

## A Model for Airline Selection of Ground Handling Service Providers at Suvarnabhumi Airport

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### Abstract

This study investigates the critical factors influencing airlines' selection of ground handling companies at Suvarnabhumi Airport, a major hub experiencing high passenger volumes. Through a qualitative methodology, this research conducted semi-structured interviews to gather data and employed coding analysis technique to interpretate the findings, comprising 16 airline professionals who possess 20 years of utilizing ground handling companies including both managerial and operational levels. The research identifies six key determinants in the decision-making process. The factors include 1) cost-efficiency, 2) airline policy, 3) ground handling company core competencies (encompassing management, operational performance, and employee skills), 4) ground handling company capacity (addressing manpower and equipment availability), 5) ground handling company attributes (such as reputation, service quality, and adaptability), and adherence to 6) authority compliance. The findings are consolidated into the "A Model for Airline Selection of Ground Handling Service Providers at Suvarnabhumi Airport," a comprehensive framework designed to assist airlines and relevant stakeholders in choosing a ground handling provider at Suvarnabhumi Airport or in similar contexts.

**Keywords:** Ground Handling Company, Ground Handling Services, Airport Management, Suvarnabhumi Airport

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## Introduction

Thailand remains the favorite destination among travelers around the globe. The increased number of tourists in particular post-pandemic era results in crucially high statistical volumes of passengers (Wongmonta, 2021). The rise in tourist numbers indicates a significant demand for air travel to Thailand, particularly at Suvarnabhumi Airport, the country's primary airport. Consequently, airlines invest high resources on manpower and ground support equipment to handle the routine operations (Bevilacqua et al., 2015). Given the substantial investment, numerous airlines may seek alternative, more efficient methods to optimize their operations for maximum benefit. As a result, ground handling is essential in supporting foreign air carriers and serves as an alternative source of manpower for operating airlines at major airports in Thailand.

The outbreak of the COVID-19 pandemic has significantly affected the aviation sector, disrupted air travel activities, and raised substantial questions regarding its operations (Dube et al., 2021). In Addition, Vinod (2022) argued that airlines have implemented personnel reductions to mitigate excessive fixed costs, which has significantly affected ground handling organizations. Moreover, the behavior of passengers during air travel has undergone a transformation in the aftermath of the pandemic, presenting challenges for both airlines and ground handling service providers to handle. Still, there is an absence of current research that may assist airlines in making informed decisions regarding the selection of ground handling companies within this altered paradigm.

To adhere to local authority and IATA recommendations, the airport will ensure fair competition in ground handling options, preventing any monopolistic practices for airline members. Suvarnabhumi, the largest airport in Thailand, has been in operation since 28 September 2008, enabling various ground handling organizations to perform business functions (Airport of Thailand PLC, 2024). The Airport Authority of Thailand (AOT) also oversees the concession that allows competing companies in the ground handling sector at Suvarnabhumi Airport to secure a specific period of service operation. Conversely, it seems that air carriers are influenced by factors established by AOT and ground handling companies. Due to the complexities involved in the ground handling sector, airlines have recognized the challenges associated with collaborating with ground handling service providers.

## Proposes

This study aims to investigate the factors influencing airlines' selection of ground handling companies and to propose the ground handling company selection model at Suvarnabhumi Airport. Consequently, the research findings will assist with active ground handling operators in identifying areas for enhancement. Furthermore, for upcoming renewal of contracts or concessions, A Model for Airline Selection of Ground Handling Service Providers at Suvarnabhumi Airport proves advantageous for both airlines and ground handling operators.

## Literature Review

### Ground Handling Significance

Ground handling services involve ground operation from start to finish for every daily routine operation. Bakir et al. (2020) concurred with Schmidberger et al. (2009) that ground-handling is one of the most important services. Ground handling operations at airports involve both airside and landside activities that outline the procedures for managing passengers, cargo, and supplies in compliance with international aviation organizations' standards (Tabares et al., 2021). The following services are technological processes, but they also affect the passenger experience (Humza & Hacioglu, 2023). The diverse engagement of operations, including equipment, vehicles, and employee abilities, is a radical feature of airport and airline ground management (Fitouri-Trabelsi et al., 2013a).

