
Hotel and Restaurant in Thailand

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Summary

Introduction and project's background

- Hotel and Restaurant is the main component of tourism industry in Thailand as it is a main services sector country and a popular tourist destination. It has been named as one of the best countries for traveling according to reports of US News and World Report.
- This industry has benefit from the increase in visitors. In recent years, the majority of Thai's tourist chose to stay in hotels during their visit among other accommodations such as guesthouses and hostels.
- Nowadays, the best way to reach the Hotel and Restaurant reservation is to search it on the internet. Thus, using the related search data from Google trend can predict the actual overall trends and patterns of Thai Hotel and Restaurant industry.

Sources of data



BOT: Office of Industrial Economic,
Ministry of Industry



Google trends
(data from 2008-2018)

Introduction

Source

Methodologies

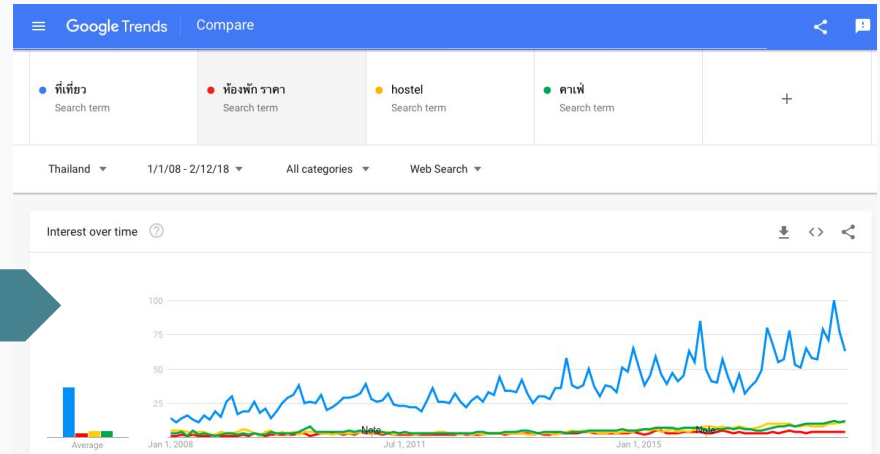
Result

Summary

Briefs of analytical methodologies

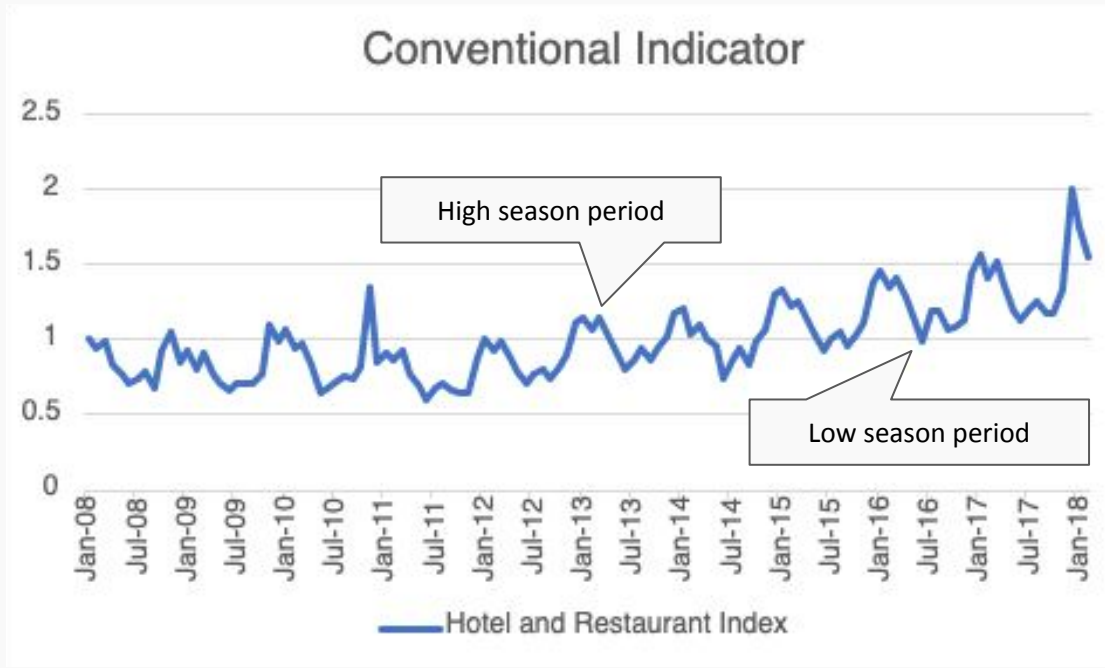
Analytical Methodologies

