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Liberalization in Southeast Asia: who is capturing the markets?

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Abstract

In ten countries of Southeast Asia (ASEAN), in a context of strong traffic growth and development of the airlines in the region, regulations are being changed in order to achieve a regulatory situation similar to that in Europe, both inside the region and on international routes to other countries.

A multilateral agreement with China has already led to the development of international routes between China and ASEAN. In this paper, we study recent network and traffic development on international routes and the role of Chinese airlines in the development of the markets. We then focus deal on possible competition distortion between Chinese and ASEAN airlines.

1 Introduction

The recent development of air transport in new regions of the world has placed increasing emphasis on regulations restricting the airlines' freedom to expand their networks.

In ten countries of Southeast Asia (ASEAN), in a context of strong traffic growth and development of the airlines in the region, regulations are being changed in order to achieve a regulatory situation similar to that in Europe, both inside the region and on international routes to other countries. This should give airlines more opportunities of development, both inside and outside the region and benefit passengers. However, as long as the process is not completed, it may be offering more advantages to airlines in some countries, creating unbalances.

The focus of this paper is on the actual and potential future impact of those regulatory changes on traffic and airline market shares to and from the ASEAN region.

We focus on the case of China, where a multilateral agreement signed at the beginning of 2011 has already led to the development of new international routes: routes to and from China show spectacular growth, in response to the development of the Chinese economy and tourism and the removal of capacity constraints on this market. However, by using historical data on routes between international airports in the region, we show that the market shares of ASEAN and Chinese airlines are more and more unbalanced, in favor of the Chinese firms. How can we explain it, and what can we deduce about the path of liberalisation?

The paper enfolds as follows: In a first part, we explain the rationale behind the creation of ASEAN, and how it translated into a liberalization process in air transport. We highlight what remains to be done to create a single market similar to the European one. In a second part, we explain the air service agreement between ASEAN and China: why it was signed, and what it entails. In part three, we look at traffic and market shares on this market. Using historical OAG data on flights, frequencies and seat supply by airline, we perform an analysis of market shares on those routes, with different indicators. Then, in part four, we analyze this situation, drawing a parallel with the one that prevailed between Europe and the USA before and after the European liberalization, and comparing it to the ASEAN case. In the end, we deduce some policy recommendation concerning the completion of the liberalization process inside ASEAN.

2 Liberalization in ASEAN

The Association of South East Asian Nations (ASEAN) was established in 1967 by Indonesia, Philippines, Singapore, Malaysia and Thailand. They were joined later by Brunei (1984), Vietnam (1995), Lao PDR and Myanmar (1997), and finally Cambodia (1999). The objectives of ASEAN, as stated in the ASEAN Declaration in 1967, are to "accelerate the economic growth, social progress, and cultural development in the region, (...) to promote regional peace and stability".

The economic integration taking place in ASEAN should lead to the establishment of the AEC (ASEAN Economic Community), an undertaking somewhat similar to the common market of the European Union. It is to be noted, however, that ASEAN is dissimilar to Europe in many respects: first the countries of ASEAN are at widely different stages of economic and social development, which makes economic convergence more difficult. Second, the association that has been created does not have the power of the European institutions. Progress must be made on a unanimous basis, which makes everything somehow slower.

In this context of regional integration, air transport is one of the priority sectors. The idea of liberalizing the air travel sector came as early as 1995 in the ASEAN leaders' summit held in Bangkok. In 2004, the 10th air transport ministers' meeting in Phnom Penh decided upon an "Action Plan for ASEAN Air Transport Integration and Liberalization 2005–2015" (ASEAN, 2004). The objective was to establish a single aviation market by 2015. This is progressing somewhat slower than planned, but still, many steps have already been taken to achieve the objective. ASEAN is referring explicitly to the European model of liberalization, which led to the creation of a single aviation market in Europe in 1997.

Two multilateral agreements have been set up in ASEAN, and will lead to the "Air transport liberalization" objective. The first, in 2008, is the Multilateral Agreement on Air Services (MAAS), the second, in 2010 is the Multilateral Agreement for the Full Liberalization of Passengers Air Services (MAFLPAS).

The MAAS concerns the relaxation of 3rd, 4th and 5th freedom rights between capital cities. The second agreement (MAFLPAS) concerns the relaxation of 3rd, 4th and 5th freedom rights between all other cities. They have been ratified by most countries. In both agreements, the creation of ASEAN carriers is contemplated, but each ASEAN country may deny approval to such a carrier seeking to operate in this country.

