Determining a System of Performance Analysis Criteria by Tourism Sectors for Tourism Enterprises

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ABSTRACT: Tourism is a general business with operations related to accommodation, food and beverage, travel, and entertainment industries. The performance measurement for each tourism sector is different. To define a system of indicators to analyze the performance of each tourism sectors for tourism enterprises, a study was conducted with the particiaption of 200 tourism enterprises in Vietnam in the following fields: accommodation, food and beverage, travel and entertainment from January to March 2021 through survey questionnaires, in-depth telephone interviews and descriptive statistical methods for analysis. Research results have shown that tourism enterprises are very interested in performance analysis indicators, but they have not known which indicators to choose for analysis and how the analysis can be conducted accordingly. On that basis, the study has proposed a system of performance analysis indicators for each tourism sector, including accommodation, food and beverage, travel and entertainment for tourism enterprises to apply and analyze at their places.
KEYWORDS: analytical indicators, enterprises, operational efficiency, tourism business.

INTRODUCTION

This research is an empirical study on the identification of a system of indicators for performance analysis for each tourism sector in tourism enterprises. It is a case study in tourism enterprises in Vietnam, thereby showing the views of tourism enterprises on the level of interest in using performance analysis indicators for each tourism sector to propose a system of analytical indicators. The study was carried out with a convenient sampling and a survey of 200 tourism enterprises in Vietnam through questionnaires for data collection.

With the collected questionnaires, the authors considered the completeness, representativeness, and comprehensiveness of the research sample to ensure that the samples collected from the surveyed enterprises are reliable enough for analysis and evaluation. The collected survey questionnaires must fulfill the following conditions (i) including representatives for both large, medium, and small scale; (ii) including representatives for both state and non-state capital ownership; (iii) including representatives for both joint-stock companies, limited liability companies, private enterprises and other types of enterprises; (iv) including representatives for sectors, namely food and beverage, accommodation, travel and entertainment.

The main objective of this study is to highlight that it is essential for tourism enterprises to complete performance analysis indicators for each tourism sector. Therefore, the authors conducted a survey to answer the following research questions: (i) To analyze the performance of each tourism sector, what indicators should be analyzed?; and (ii) How are those indicators analyzed and evaluated?

PERSPECTIVES ON PERFORMANCE ANALYSIS IN TOURISM BUSINESS

Based on the studies of Nguyen (2005), Ngo and Nguyen (2008), Nguyen (2009), Nguyen (2010), Tien (2015), Nguyen et al. (2019) and Nguyen (2019), the authors believe that the highest manifestation of operational efficiency is the ability to profit from operations; it is because the ultimate and most important purpose of an enterprise is to generate profits for the business and bring benefits to the society. Therefore, when analyzing operations, it is necessary to focus on scrutinizing the profitability of resources used for operations; profitability can only be achieved when the enterprise has a good operational capacity, the ability to exploit and manage the resources with high efficiency. In addition, tourism is a specific industry that is influenced by many

factors and diverse in business activities. Therefore, to fully and accurately evaluate the operational efficiency in the tourism business, it is believed that: first of all, it is vital to evaluate the performance of the tourism enterprises through the criteria of capacity analysis according to business lines, followed by assessing the profitability of resources. Specifically:

First, about the analysis of operational capacity:

Operational capacity is expressed through the ability to exploit resources; it represents the ability to exploit and use the available resources of the enterprise in the course of business activities in each line of business as well as the waste of resources on activities to generate revenue for the enterprise. The analysis criteria may include total revenue earned from activities, the capacity of using existing resources, frequency of exploiting resources, average exploitation time of resources, average productivity in the use of resources, the average price of a resource, and the average cost per unit of resource used.

When analyzing operational capacity by the tourism sector, the value of resource factors used for analysis depends on the surveyed tourism sector. For example: (i) For the accommodation business, the resource factor value can be the number of rooms, the number of beds, the number of room service staff, the number of staying guests, the number of days the guests stay, etc; (ii) For the food and beverage business, the resource factor value can be the number of restaurants, the number of seats, the number of restaurant staff, the number of dishes, etc; (iii) For the travel business, the resource factor value can be the number of available tours, the number of available destinations, means of passenger transport, etc; and (iv) For the entertainment business, the resource factor value can be the number of games, the number of entertainment points, the number of staff serving the games, etc. Thus, depending on whether tourism enterprises conduct business in one or more of the above-mentioned business lines, they will select appropriate resource factors for the issues to be scrutinized.

