



Intersecta Minds Journal

Social Science and Management Science

ISSN: 3056-929X (Online)

Pacific Institute of Management Science

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Article history:

Received: 08/01/2025

Revised: 20/03/2025

Accepted: 05/04/2025

Available online: 01/05/2025

How to Cite:

Lee, C. C. (2026). Personnel Management and Its Effect on Organizational Efficiency in the Era of Disruption. *Intersecta Minds Journal*, 4(2), 19-32.



INTERSECTA MINDS JOURNAL
SOCIAL SCIENCE AND MANAGEMENT SCIENCE

<https://so13.tci-thaijo.org/index.php/IMJ/index> | ISSN: 3050-929X (Online)

PACIFIC INSTITUTE OF MANAGEMENT SCIENCE

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Original Research Articles

Personnel Management and Its Effect on Organizational Efficiency in the Era of Disruption

Chia Ching Lee^{1*}

Abstract

The era of disruption, driven by digital transformation, technological innovation, and external environmental uncertainty, has profoundly affected labor-intensive service industries, particularly the hotel and tourism sector. In Taiwan, rapid changes in consumer behavior, workforce digitalization, and global crises have heightened the importance of effective personnel management for organizational efficiency. This study investigates the effect of personnel management practices on organizational efficiency in the disruption era, drawing empirical evidence from Taiwan's hotel and tourism industry. Using a quantitative research design, data were collected through an online questionnaire from 386 employees working in hotels and tourism-related organizations. One-way analysis of variance (ANOVA) was employed to examine differences in organizational efficiency across varying levels of personnel management practices. The findings reveal statistically significant differences in organizational efficiency related to workforce planning, training and development, performance management, and digital personnel management systems. The results underscore the strategic role of personnel management in enhancing operational efficiency, employee productivity, and organizational adaptability in disruptive environments. The study contributes empirical insights to human resource management literature and provides practical implications for service industry management in Taiwan.

Keywords: Personnel Management; Organizational Efficiency; Disruption Era; Human Resource Management; Digital Transformation

Introduction

The global business environment has entered an era of disruption characterized by rapid technological advancement, digital transformation, and increasing environmental uncertainty (Christensen, Raynor, & McDonald, 2015). Service-oriented industries, particularly the hotel and tourism sector, are among the most affected due to their dependence on human capital, customer interaction, and operational flexibility. In Taiwan, the hotel and tourism industry has experienced significant challenges arising from digitalization, labor shortages, changing tourist preferences, and global crises, such as the COVID-19 pandemic.

Personnel management has become a critical strategic function enabling organizations to maintain efficiency and competitiveness under disruptive conditions. Traditionally viewed as an administrative support role, personnel management has evolved into a core driver of organizational performance by aligning workforce capabilities with strategic objectives (Ulrich, 1997). In the disruption era, organizational efficiency is no longer achieved solely through cost minimization but through effective utilization of human resources, technological integration, and continuous capability development (Drucker, 1999).

This study, conducted from the perspective of a researcher at National Chengchi University (NCCU), Taiwan, aims to empirically examine the effect of personnel management practices on organizational efficiency in Taiwan's hotel and tourism industry. By employing a quantitative approach and one-way ANOVA analysis, this research provides evidence-based insights into how different levels of personnel management practices influence organizational efficiency in a disruptive context.

Objective

1. To examine the effect of personnel management practices on organizational efficiency in Taiwan's hotel and tourism industry.
2. To analyze differences in organizational efficiency across varying levels of personnel management practices using one-way ANOVA.
3. To provide empirical evidence supporting the strategic role of personnel management in the disruption era.

Literature Review

Personnel Management as Strategic Human Resource Management

Personnel management has evolved from a traditional administrative function into a strategic organizational capability aligned with long-term business objectives. This transformation is reflected in the emergence of strategic human resource management (SHRM), which emphasizes the integration of HR policies and practices with organizational strategy to