- Using **Google Trends** data to predict the present of conventional economic indicator, **“Hotel and restaurant index”**, which we picked four alternative indicators: **“hostel”**, **“ที่เที่ยว”**, **“ห้องพัก ราคา”**, and **“กาแฟ”**
- **Normalized both conventional and alternative indicators in excel** to match with selected year range (2008-2018)
- Using the **regression analysis** to find the relationship between conventional and alternative indicators
- To get graphs and r-square of all data, we ran all X and Y variables in **STATA program**



Suggestion: investigation in Google Trends data **may not reflect the current state** of the hotel and restaurant industries since the visitors will search for more information about hotels and restaurants **when they plan to travel in Thailand**. But the outbreak **COVID-19 causes service industries in Thailand pauses**.

Historical trends of conventional indicators

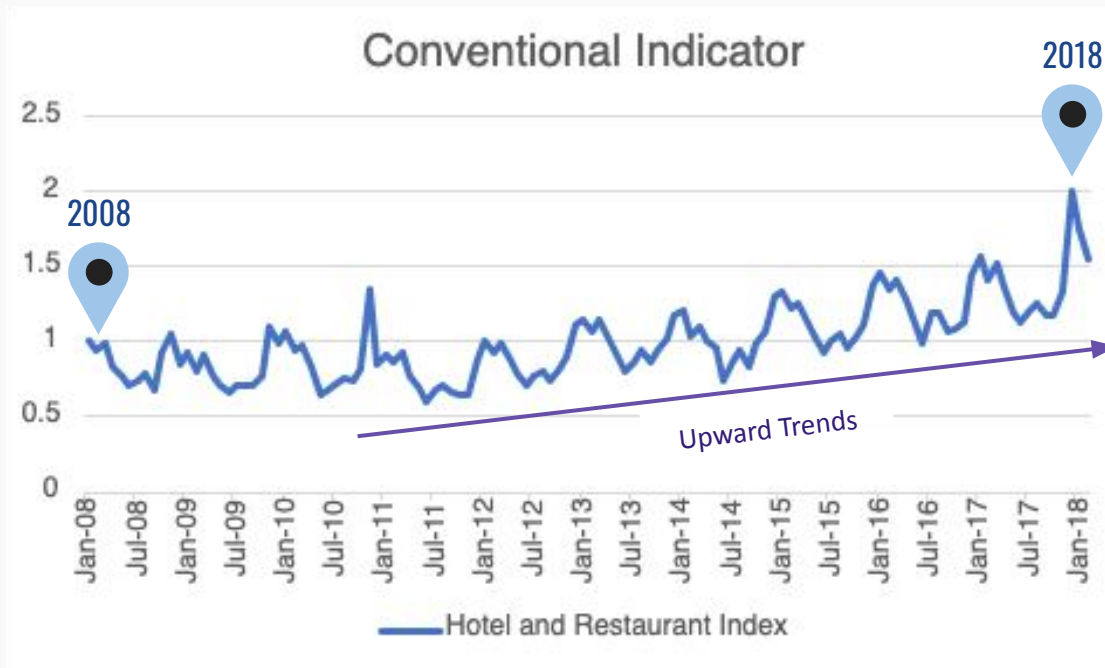


Source: Office of Industrial Economic, Ministry of Industry

Key Takeaways

- The pattern of the domestic tourism that it will rise to the peak during high season period
 - such as the end of the year (December to January) and Songkran Festival (April)
- In the low season period, at the middle of the year, graph will shift downward to reach the lowest point of each year.