### Factors influencing airlines' selection of ground handling companies at Suvarnabhumi Airport

The airliners can potentially choose the ground handler based on various factors. Complications on considering choice for ground handling company vary several aspects. Full-service carriers which represent a country may possess their own criteria to express their national pride or mutual contract between national flag carriers. The various aspects of choice determinants were reviewed as specified.

### Cost-Efficiency

A great deal of research on pricing has been introduced. Ren et al. (2022) studied differential pricing for aircraft auxiliary services based on heterogeneity in consumer choosing behavior and willingness to pay. Without regard to low-cost carriers, airliners may crucially consider handling cost as priority. Kim et al. (2016) agreed with Bakır et al. (2021) on the similar perspectives that pricing play important factor in choosing airport from stakeholders.

### Trustworthiness

In ground handling business, the reliability of service performance indicates the service quality of ground handling company (Gleave, 2010; Bakir et al., 2021). The trustworthiness of ground handlers consists of multiple components. For sustained development of the ground handling organization, the enterprise must align with appropriate supervision and management, passenger services, ramp services, payload control, cargo services, support services, security, and aircraft maintenance (Çiçek, 2024).

Ground handling company is a service provider which shall imperatively have a good branding image to impact their customer airlines. Similarly, Cocos et al. (2021) confirmed the significance of performance and reputation for air carriers. The opinion of a company's branding image influences candidates for ground handling firms (Pesonen, 2023). In addition, Mumlu Karanfil and Karakuş (2024) contended that the perception of ground handling reputation is based on the products and services provided to customer airlines.

### Efficient Management

In air transport, professionalism is indispensable for the air carriers' trustworthy image and expresses good ground handling company management. Air transport is directly responsible for ensuring passenger safety and security. Efficient management signifies effective organization (Kim, 2016; Yu-Jwo et al., 2020).

To measure work performance, Key Performance Indicators (KPIs) are generally utilized to determine work efficiency. On the other hand, Service Level Agreements (SLAs) and Standard Ground Handling Agreement (SGHA) are regulated to demonstrate the mutual agreement between ground handling companies as service providers and customer airlines. The KPIs from the total

ground handling operation that are deemed to be most crucial are on-time performance (OTP) (Tabares et al., 2021).

Head-counting manpower is indispensably important for customer airlines as crucial service components from ground handling company (Schmidberger et al., 2009; Passaro & Thomas, 2020; Wiltshire, 2018). Rahman and Akbar (2023) argue that ground handling operators require appropriate strategies for the maintenance of ground support equipment, as such equipment may depreciate in value over extended periods of use.

### **Training Compliance**

Training along with up-skilling are also mandated as per International Civil Aviation Organization (ICAO), International Air Transport Association (IATA) and other involved local aviation regulators (Schmidberger et al., 2009; Gleave, 2010; Passaro & Thomas, 2020; Shen et al., 2019). Pekkarinen and Vitikainen (2020) confirmed that the approach for an organization in the aviation industry to retain outstanding employees and attract new ones is to provide chances for employees to grow. Training reduces the staff turnover rate, which is beneficial for the firm recruitment cost.

### **Research Methodology**

Data collection commenced with the approval of the Institutional Review Board (IRB) under protocol ID No. ECNIDA 2025/23. The data collecting occurred in February and March 2025. This research utilized a qualitative methodology to examine the factors influencing airlines' selection of ground handling companies at Suvarnabhumi Airport, focusing on airline personnel at both managerial and operational levels. Sixteen respondents with over twenty years of experience in utilizing ground handling companies were chosen through purposive sampling techniques until data saturation was achieved. Additionally, semi-structured interviews are identified as consisting of five primary questions viz. 1) the crucial factor of selecting ground handling company, 2) preferred attributes of ground handling company, 3) the significant characteristics affecting choice selection of ground handling company, 4) the aspects of ground handling company's improvement areas, and 5) the achievement of the airline goals/KPIs/SGHA standard supported by ground handling company.

