

ผลกระทบของการฝึกอบรมและพัฒนา และพฤติกรรมการเป็นสมาชิกที่ดีขององค์กรต่อ
ประสิทธิภาพการปฏิบัติงานของพนักงาน: กรณีศึกษา บริษัท Beijing Anti Technology Co., Ltd.
Effect of Training and Development and Organizational Citizenship Behavior on
Employee Performance: Case Study Beijing Anti Technology Co., Ltd.

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การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาผลกระทบของการฝึกอบรมและพัฒนาและพฤติกรรมการเป็นสมาชิกที่ดีขององค์กรที่มีต่อประสิทธิภาพการปฏิบัติงานของพนักงานในบริษัท Beijing Anti Technology Co., Ltd. ประชากรในการวิจัยประกอบด้วยพนักงานจำนวน 306 คน โดยกลุ่มตัวอย่างจำนวน 240 คน ได้มาจากการสุ่มตัวอย่างแบบหลายขั้นตอน เครื่องมือที่ใช้ในการวิจัยคือแบบสอบถามแบบมีโครงสร้าง ซึ่งพัฒนาขึ้นจากทฤษฎีที่เกี่ยวข้อง วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาและสถิติเชิงอนุมาน โดยทดสอบสมมติฐานด้วยการวิเคราะห์แบบจำลองโครงสร้างกำลังสองน้อยที่สุดบางส่วน (PLS-SEM) ที่ระดับนัยสำคัญทางสถิติ .05

ผลการวิจัยพบว่า การฝึกอบรมและพัฒนา และพฤติกรรมการเป็นสมาชิกที่ดีขององค์กร มีผลต่อประสิทธิภาพการปฏิบัติงานของพนักงานอย่างมีนัยสำคัญทางสถิติที่ระดับ .000 โดยแบบจำลองมีความสามารถในการพยากรณ์เท่ากับร้อยละ 31.6 และพบว่าพฤติกรรมการเป็นสมาชิกที่ดีขององค์กรมีอิทธิพลต่อประสิทธิภาพการปฏิบัติงานมากกว่าการฝึกอบรมและพัฒนา ผลการวิจัยดังกล่าวสะท้อนให้เห็นว่าการส่งเสริมพฤติกรรมการเป็นสมาชิกที่ดีขององค์กร ควบคู่ไปกับการจัดการฝึกอบรมที่มีประสิทธิภาพ มีความสำคัญต่อการเพิ่มผลผลิตภาพของพนักงานและผลลัพธ์ขององค์กร

คำสำคัญ: การฝึกอบรมและพัฒนา พฤติกรรมการเป็นสมาชิกที่ดีขององค์กร ประสิทธิภาพการปฏิบัติงานของพนักงาน

ABSTRACT

This research aimed to investigate the impact of training and development, as well as organizational citizenship behavior (OCB), on employee performance at Beijing Anti Technology Co., Ltd. The population consisted of 306 employees of Beijing Anti Technology Co., Ltd., with a sample of 240 participants selected using multi-stage sampling. The research instrument was a structured questionnaire developed from relevant theories. Data were analyzed using both descriptive and inferential statistics, with hypothesis testing conducted through Partial Least Squares Structural Equation Modeling (PLS-SEM) at a .05 significance level.

The results revealed that both training and development and OCB had statistically significant effects on employee performance at the .000 level. The model demonstrated a predictive power of 31.6%, with OCB exerting a greater influence on performance than training and development. These findings suggest that fostering citizenship behaviors and offering effective training strategies are essential for enhancing employee productivity and organizational outcomes.

Keywords: training and development, organizational citizenship behavior, employee performance

1. Introduction

Employee performance is a critical determinant of organizational success, directly influencing the efficiency, effectiveness, and competitiveness of a company. In today's rapidly evolving business environment, organizations must prioritize employee development and cultivate positive behaviors in the workplace to sustain their competitive edge (Huang et al., 2019). This is particularly relevant in technology-driven industries, where continuous innovation and adaptability are essential for survival.

