Airport management in Japan: any lessons learnt from the UK?

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ABSTRACT

The aim of this paper is to examine the possible involvement of private sector airport management in Japan, particularly at Kansai airport. A comparison is undertaken with the UK airport industry, as some parallels can be drawn with this country around the 1990s when it went through a period of aviation liberalization and privatization of its airports. The findings suggest that private sector involvement in Japan has the potential to be successful, arguably as in the UK, and may help overcome certain problems facing Japanese airports, especially those associated with the funding system and lack of integrated airport management models. However financial problems at the airports, and especially the huge debt at Kansai, are likely to make it challenging to attract the private sector investors that are needed.

KEYWORDS: Privatization, Concession, Japan, United Kingdom

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1. Introduction

Both the UK and Japan have a very significant airport industry with similar levels of traffic. In 2012 UK airports handled a total of 224 million passengers whilst 238 million passengers passed through Japanese airports. This is in spite of the population of Japan being twice that of the UK (127 million compared to 63 million in 2013) and a larger land mass in Japan, resulting in around 336 people per square km in Japan and 257 in the UK[1]. Both countries are dominated economically by their capital cities of Tokyo and London. However Japan has a far greater number of airports, approximately 100 compared to around 60 in the UK.

Whilst there are many differences between the UK and Japanese air transport environments, it can be argued that the present Japanese situation is, to some extent, similar to that experienced in the UK around the 1990s. At that time the dominant position of the London airports, and in particular Heathrow, began to be somewhat eroded with the development of many new services out of the regional airports. Heathrow was congested whereas there was ample capacity in the regions. New services from the regions were also encouraged by an increasingly liberal airline regulatory environment and the emergence of the low cost carrier (LCC) sector. Currently in Japan the airports serving Tokyo are congested whilst there is excess capacity in the regions. In addition a more liberal aviation regulatory regime is progressively being established in Japan and LCCs are gaining market share.

However the ownership and regulatory regime of the airport industry in the two countries is very different. The UK was the first country in the world to introduce airport privatization in 1987. Consequently in the last twenty five years, most of major UK airports have passed into partial or full private ownership, with some companies owning more than one UK airport. By contrast almost all Japanese airports are owned and managed by public authorities. The Japanese government also plays an important role as a major shareholder in Tokyo-Narita, Osaka-Kansai and Chubu-Centrair international airports which are public limited companies. There are a number of key problems associated with the nature of the industry in Japan, particularly associated with the funding system, and the lack of integrated airport management models which are responsible for both the airfield and terminal facilities. One possible solution that has been proposed to overcome some of the difficulties facing Japanese airports is airport privatization and group or 'package' ownership that has been experienced in the UK.

Therefore the aim of this research is to examine whether there are any lessons that can be learnt from the UK situation that can be applied to the Japanese airport industry as it moves into new and uncharted waters. The overall structure of this paper is as follows. Section 2 looks generally at airport management and ownership. Section 3 then considers the UK situation in detail, focusing on investors, group ownership and concession operations. This leads on to Section 4 which discusses the challenges facing the Japanese airports, and in particular developments at Kansai and Itami airports. Section 5 discusses the comparative analysis between the two countries and draws conclusions.

2. Airport management and ownership

During the last 25 years, a number of airports throughout the world have been privatized with around a quarter of all airports now being under partial or total private control[2]. The objectives of such privatizations have been very varied, with two key drivers being the need for investment finance and improvements in efficiency. Other goals have included financial gains to the state; less state influence; improvements in quality and responsiveness to customers; improvements in management expertise; and greater opportunities to diversify activities[3]. These strategic priorities set by government have key implications for the type of privatization model that is adopted[4,5].

Indeed privatization is a very broad term. Sometimes it is described as the transfer of ownership to private organizations, and sometimes the focus is purely on the transfer of management (which might be defined as public private partnerships (PPPs) or private finance initiatives (PFIs) rather than privatization). An important consideration is the degree of government control that exists, with partial privatization tending to be the more popular option. For instance globally 19 per cent of airports are owned by mixed public-private shareholders compared to 8 per cent that are fully privatized[6]. Clearly, this is primarily because governments feel the need to retain at least some stake in their airports as these are considered vital national or regional assets, having both economic benefits and environmental costs to the communities that they serve.

