



# Thailand Tourism Statistics Project (Excel + Power BI)

## Introduction

This project is inspired from my interest in my own country's tourism statistics, because Thailand is famous for tourism, and I want to know more about generated profit from tourism for each provinces in Thailand.

## Dataset

Source: [https://www.kaggle.com/datasets/thaweevatboy/thailand-domestic-tourism-statistics?select=thailand\\_domestic\\_tourism\\_2019\\_2023\\_ver2.csv](https://www.kaggle.com/datasets/thaweevatboy/thailand-domestic-tourism-statistics?select=thailand_domestic_tourism_2019_2023_ver2.csv)

This dataset contains statistics on domestic tourism in Thailand from Jan 2019 to Feb 2023, broken down by province, and consists of 30,800 rows in total. The dataset includes information on:

- The number of tourists (No.)
- The occupancy rate (%)
- The revenue generated by tourism in each province (Thai Baht)
- The nationality of the tourists (Thai tourists vs. Foreign tourists)

## Data Dictionary

| Column        | Description   |
|---------------|---|
| date          | The month and year in which the statistics were recorded. The dataset covers the years 2019-2023. |
| province_thai | The name of the province in Thailand, in the Thai language.                                       |
| province_eng  | The name of the province in Thailand, in English.   |
| region_thai   | The name of the region in Thailand to which the province belongs, in the Thai language.           |
| region_eng    | The name of the region in Thailand to which the province belongs, in English.                     |
| variable      | The 8 types of data being recorded, such as the number of tourists or the occupancy rate.         |
| value         | The value of the data being recorded.   |

| Variables           | Meaning   |
|---------------------|---|
| no_tourist_all      | The total number of domestic tourists who visited the province              |
| no_tourist_foreign  | The number of foreign tourists who visited the province                     |
| no_tourist_occupied | The total number of occupied hotel rooms in the province                    |
| no_tourist_thai     | The number of Thai tourists who visited the province                        |
| occupancy_rate      | The percentage of occupied travel accommodation in the province             |
| revenue_all         | The revenue generated by the tourism industry in the province, in Thai Baht |
| revenue_foreign     | The revenue generated by foreign tourists in the province, in Thai Baht     |
| revenue_thai        | The revenue generated by Thai tourists in the province, in Thai Baht        |

## Tools

1. Microsoft Excel (Microsoft 365)
2. Microsoft Power BI (Microsoft 365)

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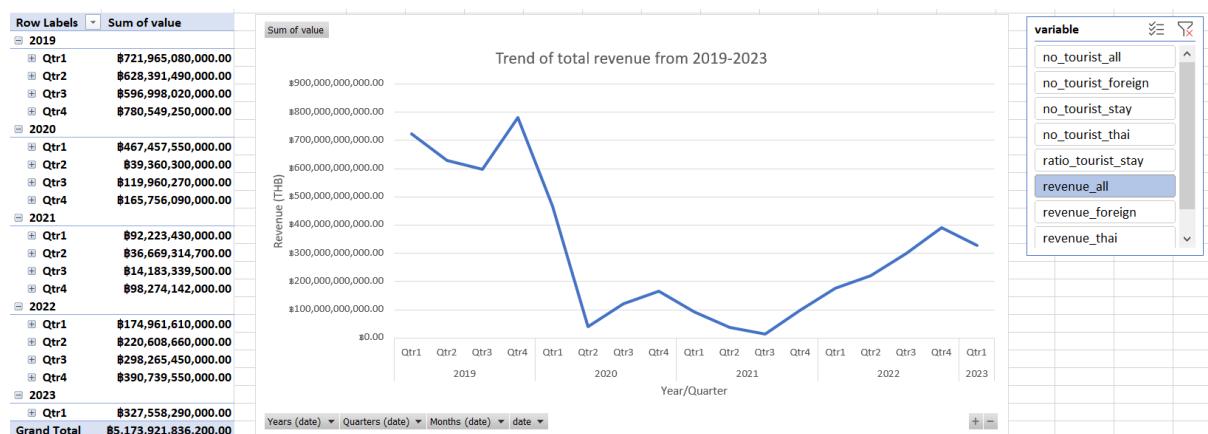
## Analysis