Training and development represent fundamental aspects of human resource management, aimed at enhancing employees' skills, knowledge, and capabilities. Effective training programs not only boost individual performance but also contribute to the overall growth of the organization by fostering a culture of continuous learning and adaptation. Noe (2020) highlights that addressing skill gaps, improving job satisfaction, and providing career advancement opportunities through training are crucial for maintaining organizational competitiveness. However, in the context of rapidly changing technological environments, the impact of training and development on employee performance becomes even more pronounced, necessitating focused research in this area.

In parallel, Organizational Citizenship Behavior (OCB) is recognized as a significant contributor to organizational efficiency. OCB involves voluntary behaviors that are not explicitly rewarded but are essential for enhancing organizational effectiveness. These behaviors include supporting colleagues, taking initiative, and demonstrating a strong commitment to organizational goals. Podsakoff et al. (2014) emphasize that OCB fosters teamwork, reduces turnover intentions, and creates a supportive work environment, ultimately leading to higher organizational efficiency. The synergy between training and development and OCB is particularly important in technology companies, where the need for collaboration, innovation, and adaptability is paramount. Despite the recognized benefits of both training and development and OCB, there remains a significant research gap in understanding their combined impact on employee performance, especially within the unique cultural context of technology companies in China (Aguinis & Kraiger, 2009). In such environments, where technological advancement and rapid market changes are the norm, it is crucial to understand how these factors interact to influence employee performance.

Beijing Anti Technology Co., Ltd., founded in 2016, specializes in industrial network security technologies and is recognized as a pioneer in the industry. With more than 10 years of experience, the company has developed a wide range of products and services tailored to industries such as energy, petroleum, and rail transportation. Operating in a highly competitive and rapidly evolving industry, Beijing Anti Technology recognizes the importance of developing a skilled and motivated workforce capable of adapting to changing demands. The company has made significant investments in comprehensive training and development programs and

actively promotes OCB among its employees to enhance overall efficiency and maintain its leading market position.

Given this context, the current study seeks to explore the "Impact of Training and Development and Organizational Citizenship Behavior on Employee Performance: Case Study Beijing Anti Technology Co., Ltd." This research aims to investigate how these two critical factors—training and development, and OCB—interact to influence employee performance in a technology company operating within China’s dynamic business landscape. Understanding this relationship will provide valuable insights for developing strategic HR practices that not only enhance employee skills but also foster a culture of excellence and collaboration within the organization. The findings will serve as a guideline for improving employee performance and, consequently, strengthening the company’s competitiveness in the industry.

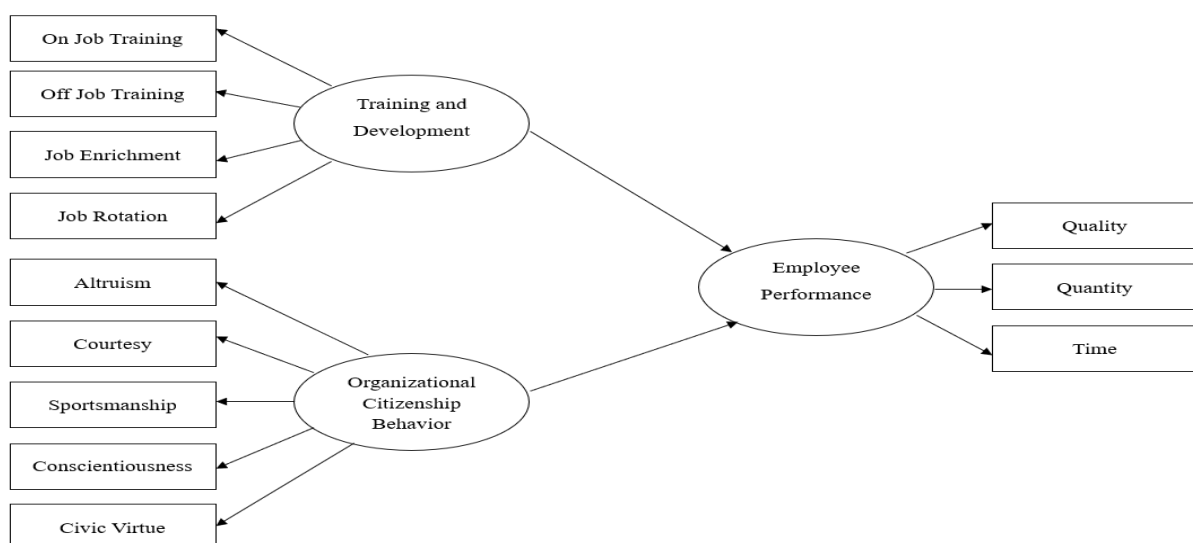
Research objectives

1. Investigating the impact of training and development on employee performance of Beijing Anti Technology Co, Ltd.
2. To study the impact of organizational citizenship behavior on employee performance of Beijing Anti Technology Co, Ltd.