Of the different privatization options, concession type models have been popular in most parts of the world[7]. These are the privatization models that are currently being considered in Japan. ICAO[8] showed that 164 out of 578 global airports had concession or leasing arrangements. Likewise within Europe, around a third of all airports were identified as falling into this category[9]. For this paper a concession agreement is defined as relating to the operation of government-owned assets by a separate organization for a specified period of time. The opportunities for investment will depend on the risks involved and how these will be allocated between the airport operator and the government[10,11].

The UK has a mixed private-public sector airport industry with a variety of different governance models:

- Private ownership (e.g. London City Airport)
- Private share flotation (e.g. the former company BAA - now Heathrow Airport Holdings. This operator is now delisted)
- Total private trade sale (e.g. Leeds Bradford, Bristol, Liverpool)
- Partial private trade sale (e.g. Manchester, Birmingham, Newcastle, Norwich)
- Concession agreement with public ownership (e.g. Luton)
- Public ownership (e.g. Cardiff, Highland and Islands (HIAL))

The majority of the totally or partially publicly owned airports in the UK have local government shareholders but are managed in a financially independent way. By contrast in Japan, there are only three airports (Narita, Centrair and Kansai) that have been corporatized with integrated management which is responsible for both the airfield and terminal facilities. Even here the majority of their shares are owned by the public sector. Narita airport is wholly owned by the central government whilst Centrair is partly owned by the public sector (48.69%). Up until June 2012, Kansai airport was majority owned by the government (66.56%) and municipal governments (15.23%), but it has now been taken over by the central government and merged with Itami airport as a concession. The new Kansai International Airport Company (NKIAC) intends to sell the concession rights to the private operator. All the other airports in Japan are publicly owned.

3. The UK experience

3.1 Privatization developments

The pattern of ownership changed in the UK because of the 1986 Airports Act [12, 13]. Prior to this all airports were owned by the public sector. Privatization has led to a number of airport groups or investors that manage or own more than one airport in the UK including Heathrow Airport Holdings, Peel Group/Vantage, Global Infrastructure Partners (GIP), Ontario Teachers' Pension Plan, Manchester Airport Group (MAG), Stobart Holdings, Regional and City airports (Balfour Beatty) and Highlands and Islands Airports (HIAL)[14]. These companies traditionally had different spheres of operation such as Peel (property), Balfour Beatty (infrastructure), Stobart (logistics) and GIP (investment funds), or are specialist airport operators, such as MAG and HIAL.

It can be argued that group operations can potentially help airport operators achieve economies of scale, make best use of resources and expertise, and enable a more strategic and coordinated approach to airport development. However, on the other hand, it may significantly inhibit competition. For a number of the airport groups in the UK, the airports do not share the same catchment area and so can benefit from common operations without there being any possible detrimental impact on competition. Indeed the Office of Fair Trading (OFT) generally found that the UK regional airport industry operated in a competition manner[15]. However there have been a few cases when group ownership has not gone ahead because of anti-competitive fears, for example with the cases of Belfast International and Belfast City airport, or the cases of Bristol and Exeter airport. The most extensive debates have occurred with the former BAA group of airports which were privatized in 1987. Eventually in 2009 the Competition Commission concluded that common ownership had inhibited competition and BAA was required to sell Gatwick, Stansted and Glasgow or Edinburgh[16]. Gatwick, Edinburgh and Stansted have now been sold.

Airport operators in the UK, especially in the regions, generally benefitted from strong growth spurred on particularly by airline deregulation and the emergence of the LCC sector in the early 2000s (Table1). Indeed the overall LCC market share increased from just 14 per cent in 2000 to over 40 per cent in 2008[17] - in many cases encouraged by attractive deals offered by the airports. However in recent years, growth has fallen at many airports and services have been dropped, primarily as a result of the much more volatile era brought on with the onset of the financial crisis of 2008 and subsequent economic recession. Some of the airports, such as Belfast International, Bournemouth, Cardiff and East Midlands, which typically experienced some of the greatest increases in traffic in the boom period of LCC expansion, have also tended to see the largest contraction in recent years. These changing fortunes for the airports are also reflected in lower profits levels (or losses) for the majority of airports (Table 2) in more recent years. Nevertheless the majority of the airports still managed to achieve relatively large operating margins - which would be the envy of most airlines - in spite of reductions in traffic volume. Moreover the UK airport industry is now generally considered to be much more commercially focused than before, with a prime illustration of this being that more than 40 per cent of revenue on average is now generated from non-aeronautical sources.

