual level, workplace harassment depletes emotional and cognitive resources (Livne & Goussinsky, 2018) and, when intensified, leads to severe psychological distress and symptoms of post-traumatic stress disorder (Matthiesen & Einersen, 2010). It also has detrimental effects on health (Verkuil et al., 2015) and triggers various emotions, including distrust, shame, embarrassment, self-doubt, shock, self-blame, fear, depression, and denial (Pamela et al., 2007). In severe cases, it can even escalate to suicide attempts. The negative impact of workplace harassment is not limited to the individual level but also affects organizational performance. The major effects on organizations include the attrition of talented employees, weakened organizational effectiveness, and loss of employees' mental and physical health, resulting in decreased productivity (Niedhammer et al., 2013). Workplace harassment can also undermine organizational effectiveness through covert means. It disrupts social interactions, damages trust, and negatively affects the sharing and dissemination of knowledge (Han, 2021), as well as having a negative impact on organizational citizenship behaviors, which are understood as voluntary organizational support behaviors. Workplace harassment can lead to decreased cohesion and communication within the workplace and ultimately result in organizational disengagement (Valentine et al., 2021).

To address these issues, the Korean government introduced the Workplace Harassment Prohibition System on July 18, 2018. This legislation is significant not only in its establishment but also in terms of its implications for coping with and preventing harassment. However, the effectiveness of this legislation has been questioned. Examining the status of reported workplace harassment cases in the three years

following the enactment of the law, as investigated by the Ministry of Employment and Labor, there were positive responses indicating a spread of compliance with the law, but there was no significant decrease in reports of severe workplace harassment. In other words, it appears that the actual impact of the legal revision is not being felt in real workplace settings.

Therefore, this study attempts to analyze the effectiveness of the Workplace Harassment Prohibition Act from the perspective that various efforts are needed for the stable establishment of the legislation. While previous research has focused on organizational and industry characteristics that contribute to workplace harassment (Bakker & Demerouti, 2007; Samnani & Singh, 2012), the impact of workplace harassment on victims (Verkuil et al., 2015; Livne & Goussinsky, 2018), and individual resources that mitigate the negative effects of workplace harassment on organizational effectiveness, research on the effectiveness of the workplace harassment prohibition law is very limited. Therefore, this study aims to verify the effectiveness of the legislation by analyzing review data from Jobplanet, a job review platform, regarding changes in workplace harassment. Specifically, through text mining analysis of the review data, this study measures workplace harassment and examines its impact on job satisfaction. Since job satisfaction is a crucial variable in organizational effectiveness, considering that turnover intentions are a response to job dissatisfaction, improved job satisfaction can be seen as an indicator of the effectiveness of the workplace harassment prohibition law. Additionally, this study analyzes survey data from public officials to examine how work performance has improved after the enforcement of the workplace harassment prohibition law.

2. Literature Review

2.1 The concept of workplace harassment

Workplace harassment was initially introduced by Brodsky (1976) as a concept referring to "systematic and persistent conflict that occurs in relationships with superiors or colleagues within the workplace" and is termed workplace harassment (Matthiesen & Einarsen, 2010). Workplace harassment is defined as behavior in which individuals or groups target specific individuals, causing them social exclusion or negative impacts on their internal work, particularly when such negative behavior persists and repeats over a certain period of time (Einarsen, Zapf, & Cooper, 2003). Leymann (1990, 1996) referred to workplace harassment as "group violence" or "psychological terror." He defined group violence as "hostile and unethical communication directed systematically by one or several individuals toward an individual" and stated that "this behavior occurs frequently,

nearly every day, over a period of at least six months, resulting in significant mental, physical, and social distress for the victim." Understanding the dynamics of the entities involved and their roles in amplifying the process and conflict is helpful in defining workplace harassment (Einarsen et al., 2003). Hutchinson et al. (2010) also defined workplace harassment as "repeated hostile and negative behaviors targeting individuals who are in a weaker position for an extended period of time."

In South Korea, the Labor Standards Act defines workplace harassment as "acts by employers or workers that go beyond the appropriate scope of work, utilizing hierarchical superiority or relationships within the workplace to inflict physical or mental suffering on other workers or worsen working conditions." Types of workplace harassment include physical assault, verbal abuse, defamation, discrimination, coercion, and unfair instructions (Labor Standards Act, 2019).

The concept and terminology used to refer to workplace harassment vary depending on the cultural and social contexts of each country. The UK, USA, Australia, and other countries use the term "workplace bullying," while in France, workplace harassment is referred to as "moral harassment" (*harcèlement moral*). In Italy, there is a broader concept called "prepotenza," which encompasses more than just "mobbing/bullying" (Genta, Menesini, Fonzi, Costabile, and Smith, 1996). In nearby Japan, the concept of "ijime" is used, focusing more on psychological aspects than physical aspects (Naito and Gielen, 2005). In Scandinavian countries and Germany, workplace harassment is referred to as "mobbing." Recently, in Europe, there has been a tendency to use the term "workplace harassment" instead of "workplace bullying," and the European Agency for Safety and Health at Work (EU-OSHA) uses "workplace harassment" as the term for workplace harassment (Maarit, 2014).