This is a step forward, but it falls short of achieving its goal. The creation of community carriers (or European carriers) was a substantial step in European liberalization: those carriers could operate anywhere in Europe, they developed regional traffic and pursued consolidation inside the airline industry.

Further liberalization, where a single aviation market similar to that of Europe, would be created, is contemplated for 2023, with liberalization of 7th, 8th and 9th freedom, but nothing has been signed formally yet.

ASEAN has already carried out some multilateral negotiations with other countries, without waiting for completion of its air transport liberalization. If the idea of collective negotiation has some appeal, and enables ASEAN countries to bear more weight in a discussion, the fact that the liberalization process has not been completed on the ASEAN side may pose some problems, as we shall see later with the example of China.

3 The air service agreement with China

At the beginning of 2010, ASEAN and China established a free trade area, called ASEAN-China Free Trade Area (ACFTA).

At the end of the same year, ASEAN signed an air service agreement with China.

The reason behind the first initiative lies mainly in the importance of commercial links between China and the countries of ASEAN. The trade between them grew at an average annual rate of 46% during the period 2000-2010 (source IMF).

In 2008, ASEAN represented 9.03% of all imports and exports of China in value (US\$ billions, source Chinese ministry of commerce). It was even more in 2013, with 10.66%.

Conversely, trade (imports and exports) with China (including Hong Kong) represented 18.5% of all ASEAN external trade in 2010 (US\$ billions, Source IMF).

The strength and growth of commercial links between ASEAN and China are therefore an important factor in explaining the willingness to open the markets to trade, and lower the trade barriers.

Air transport between ASEAN and China is one particular sector that is developing fast. Here, the major factor to explain the development of traffic is tourism: tourism arrivals from China grew by 86% from 3.93 million in 2007 to 7.32 million in 2011 (source Asean).

Even before signing the agreement, the traffic of ASEAN with China (including Hong Kong) already represented 23,9% of all international seats into/out of ASEAN (source OAG, April 2008). The importance of this traffic flow has pushed the authorities to alleviate the constraints and give more freedom to the airlines of both regions: less capacity constraints and more possibilities to open new routes.

What is the nature of this air service agreement?

In the first protocol of this agreement, 3rd and 4th freedom rights are liberalized on both sides, with the exception of Hong Kong, Macao and Taiwan (points excluded by China). This enables ASEAN carriers to go from their own country to anywhere in China, with the only restrictions of capacity constraints in the main Chinese airports. Conversely, it enables Chinese carriers to go from anywhere in China to any point in ASEAN.

In December 2015, the first protocol had been ratified by China, Brunei, Malaysia, Myanmar, Singapore, Thailand, Vietnam (Source ASEAN). The protocol is already in force between China and all members having ratified it.

A second protocol, concerning the 5th freedom has been signed in November 2014, but it should not lead to any significant result because only secondary cities are concerned on both sides, with a capacity limit. So far (in December 2015) it has been ratified by China, Malaysia, Myanmar, Singapore, Thailand, Vietnam (Source ASEAN). It came into force in September 2015.

The first protocol appears to give ASEAN airlines some immediate benefits, by opening up any point in China (except the three excluded points). As we will see in the next part, many new routes have indeed been opened by the ASEAN carriers, and only slot restrictions at major airports limit their freedom now. It also opened the ASEAN market to Chinese airlines.

It is to be remarked that these slot restrictions can limit access in main markets on both sides: difficulties for ASEAN airlines to reach main cities in China (Beijing, Shanghai and others), and problems for Chinese airlines to reach main cities in ASEAN where some capital airports are congested.

It has been noticed that these protocols lead to unbalances in traffic rights, given the fact that Chinese carriers can start from anywhere in China to go to anywhere in ASEAN, and have thus access to a larger market than ASEAN carriers. Those can only start from their country of origin, because the process of liberalization inside ASEAN is not yet complete. This could lead to an unbalance in market shares betwen Chinese and ASEAN Airlines. Before analyzing this unbalance in more details, let us look at traffic to see if it validates this claim.

What has been the evolution of traffic and market shares between ASEAN and China before and after the ratification of this agreement?