TABLE 1 AND 2 HERE

However, the challenging economic conditions made some airports less attractive to investors and in some cases secondary airport sales have occurred. For example 65 per cent of Peel Airports was sold to the international airport Vantage Airport Group (previously Vancouver Airport Services) in 2011 when it faced financial problems. Elsewhere MAG sold Humberside airport in 2012, as did Copenhagen airport with Newcastle, when these airports no longer fitted in with the parent company's development strategy. Meanwhile Cardiff airport, which has experienced a dramatic decline in traffic in recent years, has actually been bought back to public ownership by the Welsh government, after 18 years in private hands, in an effort to turn around the fortunes of the airport. Its former owner Abertis has also disposed of its other UK airports. In addition, Prestwick airport is now back under public ownership with the Scottish government.

3.2 The Luton concession

As a concession type of privatization approach is being planned for Japan, it is useful to consider the experience of such a model in the UK. This is limited to Luton airport as this is the only UK airport to have adopted a concession arrangement. The airport is owned solely by Luton Borough Council, becoming a limited company operator in 1987. It is one of a number of airports serving the London area and so in 1990 it was renamed London Luton airport to reinforce this position. However in 1991, faced with a decline in traffic (especially as one of its main customers Ryanair had moved to nearby

Stansted) an unsuccessful attempt was made to sell the airport. Subsequently in 1998 a consortium originally consisting of Barclays Investment, Bechtel Enterprises, and Airport Groups International (AGI) (which was subsequently bought by TBI in 1999 which became part of Abertis) was given the 30-year concession to run the airport. A concessionaire-type arrangement was chosen, rather than a flotation or trade sale, since the local government owners had promised not to relinquish total control of this publicly owned asset to private hands. Barclays and Bechtel subsequently sold off their interest in this airport. The airport concession was owned by Airport Concessions and Development Ltd (ACDL) which is a Spanish company owned by Abertis Infrastructures (90%) and the airport group AENA International (10%) until 2013 when it was transferred to AENA (51%) and AXA Private Equity (49%).

The arrangement involves an annual concession based on passenger and cargo traffic with a guaranteed minimum payment. In 2010 the annual fee was in excess of £20 million and overall more than £210 million in fees has been made since the concession started in 1998. The council had the right to terminate the concession agreement halfway through its term subject to required notice and termination payments being paid to reflect the value of the remaining years of the concession and other liabilities. As can be seen from Tables 1 and 2 the airport has generally benefitted from the growth in traffic in the last years (2009 and 2010 being exceptions), stimulated by LCC growth which is now its main market (it is a major base for easyJet), and has had relatively healthy profits.

Nevertheless there have been some issues related to the fixed term nature of the concession weakening incentives to invest because of the uncertainties of making an adequate return on investment. In 2006 the airport operator published a master plan that proposed an extended runway and a new terminal. However in 2007 it decided not to pursue these plans and to instead make better use of the existing site and facilities. The limited period remaining before the end of the recession was cited as one of the reasons for this, albeit that the expansion plans at nearby Stansted airport were also likely to have played a key role in this decision. Then in 2012 Luton Borough Council published a new master plan for the airport. This was arguably viewed as an indication that the council wanted to terminate the concession at its half way stage to get more investment under a new contract and as a threat to the current concession agreement. The airport operator Abertis subsequently unveiled its own plans for the airport’s expansion which could have been considered as its bid to retaining its concession. Eventually the two bodies agreed on a development programme and as a consequence the concession agreement has now been extended to 2031. Such developments illustrate the problems with reaching agreements between concession partners over the required investment that is needed if it is not stipulated in detail in the concession agreement.

4. The Japanese situation

4.1 The structure of the airport industry and current issues

Since 2008, Japanese airports have been classified according to who administers them, namely company managed airports (Kansai, Itami, Centrair and Narita accounting for 29 per cent total traffic); airports administered by the central government (61 per cent); airports administered by local governments; and others (10 per cent) [18] (Figure 1).

FIGURE 1 HERE

In Japan, as in the UK, the number of passengers decreased after 2007 (Table 3). This was primarily due to poor economic conditions, the declining population, the financial problems of JAL, and domestic competition especially from the Shinkansen 'bullet' train. Traffic subsequently fell further in 2011 because of the devastating earthquake. Moreover at many Japanese airports passenger numbers also declined in between 2004-2008 unlike in the UK. However passenger throughput increased in 2012, mostly driven by the entry of LCCs. Total numbers grew from 216 to 238 million.

