



# Sectorial Observatory

June 25, 2009

## The impact of swine flu on tourism

The flu epidemic that swept through the country in April and May clearly hit economic activity hard at first. Preliminary estimates suggest that this episode, due to the additional effects throughout the year, could decrease GDP growth by between half a percentage point and a whole percentage point this year.<sup>1</sup> This article analyses implications for tourism and related activities, where the economic effects from the epidemic were concentrated. By reviewing activities in the tourism sector and their specific contribution to the economy, including the tourism features and trends before and after the flu outbreak, estimates are given about the extent to which they could have been affected, both on a national and a regional level.

### Tourism, more than just hotels

In accordance with the INEGI's Tourism Satellite Account, which uses the method proposed by the IMF, 23 of the 79 activity branches in which the economy is broken down are linked to tourism. Out of these, the contribution from hotels in terms of GDP is just 12%. The greatest share is in supplementary activities, such as transport (34%), trade (26%), and restaurants (8%). Overall, these four main activities represent 80% of the tourism GDP and they comprise 75% of the companies that are directly or indirectly involved in the sector.

### Where is the hotel infrastructure?

The share of tourism in the domestic economy is around 9% of the GDP, although for some federal entities it is much higher: in the case of Quintana Roo, for example, it is almost 50%, and for Baja California Sur it is 30%. At the opposite end are federal entities such as Tabasco, Campeche and the State of Mexico, where tourism contribution to the economy is not even 2%.<sup>2</sup>

The hotel infrastructure also reflects the focus on tourism in these states and the important role that they play in domestic economic activity. The Federal District and Jalisco are the two federal entities with the greatest accommodation offer, together representing 20% of the country's total hotel rooms.<sup>3</sup> Quintana Roo, which is in third place, has the most luxury hotels

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### What activities make up tourism?

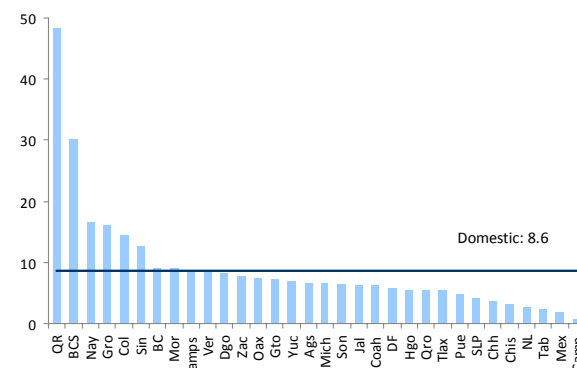
(Share %)

	Establish- ments	GDP
Total	100.0	100.0
Hotels and restaurants	29.2	20.1
Hotels and motels	4.1	12.3
Restaurants	25.1	7.8
Transportation	1.2	34.0
Air	0.0	7.4
Intercity and rural	0.4	6.2
Railway	--	5.3
Transport- related services	0.3	13.5
Collective	0.6	1.7
Retail trade	44.5	26.4
Self-services	2.9	8.1
Fashion boutiques	17.4	4.2
Department stores	0.2	3.9
Healthcare	4.1	3.4
Fuels	0.4	2.4
Art and crafts, gifts, etc	11.2	1.6
Footwear	4.7	1.6
Jewelry	3.7	1.2
Other activities	25.1	19.5

Source: BBVA Bancomer with INEGI and Sec. Tourism data

### What is the weight of tourism in the state GDP?

(Share %)



Source: BBVA Bancomer with INEGI and Sec. Tourism data

<sup>1</sup> Estimates by the Secretariat of Finance, Banxico, BBVA Bancomer and other analysts

<sup>2</sup> This is largely explained by the heavy weight of other activities in the economy of these federal entities, such as oil, in the case of Campeche and Tabasco, and the motor vehicle industry in the State of Mexico.