All respondents consented to being recorded throughout the interview; they are allowed to decline or answer questions at their discretion. Coding analysis was utilized for analyzing the data obtained from the interviews. Coding involves deconstructing qualitative text data to assess its content and subsequently reconstructing it in a coherent manner (Elliot, 2018).

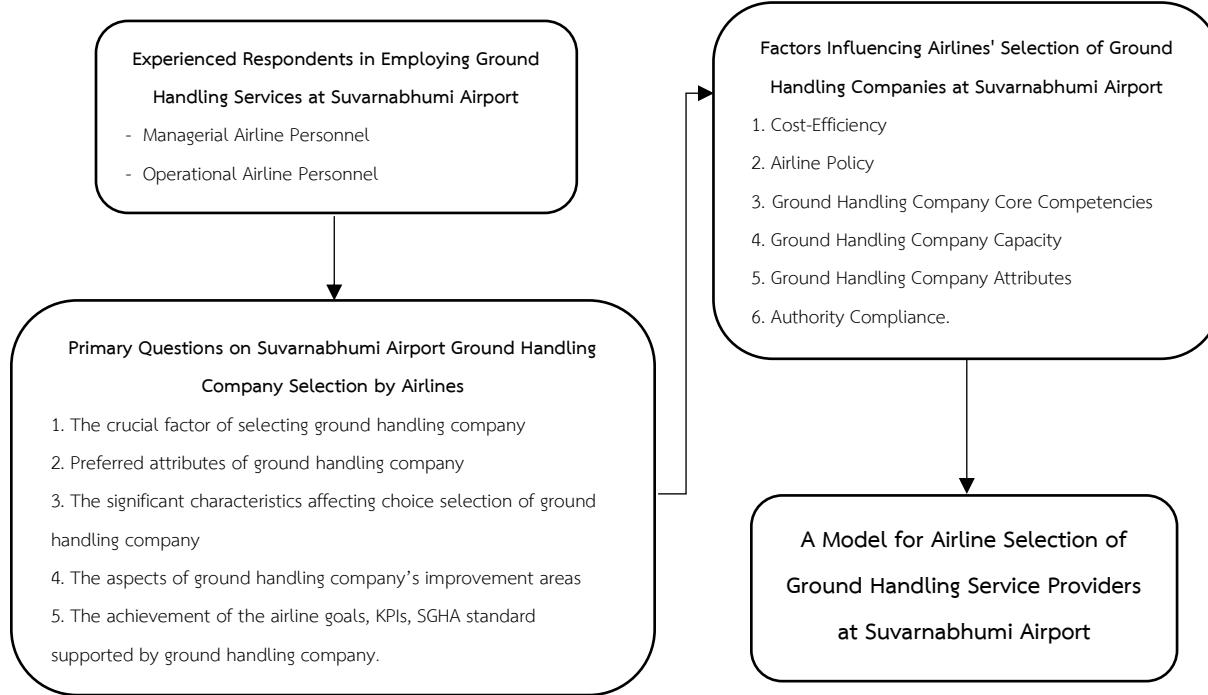


Figure 1: Conceptual Research Framework

## Results

**Respondent's Profiles:** The researcher has interviewed 16 employees from various active airlines operating from/to Suvarnabhumi Airport. The interviewees included 10 airline managerial-level personnel and 6 airline operational-level employees.

The responders represent diverse airline business models, including full-service carriers and low-cost carriers. The average number of years in service for airline managerial and operational level employees is 21.5 years. The respondents were entirely willing to engage in the interview. The responses offered succinct insights regarding their perspectives on past and present issues involving factors affecting airlines' selection of ground handling service providers.