The general formula to determine the efficiency of the ability to exploit the above resources according to each tourism business line is as follows:

(1) Total revenue earned from operations:

$$\text{The total revenue from operations} = \text{Amount of resources used from operations} \times \text{Service unit price from operations} \quad (2.1)$$

This indicator shows how much revenue value is generated by the number of resources used in the period from operations. If this indicator is high, the income from the exploitation of resources is with higher economic efficiency, contributing to improving the efficiency of use, business efficiency, and vice versa.

(2) Capacity of using existing resources:

$$\text{The capacity of using resources} = \frac{\text{Total resources used}}{\text{Total resources available for use}} \times 100 \quad (2.2)$$

This indicator shows how much the number of resources used in the enterprise's total resources available for use. The higher this indicator is calculated, the better the enterprise exploits resources and vice versa.

(3) Frequency of exploitation of resources:

$$\text{Frequency of exploitation of resources} = \frac{\text{The total amount of resources exploited}}{\text{Total resources available}} \quad (2.3)$$

This indicator shows the level of exploitation of resources in the period compared to the number of existing resources of the enterprise. The higher the index, the better, and vice versa.

(4) Average time to exploit resources:

$$\text{Average time to exploit resources} = \frac{\text{Total time to exploit resources in the period}}{\text{The total amount of resources exploited}} \quad (2.4)$$

This indicator shows how long each unit of resource will be exploited. The higher this indicator, the more efficiently the enterprise's resources are used.

(5) Average capacity of using resources:

$$\text{The average capacity of using resources} = \frac{\text{The total value of exploiting revenue}}{\text{The total amount of resources used}} \quad (2.5)$$

This indicator shows how much revenue per unit of resources used on average. The higher this indicator, the greater the ability to generate revenue from resources and vice versa.

(6) Average unit price of a resource used:

$$\text{The average unit price of a resource used in the period} = \frac{\text{Total revenue for the period}}{\text{Total resources exploited}} \quad (2.6)$$

This indicator shows how much a unit of exploited resource is worth on average.

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(7) Average cost per unit of resource used:

$$\text{Average cost per resource unit} = \frac{\text{Total expenses for the period}}{\text{The total amount of resources exploited}} \quad (2.7)$$

This indicator shows how much is wasted per unit of exploiting resources on average; the lower this indicator the better and vice versa.

Second, about profitability analysis criteria:

The profitability of an enterprise represents the ability to make a profit from input resources, input or output costs reflect the production results of the enterprise.

The general formula to determine the profitability of each resource is as follows:

$$\text{Profitability coefficient of each resource} = \frac{\text{Output reflecting profit}}{\text{Input resources, input or output costs reflecting production results}} \quad (2.8)$$

This indicator indicates that to produce a unit of output reflecting profit, how many units of input resources, input or output costs reflecting production results the enterprise must spend. The higher this indicator, the higher the profitability of the enterprise, the higher the operational efficiency of the enterprise and vice versa.

When applying this indicator to analyze tourism enterprises, it is possible to calculate the profitability for each resource element. Besides, this indicator can also be applied to calculate the profitability for each operation of accommodation, food and beverage, travel, entertainment, helping the analyst have a more comprehensive view of the profitability of each tourism sector.

At the same time, from the perspective of analyzing the performance of tourism enterprises, when using data sources for analysis, analysts often use a system of financial statements prepared at the end of each accounting period or the end of the accounting year. As a result, there is little mention of the specificity as well as the separateness of tourism business operations. Therefore, when analyzing operational efficiency in the tourism business, it is necessary to focus on specific factors, which greatly affects the performance analysis indicators of tourism enterprises (Pham, 2002; Nguyen, 2014; Nguyen, 2015; Tien, 2019; Tran, 2019; Nguyen, 2021). Specifically:

First, the influence by the value and asset investment structure. In the tourism business, investment activities are usually in fixed assets, such as building hotels, restaurants, amusement parks, purchasing means of transport, etc. In the structure of investment assets of the enterprise, fixed assets account for a very large proportion from 70% to 85% of the total value of assets of the whole enterprise. However, assets have a relatively long time to be effective and to recover capital, especially in the early stages of operation, when the enterprise does not have enough regular customers to bring return profits to the enterprise, the profitability of total assets or invested capital is very low.