Historical trends of conventional indicators

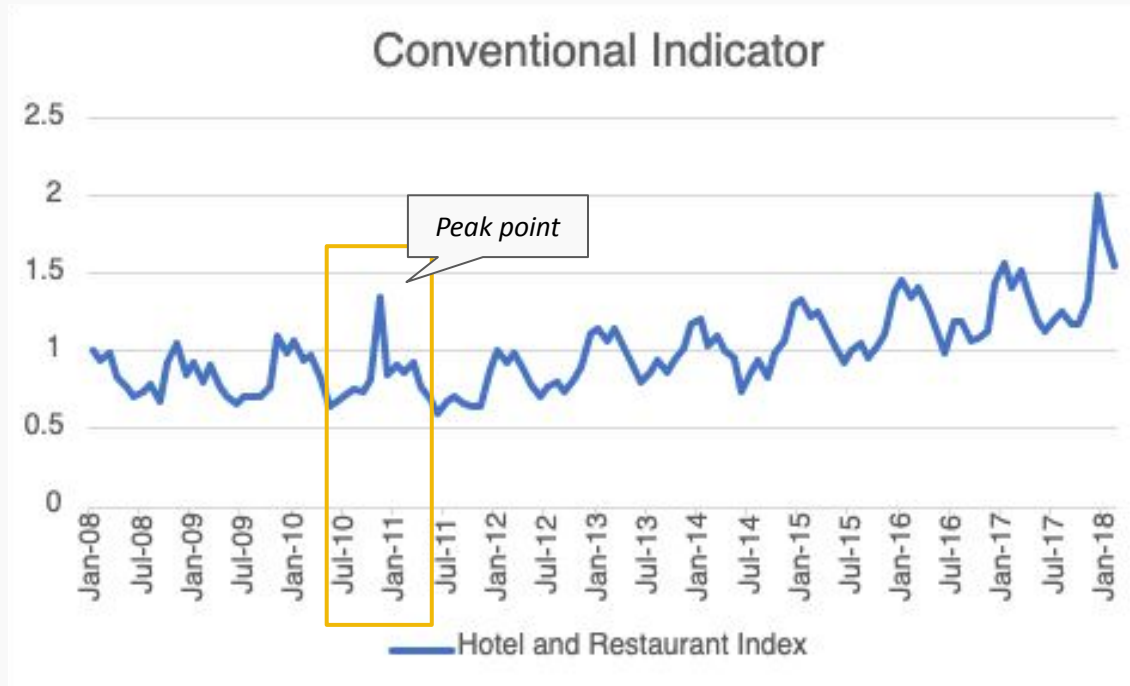


Source: Office of Industrial Economic, Ministry of Industry

Key Takeaways

- There seems to have the upward trends in the number of hotel and restaurant index in each year which constantly increased since 2011 to 2018