Import the CSV file by [Data → From Text/CSV → File Origin = 65001: Unicode (TF-8)] in order to make sure that Thai alphabets are displayed correctly.

| A         | B               | C                        | D           | E          | F                  | G     | H | I | J | K | L |
|-----------|-----------------|--------------------------|-------------|------------|--------------------|-------|---|---|---|---|---|
| date      | province_thai   | province_eng             | region_thai | region_eng | variable           | value |   |   |   |   |   |
| 1/1/2019  | กรุงเทพมหานคร   | Bangkok                  | ภาคกลาง     | central    | ratio_tourist_stay | 93.37 |   |   |   |   |   |
| 1/1/2019  | ลพบุรี          | Lopburi                  | ภาคกลาง     | central    | ratio_tourist_stay | 61.32 |   |   |   |   |   |
| 1/1/2019  | พระนครศรีอยุธยา | Phra Nakhon Si Ayutthaya | ภาคกลาง     | central    | ratio_tourist_stay | 73.37 |   |   |   |   |   |
| 1/1/2019  | สระบุรี         | Saraburi                 | ภาคกลาง     | central    | ratio_tourist_stay | 67.33 |   |   |   |   |   |
| 1/1/2019  | ชัยนาท          | Chainat                  | ภาคกลาง     | central    | ratio_tourist_stay | 79.31 |   |   |   |   |   |
| 1/1/2019  | นนทบุรี         | Nonthaburi               | ภาคกลาง     | central    | ratio_tourist_stay | 71.7  |   |   |   |   |   |
| 1/1/2019  | สระบุรี         | Sing Buri                | ภาคกลาง     | central    | ratio_tourist_stay | 64.65 |   |   |   |   |   |
| 1/1/2019  | อ่างทอง         | Ang Thong                | ภาคกลาง     | central    | ratio_tourist_stay | 71.21 |   |   |   |   |   |
| 1/1/2019  | นonthaburi      | Pathum Thani             | ภาคกลาง     | central    | ratio_tourist_stay | 75.07 |   |   |   |   |   |
| 1/1/2019  | สมุทรปราการ     | Samut Prakan             | ภาคกลาง     | central    | ratio_tourist_stay | 72.5  |   |   |   |   |   |
| 1/1/2019  | สมุทรสาคร       | Samut Sakhon             | ภาคกลาง     | central    | ratio_tourist_stay | 61.64 |   |   |   |   |   |
| 1/1/2019  | ฉะเชิงเทรา      | Chachoengsao             | ภาคตะวันออก | east       | ratio_tourist_stay | 59.4  |   |   |   |   |   |
| 1/1/2019  | ราชบุรี         | Ratchaburi               | ภาคกลาง     | central    | ratio_tourist_stay | 75.09 |   |   |   |   |   |
| 1/1/2019  | กาญจนบุรี       | Kanchanaburi             | ภาคกลาง     | central    | ratio_tourist_stay | 83.8  |   |   |   |   |   |
| 1/1/2019  | สุพรรณบุรี      | Samut Songkhram          | ภาคกลาง     | central    | ratio_tourist_stay | 75.6  |   |   |   |   |   |
| 1/1/2019  | สุพรรณบุรี      | Suphan Buri              | ภาคกลาง     | central    | ratio_tourist_stay | 89.43 |   |   |   |   |   |
| 1/1/2019  | เพชรบุรี        | Phetchaburi              | ภาคกลาง     | central    | ratio_tourist_stay | 81.2  |   |   |   |   |   |
| 1/1/2019  | ประจวบคีรีขันธ์ | Prachap Khiri Khan       | ภาคกลาง     | central    | ratio_tourist_stay | 64.55 |   |   |   |   |   |
| 21/1/2019 | ชลบุรี          | Chonburi                 | ภาคตะวันออก | east       | ratio_tourist_stay | 84.33 |   |   |   |   |   |
| 22/1/2019 | ชุมพร           | Chanthaburi              | ภาคตะวันออก | east       | ratio_tourist_stay | 68.86 |   |   |   |   |   |
| 23/1/2019 | ตราด            | Trat                     | ภาคตะวันออก | east       | ratio_tourist_stay | 80.48 |   |   |   |   |   |
| 24/1/2019 | นครนายก         | Nakhon Nayok             | ภาคตะวันออก | east       | ratio_tourist_stay | 68.39 |   |   |   |   |   |
| 25/1/2019 | ปราจีนบุรี      | Prachinburi              | ภาคตะวันออก | east       | ratio_tourist_stay | 68.57 |   |   |   |   |   |
| 26/1/2019 | ระยอง           | Rayong                   | ภาคตะวันออก | east       | ratio_tourist_stay | 70.11 |   |   |   |   |   |
| 27/1/2019 | สระแก้ว         | Sa Kaeo                  | ภาคตะวันออก | east       | ratio_tourist_stay | 56.69 |   |   |   |   |   |