Second, the influence of cost structure in revenue. Due to the specificity of the industry, there is a huge difference in costs for tourism business operations. For example, for accommodation and travel businesses, the cost to conduct service provision activities for customers compared to the turnover is very low; meanwhile, those in the food and beverage business are usually quite high. Therefore, when analyzing operational efficiency in the tourism business, it is essential to evaluate each activity separately to see the real effectiveness of each operation.

Third, the influence by the seasonal nature of the tourism business. Tourism business operations are greatly affected by seasonality; the seasonality is most clearly shown in the weather season, festival season, and wedding season.

Fourth, the influence by local or national historical, cultural, and political institutions in the tourism business. With localities associated with many historical and cultural relics, tourism business, especially travel business and accommodation business in these localities will develop in a stronger and more diversified manner than in other locations. Therefore, when evaluating, analyzing, and comparing the performance of tourism enterprises, analysts need to pay attention to this factor to have more accurate comments.

Fifth, the influence of geographical and natural factors in the tourism business. This is a factor that greatly affects the efficiency of tourism business operations of enterprises, especially entertainment business activities. For places endowed by nature with many scenic spots, beautiful scenery, and favorable geographical conditions, tourism business operations will be more diverse and richer with various entertainment activities.

Sixth, the influence by socio-economic conditions and customs. This is the factor that has the most impact on the consumption of tourism products and services. A place with better socio-economic conditions, higher income, and a more liberal lifestyle are where people spend more on travel or entertainment and vice versa. This makes the efficiency of the tourism business dependent on socio-economic conditions as well as the way of life of the population where tourism operations take place.

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In short, due to the characteristics of the tourism industry, tourism business operations have quite big differences compared to other material-production industries. Therefore, when analyzing the efficiency of tourism business operations, it is vital to consider the above-mentioned influential factors and define the criteria to choose the indicators for analysis, evaluation, and commenting to suit this business industry.

METHODOLOGY
Research process
The group of authors employed descriptive statistics research methods and tested mean values to utilize in the research process. The research process was carried out by the authors is illustrated by the following diagram:
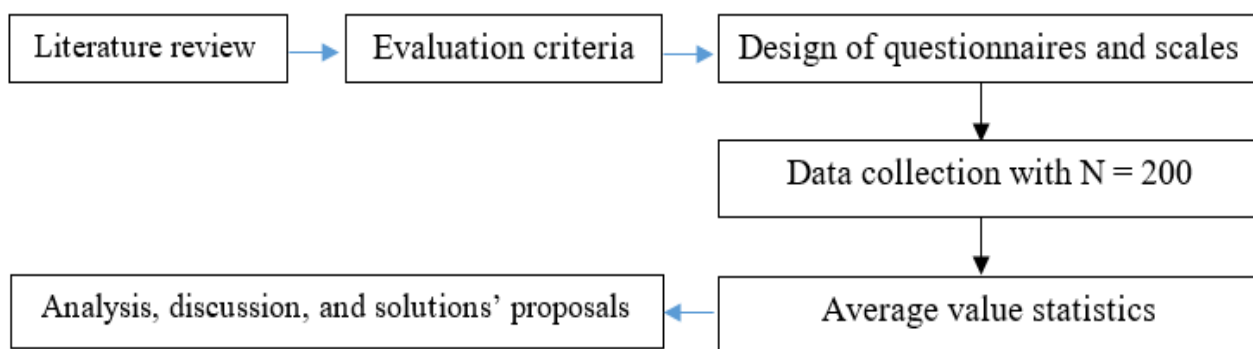

Figure 1: Research process

DATA COLLECTION METHODS
 Source of data collected: The authors collected data for analysis by survey method, the expert method through survey questionnaires. The authors designed a questionnaire to gather opinions from subjects such as senior and mid-level managers at tourism enterprises in Vietnam with a total number of 200 questionnaires, including 50 questionnaires for food and beverage businesses, 50 for accommodation businesses, 50 for travel businesses, and 50 for the entertainment business.
Methods of collecting data: The main methods employed to collect data are: (i) directly submitting the survey form and (ii) submitting the survey form via the Google Form application. In addition, the authors also conducted face-to-face interviews with experts in the field of tourism, managers, scientists with expertise in the field of tourism business, about the content of the survey questionnaire. The authors also carried out phone interviews with tourism enterprises in the surveyed area to clarify issues that need to be researched.
Methods of processing and analyzing data
The total number of survey questionnaires collected by the author group was 200.