Research hypothesis

1. Training and development impact employee performance of Beijing Anti Technology Co., Ltd.
2. Organizational citizenship behavior impact employee performance of Beijing Anti Technology Co., Ltd.

Research Framework



Finger 1. Conceptual framework

2. Literature review

2.1 Concepts and theories related to Training and Development

Training and Development refers to the development of human resources within an organization to have the knowledge, skills, and abilities necessary for work, in order to respond to the needs and changes in a rapidly developing organization (Arulsamy et al., 2023). Rodriguez and Walters (2017) defined Training and Development as a process of developing and promoting personnel to have knowledge, abilities, understanding, work skills, as well as good attitudes and behaviors to improve work efficiency both in the present and future. Ismael et al. (2021) state that Training and Development is a process of finding, developing, rewarding, and retaining people with abilities and potential within the organization. In development, appropriate methods can be chosen to match the nature of the work for each individual and department, which can be categorized into 4 aspects as follows: (1) On Job Training is a tool for personnel development through practical training in real settings. (2) Off Job Training is formal training organized by departments or institutions, with staff responsible for arranging the training. (3) Job Enrichment is a management activity that focuses on job design. And (4) Job Rotation is the exchange and rotation of personnel to perform other duties, focusing on changing jobs while the position and benefits received remain the same (Arulsamy et al., 2023).

2.2 Concepts and theories related to Organizational Citizenship Behavior

The characteristics of a "good person" or an individual who aims to benefit others, such as providing help, being attentive, and respecting the differences of others, are referred to as "Organizational Citizenship Behavior or OCB" (Ünal & Kaygin, 2019). Ndoja and Malekar (2020) defined Organizational Citizenship Behavior as behavior that originates from the personnel themselves, which the organization has not prescribed for practice. It is a willingness to work without expecting any rewards. It is beneficial behavior that affects the effectiveness and success of the organization. Organ (1988) described 5 components of Organizational Citizenship Behavior as follows: (1) Altruism refers to the behavior of voluntarily helping others in solving problems that arise from work performance. (2) Courtesy refers to the behavior of considering others before taking any action, to prevent problems or conflicts related to work performance in the future. (3) Sportsmanship refers to individual behavior that demonstrates patience and tolerance towards difficulties, frustrations, disappointments, stress, discomfort, or various pressures that may arise in work performance. (4) Conscientiousness refers to the behavior of individuals who comply with the rules and policies of the organization with respect, demonstrating honesty in work performance and time management. And (5) Civic Virtue refers to the behavior of individuals who demonstrate responsibility and participation in the organization's operations.

2.3 Concepts and theories related to Employee Performance

Triansyah et al. (2023) defined Employee Performance as the ability to perform tasks that require knowledge, skills, techniques, and various experiences to complete assigned work. This is done while considering the accuracy and speed of work, convenience, economy, fairness, and equality, as well as the quantity of output that aligns with the organization's goals. Mamun and Khan (2020) state that factors contributing to management efficiency include the personal behavior of managers, organizational efficiency, special qualifications of managers, and the unique abilities of managers. Additionally, factors affecting work efficiency are motivation and job satisfaction, which are crucial components for successfully completing any task. Abun et al. (2022) discussed the concept of work efficiency, stating that it has three main components: (1) Quality refers to the ability of employees to perform tasks according to the organization's policies strictly. (2) Quantity refers to the ability of employees to perform tasks according to the management policies swiftly. And (3) Time refers to the ability of employees to perform tasks according to the operational policies within the specified timeframe.