Then, create pivot tables and charts from the dataset to see the insights behind the data.

### Task 1: Find the trend of total revenue from 2019-2023



From a pivot table and a line graph presented, the total revenue reached its peak on the 4th quarter of 2019. But, the total revenue sharply declined starting from the 4th quarter of 2019 to the 2nd quarter of 2020.

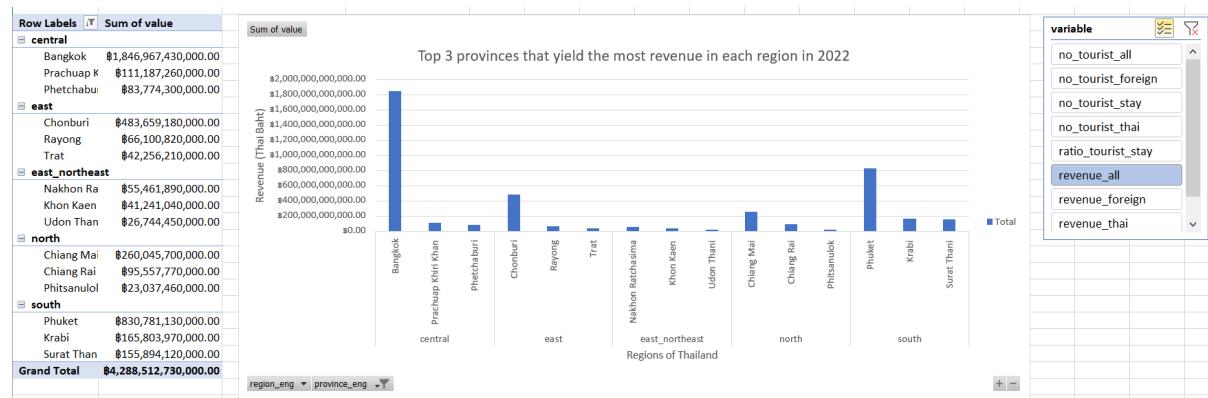
For the explanation of the sharp decline on tourism revenue, COVID-19, that was arrived on January 2020, might be the biggest cause of the sharp decline, because COVID-19 is a pandemic that affects many aspects affiliated with tourism, including the amount of tourist coming to Thailand.

After the 3rd quarter of 2021, the total revenue gradually rised until the 4th quarter of 2022. And then, the total revenue was slightly decreased on the 1st quarter of 2023. But, since the data collected contains only data until February 2023, the data of total revenue on March 2023 has not been collected yet, as such, the total revenue from

January to March 2023 is expected to be higher than the total revenue from January to February 2023 displayed as the 1st quarter of 2023.