TABLE 3 HERE

About two thirds of the domestic passengers use Haneda Airport, with the regional airports facing a difficult situation because of the weak local economy, considerable overlapping catchment areas and competition with other transport modes. As for international passengers, nearly 90 per cent of international passengers use Tokyo (Haneda and Narita), Kansai and Centrair. This traffic distribution shows the traffic concentration in urban areas and relatively small use of the regional airports.

The regional airports have been engaged in a variety of initiatives intended to keep or grow their traffic. Typically these are aimed at airlines or passengers[19]. For airlines these include the reduction of airport charges or the guarantee of a boarding rate. The boarding rate guarantee is a mechanism when the local government compensates for the losses of the airline, if the annual load factor fails to meet the target which was agreed between the local government and airline. As regards passengers, the initiatives include the payment of grants to reduce the total travel costs or offering free car parking. Some airports also use public relations activities to encourage the use of their facilities. However whilst such measures to reduce the burden of airport users may lessen the decline of passengers in the short run, increasing numbers is a much harder task, particularly as financial support from the local governments cannot be expected on a permanent basis. Moreover since these initiatives are intended to work on the demand side, they do nothing to streamline airport operations. This could potentially be achieved if the airports co-operated or used a system approach but in practice this is difficult to attain because of the existence of the different airport administrators.

This situation has not been helped by the fact that the aeronautical revenues of most of the airports goes into a national government account that is then redistributed (with additional funding from general national accounts) through capital grants to the individual airports in accordance with five year development plans[20]. This pooling and re-allocation of funds has come under increasing criticism in recent years for producing an unbalanced and inefficient airport system which has led to overinvestment at a number of regional airports, with political rather than economic need taking priority[21, 22].

Moreover Japanese airports are unusual, compared with other airports, in that the non-aeronautical facilities (such as the passenger or cargo terminal buildings and car parking) are managed by different entities (typically mixed public/private corporations) from the basic aeronautical facilities (such as runways, taxiways and aprons). This means that airports miss out on this additional source of income which can potentially be used to cross-subsidize aeronautical operations and lower airport charges. Only Narita, Kansai and Centrair have integrated management that has responsibility for both the airfield and terminal facilities.

As a result of these issues, focusing on the efficient management of airports has become a major policy direction of the government. Its so-called ‘Growth Strategy’ identified a short-term goal to revise the airport charges system, in accordance with the preferential treatment of smaller aircraft and the need to respond the aviation market, through a review of the airport accounting system. It also demonstrated a fundamental policy shift towards streamlining airport management by leveraging "private sector wisdom and financing" in the medium term, specifically related to privatization and concession contracts, and the integration of aeronautical and non-aeronautical activities of airports[23]. Subsequently in 2012 the government announced that it was considering plans to reform the ownership and governance of the Japanese airports (excluding Narita, Haneda, Kansai and Centrair). From 2014 it proposed that as many of the airports as possible should be run by integrated companies (e.g. covering both airfield and terminal operations) on a long-term (30-50 years) concession basis[24]. This covered 94 airports including 27 central government managed regional airports and 67 local government managed airports – although the focus consequently has been very much on the regional airports.

4.2 Examples of private sector involvement

To date there has been little private sector involvement with Japanese airports, although there are a few airports, such as Asahikawa (1,060,000 passengers in 2012) and Shizuoka (440,000 passengers), that have entrusted operations to the private sector. Both of these airports issued a contract for managing the operations of aeronautical and non-aeronautical facilities as a package in 2007 and 2009 respectively. These airports are limited both in size and revenues and the focus has been on controlling costs, especially those associated with staff. However these examples relate to a consignment contract for the purchasing of airport services by the public and are not a concession model that has to be used with the establishment of a Special Purpose Company (SPC). This latter type involves the sale of operational rights to the investors of SPCs by legislation, and been considered by several government administered airports such as Sendai and Hiroshima airport.

