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# The Impact of Human Resource Management Practices on Transportation Efficiency in the OEM Health and Beauty Supplement Industry in Samut Sakhon Province

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**Abstract**

The objectives of this research were: (1) to examine human resource management (HRM) practices in the OEM health and beauty dietary supplement industry; (2) to assess the level of transportation efficiency in the industry; and (3) to analyze the influence of HRM practices on transportation efficiency in enterprises located within the local administrative jurisdictions of Samut Sakhon Province.The sample consisted of 227 employees and managers from logistics and human resource departments of OEM enterprises in the health and beauty dietary supplement sector. A purposive sampling method was applied. The research instrument was a questionnaire with a reliability coefficient (Cronbach's alpha) of 0.92. Data were analyzed using descriptive statistics (percentage, mean, and standard deviation) and inferential statistics, specifically stepwise multiple regression analysis.The findings indicated that overall HRM practices were implemented at a high level, particularly in digital skill development and adaptability to technological change. Transportation efficiency was also rated at a high level, especially in terms of delivery speed and accuracy. The regression results revealed that HRM practices related to training, workforce planning, and employee retention had a statistically significant positive effect on transportation efficiency at the 0.05 level.

***Keywords:*** *Human resource management practices;transportation efficiency;OEM industry; health and beauty supplements;Samut Sakhon Province*

## 1.Introduction

In an era characterized by rapid technological transformation and intensified global competition, human resource management (HRM) has become a critical determinant of organizational capability and operational performance (Worapongpat, 2025e). This importance is particularly pronounced in logistics-intensive industries, such as the OEM health and beauty dietary supplement sector, where workforce competencies directly influence supply chain and transportation outcomes. Previous studies indicate that organizations implementing integrated HRM systems especially those emphasizing employee training, digital skill development, and motivational practices can significantly enhance supply chain performance compared to organizations with less structured HRM approaches (Gladenkova, 2022; Islami et al., 2024).

In Thailand, the OEM health and beauty dietary supplement industry represents a rapidly growing manufacturing segment. According to the Department of Industrial

Promotion, OEM enterprises in Samut Sakhon Province recorded a production growth rate of 11.4% in the previous year. Despite this expansion, many firms continue to experience operational challenges, particularly delays in transportation processes and shortages of personnel with appropriate logistics-related competencies. These constraints have adversely affected delivery performance and overall competitiveness within the industry.

A review of existing literature reveals that although numerous studies have examined logistics performance and supply chain efficiency (Worapongpat, 2025d) as well as HRM-related issues in service and manufacturing sectors (Jeon & Park, 2021), empirical research explicitly linking HRM practices with transportation efficiency remains limited. This gap is especially evident in studies focusing on specific regional and industrial contexts, such as the OEM health and beauty dietary supplement industry in Samut Sakhon Province (Sato et al., 2023; Worapongpat, 2021a). Consequently, there is a clear need for research that integrates HRM and logistics perspectives through a systematic and context-specific analytical framework.

Samut Sakhon Province is recognized as one of Thailand's key economic zones, particularly in processed food and health supplement manufacturing, where a dense concentration of medium- and large-scale OEM enterprises is located (Worapongpat, 2025c). Although the province benefits from favorable logistics infrastructure and proximity to major transportation routes, enterprises in the region face persistent shortages of transportation personnel equipped with digital-age skills. These skills include the use of product tracking systems, cross-departmental coordination, and warehouse management technologies (Kitipadung & Jaiborisudhi, 2021). Based on the researcher's experience in collaborative training and development activities with local enterprises, it is evident that existing HRM practices are often insufficiently aligned with logistics performance objectives, limiting the effectiveness of workforce utilization in transportation operations (Worapongpat, 2025b).