<sup>3</sup> Nuevo León is an interesting case. In spite of its important economic role, it is not among the top entities in terms of hotel infrastructure (although more than 60% of its hotels are luxury hotels)

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A look at the cities reveals that among those that have a population of at least 100 thousand inhabitants (181 in total), half of the tourism offer (calculated by number of hotels) is concentrated in just 26 cities. Hotel density, or the ratio of hotels to inhabitants, is high (domestic average plus standard deviation) in just 20 of them. Generally speaking, the cities in this group are in keeping with those that the Secretariat of Tourism identifies as the most important in terms of number of visitors, which include Cancún, Playa del Carmen and in general the Riviera Maya region in Quintana Roo; Los Cabos in Baja California Sur; Puerto Vallarta in Jalisco; Veracruz and Boca del Río in Veracruz; Mazatlán in Sinaloa; Acapulco and Ixtapa in Guerrero; the Nuevo Vallarta region in Nayarit; Mérida in Yucatán; Oaxaca and Huatulco in Oaxaca; Guanajuato and San Miguel Allende in Guanajuato; and San Cristóbal de las Casas in Chiapas.

## Tourism features

According to Secretariat of Tourism figures, in 2008 around 40 million tourists checked into hotels. Inflow records at immigration control points show that 8.4 million tourists from abroad entered the country. A reconciliation of the figures shows that for each international tourist there are 4.7 national tourists, in other words, international tourism represents 21% of the total.

The bulk of international tourism activity (only considering those who travel deep into the country or arrive on cruise ships) is during the first quarter and declines significantly from then on, especially in the fourth quarter.<sup>4</sup> As regards domestic tourism, this is mostly during the summer. The seasonal pattern is especially important when calculating the fall in tourism brought about by swine flu, as well as the speed of recovery.

With regard to the focus on tourism in states, in accordance with the Secretariat of Tourism's figures only Quintana Roo, Baja California Sur and Nayarit receive more tourists from abroad than domestic tourists, and in a very-far-off second group are Baja California, Jalisco, Federal District, Chihuahua, Yucatán and Coahuila, with a contribution of tourists from abroad of between 20 and 35%. The numbers confirm that tourism from abroad is heavily concentrated in coastal destinations,<sup>5</sup> while national tourism is mainly in cities in mainland Mexico.

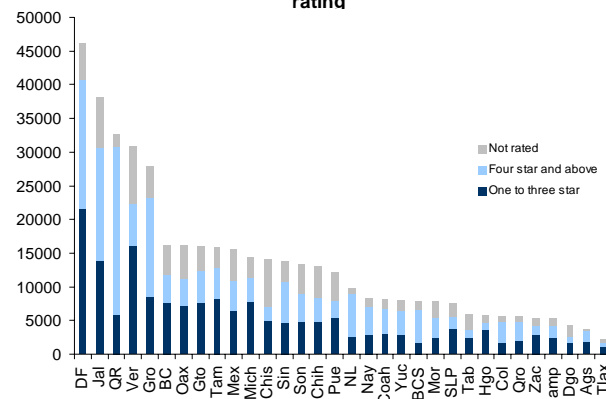
## Recent trends: before and after swine flu

How much did swine flu impact tourist activity? Or rather, How much did swine flu contribute to the downtrend that was recorded since the start of 2009? Which cities did it hit the hardest?

<sup>4</sup> This suggests that the climate factor is the determining factor in international tourism to Mexico. Although it is straightforward, the reason helps to explain why tourism is so highly concentrated on the coast.

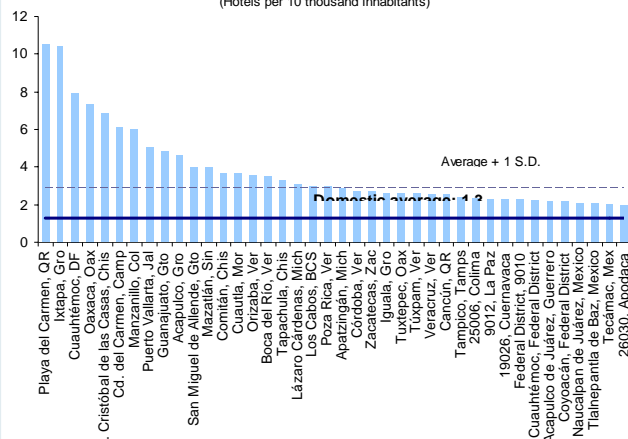
<sup>5</sup> Based on immigration control point records, which are probably the most reliable source of foreign tourist inflows, 52% of these tourists are in Cancún, another 33% split between Los Cabos, Puerto Vallarta, Guadalajara, Mazatlán, Acapulco and Ixtapa, while the remaining 15% enter via the Federal District (12%) and other points (3%).

