# PIURN, Panel 5: « tourisme en Océanie-Pacifique: vers un post-exotisme? »

## Une nouvelle concurrence aérienne internationale en Polynésie Française : et après ?

## A new international air competition in French Polynesia: and after?

Sylvain Petit, maître de conférences en sciences économiques, Université de Polynésie Française

Contact: Tél.:40-86-64-32

ou 87-79-32-40 – sylvain.petit@upf.pf

https://sites.google.com/site/sylvainpetitperso/

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# Aim and objective

- To identify and to measure the consequences for the tourism industry in French Polynesia of the two new airlines arrival: French Bee and United Airlines

CETOP Centre d'Études du Tourisme en Océanie-Pacifique
UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# Context

- For the Paris - Los Angeles - Papeete international airline: until now, there were 2 companies.

→Air France (50 years)

→Air Tahiti Nui (20 years): Small airline (funded by the local public authorities) with a fleet of 5 aircraft and which will take nearly 15 years to be profitable.

→75% of the international inbound

# Summary

1. **Tourism economy in French Polynesia**
2. **The new competition in the international aviation sector**
3. **Theoretical expectations**
4. **Empirical previsions**
5. **Conclusions**

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 1. Tourism economics in French Polynesia

<u>French Polynesia</u>

Tourism is the 1st economic sector

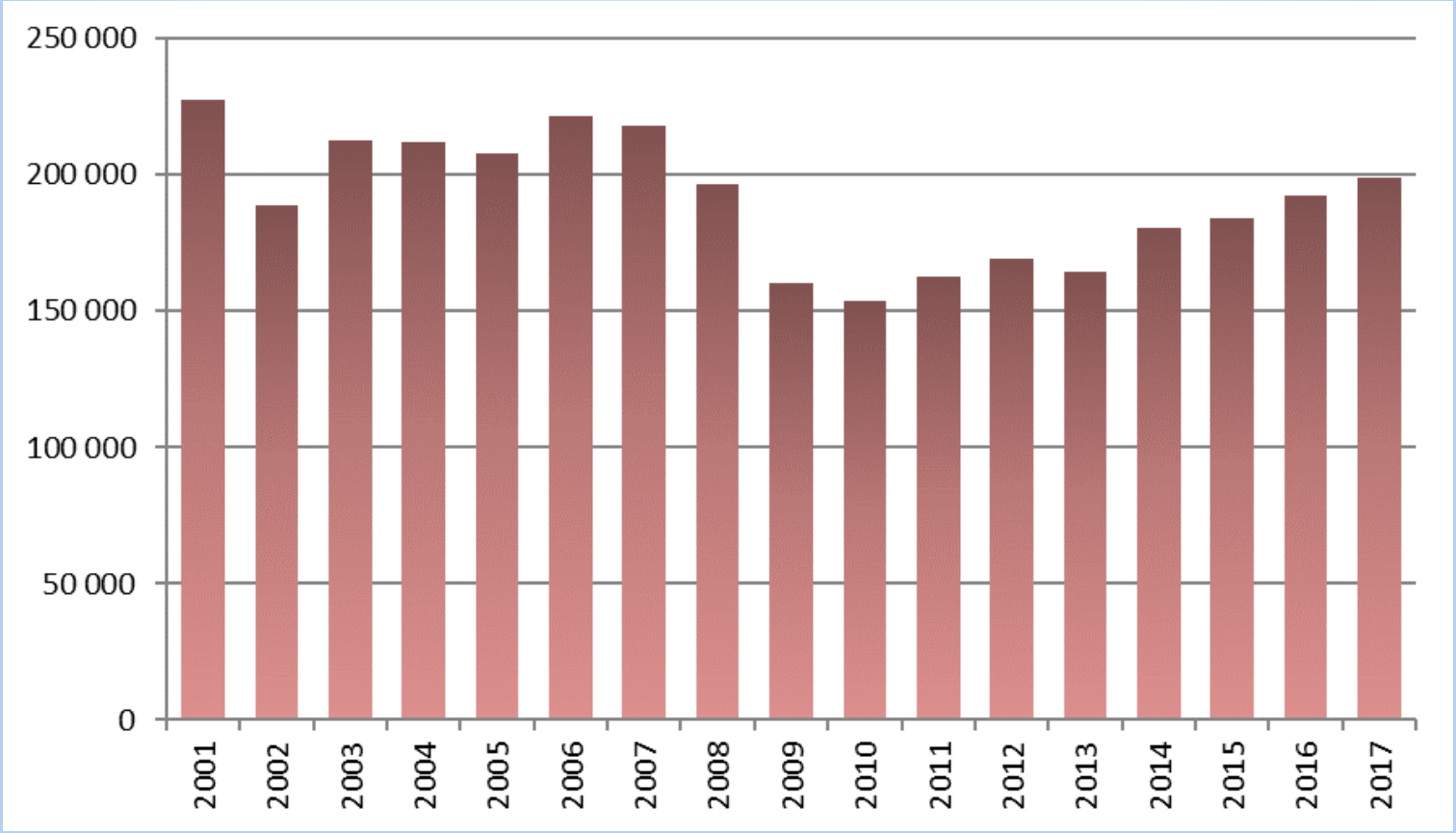
→42% of polynesian exports

→17% of GDP and employment

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

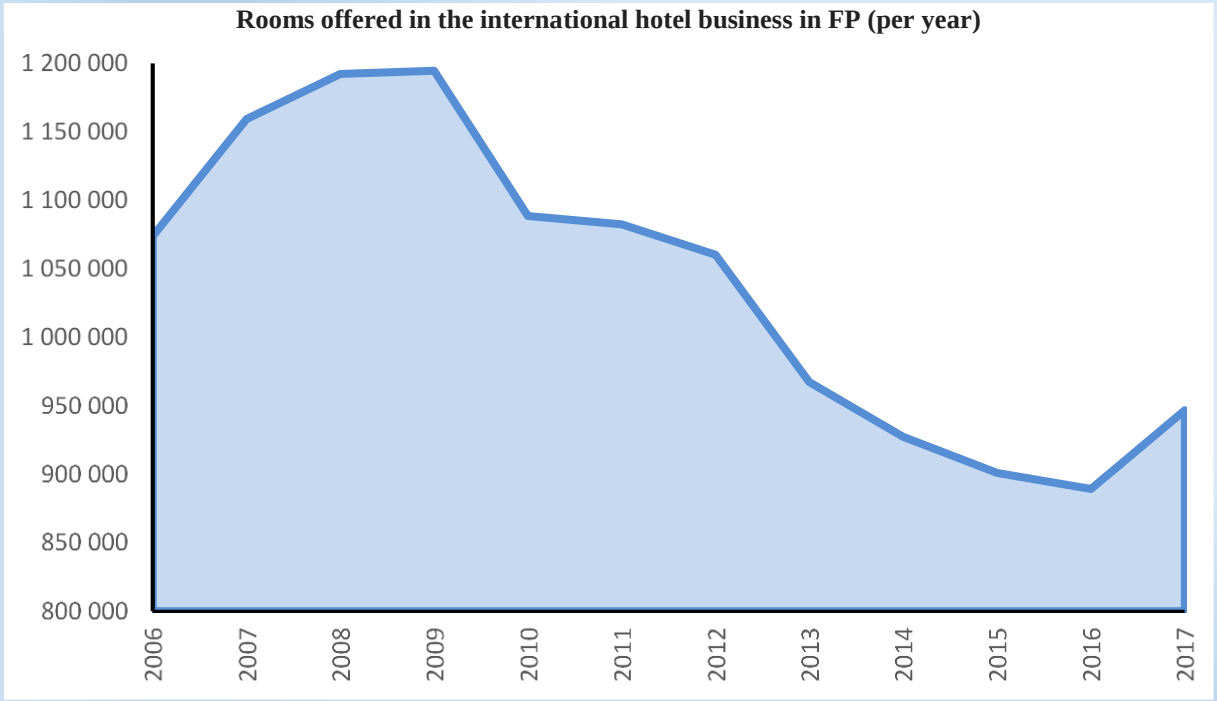
# 1. Tourism economics in French Polynesia




CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 1. Tourism economics in French Polynesia




CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 1. Tourism economics in French Polynesia

Population: 270 00

Inbound : 200 000

→Less than 1 tourist per habitant

Crisis of the previous years:

→International tourism: model of monopolistic competition; the differentiation is important, not only the price !