Against this backdrop, the present study aims to examine the influence of human resource management practices on transportation efficiency in OEM health and beauty dietary supplement enterprises located within the local administrative jurisdictions of Samut Sakhon Province. This research adopts a quantitative approach, with data collected during the second quarter of 2024 through a structured questionnaire administered to employees and managers involved in HRM and logistics functions (Worapongpat, 2025a). Data were analyzed using descriptive statistics and stepwise multiple regression analysis to identify the relationships between HRM practices and transportation performance (Worapongpat, 2024b).

This study focuses on key dimensions of HRM practices, including training and skill development, workforce planning, employee retention, competency evaluation, and the application of HRM-related technologies, and examines their effects on transportation outcomes such as delivery speed, accuracy, flexibility, and customer satisfaction. By addressing a critical empirical gap, the study seeks to contribute to the body of knowledge on the integration of HRM and logistics management at the organizational level. Furthermore, the findings are expected to provide practical insights for business practitioners and local policymakers to enhance workforce management strategies and sustainably improve transportation efficiency and competitiveness in the Thai OEM industry.

### 1.1 Objectives

1.To examine human resource management (HRM) practices in OEM enterprises in the health and beauty dietary supplement industry within the local administrative jurisdictions of Samut Sakhon Province.

2.To investigate the level of transportation efficiency in OEM enterprises in the health and beauty dietary supplement industry within the local administrative jurisdictions of Samut Sakhon Province.

3.To analyze the influence of human resource management (HRM) practices on transportation efficiency in OEM enterprises in the health and beauty dietary supplement industry within the local administrative jurisdictions of Samut Sakhon Province.

## 2.Literature Review

### Modern Human Resource Management and Its Role in Industry

A substantial body of literature emphasizes the critical role of modern human resource management (HRM) in enhancing organizational performance across diverse industries (Worapongpat, 2024a). Modern HRM extends beyond traditional personnel administration by focusing on strategic workforce planning, continuous skill development, employee retention, and the integration of digital technologies to support organizational competitiveness. These HRM practices are increasingly essential in industries operating in dynamic and technology-driven environments, where employee capabilities directly influence operational efficiency and service quality (Oppong et al., 2021).

In manufacturing and logistics-intensive sectors, effective HRM practices have been shown to contribute significantly to productivity, operational reliability, and performance outcomes. Workforce planning ensures that organizations maintain an adequate number of competent employees aligned with operational demands, while systematic training and skill development enable employees to adapt to technological advancements and process innovations. Employee retention and motivation further support organizational continuity by reducing turnover-related disruptions and preserving institutional knowledge (Worapongpat, 2024a).

### Transportation Efficiency and Logistics Performance

Transportation efficiency is widely recognized as a key determinant of organizational competitiveness, particularly in industries with complex supply chains such as the dietary supplement sector. Prior research indicates that efficient transportation processes directly affect delivery speed, accuracy, cost control, and customer satisfaction (Worapongpat, 2023b). The adoption of information technology and logistics management systems (LMS) has been found to enhance transportation performance by improving shipment tracking, coordination, and decision-making accuracy (Park et al., 2023).

Despite the growing body of research on logistics performance, most studies have primarily focused on technological systems, infrastructure, and process optimization. Comparatively fewer studies have examined human-related factors particularly HRM practices as critical determinants of transportation efficiency (Worapongpat, 2021b). This omission is noteworthy, given that logistics operations are highly dependent on employee competencies, coordination, and decision-making capabilities.

### HRM Practices and Transportation Efficiency

Several empirical studies have identified positive relationships between HRM practices and logistics performance outcomes. Practices such as employee training, motivation, and skill development have been associated with improved operational efficiency, reduced errors, and enhanced service quality in logistics and supply chain contexts (Worapongpat, 2023a). These findings suggest that HRM practices play a mediating role between organizational resources and logistics performance.