The most significant example relates to Kansai airport. This airport was built on an artificial island of reclaimed land in the sea and was opened in 1994 to overcome capacities shortages and noise complaints at Itami airport which is located in a densely populated area. Kansai airport is actually fairly remote from the central urban area of Osaka. The volume of traffic has not been nearly as high as expected and the airport is burdened with debt of more than $US 10 billion. Moreover according to a 2011 study of charges at over 50 global airports[25], Kansai ranked as the second most expensive airport (Narita came sixth). The debt problem of Kansai airport is not attributable to the accumulation of years of operating loss but to the loans for construction, the costs of a second runway and costs of coping with the airport sinking into the sea. Although the amount of interest-bearing liabilities has declined, it still remains very significant. In fact the airport made operating profits for many years but had to allocate the greater part of the profits to meeting interest payments (Table 4). Meanwhile Itami has continued to operate as a purely domestic airport with night flying restrictions and in 2012 it handled 13 million domestic passengers, compared to 5 million domestic and 11 million international at Kansai. There is also a third domestic airport Kobe nearby which was opened in 2006 and handles over 2 million passengers. To encourage development at these two other airports, the Japanese government banned aircraft with more than two engines at Itami from 2006 which forced JAL and ANA to switch domestic B747 flights to Kansai. However traffic levels at both Kansai and Itami dropped significantly in recent years although grew in 2012, in common with other major Japanese airports (Figure 2).

TABLE 4 HERE

FIGURE 2 HERE

As already mentioned, one of the characteristics of the current funding system of Japanese airports is that it makes it possible to have financial cross subsidization between airports. This has resulted in overcapacity in the regions as airports have been developed with insufficient attention being given to their financial viability. It is generally agreed that more consideration needs to be given to independent and efficient management and the role of private sector in financing airports which led to the Growth Strategy proposals. In particular with Kansai International Airport the government proposed running the airport as a concession or PPP as a way to resolving this problem. On the 1st July 2012, the first step of the reform was took place. Before the reform, Kansai International Airport Company (KIAC) was a mixed public-private company with 67 per cent owned by central government, 15 per cent by 12 municipal governments and the rest owned by 803 companies and individuals.

To turn the company around, the government considered the possibility of introducing private management and integration with the neighbouring Itami airport, which was 100 per cent controlled by the government and making significant profits[26]. However, the removal of a high debt burden was considered essential for introducing private involvement in the airport management. So for this purpose, it was thought that hiving off the ownership of the land would make it possible to remove liabilities and related costs including depreciation. The main reform at this time was mainly focused on the merger of the airports. The land was split off, and then Kansai airport was integrated with the profitable Itami airport. The idea was to use the airport profits as a means for repaying the debt and making the interest payments of Kansai airport.

Therefore two new companies were established, namely New Kansai International Airport Company, Ltd. (NKIAC) which is fully owned by the government, and a land ownership company of Kansai airport which is owned by NKIAC (67%) and municipal governments (33%) (Figure 3).. NKIAC manages and operates the runways of both airports, owns the land assets of Itami airport and the terminal facilities of Kansai. The terminal building at Itami was taken over as a wholly owned subsidiary of NKIAC in 2013. The land company has taken over Kansai's land assets and the rest of the debt. It is likely to lease its assets to NKIAC using the lease payments to repay the debt. It is planned that the rights to operate NKIAC will be transferred to the private sector in terms of a concession agreement. The Japanese Government will continue to own NKIAC's shares.

FIGURE 3 HERE

5. Discussion and conclusions

The last few years have clearly been a very challenging and volatile time for the Japanese airport industry. Moreover the Japanese aviation environment is changing with more liberal market access and more relaxed ownership rules. JAL is now profitable again and back on the Tokyo Stock Exchange and new LCC operations have boosted traffic. Indeed the LCC seat capacity increased from a domestic share of 2.6 per cent and international share of 9 per cent in 2011 to 4.4 and 20.3 respectively in 2012[27]. This has encouraged the planning or building of LCC facilities at airports such as Centrair, Okinawa Naha, Narita and Kansai - just as has been seen in other countries when the LCC sector has expanded operations. However such strategies are not without risk as experience elsewhere, and particularly in the UK, has shown that LCCs can be very footloose and volatile, and can cause traffic levels to dramatically fall as well as grow. Indeed already in Japan, Japan Air Asia has ceased operations although other new LCCs such as Peach and Jetstar Japan seem to be having greater success.

Meanwhile Japanese airports continue to face several key problems. The first is the lack of integrated airport management models. This means that most airport operators in Japan are not able to take advantage of the often substantial revenues from commercial facilities, typically accounting for 40 per cent of all revenues in the UK. Secondly, the pooling system of airport account still makes it possible to cross subsidization between airports. However the airport industry is at a pivotal time in terms of its development with the government through its so-called Growth Strategy suggesting greater private sector involvement to overcome these problems. With the strategy recommending private sector involvement in Japanese airports, a key question is what kind of investors are to be expected, or what will be the likely pattern of the airports' financing.