The typical effects of workplace harassment on companies include the attrition of talented employees, weakening of organizational effectiveness, and loss of employees' mental and physical health, leading to a decline in productivity. Workplace harassment not only damages employees' physical and mental well-being and infringes on their labor and personal rights but also undermines the organizational culture and order of a company. Considering the negative impact on the labor market, society, and the economy, it becomes an important legal challenge that should be actively addressed at a national level.

2.2 Workplace Harassment Prohibition Act

Until 2017, there was no law in South Korea that specifically regulated workplace harassment. However, in Korean society, the issue of workplace harassment has been addressed and responded to, primarily through labor unions, naming it "ilteo

gworophim". Additionally, by considering the violated legal interests through rights and obligations that can be derived normatively, illegal acts have been remedied retrospectively through criminal sanctions or compensation for damages. From 2014 onwards, cases of harassment in the workplace began to be highlighted, and surveys on physical and psychological violence, bullying, and harassment in the workplace started to be conducted as part of workplace environment investigations. In particular, the "peanut incident" in 2014, where a senior executive at Korean Air ordered a plane to return due to dissatisfaction with the flight attendant's customer service attitude, became a triggering event that brought the issue of workplace harassment, which had been latent in our society, to the forefront. Since then, there has been an active demand for improvements in unfair treatment arising from hierarchical employer-employee relationships, gaining public sympathy. As a result, in July 2019, the Workplace Harassment Prohibition Act was enforced, establishing a legal basis to prevent workplace harassment and protect victims.

On July 18, 2018, the government formulated the "Measures to Eradicate Harassment in the Workplace" and through subsequent legislation, the Workplace Harassment Prohibition System was established in the Labor Standards Act, which has been in effect since July 16, 2019. Efforts to foster a safe workplace culture in addressing workplace harassment began, but the problem of workplace harassment still frequently appears in social news to a significant extent. Workplace harassment violates the dignity and personal rights guaranteed by the Constitution, as well as the health rights of workers, making it an important task for the nation and society to improve workplace harassment regulations in a direction that strongly protects employees from a legal perspective.

2.2 Previous Studies on Workplace Harassment

Castillo et al. (2017) applied the synthetic control method to verify whether tourism development policies in the Salta region of Argentina had an impact on employment growth. The analysis revealed that the tourism industry's employment rate in the region increased by 11% over a period of approximately 13 years since the implementation of the policy, indicating the effectiveness of such policies in generating employment across industries.

Roesel (2017) conducted an empirical analysis from an economic perspective to examine whether regional integration policies influenced local government spending. The study used administrative costs, social security expenditures, education expenditures, and total expenditures as variables for local government spending. The synthetic control method was applied to estimate the difference in spending before and after the

implementation of regional integration policies. The analysis results showed that regional integration efforts did not have a significant impact on local government spending.

Stricker and Baruffini (2020) estimated the impact of the partial amendment to the Swiss Unemployment Insurance Act in 2011 on regional unemployment rates. By constructing a synthetic control group and conducting a difference-in-differences analysis, they verified the change in unemployment rates before and after the amendment. The results indicated that the average unemployment rate decreased by 0.74% after the partial amendment. The amendment, which aimed to reduce the duration of unemployment benefits, accelerated job search activities for job seekers and had a positive effect on employment retention after re-employment.

Im Tae-kyung (2020) analyzed the effects of COVID-19 support policies on employment among small business owners and self-employed individuals. Using short-term data from January to June 2020, the study employed a difference-in-differences analysis to estimate the impact of the support policies before and after the implementation of direct financial aid. By comparing the employment rates between the experimental group (areas where direct financial aid was provided) and the control group (areas where it was not provided), the employment effects were examined. The employment effect was measured by the proportion of the economically active population working in the accommodation and food service industries. Other factors were controlled as covariates in estimating the policy effect. The analysis showed that the employment rate in the accommodation and food service industries exhibited a statistically significant impact after three months of direct financial aid, but the effect decreased after May, indicating limited sustainability of the policy effect.

Jang In-soo (2021) examined the effects of the Chungbuk Innovation City policy on regional economic growth and fiscal soundness. Dependent variables were defined as changes in regional economic growth and fiscal soundness, and data on per capita gross regional domestic product (GRDP) and fiscal autonomy were utilized. The synthetic control method was applied to analyze the relationship between the Innovation City policy and regional economic growth. The results indicated that per capita GRDP increased in Jincheon County and Eumseong County, which are administrative districts where Chungbuk Innovation City, a beneficiary of the policy, is located. However, fiscal autonomy showed a significant increase only in Jincheon County. Nevertheless, the sustained increase was not observed throughout the observation period, suggesting that the effects of the Innovation City policy were limited.