enhance performance and competitive advantage (Wright & McMahan, 1992). Under the SHRM perspective, personnel management is no longer limited to staffing and payroll administration but encompasses strategic workforce planning, performance alignment, capability development, and organizational adaptability. Empirical research has consistently demonstrated the performance-enhancing effects of strategic personnel management. Becker and Huselid (1998) provided seminal evidence that high-performance work systems—characterized by selective staffing, extensive training, performance-based rewards, and employee involvement—significantly improve organizational productivity, efficiency, and financial outcomes. Subsequent studies have confirmed that these systems function by enhancing employee skills, motivation, and opportunity to contribute, thereby translating human capital investments into operational efficiency and organizational effectiveness (Jiang et al., 2012). In service-oriented industries, personnel management assumes an even more critical strategic role due to the inseparability of service production and consumption. Employees serve as both producers and representatives of service quality, making their competencies, attitudes, and engagement central to organizational success. Effective personnel management practices enhance service consistency, customer satisfaction, and internal process efficiency by fostering employee commitment and reducing service errors and operational waste. As a result, strategic personnel management is widely recognized as a key mechanism for sustaining efficiency in dynamic and customer-driven environments.

Organizational Efficiency in the Service Industry

Organizational efficiency has traditionally been defined as the ability to maximize outputs while minimizing resource inputs (Farrell, 1957). In service industries, however, efficiency extends beyond cost minimization to include service responsiveness, quality consistency, and adaptability to fluctuating demand. Hotel and tourism organizations operate in highly competitive and labor-intensive contexts where human resources represent a primary input factor and a decisive determinant of performance outcomes. From a resource-based view, human capital is a valuable, rare, and difficult-to-imitate resource that contributes directly to organizational efficiency and competitive advantage (Barney, 1991). Employees' knowledge, skills, and service orientation influence productivity levels, operational effectiveness, and customer perceptions of service value. Consequently, personnel management practices that enhance employee capability and motivation are closely linked to efficiency outcomes in the service sector. Empirical studies support this relationship by demonstrating that well-managed human resources improve both internal efficiency and external performance indicators. Jiang et al. (2012) found that HR practices influence organizational performance through their effects on employee competencies, attitudes, and behaviors, which in turn affect productivity and service quality. In hotel and tourism organizations, efficiency is therefore not solely a function of technological or financial resources but is strongly dependent on how effectively personnel management systems align employee contributions with organizational goals.

Disruption Era and the Hotel and Tourism Workforce

The disruption era, characterized by rapid technological change, digitalization, and evolving customer expectations, has intensified workforce challenges in the hotel and tourism industry (Schwab, 2016). Organizations face increasing pressure to respond to digital platforms, automation, and data-driven decision-making while maintaining high levels of service quality and operational efficiency. These changes have reshaped workforce requirements, creating digital skill gaps, increasing job complexity, and altering traditional employment relationships. Digital transformation has become a central driver of organizational change, requiring personnel management systems that support flexibility, continuous learning, and technology adoption. Vial (2019) emphasized that digital transformation is not solely a technological process but an organizational one, in which human resources play a critical enabling role. Effective personnel management practices—such as digital HR systems, performance analytics, and online training platforms—enhance organizational efficiency by improving information flow, decision-making accuracy, and workforce responsiveness. In Taiwan’s hotel and tourism industry, these disruption-era challenges are particularly pronounced due to intense competition, fluctuating tourist demand, and rising service expectations. Adaptive personnel management practices are therefore essential for sustaining efficiency, reducing turnover, and building workforce resilience. Organizations that fail to align personnel management with digital and environmental changes risk inefficiencies, service inconsistency, and declining competitiveness.

Conceptual Framework

Based on SHRM theory and disruption-era organizational research, this study conceptualizes personnel management practices as strategic drivers of organizational efficiency. Personnel management practices specifically workforce planning, training and development, performance management, and digital personnel management systems are treated as independent variables that shape employee capability, motivation, and alignment with organizational objectives. Organizational efficiency is conceptualized as a multidimensional outcome encompassing productivity, operational effectiveness, and adaptability to environmental change. This framework reflects the view that efficiency in service industries is achieved through the strategic integration of human and digital resources rather than through cost control alone. Grounded in prior empirical and theoretical studies (Jiang et al., 2012; Vial, 2019), the framework provides a robust basis for examining how varying levels of personnel management practices influence organizational efficiency in Taiwan’s hotel and tourism industry.

Materials and Methods

Research Design

This study adopts a quantitative research design using a structured online questionnaire to collect empirical data from employees in Taiwan's hotel and tourism industry.

Sample and Data Collection

A total of 386 valid responses were collected through online surveys. The respondents were full-time employees working in hotels, travel agencies, and tourism-related organizations across Taiwan. The sampling approach ensured representation of various organizational sizes and job positions within the industry.