Table 1: The Details of Airline Respondents Utilizing Ground Handling Companies at Suvarnabhumi Airport

Airline Respondents	Position	Number of Years in Service	Airline Details	Type of Airline Business Model	Ground Handling Companies at Suvarnabhumi Airport		
					G1	G2	G3
A1	Station Manager	22	European Airlines Group	FSC	✓	✓	
A2	Vice-Station Manager	21	National Airline from Southeast Asia	FSC	✓	✓	
A3	Station Manager	21	National Airline from Southeast Asia	FSC	✓	✓	
A4	Station Manager	24	National Airline from French Islands South Pacific	FSC		✓	
A5	Operation Manager	10	Chinese Airlines Group	FSC/LCC	✓	✓	✓
A6	Airport Service Duty Officer	24	World's Top 5 Airlines from Middle East	FSC		✓	
A7	Airport Service Duty Officer	20	National Airline from East Asia	FSC	✓		
A8	Manager Airport Services	24	Airline from Special Administrative of China	LCC		✓	
A9	Vice-Station Manager	24	National Airline from East Africa	FSC		✓	
A10	Vice-Station Manager	25	National Airline from South Asia	FSC		✓	
O1	Supervisor Passenger Service	12	National Airline from South Asia	FSC	✓		
O2	Airport Supervisor Passenger Service	25	National Airline from East Asia	FSC		✓	
O3	Station Supervisor	20	Airline from Special Administrative of China	LCC	✓		
O4	Senior Airport Officer	25	National Airline from Southeast Asia	FSC	✓		
O5	Airport Supervisor Service	24	World's Top 5 Airlines from Middle East	FSC	✓	✓	
O6	Senior Airport Service Officer	23	World's Top 5 Airlines from Southeast Asia	FSC	✓		

Note: 'A' represents Managerial Airline Personnel, 'O' represents Operational Airline Personnel

Table 2: Summary of Interview Results

Topic	Subtopics	Respondents
1. Cost-Efficiency	1.1. Budget 1.2. Cost-Worthy 1.3. Cost-Deduction	A1, A2, A3, A4, A6, A8, A10, O2, O5 A2, A3, A6, A7, A8, A10, O2, O5, O6 A8, O1, O4
2. Airline Policy	2.1. Head Office Decision 2.2. Familiarity	A1, A2, A5, A7, O3, O4, O5 A3, O2, O4, O6
3. Ground Handling Core Competencies	3.1. Efficient Management 3.2. Operational Efficiency 3.3. Customer Airline Focus 3.4. Performance Monitoring 3.5. Employee Proficiency 3.6. Employee Attitude 3.7. Employee Communication Skills 3.8. Experienced Employee 3.9. Employee Quality 3.10. Employee Workload and Welfare 3.11. Employee Turnover Rate	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, O1, O2, O3, O5, O6 A1, A2, A3, A5, A8, A9, A10, O5 A1, A3, A4, A5, A6, A7, A8, A9, A10, O1, O5 A2, A4, A5, A6, A7, A9, A10, O6 A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, O1, O2, O3, O6 A2, A3, A5, A6, A10, O1, O2, O4, O5 A3, A5, A8, A10, O1, O2, O3, O5 A2, A4, A6, A7, A9, A10, O1, O2, O3, O5 A2, A3, A4, A5, A7, A10, O1, O2, O3, O4 A2, A7, A5, A10, O5 A1, A5, A6, A8, A10, O4, O5, O6
4. Ground Handling Company Capacity	4.1. Full Handling Services 4.2. Manpower Availability 4.3. GSE Availability	A1, A5, A6, A7, A10, O1, O2, O3, O4, O5, O6 A1, A3, A5, A6, A7, A8, A9, A10, O1, O2, O3, O5, O6 A1, A3, A4, A6, A7, A8, O1, O2, O4, O5, O6
5. Ground Handling Company Attributes	5.1. Service Quality 5.2. Experience 5.3. Compliance Training 5.4. Trustworthiness 5.5. Loyalty 5.6. Reputation 5.7. Standardization 5.8. Modern Organizational Mindset 5.9. Organizational Adaptation	A2, A8, A10, O1, O2, O3, O4 A4, A8, A10, O4, O6 A1, A2, A4, A5, A7, A9, A10, O1, O3, O4, O6 A2, O3, O4, O6 A7, O2, O4, O6 A1, A2, A4, A10, O3, O6 A2, A9, A10 A4, A5, A10, O4, O5, O6 A3, A10, O5, O6