Hwang Da-sol (2022) evaluated the policy effectiveness of designating areas in crisis as employment crisis regions. The study used the treatment group as the beneficiaries of the employment crisis region policy and the control group as non-beneficiaries. To

estimate the net effects of the policy, a synthetic control group was selected to have similar homogeneity to the treatment group. Through a difference-in-differences analysis, it was found that the implementation of the employment crisis region policy did not have a significant positive impact on employment stability within the region. However, significant results were observed in job creation. Additionally, to understand the influence of factors other than the employment crisis region policy on the effectiveness of employment stability policies, regional influence factors and demographic characteristics were included as control variables. The analysis verified that the proportion of insured persons in the manufacturing industry and fiscal autonomy had a positive impact on employment stability, while the proportion of elderly population had a negative impact.

Based on the results of the previous studies mentioned above, it is essential to carefully consider the setting of the pre- and post-legislation periods, as well as the selection and measurement of predictor and outcome variables when evaluating the effectiveness of workplace harassment prohibition laws.

3. Research Methods

3.1 Research Hypotheses

In this study, based on a review of the theoretical background, hypotheses regarding the effectiveness of workplace harassment prohibition laws were formulated for empirical research.

Hypothesis 1: Workplace harassment prohibition laws will have a negative (-) impact on workplace harassment.

Hypothesis 2: Workplace harassment prohibition laws will have a positive (+) impact on job satisfaction.

Hypothesis 3: Workplace harassment prohibition laws will have a positive (+) impact on organizational performance.

Hypothesis 1 focuses on verifying whether workplace harassment prohibition laws reduce workplace harassment within organizations. Hypothesis 2 aims to examine the effects of these laws on employee job satisfaction, considering that job dissatisfaction often leads to intentions to leave the job. Job satisfaction is a crucial variable in organizational effectiveness. Previous studies on workplace harassment consistently report that it undermines job satisfaction (Sim et al., 2014; Lee et al., 2020; Im et al., 2021). These findings suggest that if workplace harassment is reduced due to the implementation of harassment prohibition laws, it may have a positive impact on job

satisfaction. Based on these previous studies, this research assumes that workplace harassment prohibition laws will have a negative (-) impact on workplace harassment and a positive (+) impact on job satisfaction.

Furthermore, Hypothesis 3 aims to analyze the impact of workplace harassment prohibition laws on organizational performance. Workplace harassment not only manifests in overt behaviors such as employee turnover but can also undermine organizational effectiveness through less visible means. Jang and Jung (2018) argued that workplace harassment negatively affects organizational citizenship behavior, which is understood as voluntary organizational support behavior. From the perspective of social exchange theory, organizational citizenship behavior refers to the emotional exchange between members and the organization, encompassing concepts such as trust in the organization and member loyalty (Alan et al., 2015). In other words, workplace harassment, although not directly apparent like employee turnover, can hinder positive emotional exchanges within the organization, thus undermining organizational effectiveness. Therefore, the establishment of workplace harassment prohibition laws is expected to have a positive impact on organizational performance.

3.2 Data

In this study, we conducted two separate analyses, referred to as Study 1 and Study 2, by collecting and analyzing data. The reason for collecting and analyzing two sets of data in this study is as follows.

First, the purpose of this study is to analyze the impact of workplace harassment prohibition laws not only on harassment itself but also on employee performance. Therefore, we utilized survey data that includes measures of employee performance from the Public Official Survey. Specifically, using time-series data from 2011 to 2020, we were able to analyze the effects of workplace harassment prohibition laws before and after their implementation. More specifically, we utilized data from 2018 to 2021, with 4,000 cases in 2018, 4,111 cases in 2019, 4,339 cases in 2020, and 4,133 cases in 2021, totaling 16,583 cases for analysis.

Second, to more rigorously analyze the effects of workplace harassment prohibition laws, we additionally validated them using review data from Job Planet. Generally, conducting opinion surveys through questionnaires, as in Study 1 using the Public Official Survey, may introduce biases due to the potential inconsistency between attitudes and behaviors. Furthermore, when using opinion surveys to analyze effects, there is concern for errors related to the inconsistency between attitudes and behaviors. Additionally, relying on the number of reports as a measure of effectiveness can also lead to biases. This is because an increase in reports can occur independently of an

actual increase in harassment, driven by reporting policies and improved awareness. Therefore, in this study, we collected and analyzed Job Planet data in Study 2 through web scraping. We also utilized text mining techniques to measure workplace harassment-related keywords from Job Planet reviews.