Accommodation capacity by federal entity and rating



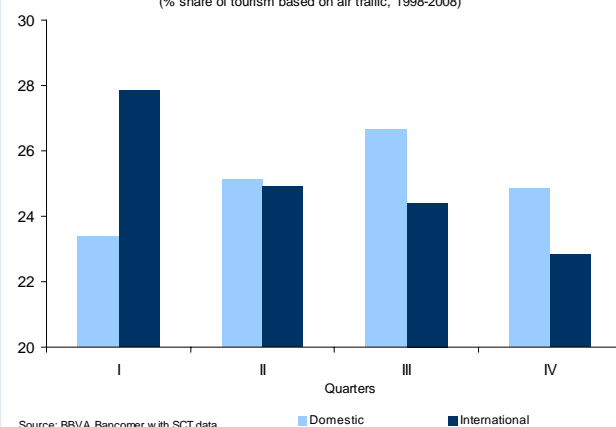
Source: BBVA Bancomer with INEGI and Sec. Tourism data

Cities with most hotel activity  
(Hotels per 10 thousand inhabitants)



S.D. = Standard deviation excluding extreme observations  
Only considers cities with more than 100 thousand inhabitants  
Source: BBVA Bancomer with INEGI data

The summer will set the trend for recovery in domestic tourism  
(% share of tourism based on air traffic, 1998-2008)



Source: BBVA Bancomer with SCT data

Firstly, it is worth noting that tourist activity recorded a clear decline since the start of the year, in terms of foreign and domestic tourism. As regards the former, there had been many speculations about the positive effect that the heavy depreciation of the peso would have<sup>6</sup> and that could counteract the impact of the recession on a global scale and in the United States in particular, from where more than 70% of tourists from abroad come. It turned out that this impact was not as heavy as expected, or in economist language, the income effect (recession) prevailed over the price effect (depreciation and in some cases price fall). In the first quarter, inflow records at immigration control points showed an 8.5% fall in the international tourism flow compared to the same period in 2008.<sup>7</sup>

As far as domestic tourism is concerned, weekly hotel activity records reveal that from January to the third week of April (i.e. after Easter and before the swine flu outbreak, during the fourth week) overnight stays and hotel occupancies in mainland cities (domestic tourism trend indicator) recorded a drop of around 6% compared to 2008.<sup>8</sup>

Both results, domestic and international tourism, hint that the fall in tourist activity, without taking the swine flu effect into account, was around 7% in annual terms, once the relative weightings are calculated.

The impact of swine flu on tourism became apparent as soon as this was announced, on April 24, but mainly over the following three weeks, when hotel occupancy fell to 10% (from 60% before the epidemic) in areas such as the Riviera Maya. In both coastal destinations and mainland cities lodgings fell by around 50% in annual terms. Furthermore, there were also signs in the sense that the recovery could be quicker in mainland cities: by the fifth and sixth week after the virus broke out, the rate of decline had eased in these cities compared to coastal resorts.

## Quantifying the impact

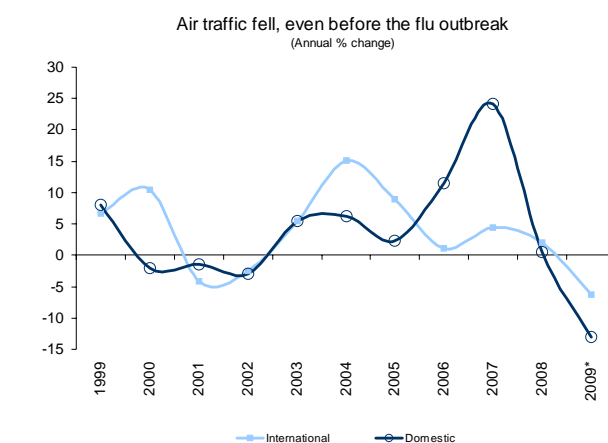
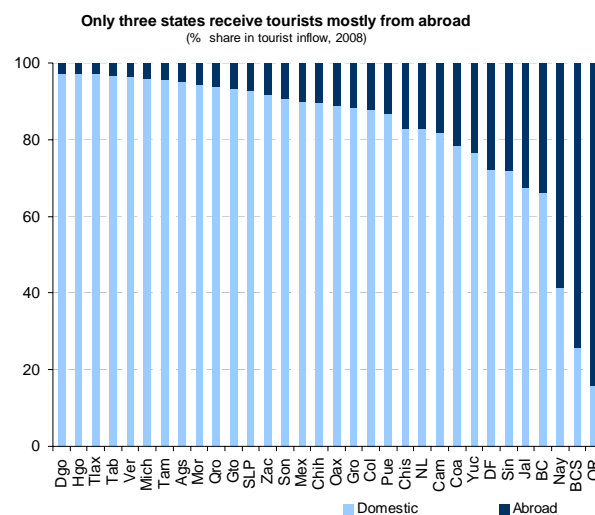
Based on trends up until the flu outbreak, tourism seasonality and hotel occupancy figures during the weeks following the outbreak, the scope of the impact of the epidemic on tourist activity, both national and regional, can be inferred.