Recent studies have reinforced the critical roles of training and development and Organizational Citizenship Behavior (OCB) in enhancing employee performance. Harwiki (2016) found that leadership styles that promote positive organizational culture significantly influence OCB and employee outcomes. Khan et al. (2016) and Ahmed et al. (2013) both demonstrated that training and development activities positively affect employee job satisfaction and performance by strengthening skills and reducing turnover rates. Similarly, Falola et al. (2014) confirmed that effective training programs contribute not only to individual performance but also to organizational competitiveness. Regarding OCB, Ridwan (2020), Sugiharjo (2020), and Dinka (2018) provided strong evidence that OCB has a direct positive impact on employee performance, with behaviors such as altruism, conscientiousness, and civic virtue playing key roles. These findings collectively support the theoretical foundation that fostering both continuous development initiatives and citizenship behaviors is essential for sustainable performance improvement.

3. Methodology

3.1 Population and Sample

The population for this research comprised employees of Beijing Anti Technology Co., Ltd., located in Beijing, China, totaling 306 employees, with the exact number known to the researcher. The sample size was determined based on Hair et al. (2010), who recommend a minimum of 20 observations per observed variable when using Structural Equation Modeling (SEM). With 12 observed variables in this study, the sample size was calculated to be 240 employees. Although this guideline provides a conventional benchmark, more recent literature suggests that Partial Least Squares Structural Equation Modeling (PLS-SEM) is well-suited for small sample sizes, particularly when the model is not overly complex and statistical

power is adequately considered. According to Hair et al. (2021), PLS-SEM can yield valid results with as few as 100 to 150 cases, depending on the number of indicators and paths in the model. Therefore, the sample size used in this study falls within the acceptable range and is appropriate for the analytical method applied. The sampling method adopted was multi-stage sampling, starting with purposive sampling to select operational-level employees across departments, followed by convenience sampling within these groups. While the use of convenience sampling may typically introduce a degree of bias, in this study the sample size of 240 participants closely approximates the total population of 306 employees. This high proportion ensures that the data collected through convenience sampling is sufficiently comprehensive and representative of the overall employee population.

3.2 Research Instruments

The research instrument used in this study was a structured questionnaire developed based on relevant concepts and theories aligned with the research objectives. In particular, the questionnaire design was informed by training and development frameworks such as the Human Capital Theory and experiential learning principles, as well as Organizational Citizenship Behavior (OCB) theory developed by Organ (1988), and performance evaluation dimensions grounded in productivity assessment models. The questionnaire was designed to collect data on three key constructs: Training and Development, Organizational Citizenship Behavior, and Employee Performance, and was organized into four parts: (1) General information of the respondents, including gender, age, education level, and work experience; (2) Training and Development, divided into four dimensions—On-the-Job Training, Off-the-Job Training, Job Enrichment, and Job Rotation; (3) Organizational Citizenship Behavior, consisting of Altruism, Courtesy, Sportsmanship, Conscientiousness, and Civic Virtue; and (4) Employee Performance, covering Quality, Quantity, and Time. To ensure content validity, the questionnaire was reviewed by the research advisor and subsequently assessed by three field experts. These experts were selected based on their academic qualifications and research experience in human resource development and organizational behavior. The Index of Item-Objective Congruence (IOC) was calculated for each item, with values ranging from 0.67 to 1.00, all exceeding the minimum threshold of 0.50, confirming that the questionnaire items were appropriately aligned with the research objectives. To assess reliability, the researcher conducted a pilot test with a group of 30 participants, comparable in characteristics to the actual sample. The reliability of each section was examined using Cronbach's Alpha coefficient, with values ranging from 0.706 to 0.914, which exceeds the acceptable benchmark of 0.70, indicating high internal consistency across all constructs.

Table 1. Shows the results of the questionnaire reliability test

Variable	Number of Question	Cronbach Alpha
Training and Development	16	
- On Job Training	4	.852
- Off Job Training	4	.873
- Job Enrichment	4	.866
- Job Rotation	4	.841
Organizational Citizenship Behavior	20	
- Altruism	4	.862
- Courtesy	4	.849
- Sportsmanship	4	.829
- Conscientiousness	4	.876
- Civic Virtue	4	.706
Employee performance	12	
- Quality	4	.908
- Quantity	4	.871
- Time	4	.914