By incorporating these two separate studies, this research allows for a more robust estimation of the effects of workplace harassment prohibition laws. It enables us to estimate not only the impact of these laws on reducing harassment but also their effects on employee performance. In Study 1, we collected and measured relevant variables from the Public Official Survey and validated hypotheses through regression analysis. In Study 2, we collected Job Planet data, measured variables using text mining techniques, and validated hypotheses through regression analysis.

In order to analyze the effects of the enactment of the workplace harassment prohibition law, JobPlanet collected review data for each company. Generally, conducting opinion surveys to analyze the effects can introduce biases due to the inconsistency between attitudes and behaviors. Additionally, when verifying effectiveness through the number of reports, biases can also occur. This is because an increase in reports may occur solely due to the recommended reporting policy and improved awareness, unrelated to an actual increase in harassment incidents. The use of opinion surveys to analyze the effects is generally concerned with errors related to the inconsistency between attitudes and behaviors. Furthermore, verifying effectiveness through the number of reports can also introduce biases. This is because an increase in reports may occur solely due to the recommended reporting policy and improved awareness, unrelated to an actual increase in harassment incidents. Therefore, in this study, data was collected focusing on review data. Unlike surveys, review data based on anonymity has fewer errors in self-reported survey results according to social desirability. Thus, anonymous review data was collected and analyzed to complement the analysis of the survey data on the state of public service. Specifically, 375,139 online review data from 2018 to 2022 were collected.

To measure the effects of the law's enactment, the text of the cons of the JobPlanet review data was measured. By analyzing whether workplace harassment-related words in that text decrease after the law's enactment, the effects of the law can be measured. In particular, JobPlanet review data (figure 1) has a system to verify the credibility of reviews and provides data on industry, occupation, and company size, which makes it suitable for this study.

작성일	만족도	직종	전직원	승진기회	복지 및	급여와 삶	사내문화	경영진	장점	단점	바라는점	추천여부	1년 후 성장도	도움이 돼요
2022.04	5	개발	전직원	5	5	5	5	5	5	실력만 있으면 대기업이라 그렇지 경직되어있는 부분	실무자에게 추천	성장	0	
2022.04	5	생산관리/품질관리	현직원	5	5	5	5	5	뛰어난 사내 업무의 체계가 잘 잡혀있지만 업무 분	체계적인 업무 분	추천	성장	0	
2022.04	3	개발	전직원	2	4	2	3	3	삼성전자 업무 강도가 백세다. 다른 사람들은 돈	요즘 삼성 추천	성장	0		
2022.04	4	생산/제조	전직원	4	4	4	4	4	역시한국 단점이없는게 단점인거 같습니다. 크	없습니다 추천	성장	0		
2022.04	5	기획/경영	전직원	5	5	5	5	5	위치도 좋 출퇴근 힘들고 경쟁이 심함. 연봉을 더	직원들의 추천	성장	0		
2022.04	5	생산/제조	현직원	5	5	5	5	5	5	5	5	5	5	5
2022.04	4	생산/제조	현직원	4	4	1	3	2	내임벌류 업무량, 노조가 없이 오래된 회사라 그	2등 하급비추천	-	0		
2022.04	4	개발	현직원	3	5	3	3	4	몇몇 특정 그만을 갈러나갈 것을 각오 해야함 일	정상의 자추천	성장	0		
2022.04	4	개발	현직원	3	4	5	4	1	부모님이 버는거에 비해 돈을 너무 직원들에게	자기앞길만추천	-	1		
2022.04	4	생산/제조	전직원	3	3	3	3	3	3	3	3	3	3	
2022.04	3	생산관리/품질관리	전직원	3	4	1	1	1	내임벌류 보안 철저. 근무 자유도 굉장히 떨어지	1등회사에 비추천	비슷	0		
2022.04	4	생산/제조	현직원	3	4	3	5	3	글로벌 대 돈을 많이 주지만 기본급이 높은건아님	이런데 경 비추천	비슷	0		
2022.04	4	디자인	전직원	3	5	5	4	2	말할 것도 디자이너로서 성장한다는 느낌을 얻기	경영진도 비추천	비슷	0		
2022.04	3	디자인	전직원	3	3	3	3	3	큰 프로젝트 업무량이 다소 많고 야근도 자주함. 억	편안한 분추천	성장	0		
2022.04	4	생산관리/품질관리	현직원	3	3	2	4	1	하루 4개 메일이라 메신저 주기적으로 삭제됨. 2	부종 구매추천	비슷	0		
2022.04	4	생산/제조	전직원	3	4	3	4	3	자유로운 연금했던거와 마찬가지로 직군에 따라	직군 개선추천	성장	0		
2022.04	5	생산/제조	현직원	5	5	5	5	3	대기업이 대중중업계의 연봉 및 보너스가 커서 상	보여주기추천	비슷	0		
2022.04	3	마케팅/시장조사	전직원	2	4	4	2	1	유연근무 혁신기술 신사업 발굴 추진 필요성은 모	이제는 재추천	비슷	1		
2022.04	3	연구개발	현직원	2	4	3	1	1	자유로운 자부장들의 쓸데없는 고집 아집. 본인	시대의 변비추천	비슷	2		
2022.04	4	연구개발	현직원	3	2	4	5	1	출퇴근편환비만급 임직원들한테 보살하기엔 아	글로벌 제추천	비슷	0		
2022.04	3	생산관리/품질관리	현직원	3	3	1	3	1	밀리의 사 공부할 시간을 안중 성과급 안 나오면	임금 인상비추천	비슷	1		
2022.04	5	기획/경영	현직원	5	5	3	4	5	직원 복지 기업 문화를 개선한다고 노력하지만	단점에도 추천	성장	0		
2022.04	5	생산관리/품질관리	현직원	4	5	1	1	3	연차를 지 사람이 전부별로입니다괜찮은사람없고	5시이후에 추천	성장	0		
2022.04	5	생산/제조	전직원	5	5	5	5	5	수평적인 인력. 실적이 중요하다는거. 회의가 많고	직원의 추천	성장	0		