In the UK, privatization has brought many types of investors. For example in 2006, BAA was taken over by the consortium composed of a Spanish construction company; Ferrovial (55.87%) and two foreign financial investors Caisse de Dépôt et Placement du Québec (26.48%) and the Government of Singapore Investment Corporation (17.65%). In 2010 the OFT reported that there were a total of 52 investors at UK airports. Of these 52 investors, 16 were financial investors and 14 other private sector entities. The remaining 22 were composed of 18 public institutions, two foreign public institutions and two unknown investors. The number of financial investors owning over 50 per cent of the shares of airports was only four, whilst the number of financial investors owning up to 50 per cent was 12. By contrast, the number of other private sector investors owning more than 50 per cent of the shares was 12, with only two owning less than 50 per cent. This appeared to indicate that at this time although the financial sector investors were major supporters of airports, they did not always seek to acquire control of the airports and preferred to focus on financial gains through dividends or resale. Nevertheless, whatever the type of investor, it will clearly pursue a financial return and will want to ensure that the risks borne by the airport company are limited or properly managed. Even though the experience in the UK appears to show that it is possible to have a reasonably healthy and competitive regional system being operated predominantly by private operators, this is very dependent on economic factors and the nature of demand, and consequently becomes that much more challenging in difficult times. The transfer back of Cardiff and Prestwick airports to public hands in 2013 (the latter for just a £1) is a good illustration of this.

Overall there is only limited and rather inconclusive evidence in the UK as to whether privatization has actually improved the efficiency and well-being of the airports. For example, studies by Parker[28], Holvad and Graham[29], Barros and Weber[30] and Barros[31] found no clear relationship between ownership and efficiency or productivity whilst, by contrast, Bottasso and Conti[32] observed that privatized UK airports seemed to have lower costs compared to public or mixed ones. Whilst many industry commentators, including the CAA[33], have acknowledged that the UK airport industry has become more commercial in its outlook, Ison et al.[34] have actually argued that it is this alone, rather than privatization, that has brought benefits to the airports. The privatization models being suggested for Japan are very different than those generally adopted in UK, but experience in this latter country does show that benefits of private sector involvement may not always occur as expected.

Another key issue is airport competition. Both the UK and Japan have too many regional airports to serve the level of demand. The solution in the UK regions has generally been to interfere only when group ownership threatened airport competition, but otherwise to primarily leave the industry to sort out the distribution of traffic. By contrast in Japan some common ownership could well help to overcome some of the financial problems faced by airports and allow for a more coordinated approach, but in the long-run as the airport industry develops in an increasingly more liberal aviation environment, the impact on competition may very well need to be addressed.

The Japanese government is proposing that the regional airports should be run by integrated companies on a long-term concession basis. There are good and poor experiences of airport concession operations in various parts of the world. The practice in the UK is limited to Luton airport, and although generally this has been considered as a relative success, it has not been without its problems. For the Japanese airports in aiming to attract the private investor, it will be very important to take full consideration of the business risks. Ultimately if there are excessive requirements demanded by the public sector this will make it impossible to find private investors. Thus the need for an effective and workable risk-sharing mechanism between the government and the private sector concessionaires will be vital for these reforms to succeed.

The proposals at Kansai are particularly challenging. On a positive note since NKIAC took over operations, landing charges have been reduced by five per cent with further reductions during overnight hours. Furthermore, incentives as in the UK, are planned for the future to encourage new services. A key aim for NKIAC, surely vital for success, is to make its charges comparable with Narita and to improve its competitiveness with other Asian hubs. The airport company even has plans to develop an overseas strategy with possible involvement with other international airports. The group management of Kansai and Itami, driven by financial motives, can potentially also allow for more strategic and coordinated development but again as in the UK, the impact on possible competition could be an issue in the future. Therefore there is an essential need to define the role of the airports, particularly Itami, where a relaxation of the operating restrictions, together with international services, is favoured by some. Others support the development of Kansai as the main airport (with a high speed link to central Osaka) - especially as there are plans for a maglev rail line between Tokyo and Osaka which would reduce domestic traffic substantially at Itami.