However, empirical evidence examining how specific dimensions of modern HRM such as workforce planning, digital skill development, and employee retention affect transportation efficiency in the OEM health and beauty dietary supplement industry

remains limited. This gap is particularly evident in localized industrial contexts, such as Samut Sakhon Province, where organizational structures, labor characteristics, and operational constraints may differ from those examined in broader national or international studies (Panitsettakorn et al., 2023).

**Research Gap and Conceptual Direction**

The reviewed literature underscores the importance of modern HRM practices in driving organizational and logistics performance. Nevertheless, there is a clear lack of empirical research directly linking HRM practices to transportation efficiency in the OEM health and beauty dietary supplement industry, particularly within the regional context of Samut Sakhon Province. Existing studies tend to examine HRM or logistics performance independently, rather than adopting an integrated analytical perspective.

Accordingly, this study seeks to address this gap by systematically investigating the influence of human resource management practices specifically workforce planning, training and skill development, and employee retention on transportation efficiency in OEM enterprises in the health and beauty dietary supplement industry. By integrating HRM and logistics perspectives, the study contributes to a more comprehensive understanding of organizational performance and provides a conceptual foundation for examining causal relationships between HRM practices and transportation efficiency.

## 3.Research Conceptual Framework

This study is grounded in the concept of modern human resource management (HRM), which emphasizes strategic workforce planning, continuous skill development, employee retention, and the integration of digital technologies to enhance organizational performance. Drawing on prior studies, modern HRM practices are viewed as critical organizational resources that influence operational outcomes, particularly in logistics-intensive industries.

In the context of the OEM health and beauty dietary supplement industry, transportation efficiency is highly dependent on employee competencies, coordination, and workforce stability. Accordingly, this study proposes that modern HRM practices function as key antecedents of transportation efficiency.

Independent Variables: Human Resource Management Practices

Based on the literature review, the independent variables of this study consist of the following HRM practices:

Workforce planning in logistics, referring to the systematic allocation and forecasting of human resources to meet transportation and delivery demands.

Recruitment and selection of transportation personnel, focusing on the acquisition of employees with appropriate logistics-related skills and experience.

Digital technology skills development, emphasizing training and upskilling related to logistics systems, shipment tracking, and digital coordination tools.

Employee retention and motivation, addressing practices that reduce turnover and sustain employee commitment in logistics operations.

Continuous competency evaluation and development, involving ongoing assessment and enhancement of employee capabilities to support operational efficiency.

Dependent Variable: Transportation Efficiency

Transportation efficiency is conceptualized as the effectiveness of logistics operations in terms of delivery speed, accuracy, cost control, and operational reliability within OEM enterprises.

## 4.Methods

4.1 Research Design

This study employed a quantitative research design using a survey approach to examine the patterns of modern human resource management (HRM) practices and to analyze their influence on transportation efficiency in OEM-based health and beauty dietary supplement enterprises in Samut Sakhon Province.

4.2 Population and Sample

The target population consisted of employees and managers working in logistics and human resource departments of OEM enterprises engaged in the production of health and beauty dietary supplements in Samut Sakhon Province. These enterprises were required to be formally registered with the Department of Business Development and to maintain continuous logistics operations.

The sample was selected using a purposive sampling technique. Inclusion criteria required respondents to be directly involved in HRM or transportation-related activities within their organizations. A total of 227 respondents were included in the study, which was considered adequate for statistical analysis based on the sampling guidelines proposed by Krejcie and Morgan

4.3. Research Instrument

The primary data collection instrument was a researcher-developed questionnaire, structured into three sections:

Section 1: General demographic information, including gender, age, position, years of work experience, and department.

Section 2: A scale measuring human resource management (HRM) practices, covering workforce planning, recruitment and selection, digital skill development, employee retention and motivation, and competency evaluation.

Section 3: A scale measuring transportation efficiency, assessed through indicators such as delivery speed, accuracy, cost efficiency, shipment tracking, and customer satisfaction.

Validity Testing:

Content validity was assessed by a panel of three experts. The Item-Objective Congruence (IOC) index ranged from 0.80 to 1.00, indicating acceptable content validity.