Historical trends of conventional indicators

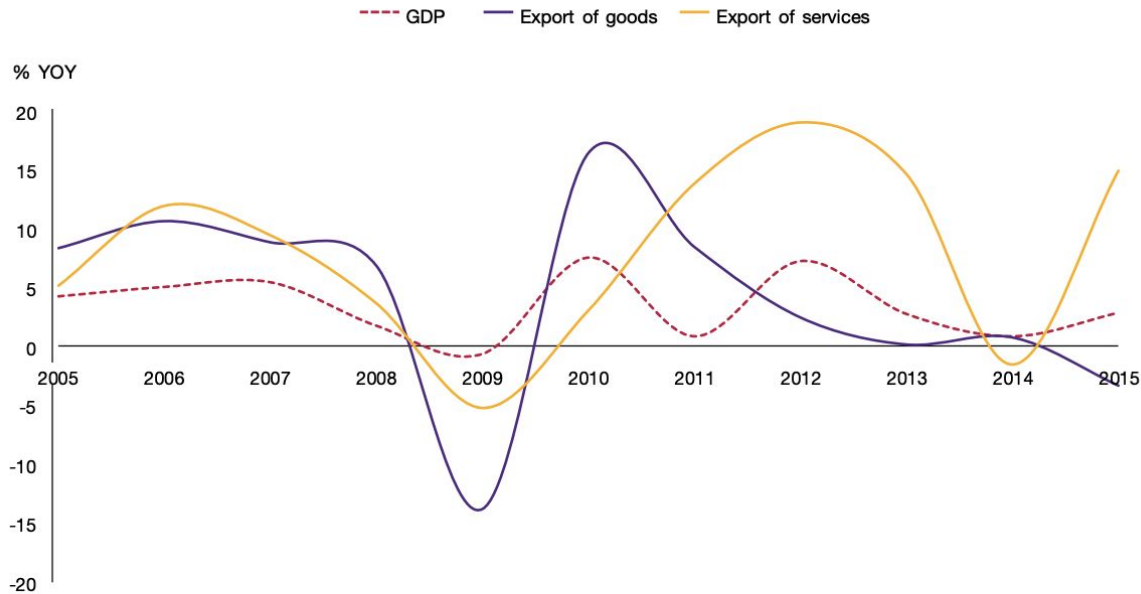


Source: Office of Industrial Economic, Ministry of Industry

	2009	2010
GDP	-2%	8%
Export of goods	-15%	17%
Export of services	-5%	20%

- There is an unusual significant peak point at the end of year 2010.

Historical trends of conventional indicators

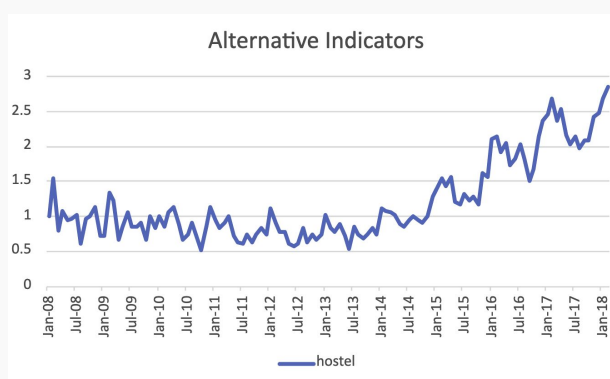
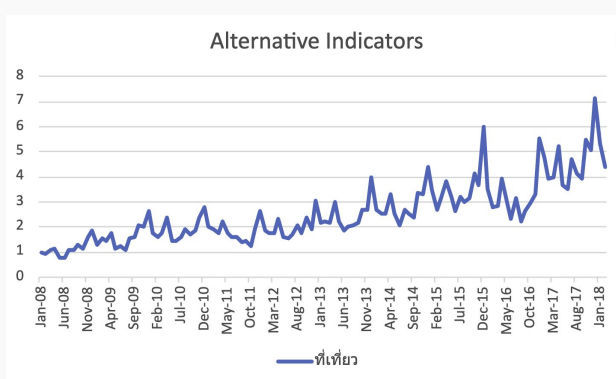
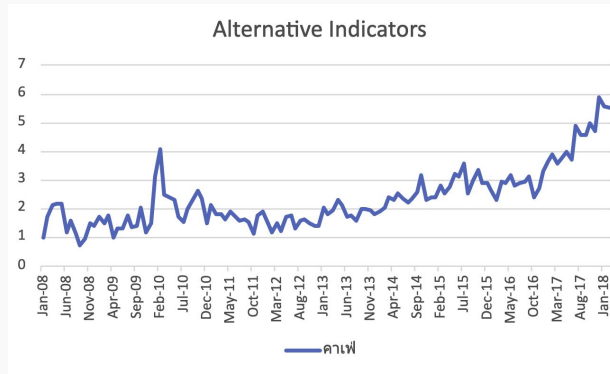
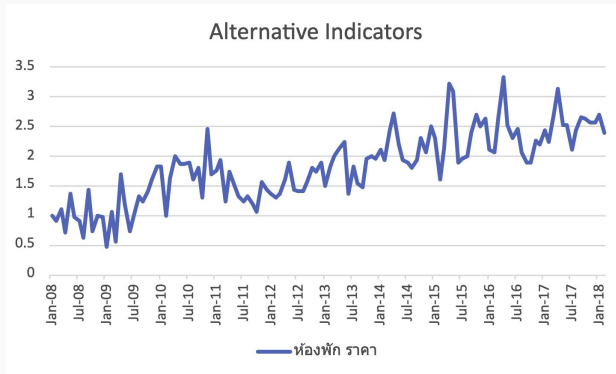