4 Seats and market shares between ASEAN and China

4.1 Global overview

The international traffic to and from ASEAN has also developed strongly in the last decade with 80% more seats supplied in 2015 than in 2006¹. The stronger growth was between 2010 and 2015 with 49% more seats supplied. This growth is quite homogenous over the years between ASEAN and non-ASEAN airlines which supply a balanced total number of seats each year, as shown in Fig. 1.

¹ The evolution of seats supplied being a proxy for measuring traffic evolution in terms of passengers transported.

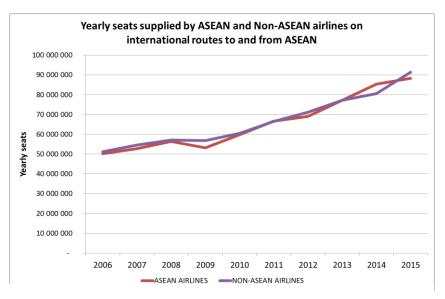


Fig. 1: Yearly seats supplied by ASEAN and non-ASEAN airlines on international routes to and from ASEAN (data source from OAG database)

The situation is however significantly different on the air transport market between ASEAN and China.

Firstly, this market is more dynamic: the total number of seats supplied was multiplied by 2.7 between 2006 and 2015 to reach 14.9 million seats. The growth was particularly high between 2010 and 2015 with 124% more seats supplied (Fig. 2).

Secondly, the market shares have evolved in favor of Chinese carriers: While ASEAN airlines' market shares (in number of seats) on all international routes remained around 50% between 2006 and 2015, they have decreased from 59% to 48% on routes between China and ASEAN during the same period. This market share decrease has been to the benefit of Chinese airlines for which the market share grew from 35% in 2006 to 51% in 2015.

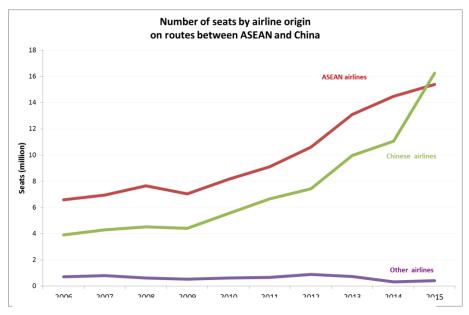


Fig. 2: Number of seats by airline origin on routes between ASEAN and China (Source: OAG database)

4.2 Routes and networks

The strategy chosen by Chinese airlines to reach this strong market share growth was mainly to develop a network more extended than ASEAN airlines. If both ASEAN and Chinese airlines have increased their number of routes operated between 2006 and 2015, the network operated by Chinese airlines has far more developed on the period considered (Fig. 3).

Moreover, while there are around twice more ASEAN airlines than Chinese airlines operating on routes between China and ASEAN (Fig. 5), the average number of routes operated per airline is dramatically higher for Chinese airlines than for ASEAN airlines (Fig. 4). In 2015, 27 ASEAN airlines operate around 250 routes, while 15 Chinese airlines operate more than 370 routes.

Another element of interest is the proportion of routes operated by carriers from only one country, or by ASEAN and Chinese carriers: in 2015 routes operated only by Chinese carriers represent 52% of the total routes between China and ASEAN, routes operated only by ASEAN carriers represent 27%, and routes operated by both represent 21%. This is another indication of the dominance of Chinese carriers over the networks.

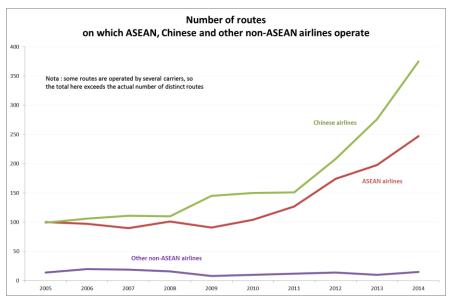


Fig. 3: Number of routes on which ASEAN, Chinese and other non-ASEAN airlines operate (Source: OAG database)



Fig. 4: Average number of routes operated per airline between ASEAN and China (data source from OAG database)

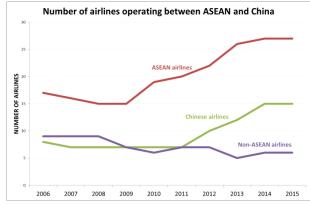


Fig. 5: Number of airlines operating on routes between 2006 and 2015 (data source from OAG database)

As an illustration, let us look at two airlines which developed their network during the period. We can see that China Southern (Fig. 6 and Fig. 7) opened routes from several cities in China, to practically all countries in ASEAN, even if the effort was emphasized in Guangzhou (China Southern is based there).