Table 2: Summary of Interview Results (continued)

Topic	Subtopics	Respondents
6. Authority Compliance	6.1. Local Authority Compliance	A5, O2, O3, O5
	6.2. Limited Variety of Choices	A2, A4, O5, O6

**1) Cost-Efficiency:** 1) Budget, 2) Cost-Deduction, and 3) Cost-Worthy

Most foreign air carriers primarily focus on financial considerations to optimize their own advantages. Given the constrained budget, the airlines are pursuing the most profitable ground handling operator while considering their financial resources.

*“According to our head office policy, we firstly regard the budget before choosing the ground handling company.”* (A1)

*“Employing direct personnel is prohibitively expensive for us. We already have various concerns.”* (O1)

*“We believe that the money spent should correspond with the quality received”* (A2)

**2) Airline Policy:** 1) Head Office Decision, and 2) Familiarity

The Airport Authority of Thailand permits air carriers to independently choose their ground handling operators. Nonetheless, the majority respond and rely on their headquarters' decision-making. The partnership between the two company associates strengthened their connection, leading to improved work quality

*“The decision has been made by head office. We follow and respect our organization.”* (A1)

*“Our head office agreed that we should continue with our current ground handling company since we have been working for years.”* (A3)

**3) Ground Handling Core Competencies:** 1) Efficient Management, 2) Operational Efficiency, 3) Customer Airline Focus, 4) Performance, 5) Employee Proficiency, 6) Employee Attitude, 7) Employee Communication Skills, 8) Experienced Employee, 9) Employee Quality, 10) Employee Workload and Welfare, and 11) Employee Turnover Rate

Ground handlers serve as representatives of the airlines. Customer airlines value collaboration with a capable management team, recognizing their effectiveness, responsiveness, employee quality, and proficiency of ground handling operators.

*“My major priority is the management team's accessibility. The management team should occasionally supervise its employees on the job site.” (A8)*

*“Safety and Security procedures should be monitored by the concerned staff from ground handling operator to time to time.” (A9)*

*“No matter how skilled or unskilled ground staff, I do hope to work with those who have a kind attitude and service mind.” (O2)*

**4) Ground Handling Company Capacity:** (1) Full Handling Services (Above and Below Wing Services); (2) Manpower Availability and (3) GSE (Ground Support Equipment) Availability

The preparedness of ground handling organizations regarding personnel and equipment is a critical determinant in selecting ground handling operators.

*“It might not be convenient for my airline which operates 8 flights daily to associate with two different ground handling operators on different functions. So, it will be preferable if the ground handling company can provide full handling services.” (O5)*

**5) Ground Handling Company Attributes:** 1) Service Quality, 2) Experience, 3) Compliance Training, 4) Trustworthiness, 5) Loyalty, 6) Reputation, 7) Standardization, 8) Modern Organizational Mindset, and (9) Organizational Adaptation

Ground handling service providers; qualifications fulfill the operational and managerial requirements of airlines.

*“As a long-term airline, we have informed the ground handling firm several times the pain points. It seems that nothing better ever happened.” (O2)*

*“We employed our previous ground handling company which is not very adaptative. We had to repeat our instructions several times to get the operation done. This is so annoying. After having changed to a new ground handling operator, the situation is on the other hand. The ground handling Organizational Adaptation is a must indeed.” (A3)*

**6) Authority Compliance:** 1) Local Authority Compliance, and 2) Limited Variety of Choices

The influence of regulators and national authorities plays a vital role in availability of ground handling organizations' choice in the rival market.