Source: EIC analysis based on data from National Economic and Social Development Board (NESDB) and the Bank of Thailand (BOT)

	2009	2010
GDP	-2%	8%
Export of goods	-15%	17%
Export of services	-5%	20%

- There is a drastic rise of Thai export goods and services in 2010 which drive up Thai economic growth.
- This situation may encourage Thai people to spend more on services sector and cause the sharp increase in the graph

Historical trends of alternative indicators

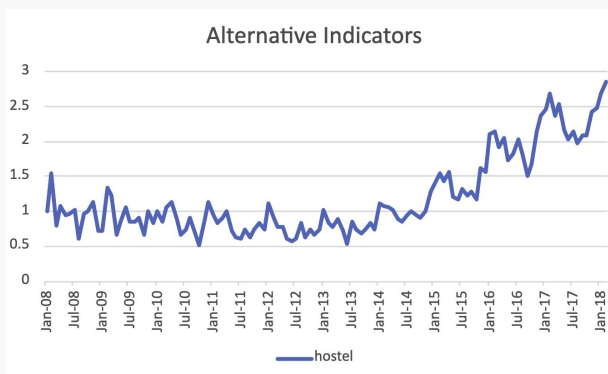
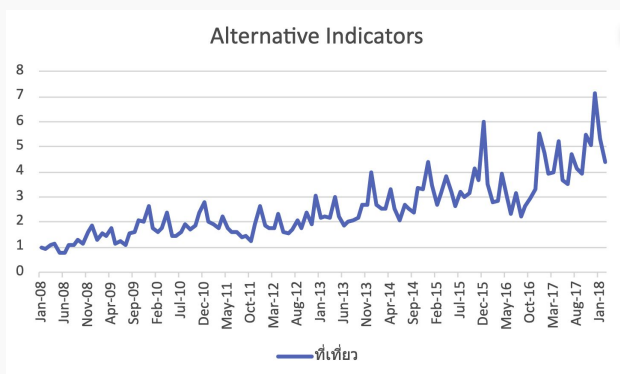
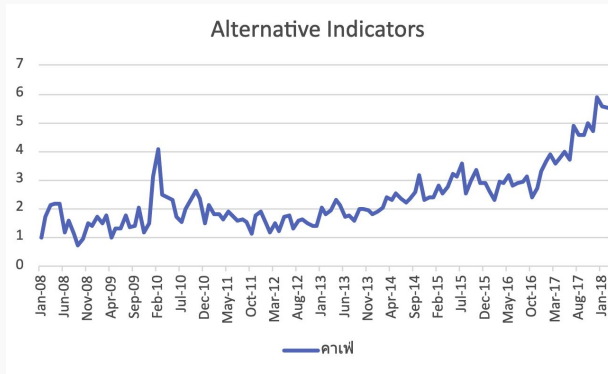
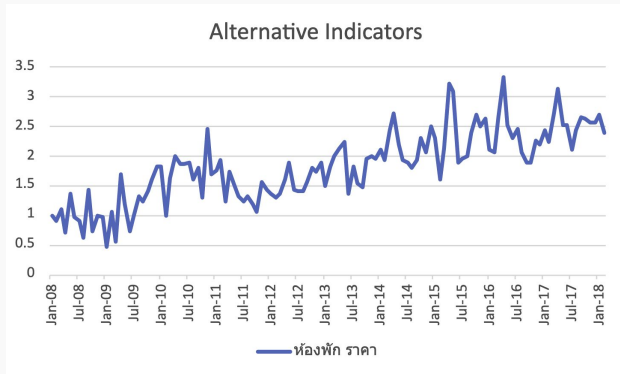


Insights

- we notice the pattern of the fluctuation of the line chart with the same pattern every year from 2008 to 2018
- Holding a straight edge over the graphs give us an approximate line that **rises up** to the right.