On the other hand, the Thai airlines "Thai Air Asia" which is a low cost airlines (subsidiary of Air Asia) opened routes to several Chinese cities, especially in the southern and central part of China, but is limited to start from Thailand (Bangkok, Chiang Mai, Krabi) (Fig.8 and Fig. 8).



Fig. 6: China Southern Airlines route network in 2010 (data source from OAG database, map with http://www.gcmap.com/)



Fig. 7: China Southern Airlines route network in 2015 (data source from OAG database, map with http://www.gcmap.com/)

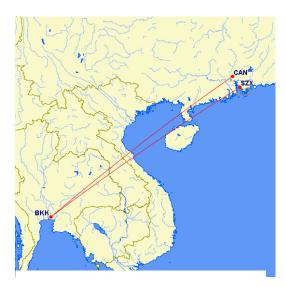


Fig. 9: Thai Air Asia route network in 2010 (data source from OAG database, map with http://www.gcmap.com/)



Fig. 8: Thai Air Asia route network in 2015 (data source from OAG database, map with http://www.gcmap.com/)

4.3 Analysis by country

In the markets between China and ASEAN, only Thai airlines, Singaporean airlines and Malaysian airlines reach a global market share of more than 10% of the total seats supplied between China and ASEAN (Fig. 10). They are indeed limited in their reach by the impossibility of offering flights starting in another ASEAN country.

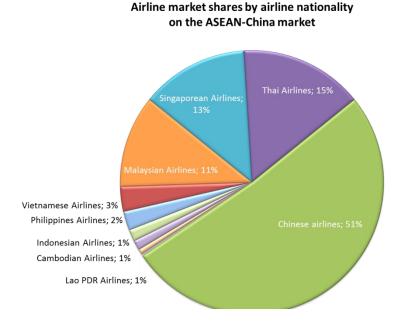


Fig. 10: Airline market shares by airline nationality on the ASEAN-China market (data source from OAG database)

In 2015, the ASEAN airlines with the largest network were airlines from Thailand with 32 routes operated between China and ASEAN (Fig. 11). But this network remains small compared to the Chinese airlines which operate on 193 routes.

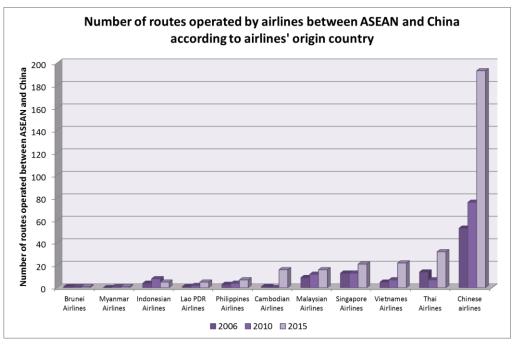


Fig. 11: Number of routes operated by airlines between ASEAN and China according to airlines' origin country (data source from OAG database)

Since from the point of view of ASEAN we have separate markets, let us look at the three largest markets: Thailand to China, Singapore to China, and Malaysia to China. Those countries have all signed the ASEAN-China agreement.

The case is quite clear: the growth in market share observed for Chinese airlines comes mainly from the Thai market (Fig.12), which is driven by tourism, and where Chinese airlines have increased their capacity, especially since 2012. The increase between 2014 and 2015 is especially strong, considering traffic of 7.6 million passengers in 2014 (source ENAC Air Transport Data).

On the Singaporean market (Fig.13), the global traffic is increasing (+7% in 2015), and Singapore Changi airport is claiming to be "the most connected airport in Southeast Asia to China". There, the local airlines (Singapore Airlines, Scoot, Silkair, Tigerair) are operating around two thirds of the traffic and are progressing faster than the Chinese airlines. It is to be remarked that Scoot and Tigerair are low cost carriers (Scoot is a subsidiary of Singapore Airlines), which may explain their appeal to leisure travelers to and from China.

On the Malaysian market (Fig.), while Malaysian airlines are increasing their supply of seats to China, the Chinese airlines are not: the supply of seats has stayed constant for a few years.

On the smaller markets, while traffic to Brunei and Myanmar remains really insignificant, traffic to Vietnam and Cambodia is increasing, with 1.9 million seats in 2015 between Vietnam and China (Fig.17), and 1.3 million seats in 2015 between Cambodia and China (Fig.). While the market is quite equally split between Vietnamese and Chinese airlines, it is in favor of Chinese airlines on the routes to and from Cambodia, with a strong increase which can be explained by the attractiveness of Cambodia for Chinese tourists. China, indeed, has lately become the first origin of tourists in Cambodia.