It is assumed that the impact of swine flu mainly occurred during the second quarter, with a dramatic fall during the first few weeks and easing off after a month. Based on the differences in occupancy in coastal resorts compared to mainland cities (with a more pronounced fall in the former) it can be estimated that tourism fell around 45% in annual terms during the second quarter, with foreign tourism recording a drop of between 55 and 60%, whereas for domestic tourism this was between 40 and 45%. Bearing in mind that the trend up until the epidemic was a decline of around 7.5%, it could be said that the flu outbreak itself caused a 37% reduction in domestic tourism during the April-June period. If the impact was mainly during one quarter, as assumed, the result for 2009 as a whole could be a drop in tourism of between 16 and 17%. In a scenario such as this, for coastal destinations the decline during the year could reach around 20%, where as for mainland cities this would be in the region of 15 to 16%. In

<sup>6</sup> 45% at its lowest point, in the first quarter, compared to its mid-September levels when the crisis broke out.

<sup>7</sup> A strong upturn was recorded in cross-border tourism, which according to Banxico figures rose by 35% in annual terms in the first quarter of the year.

<sup>8</sup> Domestic air traffic records published by the Secretariat of Communications and Transport showed a 13% reduction, whereas hotel check-ins published by the Secretariat of Tourism recorded a 17% fall. However, different factors come into play here, ranging from statistical effects (in 2008 Easter was in March and 2009 it was in April), changes to air fares following a long price war and the rise in fuel prices in 2008, as well as the recession itself.



**The swine flu impact is easing gradually, more quickly in mainland cities**

Period	Mainland cities		Coastal destinations	
	Overnight stays (Annual % change)	Hotel occupancy (% and pp*)	Overnight stays (Annual % change)	Hotel occupancy (% and pp*)
Before swine flu outbreak (01-Jan to Influenza)	-6.5	44.3 (-6.5)	0.0	64.2 (-5.5)
Week 1 (20 to 26-Apr)	-5.7	48.2 (-8.3)	-5.2	57.9 (-7)
Week 2 (27-Apr to 03-May)	-48.7	23.7 (-27.5)	-36.0	44.1 (-22.2)
Week 3 (04 to 10-May)	-48.0	18.1 (-27.1)	-49.5	23.8 (-30)
Week 4 (11 to 17-May)	-40.1	28 (-26.7)	-36.0	44.1 (-22.2)
Week 5 (18 to 24-May)	-29.3	33 (-21.2)	-43.1	29.9 (-29.2)
Week 6 (25 to 31-May)	-16.9	38 (-14.9)	-31.6	34.7 (-21.3)

\* Numbers in brackets mean change in hotel occupancy rate in percentage points  
Source: BBVA Bancomer with Sec. Tourism data

**What impact will swine flu have on tourism?**

	2009			
	2008	Before flu outbreak	With swine flu	Flu effect (3) - (2)
	-1	-2	-3	
Tourism total (millions of tourists)	40.0	37.3	33.5	-3.9
Domestic	31.6	29.5	26.6	-2.9
Abroad	8.4	7.8	6.8	-1.0
Total tourism (Annual % change)	---	-6.7	-16.4	-9.7
Domestic	---	-6.5	-15.7	-9.2
Abroad	---	-7.6	-19.0	-11.4

Source: BBVA Bancomer with INEGI and Sec. Tourism data

terms of absolute numbers, it is possible that the recession could push the number of tourists in the country (national and from abroad) down by between 2.5 and 3 million, and the swine flu epidemic would cause a further reduction of 4 to 4.5 million.