After collecting enough questionnaires for the study, the authors transferred to Excel, coding by part for each variable of the survey. Then, all the data was into SPSS 22.0 software. In the process of data processing and analysis, several analytical and testing tools on SPSS software were utilized as follows: (i) Sample statistics, the purpose of use for statistics and calculation of the percentage of research samples according to criteria for evaluation and classification, etc. and (ii) Descriptive statistics and average value test, to calculate the average value for evaluation of enterprises for the survey indicators. The mean test is to evaluate the mean value of the factors compared to the mean value of 3.0, to see the importance or the level of interest in use.

STATISTICAL RESULTS ON THE LEVEL OF INTEREST OF ENTERPRISE GROUPS IN PERFORMANCE ANALYSIS INDICATORS FOR EACH TOURISM BUSINESS LINE
In this study, the authors assessed the level of interest of enterprises in performance analysis indicators based on the Likert scale with 5 levels of options, including 1 = Very disinterested, 2 = Not interested, 3 = Neutral, 4 = Interested, and 5 = Very interested. Therefore, if the average value of the survey indicators is less than 3.0, it means that businesses are not interested in the survey criteria, and if the result is greater than 3.0, it means that businesses are very interested in the survey indicators. At the same time, the authors also made statistics of enterprises by large, medium, and small scale to see the difference between groups of enterprises.

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Accommodation business

Table 1: Statistics on the level of interest in performance analysis indicators in accommodation enterprises

		Enterprise size		
		Large scale	Medium scale	Small scale
Total room revenue	Mean	4.72	4.54	4.76
Room occupancy capacity	Mean	4.24	4.62	4.64
Bed occupancy capacity	Mean	4.16	4.82	4.61
Frequency of room use, rooms/beds	Mean	3.73	3.91	3.73
Number of arrivals versus bookings	Mean	3.46	3.67	3.39
Average length of stay	Mean	4.73	4.71	4.63
Average room rate	Mean	4.43	4.54	4.71
Labor productivity of room staff	Mean	3.73	3.62	3.60
Average cost per room	Mean	3.25	3.33	3.26
Rate of turnover/room/bed	Mean	4.51	4.63	4.74
Rate of return/room/bed	Mean	4.05	3.77	3.69

(**Source:** The authors synthesized from the calculation results)

Through the statistics in Table 1, it is shown that most of the above analytical indicators in all three groups of enterprises have the average value greater than three (> 3.0), which shows that it is significant in terms of interest in use for analytical indicators in enterprises. However, although the average values of the indicators are different between groups of enterprises, some indicators are still prominent in their frequency of use in groups of enterprises, for example, large-scale enterprises for the value of frequently using the following criteria: total room revenue, room occupancy rate, bed occupancy capacity, the average length of stay, average room rate, rate of revenue per room/bed, etc.

Food and beverage business

Table 2: Statistics on the level of interest in performance analysis indicators in food and beverage enterprises

		Enterprise size		
		Large scale	Medium scale	Small scale
Total revenue of food and beverage service	Mean	4.56	4.63	4.71
Restaurant usage capacity	Mean	4.67	4.58	4.64
Seating capacity	Mean	4.33	4.62	4.84
Frequency of use of seats	Mean	3.84	3.72	4.23
Number of arrivals versus bookings	Mean	4.06	3.55	4.00
Average meal	Mean	4.83	4.72	4.86
Restaurant average revenue	Mean	4.57	4.64	4.45
Average revenue per seat	Mean	4.73	4.76	4.71
Labor productivity of restaurant staff	Mean	3.73	3.54	4.17
Average cost per meal	Mean	4.71	4.75	4.73
Rate of revenue/restaurant/seat	Mean	4.80	4.71	4.84
Profit margin/restaurant/seat	Mean	3.72	3.76	3.66

(**Source:** The authors synthesized from the calculation results)

Through the statistics in Table 2, it is shown that most of the above analysis indicators in all three groups of enterprises have the average value greater than three (> 3.0), which shows significance in terms of interest in use for analytical indicators in enterprises. However, the average value of the indicators between groups of enterprises is different, for example, large-scale enterprises give the low values of the indicators of frequency of using seats, labor productivity of restaurant staff, profit margin/restaurant/seat, whereas the level of interest and use, while the remaining criteria are of the value of frequent use.