From further investigation, in 2022, Thailand deployed COVID-19 relaxation measures. This may be the reason why the total revenue in 2022 was gradually rising.

Task 2: Find top 3 provinces that yield the most revenue in each region in 2022



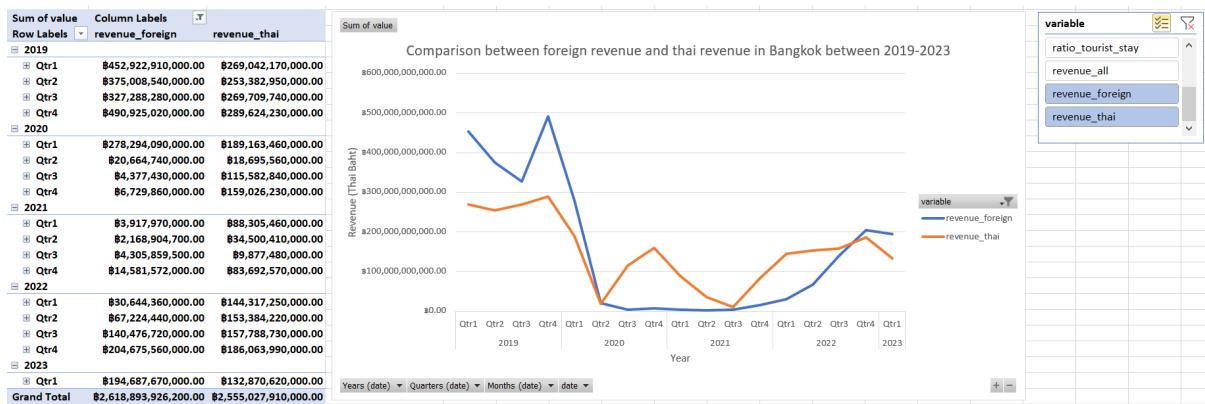
From a pivot table and a bar graph presented, top 3 provinces that yield the most revenue in each region in 2022 are:

- Central: Bangkok, Prachuap Khiri Khan, and Phetchaburi
- East: Chonburi, Rayong, and Trat
- Northeast: Nakhon Ratchasima, Khon Kaen, and Udon Thani
- North: Chiang Mai, Chiang Rai, and Phitsanulok
- South: Phuket, Krabi, and Surat Thani

Also, Bangkok yield the most revenue compared to other provinces, followed by Phuket, Cholburi and Chiang Mai.

Bangkok is the capital city and the most famous city of Thailand, also, Phuket, Cholburi, and Chiang Mai are famous and well-known tourist destinations. This may be the reason why Bangkok, Phuket, Cholburi, and Chiang Mai yield higher revenue compared to other provinces.

Task 3: Compare the difference between Foreign revenue and Thai revenue in Bangkok between 2019-2023