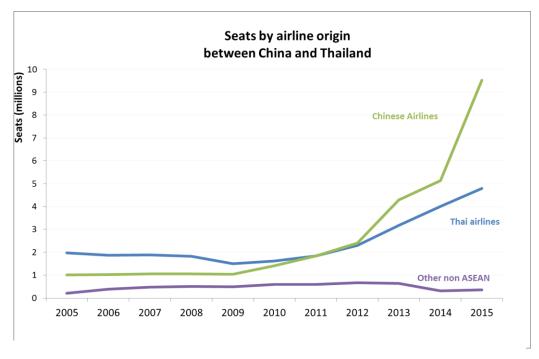
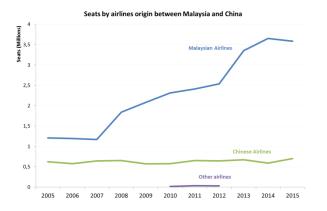


Fig.12: Seats by airline origin between China and Thailand (data source from AOG database)



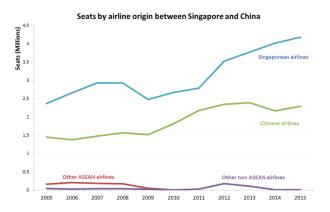
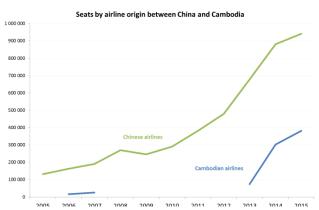


Fig.13: Seats by airline origin between Malaysia and China

Fig.13: Seats by airline origin between Singapore and China



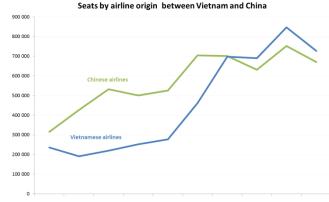


Fig.15: Seats by airline origin between China and Cambodia

Fig. 16: Seats by airline origin between Vietnam and China

What is really interesting here is that we have a very different situation in terms of market shares in the different markets. It seems that Chinese airlines are focusing more on markets where there is a large demand from Chinese tourists, like Thailand and Cambodia. In those markets, they are increasing their number of routes and seats and gaining markets shares. They are the easiest markets, while the Singapore-China market, for example, is way more competitive and harder to penetrate, with the dynamism of Singaporean low cost carriers. Malaysia could be a special case, with Chinese tourists staying away from the country after the accident of the Malaysian airline flight in March 2014. With those special circumstances, it is difficult to draw any conclusion on that market.

4.4 Market entry and airlines

Among the 16 new airlines that entered the ASEAN-China market between 2010 and 2015, 14 airlines originated from the countries having ratified the ASEAN-China multilateral agreement. This confirms the effect of the agreements on the attractiveness of the market. It is interesting to stress that this market attractiveness was particularly strong for Chinese airlines since 8 new Chinese airlines decided to operate on the market between 2010 and 2015 (Fig. 17). Entries on the market for new ASEAN airlines were rare since only one additional airline from Vietnam and one from Singapore appeared on the market. The exception was Thailand, where the number of Thai airlines strongly developed over the period with 4 more airlines operating on the market.

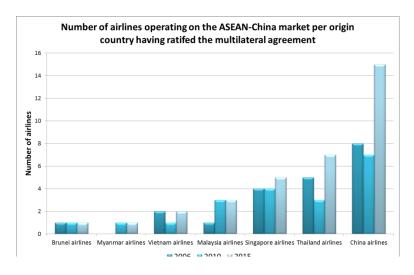


Fig. 17: Number of airlines operating on the ASEAN-China market per origin country having ratified the multilateral agreement (data source from OAG database)

Entry of new airlines on the market led to a decrease in the global market power of the fifteen more active airlines on the ASEAN-China market. While the TOP 15 airlines supplied 91% of the total seats in 2010, this percentage decreased to 80% in 2015. Such market power decrease of the TOP 15 airlines is globally to ASEAN airlines disadvantage: the market share of ASEAN airlines belonging to the TOP 15 dropped from 52% in 2010 to 37% in 2015 (Fig.18).