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Travel business

Table 3: Statistics on the level of interest in performance analysis indicators in travel enterprises

		Enterprise size		
		Large scale	Medium scale	Small scale
Total revenue of travel services	Mean	4.45	4.52	4.55
Transport unit usage capacity	Mean	4.67	4.70	4.42
Frequency of using tour services	Mean	4.40	4.49	4.49
Frequency of arrivals compared to bookings	Mean	3.46	3.35	3.25
Average revenue of tour services	Mean	4.24	3.86	3.82
Average revenue of transportation services	Mean	4.73	4.46	4.44
Labor productivity of tour staff	Mean	4.24	4.53	4.54
Average cost for a tour	Mean	4.46	4.45	4.48
Revenue/tour ratio	Mean	3.89	3.65	3.53
Profit /tour ratio	Mean	4.29	4.47	4.41

(**Source:** The authors synthesized from the calculation results)

Through the statistics in Table 3, it is shown that most of the above analysis indicators in all three groups of enterprises have an average value of three or more (>3.0), which shows that it is significant in terms of interest in the use of analytical indicators in enterprises. However, the average values of the indicators between groups of enterprises are different, for example, large enterprises give the values of the indicators of frequency of arrivals compared to bookings and the ratio of revenue per tour at a low level of interest, whereas the remaining criteria are of the value of frequent use.

Entertainment business

Table 4: Statistics on the level of interest in performance analysis indicators in entertainment enterprises

		Enterprise size		
		Large scale	Medium scale	Small scale
Total revenue of entertainment	Mean	4.77	4.73	4.72
Playground usage capacity	Mean	4.48	4.51	4.55
Frequency of using entertainment services	Mean	3.67	3.84	3.56
Average revenue of entertainment services	Mean	4.74	4.65	4.57
Service staff labor productivity	Mean	3.96	4.11	3.83
Average cost of guest/game	Mean	4.24	4.15	4.14
Revenue/game ratio	Mean	4.73	4.22	4.51
Rate of return/game	Mean	3.81	3.75	3.59

(**Source:** The authors synthesized from the calculation results)

Through the statistics in Table 4, it is shown that most of the above analytical indicators in all three groups of enterprises have the average value greater than three (> 3.0), which shows that it is significant in terms of interest in use for analytical indicators in enterprises. However, the average value of the indicators between groups of enterprises is different, for example, the group of large and small scale enterprises gives the values of the indicators of frequency of using entertainment services, productivity rate of staff labor, and profit/game ratio at the low level of interest, while the remaining criteria are of the value of frequent use.

RESULTS OF IN-DEPTH INTERVIEWS WITH ENTERPRISES ABOUT THE USE OF ANALYTICAL INDICATORS

To interview enterprises about the use of performance analysis indicators, for each questionnaire, the authors collected contact phone numbers and emails. Based on the phone numbers the enterprises provided, the authors selected and randomly phoned to interview 60% of the surveyed enterprises (corresponding to 120 surveyed enterprises). The interview results show that: (i) Most enterprises believe that the performance indicators are essential and important for enterprises; (ii) The level of use of analytical indicators in practice is not high; most enterprises state that they do not understand well how to calculate indicators as well as which data sources to use for analysis and how to comment appropriately on analytical criteria. Thus, it is shown that analyzing the performance of enterprises is necessary, but enterprises still face many difficulties and confusion in using analytical

indicators. From the survey results in Sections 4 and 5, the authors proposed analytical criteria and guidelines for analyzing the performance of tourism enterprises in each tourism business line in Vietnam, which is presented in Section 6 of this research paper.

PROPOSING A SYSTEM OF PERFORMANCE ANALYSIS INDICATORS FOR EACH TOURISM BUSINESS LINE

Accommodation business

(1) Room (bed) revenue:

$$\text{Room (bed) revenue} = \sum_{i=1}^{n} Q_i \times H_i \qquad (4.1)$$

In which:

$$Q_i : \text{Number of rooms (beds) for rent Type i}$$
$$H_i : \text{Unit price of rooms (beds) for rent Type i}$$

This indicator shows the total value of revenue from the rental of rooms or beds in the period (the period can be measured in weeks, months, quarters, or years) of the enterprise.

(2) Rate of revenue for each type of room:

$$\text{Rate of room revenue Type i} = \frac{\text{Value of revenue from room type i}}{\text{Total revenue of room types in the period}} \times 100 \qquad (4.2)$$

This indicator shows that for the total revenue of all types of rooms for rent in the period, the revenue of type i rooms accounts for what percentage.

(3) Room occupancy (bed):

$$\text{Room occupancy (bed)} = \frac{\text{Total number of rooms (beds) rented}}{\text{Total number of rooms (beds) available for rent}} \times 100 \qquad (4.3)$$

This indicator shows, of the total number of rooms (beds) available for rent, what percentage of the rooms (beds) rented is.