Figure 1. JobPlanet Revie Data

The collected JobPlanet data includes various information such as date of writing, satisfaction level, occupation, current vs. former employee, satisfaction in different dimensions, strengths, weaknesses, desired points, recommendation, growth after one year, and level of support. In this study, a frequency analysis was conducted on the cons section. Frequency analysis of keywords can be analyzed in the opposite direction (positive vs. negative) depending on the orientation. For example, the keyword "supervisor" can be considered as a positive attitude towards supervisors when it appears in the strengths section, but as a negative attitude when it appears in the cons section. Therefore, the frequency of inclusion of the keywords "workplace bullying," "supervisor," and "office politics" in the cons text was analyzed, and the ratio compared to the overall text was measured as a variable. In this study, the keywords "workplace bullying," "supervisor," and "office politics" were selected as keywords related to workplace harassment. The procedure for selecting these keywords is as follows: Firstly, keywords considered as workplace harassment based on previous studies and recent issues were collected. Secondly, it was examined whether these keywords were used in a similar meaning in the JobPlanet data. Thirdly, additional keywords related to workplace harassment were explored in JobPlanet, and the final keywords were selected.

3.3 Analysis Methods

This study analyzed appropriate methods through a review of previous studies to estimate the effects of policies. The effectiveness of a policy refers to the degree of policy achievement and is one of the criteria for evaluating a policy (Jeong et al., 2019). The American Evaluation Association classifies evaluation types into outcome evaluation or effectiveness evaluation as impact evaluation (Kim, 2017). In such

effectiveness evaluations, it is important to consider the timing of policy effects, the magnitude and scope of the impact, and whether the direction of policy effects aligns with the intended goals, as well as whether these effects are observable (Jeong et al., 2004; Hwang, 2022). Evaluation methods for policy effectiveness can be divided into quantitative evaluation and qualitative evaluation depending on the analysis data, and they can be further categorized into experimental design approach and non-experimental approach depending on the presence of evaluation design (Lee, 2006).

In this study, previous research evaluating policy effectiveness with a quasi-experimental design approach was reviewed. Difference-in-differences analysis is a method of determining the pure effect of a policy by eliminating other factors unrelated to the policy, examining the specific policy's effect after its implementation (Abadie, 2005). However, there were few previous studies that applied such difference-in-differences analysis to legal regulations related to policy and institutions, such as the workplace harassment prohibition system targeted in this study. However, research verifying the effectiveness of policies and regulations related to the economic aspects of labor-related industries has been active. For example, Castillo et al. (2017) applied the synthetic control method to verify whether tourism development policies had an impact on employment in the Salta region of Argentina. The analysis showed that the employment rate in the tourism industry in the region increased by 11% during the approximately 13 years of implementing the regional tourism development policy, validating the effectiveness of the policy in terms of inter-industry employment effects. Additionally, Roesel (2017) empirically analyzed the influence of regional integration policies on local government expenditure from an economic perspective of scale. The variables used for local government expenditure included administrative costs, social security expenditure, educational expenditure, and total expenditure, and the regional integration policy was estimated using the difference-in-differences method by comparing before and after the policy implementation.