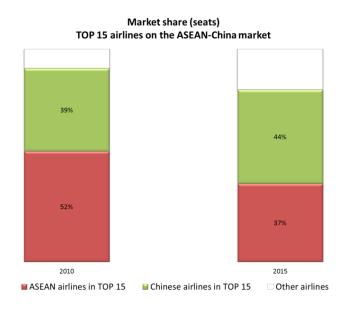


Fig. 18: Market share (in number of seats) of Chinese and ASEAN airlines in the TOP 15 airlines on the ASEAN-China market (Source: OAG database)

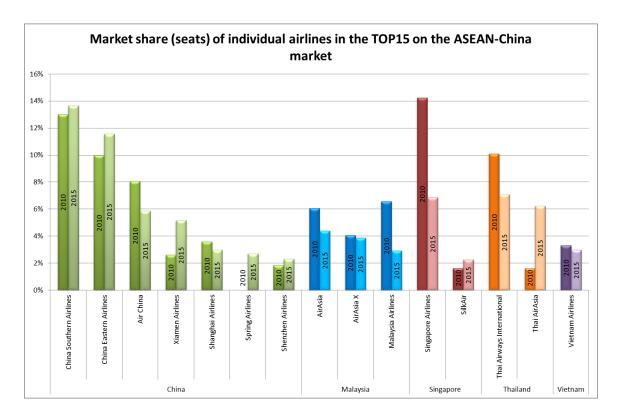


Fig.19: Market share (seats) of individual airlines in the TOP 15 on the ASEAN-China market (data source from OAG database)

Thai Air Asia and Silk Air are the only ASEAN airlines belonging to the TOP 15 which increase their market share between 2010 and 2015 (Fig.19). Thai Air Asia is a low cost carrier, while Silk Air is the regional subsidiary of Singapore airline on short and medium haul markets. The market share decrease is particularly strong for Singapore airlines that drops from a 14% market share to a 7% market share over the period, which does not compensate the increase of Silk Air by far.

There is an opposite trend for Chinese airlines in the TOP 15 that generally tend to increase their market share. Only Air China and Shanghai airlines face a market share reduction.

5 Analysis and policy recommendations

Our analysis shows that the traffic between ASEAN and China has grown tremendously since 2006, and even more since 2010. It appears that the market shares of airlines have changed in favor of the Chinese airlines from 35% in 2006 to 51 % in 2015 (seats).

The case is especially clear on the markets from the six countries who signed the air service agreement with China, liberalizing the 3rd and 4th freedom traffic between China and each country. This unbalance is significant in terms of seats offered, but even more in terms of routes opened and network development. The Chinese airlines operated nearly 200 routes in 2015 (from 120 in 2010), compared to 126 for ASEAN carriers.

One could argue that this evolution is due to the greater dynamism of Chinese carriers, but it is likely that the conditions of competition are also to blame: as we already remarked in part three, Chinese carriers can develop their networks from anywhere in China to anywhere in ASEAN, while the ASEAN carriers can only start from their country of origin. Each individual Chinese carrier has therefore more opportunities for network growth on profitable routes, and can benefit from economies of scope over the network.

We can be drawn an interesting parallel with the case of Europe. Even if the air transport development and the conditions are very different in ASEAN and in Europe, the process the ASEAN countries are committed to is the same as the liberalization process followed in Europe between 1987 and 1997. It aimed at creating a single European airspace with European airlines flying freely inside that airspace and benefiting from traffic rights with foreign countries from anywhere inside that airspace. It aimed at creating European carriers instead of national carriers. Replace European with ASEAN and you'll get what is the proposed goal of the process taking place in ASEAN right now.

Now an interesting topic linked with that liberalization process in Europe is the case of negotiations with foreign countries, and especially the United States. After the internal liberalization process was completed, the unbalance in traffic rights between European airlines and US airlines on markets between the USA and Europe led to a complete renegotiation of bilateral agreements, in order to set up a single new agreement between the European Union and the USA.

The old bilateral agreements led to a situation where European airlines could only start from their country of origin, when the US carriers could start from anywhere in the USA to go anywhere in Europe. The horizontal agreement between Europe and the USA aimed at correcting this unbalance, and give European airlines the right to start from anywhere in Europe to go to the USA. It led to a better balance between competitors and eased mergers between European airlines which gained a larger size in the process. The industry was fragmented, with many small airlines, and is now more consolidated, with larger and stronger groups.