(4) Frequency (rotation) of occupying rooms (beds):

$$\text{Frequency (rotation) of occupying rooms (beds)} = \frac{\text{Total number of guests in the period}}{\text{Total number of rooms (beds) available in the period}} \qquad (4.4)$$

This indicator shows the level of exploitation of guests in the period compared to the number of existing rooms (beds) of the unit.

(5) Frequency of arrivals compared to bookings:

$$\text{Frequency of arrivals compared to bookings} = \frac{\text{Total number of customers coming to rent}}{\text{Total number of customers contacting to make a reservation}} \times 100 \qquad (4.5)$$

This indicator shows the percentage of customers coming to the accommodation compared to the number of customers who have contacted to make a reservation (secured or unsecured).

(6) Average length of stay:

$$\text{Average length of stay} = \frac{\text{Total number of days and nights customers stay in the period}}{\text{Total number of guests coming to rent in the period}} \qquad (4.6)$$

This indicator shows how long is the average length of stay for a customer.

(7) Average room (bed) price:

$$\text{Average room (bed) price} = \frac{\text{Total revenue of rooms (beds) in the period}}{\text{Total number of rooms (beds) for rent in the period}} \qquad (4.7)$$

This indicator shows the average price of a room (bed) of the rental unit in the period.

(8) Labor productivity of room service staff:

$$\text{Labor productivity of room service staff} = \frac{\text{Total room rental revenue in the period}}{\text{Total number of room service staff in the period}} \qquad (4.8)$$

This indicator shows how much revenue will be generated by a staff serving room rental in the period.

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(9) Average cost per room:

$$\text{Average cost per room} = \frac{\text{Total cost of room rental in the period}}{\text{Total number of rooms available for the period}} \quad (4.9)$$

This indicator shows how much money the unit has to spend maintaining a room during the period for operation.

(10) Room rate (bed)):

$$\text{Room revenue ratio (beds) in the period} = \frac{\text{Total revenue from accommodation activities during the period}}{\text{Total number of rooms (beds) available in the period}} \times 100 \quad (4.10)$$

This indicator shows how much revenue an existing room (bed) of the unit can generate in a period.

(11) Room margin (bed):

$$\text{Room (bed) profit margin in the period} = \frac{\text{Total profit from accommodation activities during the period}}{\text{Total number of rooms (beds) available in the period}} \times 100 \quad (4.11)$$

This indicator shows how much profit an existing room (bed) of the unit can generate in a period.

Food and beverage business

(1) Food and beverage business revenue:

Food and beverage activities are divided into three different types, including, food, beverage and conferences. These indicators were calculated as follows:

+ Food business:

$$\text{Food business revenue} = \text{The total number of diners who ordered meals} \times \text{Meal unit price of type i set} \quad (4.12a)$$

+ Beverage business:

$$\text{Revenue of beverage products} = \text{The total quantity of beverage type i} \times \text{The unit price of the beverage of type i} \quad (4.12b)$$

+ Hall/conference business:

$$\text{Revenue from hall/conference business} = \text{The total value of customers' hall/conference rental orders during the period} \quad (4.12c)$$

These indicators show the total value of revenue from trading of food and beverage products in the period (period can be measured in weeks, months, quarters, or years) of the unit.

(2) Ratio of turnover of each type of food and beverage business:

$$\text{Rate of revenue of type i} = \frac{\text{Value of revenue from trading goods of type i}}{\text{Total revenue of food and beverage business in the period}} \times 100 \quad (4.13)$$

This indicator shows, of the total revenue from the food and beverage business in the period, the revenue of type i products accounts for what percentage. Type i items in the food and beverage business can be food, drinks, or hall/conference rentals.

(3) Restaurant capacity (seats):

$$\text{Restaurant capacity (seats)} = \frac{\text{Total number of restaurants (seats) used}}{\text{Total number of restaurants (seats) used}} \times 100 \quad (4.14)$$

This indicator shows, of the total number of restaurants (seats) currently available for use by the unit, what percentage of restaurants (seats) are used during the period.

(4) Frequency (rotation) of using restaurants (seats):

$$\text{Frequency (rotation) of using restaurants (seats):} = \frac{\text{Total number of diners in the period}}{\text{Total number of restaurants (seats) available during the period}} \quad (4.15)$$

This indicator shows the level of exploitation of diners in the period compared to the number of existing restaurants (seats) of the unit.