In domestic research, Lim (2020) analyzed the effects of COVID-19 support policies on employment among small business owners and self-employed individuals. The analysis used short-term data from January to June 2020, and the difference-in-differences method was employed to estimate the effects of the support policy by comparing the period before and after the implementation of direct financial support. Furthermore, Jang (2021) verified the effects of the Chungbuk Innovation City policy on regional economic growth and fiscal soundness using the difference-in-differences analysis. To analyze the relationship between the innovation city policy and regional economic growth, the synthetic control method was applied to select a virtual synthetic control group with similar homogeneity, and the results showed an

increase in per capita GRDP in Jincheon and Eumseong, administrative areas that include the Chungbuk Innovation City, supporting the positive effects of the policy. Moreover, Hwang (2022) examined the policy effects of the designated employment crisis area system. The policy beneficiaries were set as the treatment group, and the non-beneficiaries as the control group. To verify the policy effects, the synthetic control method was applied to select a virtual synthetic control group with similar homogeneity to the policy application group. The results of the difference-in-differences analysis estimated the net effect of the support system, showing that the implementation of the designated employment crisis area system did not have a positive impact on stabilizing employment in the region.

Based on the analysis of previous studies mentioned above, it can be noted that when verifying the effectiveness of the workplace harassment prohibition system, careful attention should be paid to the setting of the pre- and post-legislation periods, as well as how to define the observational variables for the predictor and outcome variables.

3.4 Difference In Difference

As discussed earlier in this study, the effectiveness of the workplace harassment prevention system was analyzed using the double difference estimation technique. Double difference analysis is a method of analyzing the effects by taking the difference in performance between an experimental group that has been affected by a specific policy or system and a control group that has not been affected. Random assignment of policy beneficiaries is often impractical due to significant cost issues, and selecting the experimental group may raise concerns about fairness and ethical considerations (Lee, 2012). Double difference analysis is a design that aims to mimic the effects of random assignment between experimental and control groups (Kim, 2019), and it allows controlling for the effects of unobservable variables by analyzing the differences before and after treatment in the experimental and control groups (Son & Lee, 2018).

Important assumptions of double difference analysis are parallel trends and constant treatment effects. Parallel trends assume that the two groups would have followed a similar trend in their changes if the policy had not been implemented (Kim, 2019), while constant treatment effects assume that the policy's effect would be the same for everyone (Angrist & Pischke, 2009; Athey & Imbens, 2006).

Since data on the control group is not available, we aim to verify the parallel trend assumption by analyzing the parallelism of variables unrelated to harassment. It is expected that the two groups would have had similar levels of job satisfaction if the workplace harassment prevention policy had not been implemented, but it is assumed that the implementation of the policy would lead to an improvement in job satisfaction

Average	2.92	3.07	3.21	3.29	3.23	3.39	3.33
Standard Deviation	.927	0.74	0.68	0.66	0.73	0.69	0.72

4.2 The direct and indirect impact of enacting the law.

The results of analyzing the effects of the enactment of the Anti-Harassment Law (dummy variable for the period 2020-2021) in response to contradictory demands and instructions from superiors showed a statistically significant negative effect ($\beta = -0.042$; $p < 0.01$). Furthermore, it was analyzed that job satisfaction ($\beta = -0.227$; $p < 0.01$), number of children ($\beta = -0.031$; $p < 0.01$), and length of employment ($\beta = -0.029$; $p < 0.01$) were associated with a decreased likelihood of experiencing contradictory demands and instructions from superiors. Therefore, it can be interpreted that the enactment of the law has a reducing effect on workplace harassment, supporting Hypothesis 1.

To explore the indirect effects of enacting the law, we analyzed satisfaction as an organizational performance indicator that can be achieved by reducing contradictory demands and instructions from superiors. We examined the effects on dimensions of satisfaction and performance that can be observed in the Public Service Work Environment Survey, including job autonomy, leadership, organizational culture, collaboration/communication, organizational performance, and quality of life. By analyzing the impact of contradictory demands and instructions from superiors on each dimension of satisfaction, we can assess whether the enactment of the law contributes to satisfaction.

The results of analyzing the indirect effects of the law are as follows. Firstly, the enactment of the Anti-Harassment Law positively affected job autonomy ($\beta = 0.166$; $p < 0.01$), and contradictory demands and instructions from superiors were found to have a negative impact ($\beta = -0.146$; $p < 0.01$). Therefore, it can be interpreted that the law directly has a positive impact on job autonomy and contributes to reducing contradictory demands/instructions from superiors.

Secondly, the enactment of the law positively affected leadership satisfaction ($\beta = 0.044$; $p < 0.01$), while contradictory demands and instructions from superiors had a negative impact ($\beta = -0.236$; $p < 0.01$). Therefore, it can be interpreted that the law directly has a positive impact on leadership satisfaction and contributes to reducing contradictory demands/instructions from superiors.

Thirdly, the enactment of the law positively affected organizational culture satisfaction ($\beta = 0.167$; $p < 0.01$), while contradictory demands and instructions from superiors had a negative impact ($\beta = -0.184$; $p < 0.01$). Therefore, it can be interpreted that the law

directly has a positive impact on organizational culture satisfaction and contributes to reducing contradictory demands/instructions from superiors.