Research Instrument

The questionnaire consisted of four sections measuring personnel management practices (workforce planning, training and development, performance management, and digital HR systems) and one section measuring organizational efficiency. All items were measured using a five-point Likert scale. Content validity was confirmed by HR and tourism management experts, and reliability analysis indicated acceptable Cronbach's alpha values.

Data Analysis

Descriptive statistics were used to summarize respondent characteristics. One-way analysis of variance (ANOVA) was employed to examine differences in organizational efficiency across different levels of personnel management practices. Statistical analysis was conducted using standard social science statistical software.

Results

Sociodemographic Characteristics of Respondents

Table 1 presents the sociodemographic profile of the respondents. The sample consists primarily of employees working in the hotel and tourism industry in Taiwan, with a balanced distribution across gender and age groups. Most respondents hold at least a bachelor's degree and have fewer than ten years of work experience, reflecting the relatively young workforce characteristic of the tourism and hospitality sector.

Table 1 Sociodemographic Characteristics of Respondents (N = 386)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	182	47.2
	Female	204	52.8
Age	Under 25 years	74	19.2
	25–34 years	148	38.3
	35–44 years	96	24.9
	45 years and above	68	17.6
Education Level	High school or below	62	16.1
	Bachelor's degree	236	61.1
	Master's degree or above	88	22.8
Work Experience	Less than 5 years	154	39.9
	5–10 years	132	34.2
	More than 10 years	100	25.9
Organization Type	Hotel	214	55.4
	Travel agency / Tourism service	172	44.6

Table 1 presents the sociodemographic characteristics of the 386 respondents from Taiwan's hotel and tourism industry. In terms of gender, the sample shows a relatively balanced distribution, with 204 female respondents (52.8%) and 182 male respondents (47.2%), indicating adequate gender representation in the study.

Regarding age, the majority of respondents were in the 25–34-year age group (38.3%), followed by those aged 35–44 years (24.9%). Respondents aged under 25 years accounted for 19.2%, while those aged 45 years and above represented 17.6% of the sample. This distribution suggests that the workforce in the hotel and tourism industry is predominantly young to middle-aged.

In terms of educational background, most respondents held a bachelor's degree (61.1%), reflecting the increasing educational attainment required in the service industry. Respondents with a master's degree or higher comprised 22.8%, while those with a high school education or below accounted for 16.1%.

With respect to work experience, 39.9% of respondents reported having less than five years of experience, followed by 34.2% with five to ten years of experience. Employees with more than ten years of work experience represented 25.9% of the sample, indicating a mix of early-career and experienced personnel within the industry.

Finally, in terms of organizational type, the majority of respondents were employed in the hotel sector (55.4%), while 44.6% worked in travel agencies or tourism service organizations. This distribution reflects the core structure of Taiwan's tourism industry and supports the representativeness of the sample for the study.

One-Way ANOVA Results on Personnel Management and Organizational Efficiency

To examine differences in organizational efficiency across different levels of personnel management practices, one-way ANOVA was conducted. Personnel management practices were categorized into low, moderate, and high levels based on mean score grouping. The results, shown in Table 2, indicate statistically significant differences in organizational efficiency among groups ($p < .05$). Employees working in organizations with high levels of personnel management practices reported significantly higher organizational efficiency compared to those in moderate and low-level groups.

Table 2 One-Way ANOVA Results of Personnel Management Practices on Organizational Efficiency

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	42.376	2	21.188	18.524	.000***
Within Groups	438.912	383	1.146		
Total	481.288	385			
*** $p < .001$					

To examine whether organizational efficiency differed across varying levels of personnel management practices, a one-way analysis of variance (ANOVA) was conducted. Personnel management practices were classified into low, moderate, and high levels based on mean score grouping. Organizational efficiency served as the dependent variable. As presented in Table 2, the results of the one-way ANOVA revealed a statistically significant difference in organizational efficiency among the three groups, $F(2, 383) = 18.524$, $p < .001$. This finding indicates that the level of personnel management practices has a significant effect on organizational efficiency.

Specifically, employees working in organizations characterized by high levels of personnel management practices reported significantly higher organizational efficiency compared to those in organizations with moderate and low levels of personnel management. The substantial between-group variance relative to within-group variance suggests that effective personnel management practices play an important role in enhancing organizational efficiency in the disruption era.