But this only occurred AFTER the liberalization process was completed, and AFTER the legal birth of European airlines.

While ASEAN already signed an horizontal agreement with China, these two elements lack in ASEAN: there is no real possibility today of having an ASEAN carriers with traffic rights all over the place, and the actual national carriers do not have such extended traffic rights either. Impatience to sign agreements now with outside partners can place national airlines at a disadvantage as long as traffic rights are not liberalized inside ASEAN.

If we look closely at the case of the six ASEAN countries concerned so far with the horizontal agreement with China, we see contrasted situations, but globally the Chinese airlines benefit more from the agreement, which is again very clear in terms of network development (50% of routes in 2015 operated by Chinese carriers only).

By doing so, they gain a first mover advantage that may give them a competitive edge, and it is likely that the unbalance observed will only worsen over time, as long as the ASEAN carriers are limited in their development.

While the traffic increase is so far beneficial to the passengers on both sides, the potential reduction in competition between carriers may be a bad thing in the long run, especially if the situation endures.

We think that in these conditions, it would be advisable to move forward with the liberalization process, and with the concept of ASEAN carriers able to operate anywhere inside the area. This would indeed set the balance right between ASEAN and Chinese carriers before the later become too powerful in the region, and enable ASEAN carriers to consolidate and to develop by accessing new markets. Some ASEAN airlines may be able to benefit more from this than others, but it would be better for them than having Chinese carriers take the lead in the region. From a competitive point of view, and from the point of view of the passenger, it would also be preferable to have more competition between carriers of several countries than to have only a few (Chinese) carriers on most markets.

6 Conclusion

ASEAN has taken steps towards a single sky in air transport. The process should lead to a deregulated area like the one in Europe, with ASEAN carriers sharing the same traffic rights inside and outside the area. The project is not completed yet. However ASEAN has begun to sign horizontal agreements with foreign countries like China, liberalizing in a large proportion the traffic between the two areas.

We have focused on the case of China, and seen that the agreement has put ASEAN carriers are at a competitive disadvantage compared to Chinese carriers: they only have traffic rights from their own country to China, while Chinese airlines can start anywhere in China to go anywhere in ASEAN. The agreement, signed at the beginning of 2011, has already led to a market share shift at the advantage of Chinese carriers, as we showed in part four.

As explained in the analysis in part five, it could get worse if the regulatory setting does not change in order to restore the balance between carriers in both regions. It could lead to a reduction in competition, which would ultimately be bad for the passengers. This is why progressing towards a fully liberalized ASEAN market seems at present like the best idea, all the more since other horizontal agreements could be signed and lead to the same situation with other countries.

References

- ASEAN, 2011. Air transport agreement between the governments of the member states of the association of south east Asian nations and the government of the people's republic of China, jan 2011.
- Drysdale A., Khee-Jin Tan A., McDermott P., Stone D. & Thomas, I. 2008. Developing ASEAN's Single Aviation Market and Regional Air Services Arrangements with Dialogue Partners. REPSF II Project No. 07/003
- Fleming, K., Tacker, T., Vasigh, B., 2008. Introduction to Air Transport Economics, Ashgate
- Hew Wei-Yen, D, 2007. Brick by Brick: The Building of an ASEAN Economic Community. Institute of Southeast Asian Studies.
- Khee-Jin Tan A., 2015. Assessing the Prospects for an E.U.-ASEAN Air Transport Agreement. Discussion Paper No. 2015-02, International Transport Forum
- Khee-Jin TAN A., 2013; Toward a Single Aviation Market in ASEAN: Regulatory Reform and Industry Challenges, ERIA Discussion Paper Series.
- Khee-Jin Tan, A.,2010. The ASEAN multilateral agreement on air services: En route to open skies? Journal of Air Transport Management 16 (2010) 289–294.
- Laplace I., Lenoir N., 2013, Air transport in Cambodia. Study for the French Civile Aviation Authorities (DGAC).
- Laplace I., Latge-Roucolle C., Lenoir N., Malavolti E., 2015. Provision for Consultancy Study on the Economic Impact of the ASEAN Single Aviation Market". ASEAN Air Transport Integration Project.
- Lelieur, I., 2003. Law and policy of substantial ownership and effective control of airlines, Ashgate.
- Yong P., Kee Hoong, T., 2015. Regional Industry Focus, ASEAN Airlines, DBS Group Research.