Reliability Testing:

A pilot test was conducted with 30 respondents who had characteristics similar to the target population. The overall Cronbach's alpha coefficient was 0.92, indicating high internal consistency.

4. 4. Data Collection Procedures

Questionnaires were distributed directly to participants and, where physical access was limited, through online platforms (e.g., Google Forms). Cooperation was facilitated through local business associations and networks of OEM enterprises in Samut Sakhon Province. Data collection was completed over a period of 30 days.

5. Data Analysis

The collected data were analyzed using statistical software as follows:

Descriptive statistics:

Frequency, percentage, mean, and standard deviation were used to describe respondent characteristics, HRM practices, and transportation efficiency levels.

Inferential statistics:

Pearson's correlation coefficient was used to examine the relationships between HRM practices and transportation efficiency.

Multiple regression analysis (stepwise method) was conducted to analyze the influence of HRM practices on transportation efficiency in the OEM industry.

**5.Results**

Objective 1: To examine the practices of modern human resource management (MHRM) in OEM enterprises producing health and beauty dietary supplements in Samut Sakhon Province.

Table 1 presents the general characteristics of respondents (n = 400). The majority were operational staff in transportation departments (280 persons, 70.0%), followed by logistics supervisors (119 persons, 29.8%), and a small proportion in other positions (1 person, 0.2%). In terms of logistics experience, 35.0% had less than 5 years, while 32.5% each reported 5–10 years and more than 10 years of experience.

**Table 1** General Characteristics of Respondents (n = 400)

| Item | Frequency (n) | Percentage (%) |
|---|---|---|
| Job Position | | |
| – Operational transportation staff | 280 | 70.0 |
| – Logistics supervisors | 119 | 29.8 |
| – Others | 1 | 0.2 |
| Logistics Experience | | |
| – Less than 5 years | 140 | 35.0 |
| – 5–10 years | 130 | 32.5 |
| – More than 10 years | 130 | 32.5 |

Note. Percentages were calculated based on the total sample (n = 400).

Table 2 shows the mean and standard deviation of modern HRM practices. The results indicated that respondents perceived all dimensions at a high level. The highest mean score was for technological skills development (Mean = 4.51, SD = 0.49), followed by logistics workforce planning (Mean = 4.36, SD = 0.56), appropriate recruitment and selection (Mean = 4.31, SD = 0.61), employee retention and welfare (Mean = 4.21, SD = 0.53), and performance evaluation and motivation (Mean = 4.16, SD = 0.58).

**Table 2** Mean and Standard Deviation of Modern HRM Practices

| HRM Dimension | Mean | SD | Level of Perception |
|---|---|---|---|
| Logistics workforce planning | 4.36 | 0.56 | High |
| Technological skills development | 4.51 | 0.49 | High |
| Recruitment and selection | 4.31 | 0.61 | High |
| Employee retention and welfare | 4.21 | 0.53 | High |
| Performance evaluation and motivation | 4.16 | 0.58 | High |

Note. All dimensions were perceived at a high level.

These findings suggest that OEM enterprises in Samut Sakhon place strong emphasis on HRM practices that align with technological skills and workforce planning to enhance logistics capacity.

Objective 3: To analyze the influence of modern HRM practices on transportation efficiency in OEM enterprises producing health and beauty dietary supplements in Samut Sakhon Province.

**Table 3** Mean and Standard Deviation of Transportation Efficiency Indicators

| Indicator | Mean | SD | Level of Perception |
|---|---|---|---|
| Speed of delivery | 4.21 | 0.61 | High |
| Accuracy of product delivery | 4.26 | 0.53 | High |
| Transportation cost per unit | 3.81 | 0.66 | Moderately High |

Note. Accuracy received the highest score, while cost efficiency was rated moderately high.