Fourthly, the enactment of the law positively affected collaboration/communication satisfaction ($\beta = 0.73$; $p < 0.01$), while contradictory demands and instructions from superiors had a negative impact ($\beta = -0.226$; $p < 0.01$). Therefore, it can be interpreted that the law directly has a positive impact on collaboration/communication satisfaction and contributes to reducing contradictory demands/instructions from superiors.

Fifthly, the enactment of the law positively affected organizational performance satisfaction ($\beta = 0.21$; $p < 0.01$), while contradictory demands and instructions from superiors had a negative impact ($\beta = -0.163$; $p < 0.01$). Therefore, it can be interpreted that the law directly has a positive impact on organizational performance satisfaction and contributes to reducing contradictory demands/instructions from superiors.

Lastly, the enactment of the law positively affected quality of life satisfaction ($\beta = 0.99$; $p < 0.01$), while contradictory demands and instructions from superiors had a negative impact ($\beta = -0.058$; $p < 0.01$). Therefore, it can be interpreted that the law directly has a positive impact on quality of life satisfaction and contributes to reducing contradictory demands/instructions from superiors. Therefore, Hypotheses 2 and 3 are supported.

In conclusion, the Anti-Harassment Law not only reduces workplace harassment but also ultimately has a positive impact on key organizational performance and satisfaction dimensions such as job autonomy, leadership satisfaction, organizational culture satisfaction, collaboration/communication satisfaction, organizational performance, and quality of life satisfaction.

4. 3 Study 2 Results

The analysis of Research 2 based on Job Planet data yielded the following results. Firstly, the hypothesis 1 was supported. Specifically, the enactment of the Anti-Harassment Law was found to have a negative impact on the frequency of appearance of bullying-related words in the downside content of company reviews. Specifically, it was analyzed that the negative effects were strongest in the order of supervisor ($\beta = -0.0026$; $p < 0.01$), subtle pressure ($\beta = -0.0010$; $p < 0.01$), and bullying ($\beta = -0.0008$; $p < 0.01$). Therefore, it can be interpreted that the law reduces workplace harassment. Secondly, although not hypothesized, the year 2020, the year of implementation of the Anti-Harassment Law, was found to have no significant effect. This can be interpreted as a result of the initial period of law enactment, where the perception of existing workplace harassment was changing and resulting in a superficial increase in reporting. The results of hypotheses testing are summarized in Table 2.

Table 2. Hypotheses Testing Results

Hypotheses	Results
Hypothesis 1: Workplace harassment prohibition laws will have a negative (-) impact on workplace harassment.	Accepted
Hypothesis 2: Workplace harassment prohibition laws will have a positive (+) impact on job satisfaction.	NA
Hypothesis 3: Workplace harassment prohibition laws will have a positive (+) impact on organizational performance.	NA

5. Discussion and Conclusion

5. 1 Summary

The summary of the analysis results of this study is as follows. Firstly, both Research 1 and Research 2, investigating the direct effects of law enactment, showed that the enactment and implementation of the Anti-Harassment Law have a reducing effect on workplace harassment. Specifically, in the analysis of Research 1, the effects of the law implementation on contradictory demands and instructions from superiors (dummy variable for the period 2020-2021) resulted in a statistically significant negative effect ($\beta = -0.042$; $p < 0.01$). Furthermore, in the analysis of Research 2, it was found that the enactment of the law has a negative impact on the frequency of appearance of words related to bullying in the downside content of company reviews. Specifically, it was analyzed that the negative effects were strongest in the order of supervisor ($\beta = -0.0026$; $p < 0.01$), subtle pressure ($\beta = -0.0010$; $p < 0.01$), and bullying ($\beta = -0.0008$; $p < 0.01$). Therefore, it can be interpreted that the law reduces workplace harassment. Secondly, regarding the indirect effects of law enactment, Research 1 aligned with the expected results and showed that the Anti-Harassment Law not only reduces workplace harassment but also has a positive impact on key dimensions of organizational performance and satisfaction, including job autonomy, leadership satisfaction, organizational culture satisfaction, collaboration/communication satisfaction, organizational performance, and quality of life satisfaction. Specifically, the enactment of the law was analyzed to have a positive impact on job autonomy ($\beta = 0.166$; $p < 0.01$), leadership satisfaction ($\beta = 0.044$; $p < 0.01$), organizational culture satisfaction ($\beta = 0.167$; $p < 0.01$), collaboration and communication satisfaction ($\beta = 0.73$; $p < 0.01$), organizational