3.3 Data Analysis

In this research, data analysis and hypothesis testing were conducted using computer software and were divided into two main parts: (1) Descriptive statistics were used to summarize the demographic characteristics and responses of the sample group. The results are presented in the form of frequency distribution tables, including frequency, percentage, mean, and standard deviation. (2) Inferential statistics were used to test the research hypotheses at the 0.05 significance level. The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the structural relationships among latent variables. Data analysis was performed using ADANCO program. The consistent PLS algorithm was applied for model estimation, and bootstrapping with 5,000 resamples was conducted to assess the statistical significance of path coefficients. Model evaluation included tests for internal consistency reliability using Cronbach's alpha and Composite Reliability (CR), both of which should exceed 0.70. Convergent validity was assessed through the Average Variance Extracted (AVE), with a threshold greater than 0.50. Construct reliability was additionally confirmed using Dijkstra-Henseler's rho ($\rho_A > 0.70$) and Jöreskog's rho ($\rho_C > 0.70$). Discriminant validity was evaluated using the Fornell-Larcker criterion, which requires that the square root of the AVE for each latent construct must be greater than its highest correlation with other constructs.

4. Results

4.1 Results of the analysis of respondents' general information

The majority of respondents were female, accounting for 129 individuals (53.75 %). Most respondents were aged between 41 and 50 years, totaling 81 individuals (33.75 %). Additionally, 175 respondents (72.92 %) were married or living together. In terms of education, 96 respondents (40.00 %) held a bachelor's degree. The majority had an average monthly income exceeding 8,001 CNY, with 134 respondents (55.83 %) falling into this category. Furthermore, 150 respondents (62.50 %) had more than 10 years of work experience.

4.2 Results of the analysis of training and development data OCB and employee performance

The analysis of training and development, organizational citizenship behavior, and employee performance was conducted using descriptive statistics, with mean and standard deviation calculated for each variable. The interpretation of opinion levels was based on a five-point Likert scale divided using an interval of 0.80, where scores from 4.21–5.00 indicate the highest level, 3.41–4.20 high, 2.61–3.40 moderate, 1.81–2.60 low, and 1.00–1.80 the lowest. The detailed results can be seen in Table 2:

Table 2. The mean and standard deviation of each factors

Factors	\bar{X}	SD	Level of opinion
Training and Development			
- On Job Training	3.94	0.70	High
- Off Job Training	3.89	0.76	High
- Job Enrichment	3.90	0.76	High
- Job Rotation	3.91	0.72	High
Total	3.91	0.67	High
Organizational Citizenship Behavior			
- Altruism	4.00	0.67	High
- Courtesy	3.97	0.66	High
- Sportsmanship	4.00	0.64	High
- Conscientiousness	4.07	0.67	High
- Civic Virtue	4.03	0.57	High
Total	4.01	0.53	High
Employee Performance			
- Quality	4.08	0.67	High
- Quantity	4.06	0.67	High
- Time	4.07	0.71	High
Total	4.07	0.64	High