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(5) Frequency of diners' arrivals compared to reservation:

$$\text{Frequency of diners' arrivals compared to reservation} = \frac{\text{Total number of diners served}}{\text{Total number of guests contacting to make a reservation}} \times 100 \quad (4.16)$$

This indicator shows the percentage of diners who came for a meal compared to the number of guests who contacted to make a reservation (secured or unsecured).

(6) Average restaurant revenue (seats):

$$\text{The average revenue per restaurant (seats)} = \frac{\text{Total revenue of food and beverage business in the period}}{\text{Total number of restaurants (seats) available during the period}} \quad (4.17)$$

This indicator shows how much revenue a restaurant (seat) uses for business in the period on average.

(7) Average meal:

$$\text{The unit price of an average meal} = \frac{\text{Total food revenue in the period}}{\text{Total number of meals served during the period}} \quad (4.18)$$

This indicator shows how much is the average price of a meal of the unit in the period

(8) Labor productivity of restaurant staff:

$$\text{Labor productivity of restaurant staff:} = \frac{\text{Total revenue of restaurant business in the period}}{\text{Total number of staff serving the restaurant during the period}} \quad (4.19)$$

This indicator shows how much revenue will be generated by restaurant staff in the period.

(9) Average cost per meal:

$$\text{Average cost per meal in a period} = \frac{\text{Total cost for food and beverage services in the period}}{\text{Total number of meals served during the period}} \quad (4.20)$$

This indicator shows how much money the unit must spend serving a meal in the period.

(10) Restaurant profit margin (seats):

$$\text{Restaurant profit margin (seats) in a period} = \frac{\text{Total profit from food and beverage business in the period}}{\text{Total number of restaurants (seats) available in the period}} \times 100 \quad (4.21)$$

This indicator shows how much profit an existing restaurant (seat) of the unit can generate in a period.

Travel business

(1) Revenue from travel business:

$$\text{Revenue from travel business} = \text{Total number of guests served} \times \text{Tour unit price for type i} \quad (4.22)$$

These indicators show the total value of revenue from the travel business in the period (the period can be in weeks, months, quarters, or years) of the unit.

(2) Percentage of travel revenue by destination:

$$\text{Percentage of travel revenue by destination} = \frac{\text{Total revenue of tours by destination}}{\text{Total revenue of travel business}} \times 100 \quad (4.23)$$

This indicator shows, of the total revenue from travel business in the period, what percentage the revenue from each destination accounts for.

(3) Transport unit usage capacity:

$$\text{Transport unit usage capacity} = \frac{\text{Total number of transport units used}}{\text{Total transport units available for use}} \times 100 \quad (4.24)$$

This indicator shows the total number of transport units available for use by the unit, what percentage of the transport units is used during the period.

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(4) Frequency (rotation) of using tour services:

$$\text{Frequency (rotation) of using tour services} = \frac{\text{Total number of guests served during the period}}{\text{Total number of tour services currently in operation in the period}} \quad (4.25)$$

This indicator shows the level of exploitation of tourists in the period compared to the number of tours in operation of the unit.

(5) Frequency of arrivals compared to bookings:

$$\text{Frequency of arrivals compared to bookings} = \frac{\text{Total number of guests served}}{\text{Total number of guests contacting to book tours}} \times 100 \quad (4.26)$$

This indicator shows the percentage of visitors using the tour of the unit compared to the number of guests who have contacted to book the tour (guaranteed or unsecured).

(6) Average revenue of tour services (transport unit):

$$\text{Average revenue of tour services (transport unit)} = \frac{\text{Total revenue of travel business in the period}}{\text{Total number of tours in operation (existing transport units) in the period}} \quad (4.27)$$

This indicator shows how much revenue is generated by an operating tour or 1 transport unit used for business during the period.

(7) Average unit price for a tour:

$$\text{The average unit price for a tour} = \frac{\text{Total revenue of travel business in the period}}{\text{Total number of tours served in the period}} \quad (4.28)$$

This indicator shows how much is the average unit price of a tour in the period.

(8) Labor productivity of tour staff:

$$\text{Labor productivity of tour staff} = \frac{\text{Total revenue of travel business in the period}}{\text{Total number of tour staff during the period}} \quad (4.29)$$

This indicator shows how much revenue will be generated by a tour staff in the period.

(9) Average cost per tour:

$$\text{The average cost for a tour in the period} = \frac{\text{Total cost for serving tours in the period}}{\text{Total number of tours served in the period}} \quad (4.30)$$

This indicator shows how much money the unit has to spend serving a tour in a period.