*“What more can I do? I wish I had more options than the companies that are currently in place. We must select the one that is available.” (A4)*

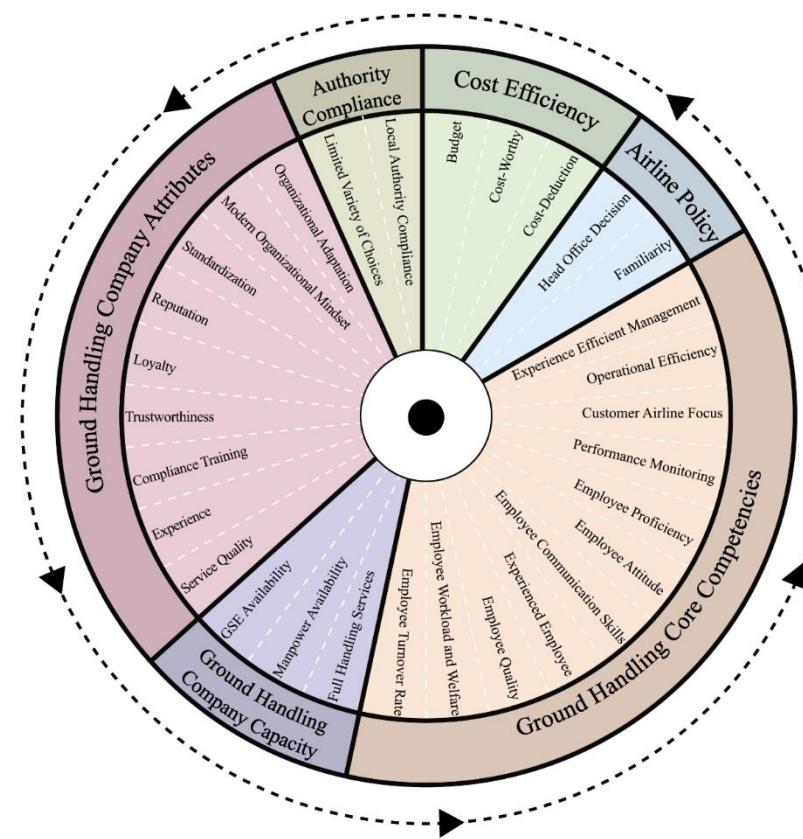


Figure 2: A Model for Airline Selection of Ground Handling Service Providers at Suvarnabhumi Airport

The six primary factors affecting the airline's decision to select the ground handling service providers consist of cost-efficiency, airline policy, ground handling company core competencies, ground handling company capacity, ground handling company attributes and authority compliance. The above variables and their sub-criteria ultimately resulted in the development of a model for airline selection of ground handling service providers at Suvarnabhumi Airport. The framework includes all critical perspectives in ground handling operations.

## Discussion

Research revealed the crucial six aspects influencing airlines' decisions in selecting ground handling contractors at Suvarnabhumi Airport. Cost-efficiency remains a critical factor in decision-making, particularly regarding budgets for most airlines. Theories have been validated by similar

studies, including those by Ren et al. (2022) and Bakir et al. (2021). Airlines acknowledge the significance of the value and quality of service provided to clients in return for their loyalty (Kim, 2016; Ren et al., 2022).

Factors influencing airlines' decision-making in selecting ground handling organizations originate from headquarters. The relationship between ground handling service providers and customer airlines is consistent with the findings of Curtis et al. (2012). Air carriers mostly concentrate on their daily operations, which are fundamentally dependent on ground handling operators. Consequently, the basic operational and managerial competencies of ground handling encompass various essential areas which demonstrate ground handlers' proficiency in servicing customer airlines (Tabares et al., 2021).