performance ($\beta = 0.21$; $p < 0.01$), and quality of life ($\beta = 0.99$; $p < 0.01$). Therefore, Hypotheses 2 and 3 were supported. Thirdly, in Research 2, the frequency of supervisor and subtle pressure decreased in 2019, but overall keyword frequencies decreased after the implementation of the law in the second half of 2019, in 2021, and in 2022. However, the year 2020 was found to have no significant effect. Specifically, the analysis involved the analysis of yearly dummies from 2018 to 2022, allowing for a more detailed examination of specific policy effects by year. The analysis showed that the frequency of supervisor ($\beta = -0.0044$; $p < 0.01$), subtle pressure ($\beta = -0.0032$; $p < 0.01$), and bullying ($\beta = -0.0012$; $p < 0.01$) had the strongest negative effects in 2021. Similarly, in 2022, subtle pressure ($\beta = -0.0360$; $p < 0.01$), supervisor ($\beta = -0.0045$; $p < 0.01$), and bullying ($\beta = -0.0024$; $p < 0.01$) had the strongest negative effects. The analysis results for 2020 can be interpreted as the initial stage of law enactment, where the perception of existing workplace harassment was changing, resulting in a superficial increase in reporting. For example, the increase in frequency could be attributed to policies recommending reporting and improved awareness, rather than an actual increase in harassment incidents. In conclusion, it can be understood that workplace harassment decreases from one year after the implementation of the law. These analysis results align with previous surveys. According to a survey conducted by Job Planet, a job search platform, on changes after the implementation of the Anti-Harassment Law among employees, 77.8% of respondents reported not perceiving any changes, and 50.1% reported experiencing workplace harassment even after the law was implemented.

5.2 Implications

This study has several theoretical implications. Firstly, previous studies have mostly focused on the impact of workplace harassment on job performance and organizational outcomes. Specifically, in many studies on workplace harassment, it has been reported that workplace harassment negatively affects job satisfaction and organizational performance (Sim, 2014; Lee & Jeon, 2020; Im & Park, 2021). For example, Han (2021) reported that workplace ostracism increases knowledge hiding. Additionally, Jang and Jung (2018) found that workplace harassment has a negative impact on organizational citizenship behavior, which is understood as voluntary organizational support behavior. This study expands on previous research by presenting legal factors that reduce workplace harassment within this context.

Secondly, this study contributes to the literature by discovering the positive effects of relevant legal regulations on organizational satisfaction and performance from the perspective of human resource management. Previous studies have mostly focused on internal factors within organizations, such as leadership, or on research on organizational

and industry characteristics that contribute to workplace harassment (Bakker & Demerouti, 2007; Samnani & Singh, 2012; Yu, 2015). For example, Brophy et al. (2018) stated that workplace harassment is a common phenomenon in the healthcare field, and healthcare professionals are about three times more likely to face workplace harassment compared to other occupational environments. This study proposes new factors that determine workplace harassment by examining the effects of external legal regulations.

This study also has methodological contributions. It measured workplace harassment by collecting and analyzing review data using text mining techniques. In particular, the use of a difference-in-differences analysis to verify the effectiveness of policies and regulations is rare in previous studies related to legal systems, such as the prohibition of workplace harassment, which is the focus of this study. Furthermore, this study utilized both survey data and review data to employ rigorous verification methods. While previous studies have mostly relied on survey data, survey data is not entirely free from biases. In this regard, this study can contribute to the methodological aspects of organizational research.

This study has practical implications as follows. Firstly, the prohibition of workplace harassment has been found to reduce workplace harassment. The financial losses to companies resulting from workplace harassment can be calculated in terms of labor costs. According to a survey conducted by the Korea Occupational Safety and Health Agency (2016), each case of workplace harassment incurs labor cost losses of approximately 624,000 KRW for the victim, 333,000 KRW for the perpetrator, and 229,000 KRW for witnesses, resulting in a total labor cost loss of 1,186,000 KRW. The estimated total labor cost loss for the 15 industries surveyed amounts to approximately 4.78 trillion KRW. Therefore, it is necessary for companies to promote and utilize prohibition policies to reduce harassment that negatively affects job performance and organizational outcomes.

Secondly, workplace harassment has been found to have negative effects not only on job satisfaction but also on organizational performance and quality of life. Therefore, efforts to eradicate harassment and improve organizational performance are necessary. In particular, the analysis indicates that harassment decreases after at least one year since the introduction of the prohibition policy. Therefore, it is essential to monitor and implement a culture or system that prohibits harassment from a long-term perspective in order to enhance performance.

5.3 Limitation and Future Research Areas

This study has the following limitations. Firstly, although this study utilized a

difference-in-differences analysis, it did not compare with a control group from the same period, which is a limitation. Therefore, future research should employ experimental designs to analyze the effects of policies more rigorously.

Secondly, despite the mixed use of Job Planet data and public servant survey data, this study is not entirely free from selection bias. There is a possibility that the responses of certain conditions of companies or employees are overrepresented or underrepresented in the analysis results. Therefore, future research should consider various analytical methods, such as the Heckman two-step analysis, to control for selection bias.

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