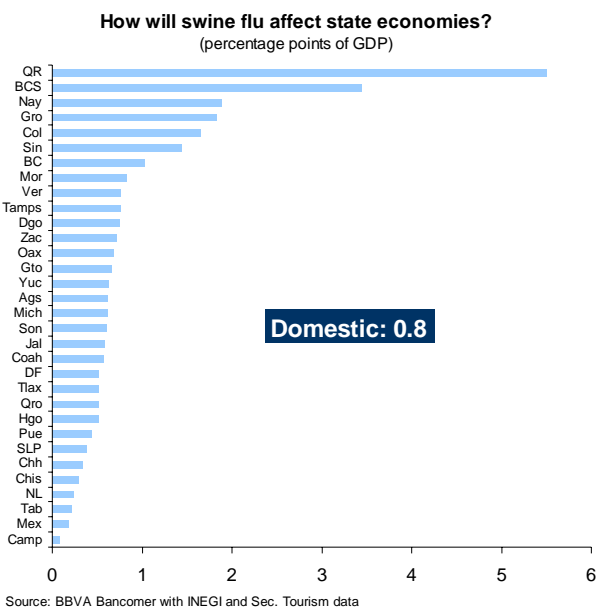
In terms of the GDP, estimates hint that swine flu will be responsible for taking between half a percentage point and a whole percentage point away from the domestic GDP in 2009.

What will this mean for local economies? In accordance with the estimated decline in tourism for mainland cities and coastal resorts, and the relative weight of tourism in the domestic GDP, the impact on a local level can be estimated. The worst hit federal entities will clearly be Quintana Roo, Baja California Sur, Nayarit, Colima, Guerrero and Sinaloa, for which the share of tourism in the economy is higher than the domestic average and that account for around 70% of tourism from abroad. For this group, the downturn linked to swine flu alone ranges from 5.5 percentage points in the case of Quintana Roo, to 1.5 points in Sinaloa. At the opposite end, the impact for federal entities such as Campeche, Tabasco, Nuevo León, State of Mexico and Chiapas will be light. It should be mentioned, however, that even in this last group there will be cities that will be heavily affected, such as San Cristóbal de las Casas, in Chiapas, and Valle de Bravo and Ixtapan de la Sal in the State of Mexico.

Conclusions

Regarding the estimates of the impact of swine flu on tourism, it must be noted that tourist activity includes much more than just hotels, in fact, when speaking about tourism GDP, hotels only account for 12%. More important activities both in terms of the number of establishments and aggregate value are transport, restaurants and retail trade. Support programs for affected companies must identify the most important states and cities in terms of economic units as well as employment and aggregate value when it comes to establishing the priority of programs and money to be allocated.

Several important considerations arise from the analysis of trends before and after the swine flu outbreak. Firstly, domestic and international tourist activity was already showing signs of a downturn even before the epidemic. Secondly, the first tourist activity indicators after the outbreak hint at a heavy but short-term impact. This is in keeping with past experience regarding a case of this type on an international scale, for example, the SARS in Asia in 2003 (Siu, and Wong, 2004). Furthermore, although the impact was widespread at the domestic level, it was more intense in coastal resorts. Mainland cities, which are more heavily targeted at domestic tourism, could see their activity levels pick up sooner than the coasts, especially those that are mainly focused on tourism from abroad.



Preliminary estimates suggest that the fall in the tourism GDP during 2009 could be 16 to 17%. For the economy as a whole, swine flu could contribute negatively by between half a percentage point and a whole percentage point to GDP growth. Levels of around 6% could even be reached in federal entities such as Quintana Roo, where the economy depends almost 50% on tourism and where the greatest impact from the epidemic was recorded. A lot will depend on the speed with which tourist flows, especially from abroad, return to normal.

### **Bibliographical References**

Siu, Alan and Wong, Y.C. Richard (2004), "*Economic Impact of SARS: The Case of Hong Kong*", Hong Kong Institute of Economics and Business Strategy, April 2004.

(INEGI) Instituto Nacional de Estadística y Geografía (2005). Sistema de Cuentas Nacionales de México, "*Cuenta satélite del turismo en México*". INEGI.

Hai, Wen, et al. (2004). "*The Short-Term Impact of SARS in the Chinese Economy*", Asian Economic Papers, 2004, Vol. 3, 1, pp. 57-61.