→When the differentiation is not enough prononciated, the destination has a risk of substitution.

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 2. The new competition in the international aviation sector

- <u>Double event: arrival of French Bee and United Airlines</u>

→Tahiti – California – Paris : 70 % of the international inbound for FP

# 2. The new competition in the international aviation sector

- French Bee

→Low cost company (which is an innovation for the lenght of the travel)

→Transit in San Franscico

→Airport of Orly

- United Airlines

→Well known company with an important network

→Only between November-March (low-season)

# 2. The new competition in the international aviation sector

- In conclusion:

→Approximately 50,000 more places available (ie 20-25% of tickets sold before the arrival of French Bee and United Airlines)

# 3. Theoretical expectations

- More competition in international transport air:

→Lower prices

→Rise of tourism inbound from US and Europe (notably between November – March, the « off peak » season)

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 3. Theoretical expectations

- But if there is no change for the hotel sector (occupacy rate: 70%) and internal air transport

→Higher prices (and notably for the off-peak season)

What will be the net effect for the tourism price in PF?


CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 3. Theoretical expectations

The additionnal demand from French Bee:

→Main consequences for Tahiti-Moorea (and less for Bora Bora and the other islands)

→New kind of tourist (without a pre-paid package)

The additionnal demand from United Airline:

→More classic (all the islands and tourist with a pre-paid package)

→But important growth expected for the « off peak » season

# 3. Theoretical expectations

- Another topic: what will be the results of this competition regarding the number of airlines in the future?
- In the past: difficulties for ATN and Air France
- French Bee: « low cost » company which has the obligation de maximize the occupacy
- United Airline : for how long will they stay?