Source: Google Trend

Historical trends of alternative indicators



Source: Google Trend

Insights

- These alternative indicators line chart are related to conventional indicators line chart because it will rise to the peak during **high season period**
- The keyword that are most correlated with the conventional indicators is “ที่เที่ยว”

Relationships between conventional and alternative indicators

```
. reg hotel อาหารเช้า
```

Source	SS	df	MS	Number of obs = 122
Model	5.19454393	1	5.19454393	F(1, 120) = 241.61
Residual	2.57991926	120	.021499327	Prob > F = 0.0000
				R-squared = 0.6682
				Adj R-squared = 0.6654
Total	7.7744632	121	.064251762	Root MSE = .14663

hotel	Coefficient	Std. err.	t	P> t	[95% conf. interval]
อาหารเช้า	.1716271	.0110414	15.54	0.000	.1497658 .1934883
_cons	.5623037	.0310759	18.09	0.000	.5007756 .6238318

```
. reg hotel อาหารเช้าราคา
```

Source	SS	df	MS	Number of obs = 122
Model	3.23197231	1	3.23197231	F(1, 120) = 85.38
Residual	4.54249088	120	.037854091	Prob > F = 0.0000
				R-squared = 0.4157
				Adj R-squared = 0.4108
Total	7.7744632	121	.064251762	Root MSE = .19456

hotel	Coefficient	Std. err.	t	P> t	[95% conf. interval]
อาหารเช้าราคา	.2715009	.0293828	9.24	0.000	.2133249 .3296769
_cons	.5038992	.0564084	8.93	0.000	.3922145 .6155839

```
. reg hotel hostel
```

Source	SS	df	MS	Number of obs = 122
Model	5.05730771	1	5.05730771	F(1, 120) = 223.35
Residual	2.71715549	120	.022642962	Prob > F = 0.0000
				R-squared = 0.6505
				Adj R-squared = 0.6476
Total	7.7744632	121	.064251762	Root MSE = .15048

hotel	Coefficient	Std. err.	t	P> t	[95% conf. interval]
hostel	.3551318	.0237627	14.94	0.000	.3080832 .4021803
_cons	.5744766	.0315072	18.23	0.000	.5120946 .6368585

```
. reg hotel คาเฟ่
```

Source	SS	df	MS	Number of obs = 122
Model	4.00500937	1	4.00500937	F(1, 120) = 127.50
Residual	3.76945383	120	.031412115	Prob > F = 0.0000
				R-squared = 0.5151
				Adj R-squared = 0.5111
Total	7.7744632	121	.064251762	Root MSE = .17723

hotel	Coefficient	Std. err.	t	P> t	[95% conf. interval]
คาเฟ่	.1753339	.0155279	11.29	0.000	.1445898 .2060781
_cons	.5876877	.0398086	14.76	0.000	.5088694 .6665059

Keywords that are highly correlated with the conventional indicators

- “ที่เดียว”
 - The **most correlated keyword** with conventional indicators
 - R-squared = 0.6682
- “Hostel”
 - R-squared = 0.6505
- “คาเฟ่”
 - R-squared = 0.5151
- “ห้องพัก ราคา”
 - R-squared = 0.4157

Relationships between conventional and alternative indicators

Relationship between conventional and all alternative indicators

- **All four alternative indicators** are some of the example of visitors' search clicks before planning the trip in Thailand which **directly affect hotel and restaurant index**
- The relationship between conventional and all alternative indicators **is quite high correlated** (R-squared \approx 75%)