**Table 4** Correlation Between HRM Practices and Transportation Efficiency

| Independent Variable | Dependent Variable | Pearson r | Sig. (2-tailed) | Relationship |
|---|---|---|---|---|
| Technological skills development | Speed of delivery | .631 | < .01 | Significant |

Note. A significant positive correlation was found between technological skills development and delivery speed ($p < .01$).

**Table 5** Multiple Regression Analysis of HRM Practices Influencing Transportation Efficiency

| Predictor | β | Sig. | Statistical Interpretation |
|---|---|---|---|
| Logistics workforce planning | 0.43 | .004 | Significant |
| Technological skills development | 0.52 | .000 | Significant |
| Employee retention and welfare | 0.31 | .008 | Significant |

Adjusted $R^2 = 0.48$

Table 5 presents the results of the multiple regression analysis. Three HRM practices were found to have a statistically significant influence on transportation efficiency: logistics workforce planning ($\beta = 0.43$, $p = .004$), technological skills development ($\beta = 0.52$, $p = .000$), and employee retention and welfare ($\beta = 0.31$, $p = .008$). The adjusted $R^2$ value of 0.48 indicates that these HRM practices collectively explained 48% of the variance in transportation efficiency.

In this study, logistics workforce planning refers to the systematic allocation of personnel, workload balancing, and scheduling aligned with transportation demands. Technological skills development encompasses training in digital logistics systems, shipment tracking, and data-based coordination tools. Employee retention and welfare include practices related to job security, benefits, motivation, and supportive working conditions that reduce turnover among logistics staff.

These findings are consistent with prior research indicating that strategic HRM practices contribute significantly to operational and logistics performance. Previous studies have shown that workforce planning improves operational continuity and resource utilization, while technological skill development enhances accuracy, speed, and adaptability in logistics processes. Furthermore, retention strategies have been identified as critical factors in sustaining organizational performance, as they reduce employee turnover, preserve accumulated expertise, and maintain service quality (Oppong et al., 2021; Worapongpat, 2023a). The significance of employee retention in this study suggests that stable and motivated logistics personnel are essential for maintaining reliable transportation operations in the OEM health and beauty supplement industry.

Overall, the results confirm that modern HRM practices particularly technological skills development, workforce planning, and retention strategies are key predictors of logistics and transportation performance in the targeted industry context.

## 6.Discussion

Findings related to Objective 1 The study revealed that contemporary human resource development (HRD) management practices in OEM enterprises in the health and beauty dietary supplement industry within Samut Sakhon Province emphasize systematic workforce planning and technological skill development. Technological upskilling emerged as a particularly critical factor, reflecting organizational readiness to adapt to the digital era. This may be attributed to the need for firms to enhance competitiveness in a rapidly changing and highly competitive market, especially in areas such as logistics systems and production technologies. These findings are consistent with (Aljabhan, 2023;Worapongpat & Chaoluang, 2024). who underscored the importance of continuous HR development and adaptability in the modern era.

Findings related to Objective 2 indicate that the overall level of transportation efficiency in the surveyed enterprises was high, particularly in terms of delivery speed and accuracy. These performance aspects contributed to improved customer satisfaction and reduced operational costs. Such outcomes may be attributed to effective human resource management (HRM) practices, including appropriate workforce planning and targeted technological training, which directly support logistics operations and coordination processes. This result is consistent with previous studies, which have emphasized that effective HRM practices play a crucial role in strengthening logistics and transportation performance (Bond, 2024; Worapongpat & Narong Uttamavangso, 2024). These studies highlight that well-trained and properly allocated personnel contribute to faster delivery, fewer operational errors, and improved service reliability.

Findings related to Objective 3 The analysis confirmed that contemporary HRD practices especially technological skills development, workforce planning, and employee retention exerted a statistically significant influence on transportation efficiency. This finding suggests that investments in human capital and HRM practices responsive to modern organizational needs are essential for operational performance. Skilled employees equipped with updated competencies and managed under efficient workforce planning reduce delays and errors in product delivery. This aligns with Demirel, D. (2022). Worapongpat, N., Limlertrid, T., Zangphukieo, N., Wongkumchai, T., & Muangmee, C. (2023). who highlighted the role of HRM in enhancing logistics and supply chain efficiency.