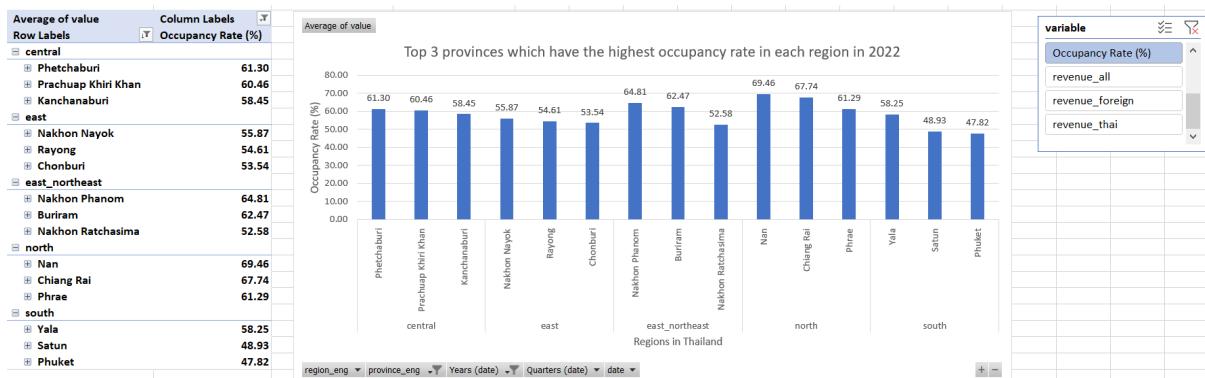


From a pivot table and a line graph presented, in 2019, Foreign revenue was higher than Thai revenue around the year. But, after the sharp drop starting from the 4th quarter of 2019 to the 2nd quarter of 2020, Foreign revenue was heavily decreased and stay low until the gradual rise starting from the 3rd quarter of 2021.

For Thai revenue, the decline in revenue occurred 2 times, once from the 4th quarter of 2019 to the 2nd quarter of 2020, and another from the 4th quarter of 2020 to the 3rd quarter of 2021. Still, The revenue from Thai tourists were higher than Foreign tourist, starting from the 3rd quarter of 2020 to the 3rd quarter of 2022. After the 3rd quarter of 2022, Foreign revenue tends to be higher than Thai revenue.

Notice that Foreign revenue was very low starting from the 3rd quarter of 2020 to the 3rd quarter of 2021, yielded below 10 billion Baht for each quarter for an entire year.

Task 4: Find top 3 provinces that have the highest occupancy rate in each region in 2022



From a pivot table and a bar graph presented, top 3 provinces that had the highest occupancy rate in each region in 2022 were:

- Central: Phetchaburi, Prachuap Khiri Khan, and Kanchanaburi
- East: Nakhon Nayok, Rayong, and Chonburi
- Northeast: Nakhon Phanom, Buriram, and Nakhon Ratchasima
- North: Nan, Chiang Mai, and Phrae
- South: Yala, Satun, and Phuket

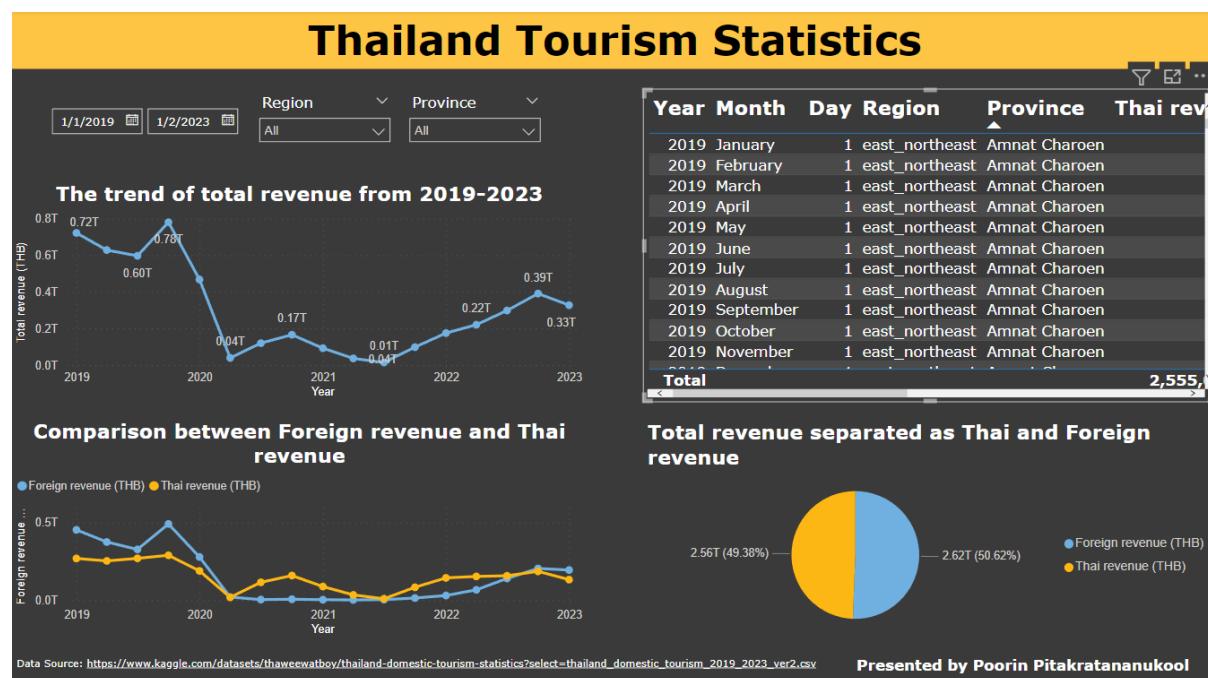
Also, Nan had the highest occupancy rate, followed by Chiang Rai, Nakhon Phanom, and Buriram. Two provinces from the Northern region and two provinces from the Northeastern region.