Regarding the ground handling organization core competencies in their employee, carriers prefer not to collaborate with personnel lacking knowledge or expertise. Furthermore, personnel exhibit high-quality work and produce successful results which derive from substantial elements of ground handling company employee attitude, quality, experiences, communication skills, workload, welfare and turnover rate. Numerous scholars have addressed comparable subjects, including Ziehe and Helfen (2021) and Barbot (2012).

Results demonstrate that air carriers favor the ground handling operator, which provides extensive handling services for both above-wing and below-wing operations. The results correspond with the study conducted by Fitouri-Trabelsi et al. (2013b), Corrigan et al. (2015) and Justesen (2014).

The overall ground handling company attributes play vital factors affecting the airlines' decision making when hiring the ground handling providers. The mutual regulated standards, i.e. SGHA, KPIs, and SLAs, shall be complied with ground handling operators. The concept is endorsed by various scholars, including Noviantoro and Huang (2022), and Lacic et al. (2016). Most importantly, compliance training is fundamental aspects of aviation regulatory requirements. Effective mandate training empowers airlines to oversee the ground handling personnel qualification necessary for servicing their organization (Pekkarinen & Vitikainen, 2020; Shen et al., 2019). Additionally, client airlines favor ground handling organizations with modern organizational mindset and their ability to adapt with shifted business model (Fitouri-Trabelsi et al., 2013b; Barbot, 2012; Türeli et al., 2019).

It is indisputable that both airlines and ground handling entities operate under the auspices of international regulatory bodies as well as local governing authorities. The relevant authorities also regulate the concession and number of service providers. (Barbot, 2012; International Air Transport Association, 2018).

## Practical Implications

A Model for Airline Selection of Ground Handling Service Providers at Suvarnabhumi Airport has been formulated, responding not only to air carriers but also to the pertinent stakeholders, as elaborated below.

### 1) Between airlines and ground handling companies

The six-dimensional factors which affect airlines' decision in choosing ground handling services could render conceptualize unsolvable problematic issues between customer airlines and ground handling service providers. Ground handlers can focus on critical domains of improvements aligned with the requirements of customer airlines.

### 2) Between ground handling companies and Airport Authority of Thailand (AOT)

AOT facilitates for both airlines and ground handling operators. Ground handling companies rely on available resources and infrastructure provided by airport authorities which reflect ground handlers' service quality. Hence, AOT may concentrate on relevant aspects of airport facilities, infrastructure, policy, and authority, including costs and fees which render consequences to both airlines and ground handling service providers.

### 3) Between airlines and Airport Authority of Thailand (AOT)

Air carriers play vital roles in economic contributors to airports, which can also assess the quality and variety of services offered. Similarly, airlines depend significantly on airport facilities and infrastructure. Furthermore, airlines necessitate enhanced collaboration with AOT, namely through the implementation of contemporary technologies to improve passenger management, viz. self-service technologies (SSTs). The research model for airline selection of ground handling service providers at Suvarnabhumi Airport is essential for airport authorities to comprehend the challenges encountered by airlines and ground handling operators. This understanding fosters mutual cooperation, leading to significant improvements in service quality and branding image.

## Conclusion

This study was designed to investigate the factors influencing airlines' selection of ground handling companies and to propose the Ground Handling Company Selection Model at Suvarnabhumi Airport. The finding identifies six major aspects of essential factors influencing the airline's decision to select the ground handling service providers i.e. cost-efficiency, airline policy, ground handling company core competencies, ground handling company capacity, ground handling company attributes and authority compliance. Six pertinent characteristics and their sub-criteria could assist airlines or relevant stakeholders in selecting ground handling organizations at Suvarnabhumi Airport or similar business contexts. Additionally, AOT, as the airport operator, facilitates collaboration between airlines and ground handling companies under its authority, enabling greater comprehension among all relevant stakeholders.

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