## 7.Originality and Body of Knowledge

This research provides new empirical insights into the role of contemporary human resource management (HRM) practices in enhancing transportation efficiency within OEM enterprises in the health and beauty dietary supplement industry in Samut Sakhon Province. While prior studies have examined HRM or logistics performance separately, this study integrates both perspectives by empirically analyzing the influence of specific HRM practices on transportation outcomes within a localized industrial context.

The key theoretical contribution of this research is the development of an integrated HRM model that identifies technological skill development, logistics workforce planning, and employee retention as significant predictors of transportation efficiency. This model demonstrates how human resource practices function as strategic drivers of operational logistics performance, rather than merely as supportive administrative functions.

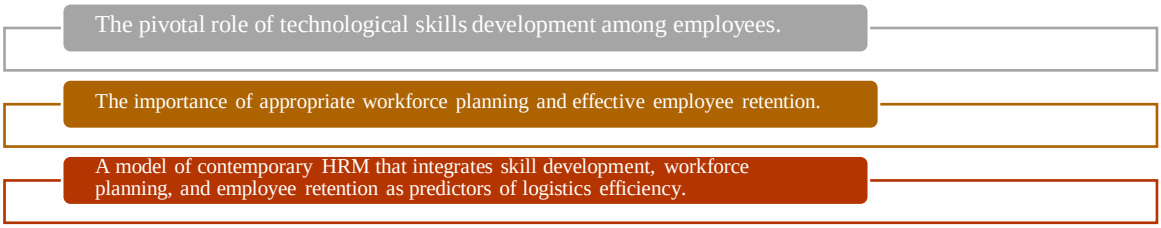


**Figure 1** illustrates the proposed model, indicating that technological skill development exerts the strongest influence on delivery speed and accuracy, while systematic workforce planning and retention practices help reduce labor shortages and enhance operational continuity. Collectively, these HRM dimensions explain 48% of the variance in transportation efficiency, highlighting the critical role of aligning HRM practices with digital transformation and operational demands.

From a theoretical perspective, this study contributes to the integration of human resource management and logistics performance literature by providing empirical evidence from the OEM health and beauty supplement industry. From a practical standpoint, the findings offer a strategic framework for enterprises and policymakers to improve transportation performance through targeted HRM interventions.

## 8.Suggestions

Based on Objective 1, organizations should provide continuous training and digital skill development for logistics personnel while implementing workforce planning strategies aligned with business needs.

Based on Objective 2, given the importance of delivery speed and accuracy in driving customer satisfaction and competitiveness, enterprises should improve logistics processes and tracking systems while minimizing unnecessary costs.

Based on Objective 3, HRM strategies that integrate development, planning, and retention should be prioritized to sustain competitive advantage and ensure operational continuity.

### Suggestions for Future Research

This study highlights that contemporary HRD management, with its focus on technological skills and workforce planning, has a direct impact on transportation efficiency in OEM health and beauty dietary supplement enterprises. The findings may be extended to similar industries, such as cosmetics or other health-related manufacturing sectors, where integration of HRM and technology is equally critical. Future research should examine the influence of external factors including market dynamics, competitive pressures, and emerging technologies—on HRM practices and operational performance within the OEM industry.

## 9.Conclusion

Contemporary HRD management in OEM enterprises within the health and beauty dietary supplement industry plays a vital role in enhancing transportation efficiency. Specifically, technological skill development, workforce planning, and employee retention emerged as significant determinants of delivery speed, accuracy, and cost-effectiveness. Moreover, the analysis confirmed a significant positive relationship between HRM practices and transportation efficiency, reinforcing the strategic value of HRM in logistics operations.