(10) Tour revenue ratio:

$$\text{Tour revenue ratio in the period} = \frac{\text{Total travel revenue in the period}}{\text{Total number of tours served in the period}} \times 100 \quad (4.31)$$

This indicator shows, on average, how much revenue is generated by a tour operated by the unit in a period.

(11) Tour profit margin:

$$\text{Tour profit margin in the period} = \frac{\text{Total profit from travel activities in the period}}{\text{Total number of tours served in the period}} \times 100 \quad (4.32)$$

This indicator shows, on average, how much profit can be generated by a tour that has been exploited for the service of the unit in a period.

Entertainment business
(1) Entertainment business revenue:

$$\text{Entertainment business revenue} = \text{Total number of guests served} \times \text{The unit price of entertainment games of type i} \quad (4.33)$$

These indicators indicate the total value of revenue from the entertainment business in the period (the period can be measured in weeks, months, quarters, or years) of the unit.

(2) Rate of revenue for each entertainment activity:

$$\text{Rate of revenue for each entertainment activity} = \frac{\text{Total revenue of entertainment activities}}{\text{Total revenue of entertainment business}} \times 100 \quad (4.34)$$

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This indicator shows, of the total revenue from the entertainment business in the period, what percentage the revenue from each entertainment activity accounts for.

(3) Usage capacity of entertainment spots:

$$\text{Usage capacity of entertainment spots} = \frac{\text{Total entertainment spots used}}{\text{Total number of entertainment spots available for use}} \times 100 \quad (4.35)$$

This indicator shows what percentage of the total number of entertainment spots available for use in the period.

(4) Frequency (rotation) of using entertainment services:

$$\text{Frequency (rotation) of using entertainment services} = \frac{\text{Total number of guests served during the period}}{\text{Total number of entertainment spots available for use in the period}} \quad (4.36)$$

This indicator shows the level of exploitation of guests in the period compared to the number of entertainment service spots being exploited by the unit.

(5) Average revenue of entertainment services:

$$\text{Average revenue of an entertainment service} = \frac{\text{Total revenue of entertainment business in the period}}{\text{Total number of entertainment services in the period}} \quad (4.37)$$

This indicator shows how much revenue an entertainment service used for business in the period generates on average.

(6) Average unit price for an entertainment game

$$\text{The average unit price of an entertainment game} = \frac{\text{Total revenue of entertainment business in the period}}{\text{Total number of entertainment services used in the period}} \quad (4.38)$$

This indicator shows how much is the average unit price of an entertainment service in the period.

(7) Labor productivity of entertainment staff:

$$\text{Labor productivity of entertainment staff} = \frac{\text{Total revenue of entertainment business in the period}}{\text{Total number of employees serving entertainment in the period}} \quad (4.39)$$

This indicator shows how much revenue will be generated by a tour staff in the period.

(8) Average cost for an entertainment service:

$$\text{The average cost for an entertainment service in the period} = \frac{\text{Total cost for serving entertainment services in the period}}{\text{Total number of entertainment services served in the period}} \quad (4.40)$$

This indicator shows how much money must be spent serving an entertainment service in the period.

(9) Revenue rate of entertainment services:

$$\text{The ratio of revenue from entertainment services in the period} = \frac{\text{Total revenue of entertainment services in the period}}{\text{Total number of entertainment services served in the period}} \times 100 \quad (4.41)$$

This indicator shows, on average, how much revenue is generated by an entertainment service served by the unit in a period.

(10) Profit rate of entertainment services:

$$\text{The profit rate of entertainment services in the period} = \frac{\text{Total profit from entertainment services in the period}}{\text{Total number of entertainment services served in the period}} \times 100 \quad (4.42)$$

This indicator shows how much profit is generated by an entertainment tourism service served by the unit in a period on average.

CONCLUSION

Most enterprises have only focused on a group of indicators related to revenue, such as total revenue, use capacity, average unit price, revenue ratio calculated per unit of material used. However, there has been little interest in using indicators reflecting the operational level such as frequency of use of material factors, labor productivity, the average cost per unit of material used, or profit rate per unit of material used. This shows that tourism enterprises have not fully reflected on all aspects of their operations. The frequency of using material factors or high labor productivity will contribute to accelerating the speed of use of material factors and thus increasing revenue. Therefore, when the factors of frequency and yield are fully reflected, the enterprises can have more accurate reflections.

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