4.3 Hypothesis testing results

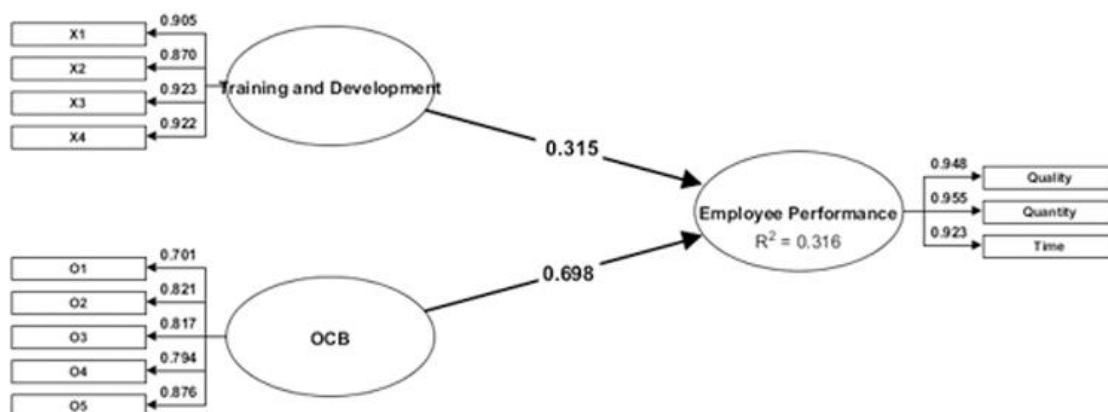


Figure 2. shows the results of hypothesis testing

Table 3. Shows the test results for structural integrity and component weight

Factors	Loading	AVE	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_C)	Cronbach's alpha (α)
Training and Development		.820	.969	.948	.929
- On Job Training	.904				
- Off Job Training	.871				
- Job Enrichment	.924				
- Job Rotation	.922				
OCB		.628	.890	.894	.878
- Altruism	.687				
- Courtesy	.810				
- Sportsmanship	.804				
- Conscientiousness	.780				
- Civic Virtue	.870				
Employee Performance		.888	.939	.960	.937
- Quality	.948				
- Quantity	.955				
- Time	.923				

Based on the data in Table 3, it was observed that all observed variables within the model exhibit factor loading values exceeding 0.5, with a range from .687 to .955, indicating strong reliability in measurement. The Dijkstra-Henseler's rho (ρ_A) values fall between .890 and .969, Jöreskog's rho (ρ_C) values range from .894 to .960, and Cronbach's alpha (α) values

lie between .878 and .937. Notably, all these metrics surpass the 0.7 threshold, affirming the reliability of the constructs. Additionally, the latent variables demonstrate discriminant validity, with Average Variance Extracted (AVE) values exceeding 0.5, ranging from .628 to .888. These findings align with the established criteria set forth by Henseler, Hubona, and Ray (2016).

Table 4. Shows a comparison of discriminant accuracy according to the Fornell-Larcker criterion

Factors	Training and Development	OCB	Employee Performance
Training and Development	.906		
OCB	.365	.793	
Employee Performance	.013	.279	.942

* Note: The diagonal values represent the square roots of the AVE.

Based on the data in Table 4, it was observed that the model possesses discriminant validity. This is evidenced by the square root of the Average Variance Extracted (AVE) being higher than the correlations (r) between each latent variable. This finding aligns with the criteria set forth by Henseler et al. (2016), which stipulate that the correlation between any two latent variables should not exceed the square root of their respective AVE. The correlations among the latent variables in this study ranged between .013 and .365.

Table 5. Shows the effects of training and development and OCB on employee performance

Factors	Employee Performance			
	Beta	t-test	p-value	Cohen's F^2
- Training and Development	.325	3.642	.000***	0.103
- OCB	.725	8.835	.000***	0.511

*** p-value < .001, ** p-value < .01, * p-value < .05

Based on the data in Table 5, both training and development and Organizational Citizenship Behavior (OCB) had a statistically significant effect on employee performance at the .000 level, with a predictive power of 31.6% ($R^2 = 0.316$), indicating a moderate level of explanatory power. OCB demonstrated a greater influence ($\beta = .725$, Cohen's $F^2 = 0.511$), reflecting a large effect size, while training and development ($\beta = .325$, Cohen's $F^2 = 0.103$) had a smaller but still meaningful effect. These findings suggest that enhancing OCB may have a more substantial impact on employee performance than training initiatives alone.

5. Conclusion and discussion

Organizational Citizenship Behavior (OCB) has a statistically significant impact on employee performance at Beijing Anti Technology Co., Ltd., as it positively contributes to creating an effective work environment and promoting collaboration among employees. When employees exhibit behaviors such as helping colleagues, making constructive suggestions, and adhering to work standards, they enhance both individual and organizational performance. Employees demonstrating such behaviors tend to perform better and have a positive impact on the organization. In this study, the Citizenship element recorded the highest factor loading, reflecting employees' active participation in organizational activities and decision-making processes. From a theoretical perspective, OCB has been defined as voluntary behavior without direct expectations of rewards but significantly benefiting organizational effectiveness (Ndoja & Malekar, 2020; Tambe, 2014). Ridwan (2020) and Sugiharjo (2020) also confirmed a positive relationship between OCB and enhanced work efficiency and job satisfaction. Moreover, Dinka (2018) emphasized that OCB fosters a positive internal environment, reduces conflicts, and strengthens teamwork, thus reinforcing its role as a crucial determinant of employee performance. The finding that OCB exerts a stronger influence on employee performance than training and development may be explained by the highly collaborative and dynamic nature of the organizational culture at Beijing Anti Technology Co., Ltd. In such environments, interpersonal interactions, voluntary cooperation, and mutual support among employees are critical for achieving high performance, often outweighing the benefits of formal skill development. This reflects the increasing importance of soft factors such as engagement, mutual trust, and proactive behaviors in knowledge-intensive industries. Although training and development remain vital, their direct impact on performance may be comparatively lower if the organizational culture highly values informal contributions and discretionary efforts.