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## 11.References

Aljabhan, B. (2023). Economic strategic plans with supply chain risk management (SCRM) for organizational growth and development. *Alexandria Engineering Journal, 79*, 411-426.

Bond, M. C. (2024). A quantitative analysis of cosmeceuticals: business service quality and client satisfaction. *Management Matters, 21*(1), 54-77.

Demirel, D. (2022). The effect of service quality on customer satisfaction in digital age: customer satisfaction based examination of digital CRM. *Journal of Business Economics and Management, 23*(3), 507-531.

Gladenkova, T. A. (2022). Modern Peculiarities of the Spatial Organization Pattern of the Beauty and Personal Care Industry in Russia and Other Countries around the World. *Regional Research of Russia, 12*(4), 556-573.

Islami, V., Rizan, M., Wibowo, S. F., & Sebayang, K. D. A. (2024). Study of service quality, trust and brand image on customer satisfaction and customer loyalty of beauty clinic consumers: Literature review. *Journal of Law, Social Science and Humanities, 1*(2), 105-111.

Jeon, H., & Park, J. (2021). The effect of the beauty service quality for humans on the customer satisfaction and the customer loyalty. *International Journal of Human & Disaster, 6*(3), 22–34.

Kitipadung, J., & Jaiborisudhi, W. (2021). Problems and recommendations regarding human resource development within the OTOP project: A case study of herbal cosmetics entrepreneurs. Humanities, *Arts and Social Sciences Studies*, 263–270.

Kim, Y. J., Lee, J. H., Lee, S. G., & Lee, H. H. (2021). Developing sustainable competitive strategies in the beauty service industry: a SWOT-AHP approach. *Sustainability, 13*(19), 10852.

Krejcie, R. V. & Morgan, D.W. (1970). Determining sample size for research activity. *Educational and Psychological Measurement, 30*(3), 607-610.

Oppong, E., Hinson, R. E., Adeola, O., Muritala, O., & Kosiba, J. P. (2021). The effect of mobile health service quality on user satisfaction and continual usage. *Total Quality Management & Business Excellence, 32*(1-2), 177-198.

Park, Y. W., Hong, P., & Shin, G. C. (2023). Rising and thriving in the post COVID-19 era: a case study of COSMAX, a leader of the Korean cosmetic industry. *Asia Pacific Business Review, 29*(4), 1105-1124.

Park, Y. W., Shin, G. C., & Lee, K. S. (2025). Streamlining Operations: Supply Chain Management in OBM. *In Original Brand Manufacturing Business Model* (pp. 113-132). Singapore: Springer Nature Singapore.

Panitsettakorn, W., Ongkunaruk, P., & Leingpibul, T. (2023). The present state of the cosmetics supply chain in Thailand and the prospective role of Independent Quality Assurance Verifiers (IQAVs) within the supply chain. *Heliyon, 9*(10).

Sato, K., Kodama, K., & Sengoku, S. (2023). Optimizing the relationship between regulation and innovation in dietary supplements: A case study of food with function claims in Japan. *Nutrients, 15*(2), 476.

Worapongpat, N. (2021a). Marketing management guidelines for the complete supplement manufacturing business in Muang Samut Sakhon District. *Journal of Liberal Art of Rajamangala University of Technology Suvarnabhumi, 3*(2), 161–174.

https://so03.tci-thaijo.org/index.php/ art/article/view/252114

Worapongpat, N. (2021b). Service quality of integrated dietary supplement manufacturing business in Mueang Samut Sakhon District, Samut Sakhon Province. *Journal of Political Science, Mahamakut Buddhist University (Online), 1*(2), 41–51.

https://so03.tci-thaijo.org/index.php/ jpsmbu/article/ view/xxxxx

Worapongpat, N. (2023a). Service marketing strategies affecting the use of contract manufacturing business services, dietary supplements SCG Grand Co., Ltd. *Journal of Management Science, Dhonburi Rajabhat University, 5*(1), 1–17.