Notice that the provinces that yielded the most revenue did not have to be the provinces that have the highest occupancy rate.

## Data Visualization

file:

[https://s3-us-west-2.amazonaws.com/secure.notion-static.com/bf839ef4-fba3-49f6-9ec1-50250fc6225f/Thailand\\_Tourism\\_Statistics\\_Project.pbix](https://s3-us-west-2.amazonaws.com/secure.notion-static.com/bf839ef4-fba3-49f6-9ec1-50250fc6225f/Thailand_Tourism_Statistics_Project.pbix)



This is my interactive dashboard with 3 graphs and 1 table.

The graphs consist of:

1. The trend of total revenue from 2019-2023
2. Comparison between Foreign revenue and Thai revenue
3. Total revenue separated as Thai and Foreign revenue

The table is created to be sorted by dropdowns on the upper-left side of the dashboard. Also, all charts in the table will be changed according to the dropdowns, which filter the data as you see fit.

The dropdowns can filter:

1. Date (1/1/2019 to 1/2/2023)
  2. Region
  3. Province
- 

## Conclusion

In the analysis, we found that:

1. The total revenue reached its peak on the 4th quarter of 2019. But, the total revenue sharply declined starting from the 4th quarter of 2019 to the 2nd quarter of 2020. After the 3rd quarter of 2021, the total revenue gradually rised until the 4th quarter of 2022. (COVID-19, that was arrived on January 2020, might be the biggest cause of the sharp decline.)
2. Bangkok yielded the most revenue in 2022 compared to other provinces, followed by Phuket, Cholburi and Chiang Mai.
3. Foreign revenue was very low starting from the 3rd quarter of 2020 to the 3rd quarter of 2021, yielded below 10 billion Baht for each quarter for an entire year.
4. For Thai revenue, the decline in revenue occured 2 times, once from the 4th quarter of 2019 to the 2nd quarter of 2020, and another from the 4th quarter of 2020 to the 3rd quarter of 2021.
5. Nan had the highest occupancy rate in 2022, followed by Chiang Rai, Nakhon Phanom, and Buriram. Two provinces from the Northern region and two provinces from the Northeastern region.

6. The provinces that yielded the most revenue did not have to be the provinces that have the highest occupancy rate.

In conclusion, this means:

1. The total revenue, both from Thai and Foreign tourists, is expected to increase because of the COVID-19 relaxation measures deployed in 2022 onwards positively affected the total revenue.
2. In 2022, Bangkok yielded the most revenue, and Nan had the highest occupancy rate.
3. While Foreign revenue from before COVID-19 arrived to Thailand and after COVID-19 relaxation measures deployment is greater than Thai revenue, Foreign revenue had been extremely low for an entire year because of COVID-19. This means, Thailand should not rely solely on revenue from Foreign tourists alone. Thai tourists do impact the total revenue of tourism in Thailand.

Beware that there may be other factors that are affecting the revenue from tourism and the occupancy rates other than COVID-19. Such as, unexpected events, cultural differences, or seasonal timings. Therefore, other factors must be explored in order to further understand the reason of revenue and occupancy rates's outcome.

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