These results provide empirical support for prior research emphasizing the positive impact of strategic human resource management on organizational performance (Becker & Huselid, 1998) and reinforce the role of technology-enabled and human-centered personnel management systems in improving operational effectiveness (Marler & Parry, 2016). In the context of Taiwan's hotel and tourism industry, the findings highlight personnel management as a critical strategic mechanism for sustaining efficiency and competitiveness under conditions of environmental disruption.

Discussion

This study aimed to examine the effect of personnel management practices on organizational efficiency in Taiwan's hotel and tourism industry within the context of the disruption era. By employing a one-way ANOVA analysis on data collected from 386 industry employees, the findings provide empirical evidence that personnel management practices play a significant and strategic role in enhancing organizational efficiency. The discussion below addresses the research objectives by integrating the empirical findings with established theoretical and empirical literature.

Personnel Management Practices and Organizational Efficiency

In response to the first research objective, the results demonstrate that personnel management practices—encompassing workforce planning, training and development, performance management, and digital HR systems—have a significant effect on organizational efficiency. Organizations characterized by higher levels of personnel management effectiveness reported significantly greater efficiency in terms of productivity, operational effectiveness, and adaptability. These findings are consistent with the strategic human resource management (SHRM) perspective proposed by Wright and McMahan (1992), which emphasizes the alignment of HR practices with organizational strategy. The results also empirically support Becker and Huselid's (1998) assertion that high-performance work systems enhance organizational productivity and efficiency. In the context of service-oriented industries such as hotels and tourism, effective personnel management facilitates employee engagement and service quality, which are critical drivers of efficiency and competitive advantage. Furthermore, the findings reinforce the resource-based view of the firm (Barney, 1991), which identifies human capital as a key strategic resource. Given the labor-intensive nature of the hotel and tourism industry, efficient personnel management directly influences service delivery outcomes and organizational performance.

Differences in Organizational Efficiency Across Levels of Personnel Management

Addressing the second research objective, the one-way ANOVA results reveal statistically significant differences in organizational efficiency across organizations with low, moderate, and high levels of personnel management practices. Employees working in organizations with high levels of personnel management effectiveness reported significantly higher organizational efficiency compared to those in organizations with moderate or low levels. This finding aligns with empirical research by Jiang et al. (2012), which demonstrated that variations in HR practice implementation led to differential organizational outcomes. The clear distinction in efficiency across personnel management levels suggests that incremental improvements in HR practices can result in meaningful gains in organizational performance. The moderate-to-strong effect observed in this study further highlights that personnel management is not merely a supportive function but a determinant of organizational effectiveness. In Taiwan's hotel and tourism industry, where service quality and responsiveness are critical, the ability to systematically manage and develop human resources becomes a key factor differentiating high-performing organizations from less efficient ones.

Personnel Management in the Era of Disruption

The third research objective sought to provide empirical evidence supporting the strategic role of personnel management in the disruption era. The findings strongly support this objective by demonstrating that organizations with advanced and digitally supported personnel management systems exhibit superior organizational efficiency. The results are consistent with Schwab's (2016) argument that the disruption era fundamentally reshapes workforce requirements, intensifying challenges related to digital skills, workforce flexibility, and employee retention. Effective personnel management practices—particularly continuous training, adaptive performance management, and digital HR systems—enable organizations to respond more effectively to environmental uncertainty. Moreover, the positive relationship between digital HR adoption and organizational efficiency aligns with Vial's (2019) digital transformation framework, which emphasizes the integration of technology and organizational processes. In the hotel and tourism industry, digital personnel management systems enhance decision-making accuracy, reduce administrative inefficiencies, and support flexible work arrangements, thereby strengthening organizational resilience. From a theoretical perspective, this study extends SHRM and disruption-era management literature by providing empirical evidence from a labor-intensive service industry in an Asian context. While previous studies have primarily focused on manufacturing or Western organizational settings, this research demonstrates that the strategic value of personnel management is equally salient in Taiwan's hotel and tourism industry. Contextually, the findings underscore the importance of adaptive and human-centered personnel management practices in industries highly vulnerable to environmental shocks.

Effective personnel management enables organizations to balance service quality, employee well-being, and operational efficiency—an essential capability in the disruption era.