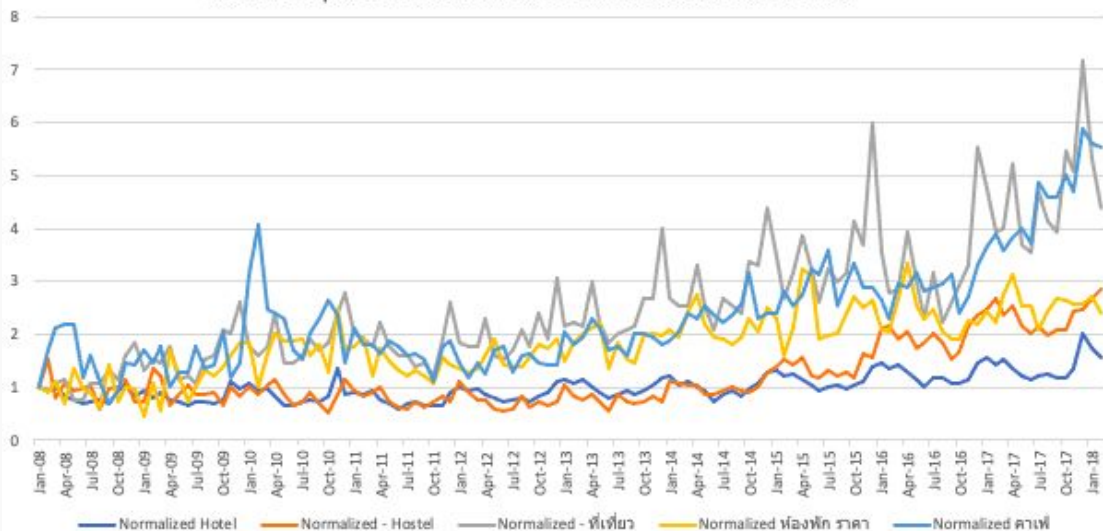
```
. reg Hotel Hostel ห้องเช็คอิน ห้องพักรักษาตัว ค่าที่พัก
```

Source	SS	df	MS	Number of obs	=	122
Model	5.8833324	4	1.4708331	F(4, 117)	=	91.00
Residual	1.8911308	117	.016163511	Prob > F	=	0.0000
				R-squared	=	0.7568
				Adj R-squared	=	0.7484
Total	7.7744632	121	.064251762	Root MSE	=	.12714

Hotel	Coefficient	Std. err.	t	P> t	[95% conf. interval]
Hostel	.2050217	.0344114	5.96	0.000	.1368717 .2731718
ห้องเช็คอิน	.1088484	.0200352	5.43	0.000	.0691696 .1485271
ห้องพักรักษาตัว	-.0056237	.0315097	-0.18	0.859	-.068027 .0567796
ค่าที่พัก	-.0115497	.0207182	-0.56	0.578	-.052581 .0294815
_cons	.5143011	.0385802	13.33	0.000	.4378952 .5907071

Key findings from these relationships

Relationship between conventional and alternative indicators



Key findings

- We can use this search term in google trends to help predict the number of hotel and restaurant reservation.
- The fluctuation of all alternative indicators' graphs tend to be in the same direction
 - In high season, the click will highly rise and drop in low season.
- “คาเฟ่” is a keyword that continuously increasing until now. It shows that the instagramable trend increase more newly opening café and good promotion.

Summary and policy recommendations

- ***Increasing the occupancy in Low Season*** : Caused by the low season that have less incentive to attract tourist attention. So, the government should promote the traveling in the low season or come up with some policy to motivate the tourist in the off season. For example,
 - **Organize events** : Events and activities are one of the biggest causes of seasonality as events are a great way to attract people.
 - **The video presents natural scenery** : to meet the needs of travelers. For instance, a video that tells interesting stories about local life and nature.
 - **Run discount offers and promotions** : People love discounts and the perception of a “good deal” will definitely help your hotel to increase bookings.