https://so10.tci-thaijo.org/index.php/msdru/article/ view/530

Worapongpat, N. (2023b). Quality improvement guidelines of effective service management for the services of the support department of direct business members of the health food business group of the Thai Direct Selling Business Association after the COVID-19 situation. *Journal of Liberal Arts RMUTT, 4*(1), 16–25.

https://so07.tci- thaijo.org/ index.php/JLA/article/view/2324

Worapongpat, N. (2024a). The impact of production management on the competitiveness of full-service supplement and beauty product manufacturing businesses: A case study of SCG Grand Co., Ltd. *Journal of Public and Private Issues, 1*(3), 159–171.

https://so17.tci-thaijo.org/index.php/jppi/ article/view/577

Worapongpat, N. (2024b). Strategic leadership based on the four Iddhipāda principles of executives in the comprehensive health and beauty supplement manufacturing business, SCG GRAND Co., Ltd., Samut Sakhon. *Buddhism in Mekong Region Journal, 7*(2), 142–164. https://so06.tci-thaijo.org/index.php/bmrj/article/view/280480

Worapongpat, N. (2025a). Digital leadership of entrepreneurs and productivity in the health and beauty supplement manufacturing industry. *Journal of Public and Private Issues, 2*(3), 116–130. https://so17.tci-thaijo.org/index.php/jppi/article/view/871

Worapongpat, N. (2025b). Best practices (ESG) for the comprehensive OEM business of dietary supplements, health, and beauty: SCG Grand Co., Ltd. and its affiliates. *Chiang Mai University Journal of Economics, 29*(1), 1–14.

https://so01.tci-thaijo.org/index.php/ CMJE/article/view/279192

Worapongpat, N. (2025c). Buddhist entrepreneurial leadership innovation and its impact on employee happiness at work: A case study of the comprehensive health and beauty supplement manufacturing business of SCG GRAND Co., Ltd. and its affiliates. *Journal of Liberal Arts Rajamangala University of Technology Phra Nakhon,* 5(1), 17–33. https://so07.tci-thaijo.org/ index.php/LiberalJ/article/view/8360

Worapongpat, N. (2025d). Management according to the four foundations for accomplishment of executives of complete supplements and cosmetic manufacturing businesses in Samut Sakhon Province. *Journal of Management Science Sakon Nakhon Rajabhat University, 5*(1), 213–226. https://so08.tci-thaijo.org/index.php/JMSSNRU/ article/view/3916

Worapongpat, N. (2025e). Guidelines for ESG management in comprehensive health and beauty supplement businesses with best practices for sustainability. *Journal of Modern Academic Promotion and Development, 3*(2), 47–69.

https://so12.tci-thaijo.org/index.php/MADPIADP/article/view/1784

Worapongpat, N., Limlertrid, T., Zangphukieo, N., Wongkumchai, T., & Muangmee, C. (2023). Factors influencing production order decisions to produce and create health supplement brands through digital media of SCG Grand Co., Ltd. *Journal of Social Innovation and Mass Communication Technology, 6*(1), 33–43. https://doi.org/10.14456/jsmt.2023.4

Worapongpat, N., & Narong Uttamavangso, P. (2024). Strategic leadership according to the four Brahmavihāra principles of business executives producing complete dietary supplements, health and beauty in Mueang District, Samut Sakhon. *Journal of Social Religion and Culture, 5*(2), 53–65. https://so12.tci-thaijo.org/index.php/src/article/view/1368

Worapongpat, N., & Chaoluang, J. (2024). Personnel management according to Brahmavihāra 4 of consumer electronics industrial in Rayong Province. *Journal of Humanities, Social Sciences, and Arts, 5*(2), 77–89. https://so03.tci-thaijo.org/index.php/hsa/article/view/270589