Training and development emerged as the second most influential factor, with job enrichment identified as the area with the highest factor loading. Quality training programs improve skills, knowledge, and employee adaptability, leading to increased job satisfaction and engagement, consistent with findings by Harwiki (2016) and Khan et al. (2016). Nonetheless, the relatively lower influence of training compared to OCB in this study may suggest that skill acquisition alone is insufficient to drive peak performance without an accompanying supportive work environment that encourages discretionary efforts. One unexpected aspect compared to some prior research is the relatively modest impact of training and development. In some contexts, such as manufacturing or technical service industries, training often has a stronger direct impact on performance outcomes. However, the results here suggest that in organizations like Beijing Anti Technology Co., Ltd., characterized by a strong emphasis on teamwork and autonomy, voluntary extra-role behaviors play a more critical role.

It is also important to acknowledge the limitations of this study. First, the cross-sectional nature of the research limits the ability to infer causality between variables. Second, data were collected through self-reported questionnaires, which may be subject to common method bias

despite procedural efforts to minimize it. Third, the findings are specific to Beijing Anti Technology Co., Ltd. and may not be generalizable to other organizations or industries with different cultural, structural, or operational characteristics. Future research could address these limitations by employing longitudinal designs, collecting data from multiple sources, and comparing findings across diverse organizational contexts.

5.1 Suggestions for use in this research

The policy and practical recommendations for promoting Organizational Citizenship Behavior (OCB) emphasize fostering a supportive organizational culture that encourages proactive and collaborative behavior among employees. Strategies include promoting civic virtue by encouraging participation in meetings and development initiatives, which helps build a sense of ownership and engagement. Courtesy is supported through activities and training that enhance respectful communication and conflict resolution, thereby improving workplace relationships. Sportsmanship is nurtured by helping employees maintain a positive outlook during challenges through stress management programs. Conscientiousness is enhanced by setting clear work standards and monitoring performance, reinforcing the importance of responsibility and diligence. Lastly, altruism is promoted by encouraging teamwork and mentoring, which strengthens cooperative relationships and collective success.

For training and development, the recommendations focus on enhancing employee capabilities and job satisfaction through various learning approaches. Job enrichment involves assigning more meaningful or complex tasks to deepen employees' engagement and sense of purpose in their roles. Job rotation allows employees to develop diverse skills and gain insights into different organizational functions. On-the-job training is tailored to specific roles and improves immediate job performance, while off-job training offers employees broader opportunities to acquire new knowledge and skills beyond their current tasks. Together, these initiatives support continuous development, increased performance, and long-term career growth.

However, it is important to recognize that the findings and recommendations from this research are based on a case study of Beijing Anti Technology Co., Ltd., a company operating within the technology industry in Beijing, China. The organizational culture, emphasis on innovation, and competitive environment characteristic of the technology sector in Beijing may significantly influence the observed importance of OCB and the specific training strategies recommended. Therefore, caution should be exercised when generalizing these suggestions to other companies or industries, particularly those operating in different cultural, economic, or technological contexts.

5.2 Future research

Future research should explore additional factors influencing employee performance beyond those already examined, such as management support and work environment. These elements could provide deeper insights into how organizational context and leadership dynamics

contribute to employee outcomes, thereby informing more targeted and effective human resource management policies. Additionally, researchers are encouraged to analyze the long-term effects of changes in training and human resource development (HRD) policies. Understanding how different training methods impact employee performance over time and across departments can offer valuable evidence for designing sustainable development programs.

Moreover, future studies should compare the effects of Organizational Citizenship Behavior (OCB) across varying organizational cultures to assess how contextual differences shape its influence on performance. This comparative approach could reveal the adaptability and limitations of OCB in diverse organizational forms. Further in-depth investigation into specialized training strategies tailored to particular domains—such as technology or management—is also warranted. Such research would help identify the most effective training methods for specific skill sets and industries, thereby enhancing both individual competency and overall organizational effectiveness.

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