CETOP Centre d'Études du Tourisme en Océanie-Pacifique
UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 4. Empirical previsions

- Small econometric model

$$Arrival_t = f(Arrival_{t-1}; vat_t;\ plane_t; dollars_t; D1; D2; D3; D4)$$

→Monthly data

→January 2007 to December 2016

$Arrival_{j;t}$: Number of international inbound

$vat_t$: indicator of economic activity

$plane_t$: number of international planes

$dollars_t$: exchange rate with dollars

$D1; D2; D3; D4$: periods

1 : January-February

2: March to June

3 : August to October

4: November and December

→ Months of reference: July

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 4. Empirical previsions

- Econometric methods

- OLS form using a robust estimator of the covariance matrix along the lines of Eicker–White (Eicker, 1963; White, 1980)

- PPML (Pseudo Poisson Maximum Likehood) with and without fixed effects

This 2nd method is recommended by Santos Silva and Tenreyro (2005, 2006)

Log-log linear model

# 4. Empirical previsions

| Variables | (1) | (2) |
|---|---|---|
| Constant | -2.230756 | -2.344658 |
| | (0.84) | (1.00) |
| Trend ($Arrival_{t-1}$) | 0.3466485*** | 0.338835*** |
| | (4.77) | (5.35) |
| Economic activity ($vat_t$) | 0.2650641** | 0.2660735*** |
| | (2.30) | (2.64) |
| Number of planes ($plane_t$) | 0.31402487*** | 0.336303*** |
| | (3.70) | (4.74) |
| Exchange rate ($dollars_t$) | 0.1502851* | 0.1461427** |
| | (1.82) | (2.05) |
| January-February ($D1$) | -0.2402862*** | -0.2303855*** |
| | (5.53) | (5.93) |
| March-April-May-June ($D2$) | -0.105142*** | -0.0963051*** |
| | (5.26) | (5.72) |
| August-September-October ($D3$) | -0.0871141*** | -0.0817381*** |
| | (3.36) | (3.58) |
| November-December ($D4$) | -0.1829174*** | -0.1773682*** |
| | (5.90) | (6.68) |
| N | 119 | 119 |
| $R^2$ | 0.7766 | 0.8040 |
| Pseudo loglikehood | - | -5937.5016 |

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 4. Empirical previsions

- Simulations with the following assumptions:

→An annual growth of vta of 2%/year

→Fixed exchange rate (100XPF: 1$)

→Number of planes: 2 scenarios

1°) No change

2°) With French Bee and United Airlines

# 4. Empirical previsions

- Simulations with the following assumptions:

→In 2018: 2 rotations per week (and 3 rotations between 18/06 and 24/10) since May 11th for French Bee (95 rotations) ; 3 rotations per week since 30th October for United Airlines (30 rotations)

→In 2019 : 2 rotations per week (and 3 rotations between 18/06 and 24/10) for French Bee (139 rotations) ; 3 rotations per week until 30th March for United Airlines (40 rotations)

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# 4. Empirical previsions

- Potentialy (comparaison with the two cases):

→An additionnal tourism inbound growth of 4%-6%

For example, in 2018, we can expect an increase of 7-8% (and 3-4% without the new airlines)

# 4. Empirical previsions

- Consequences

→In 2018, without any change in domestic air capacity or accommodation capacity, Tahiti and Moorea will have to absorb more tourists, which will lead to a sharp rise in prices for accommodation.

→As a result, by 2019, this new growth may be easing (of the order of 3-4%)

# 5. Conclusions

- Limits

→ Basic empirical work with no other elements taken into account

- The number of seats in the aircraft is not taken into account (big difference between French Bee and United Airline)
- Opening to competition in internal air not taken into account
- The tourism demand with French Bee is not the same the tourism demand with United Airlines

# 5. Conclusions

- Limits

→ For technical reasons, the model tends to overestimate on the beginning and to underestimate after

# 5. Conclusions

→However, these results give an order of magnitude for which we can expect in the future

→Thanks to this new competition in the international airline sector, tourism growth is gaining an additional 4 to 6 points. But this effect will be less in the following years.

→These results illustrate the urgent need for public policies to support this new growth in order to avoid a drop in the competitiveness of the destination concerning other components (accommodation, internal air transport, activities, etc.) in the long term.

CETOP Centre d'Études du Tourisme en Océanie-Pacifique
UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE

# PIURN, Panel 5: « tourisme en Océanie-Pacifique: vers un post-exotisme? »

## Une nouvelle concurrence aérienne internationale en Polynésie Française : et après ?

## A new international air competition in French Polynesia: and after?

Sylvain Petit, maître de conférences en sciences économiques, Université de Polynésie Française

Contact: Tél.:40-86-64-32

ou 87-79-32-40 – sylvain.petit@upf.pf

https://sites.google.com/site/sylvainpetitperso/

CETOP Centre d'Études du Tourisme en Océanie-Pacifique

UPF UNIVERSITÉ DE LA POLYNÉSIE FRANÇAISE