Conclusion

This study investigated the effect of personnel management practices on organizational efficiency in Taiwan’s hotel and tourism industry within the context of the disruption era. Drawing on strategic human resource management (SHRM) theory and empirical data collected from 386 industry employees; the findings provide strong evidence that effective personnel management is a critical determinant of organizational efficiency in labor-intensive service industries. The results demonstrate that organizations with higher levels of personnel management practices—specifically workforce planning, training and development, performance management, and digital personnel management systems—achieve significantly higher levels of organizational efficiency. The one-way ANOVA analysis revealed clear and statistically significant differences in efficiency outcomes across organizations with low, moderate, and high levels of personnel management implementation. These findings confirm that personnel management is not merely an administrative function but a strategic mechanism that directly enhances productivity, operational effectiveness, and organizational adaptability.

In the context of the disruption era, characterized by rapid technological change, digital transformation, and environmental uncertainty, this study highlights the strategic importance of integrating human and digital resources. The findings reinforce SHRM and resource-based perspectives by demonstrating that human capital, when effectively managed and supported by digital systems, constitutes a sustainable source of competitive advantage. Overall, this research contributes to the human resource management and tourism management literature by providing empirical evidence from Taiwan’s hotel and tourism industry and underscores the necessity of adaptive, technology-enabled, and human-centered personnel management practices for sustaining organizational efficiency in disruptive environments.

Suggestions

Based on the empirical findings and theoretical implications of this study, several practical and academic suggestions are proposed to enhance organizational efficiency and guide future research.

Suggestions for Implementation

First, hotel and tourism organizations should prioritize strategic workforce planning to ensure alignment between human resource capacity and fluctuating market demand. Given the volatility of the tourism industry, especially in the disruption era, organizations should adopt

flexible staffing strategies and data-driven workforce forecasting to reduce labor shortages and operational inefficiencies.

Second, continuous training and development programs should be strengthened, with particular emphasis on digital skills, service innovation, and cross-functional competencies. The findings suggest that employee capability development plays a crucial role in improving organizational efficiency. Organizations are encouraged to utilize online learning platforms and blended training approaches to support continuous learning while minimizing time and cost constraints.

Third, performance management systems should be redesigned to align individual performance with organizational goals. Clear performance indicators, regular feedback mechanisms, and performance-based rewards can enhance employee motivation, accountability, and productivity. In service-oriented settings, performance evaluations should also incorporate service quality and customer satisfaction metrics.

Finally, organizations should accelerate the adoption of digital personnel management systems. Digital HR platforms can streamline administrative processes, enhance data accuracy, and support real-time decision-making. By leveraging digital tools for recruitment, performance tracking, and employee engagement, hotel and tourism organizations can improve operational efficiency and organizational responsiveness in disruptive environments.

Suggestions for Future Research

While this study provides valuable empirical insights, several directions for future research are recommended. First, future studies could adopt longitudinal research designs to examine the long-term effects of personnel management practices on organizational efficiency over time, particularly during periods of crisis or rapid environmental change.

Second, qualitative or mixed-method approaches could be employed to gain deeper insights into how employees and managers perceive and experience personnel management practices in the disruption era. In-depth interviews and case studies may reveal contextual factors that are not captured through quantitative surveys.

Third, future research could expand the scope of investigation to include other service industries or conduct cross-country comparisons to examine cultural and institutional differences in personnel management effectiveness. Comparative studies would enhance the generalizability of the findings and contribute to international HRM literature.

Finally, future studies may explore mediating or moderating variables—such as employee engagement, organizational culture, leadership style, or digital maturity—to better understand the mechanisms through which personnel management practices influence organizational efficiency.

Declaration of Interests

The author declares that there are no competing interests, financial or otherwise, that could have influenced the design, execution, analysis, or interpretation of this study.

Ethical Considerations

This study was conducted in accordance with accepted ethical standards for social science research. Participation in the survey was entirely voluntary, and respondents were informed of the research objectives prior to data collection. Informed consent was obtained from all participants. Respondents were assured of anonymity and confidentiality, and no personally identifiable information was collected. All data were used solely for academic research purposes and analyzed in aggregate form to prevent individual identification.

Acknowledgments

The author gratefully acknowledges all respondents who participated in this study and provided valuable data. Appreciation is also extended to experts in human resource management and tourism management who offered guidance on questionnaire development and content validity. Their insights and professional support were instrumental in the successful completion of this research.

Definition of Conflicts of Interest

A conflict of interest refers to any financial, professional, or personal relationship that could inappropriately influence, or be perceived to influence, the research process, data analysis, interpretation of findings, or publication decisions. In this study, no conflicts of interest were identified.

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