As already discussed, in the past the Japanese government has encouraged domestic traffic to shift from Itami to Kansai. Route development and slot management remain outside the control of the airport management company but handing over route development to the discretion of the airport company, debatably, must be critical for the success of any private airport management company. In the UK, slot constraints restrict operations, particularly at the London airports, but otherwise the airports are reasonably free to welcome any traffic that they can attract, assuming that there are no operating or environmental constraints.

In December 2012 it was revealed that NKIAC was already considering foreign and domestic investors to manage the airports for 40-50 years, with the aim of raising $US7-15 billion. The deal is expected to be completed by 2015[35]. However in addition to these traffic allocation concerns, two other key issues remain to be resolved. The first is related to the concession arrangement, as the value of the concession contract will have to be very expensive if the government aims to have full repayment of the liabilities of Kansai airport. According to the estimation of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the turnover of NKIAC needs to be more than $US 1.5 billion if existing liabilities are to be repaid in 45 years[36]. This estimation of turnover was based on the highest turnover ever accomplished at Kansai airport in 1997 and the current turnover of $US 150 million at Itami. If these levels cannot be attained, the scheme is likely to fail. Discretionary intervention by the government would distort market incentives and reduce the attraction of the business to investors. Hence the privatization of NKIAC, due to the huge debt and uncertainty over the integrated management at Itami and control over route development, is likely to be very challenging to attract the private sector investors that are needed.

The second issue is related to the financial viability of the airports. The introduction of a concession system with the establishment of a SPC has been considered at many airports in Japan. However the estimated results of Kato et al[37] and the report of the balance of payments of the government administrated airport surveyed by the government, indicate that there are very few profitable airports. The success of the concession system may well depend on institutional changes that make airports more attractive to private sector investors. In the UK, regional airport operators become public limited companies in 1987, but other than that no major institutional alterations were needed when these airports were privatized. However in Japan it is unlikely that a focus purely on the stimulation of demand will be sufficient for investors and it may well be necessary to produce changes aimed at producing more efficient operations.

In conclusion, this paper has focused on two countries which are at different stages of the evolution of their airport industries. The UK aviation sector has benefitted from the growth encouraged by liberalization and has a very commercially orientated airport industry, which arguably is at least partly due to airport privatization which is almost complete in the UK. However the recent difficult conditions have shown that for this 'mature' industry, competing for airline traffic, remaining financially healthy and retaining investors can be challenging. Whilst the Japanese airport industry is clearly very different and has some certain unique characteristics, nevertheless the commercial and integrated approach to operating UK airports, as well as competition issues, are relevant to Japan as it plans to enter into a new era of airport management. In particular the proposed privatization of NKIAC, if successful, represents a key policy shift as regards airport provision for the government which has previously favored state management and is bound be an important test case for further private sector involvement at other airports.

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Table 1: Passengers (millions) at major UK Airports 2004/05-2012/13 (FY) by main owners/investors

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	% annual growth 04/05-08/09	% annual growth 08/09-12/13
BAA											
Aberdeen	2.7	3.0	2.5	3.4	3.3	3.0	2.8	3.1	3.4	5.3	0.3
Edinburgh	8.1	8.5	6.8	9.1	9.0	9.1	8.6	9.4	9.5	2.8	1.2
Glasgow	8.6	8.8	7.2	8.7	8.1	7.2	6.5	6.9	7.2	-1.4	-3.2
Heathrow	67.7	67.4	52.0	67.9	66.9	65.9	65.8	69.4	70.0	-0.3	1.1
Stansted	21.3	22.3	18.8	23.8	22.4	20.0	18.6	18.0	17.6	1.3	-5.9
Southampton	1.6	1.9	1.6	2.0	2.0	1.8	1.7	1.8	1.7	5.9	-3.6
GIP											
London City	1.7	2.0	2.3	2.9	3.3	2.8	2.8	3.0	3.1	17.9	-1.1
Gatwick	32.0	32.9	27.4	35.2	34.2	37.7	31.7	33.9	34.2	1.7	0.0
MAG											
Manchester	21.3	27.6	22.2	22.0	20.4	18.1	17.7	19.1	19.8	-1.1	-0.8
East Midlands	4.4	4.2	5.0	5.6	5.3	4.5	4.1	4.3	4.0	4.8	-7.1
Bournemouth	0.5	1.0	1.0	1.1	1.1	0.8	0.7	0.6	0.7	20.5	-10.8
Humberside	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	-5.2	-18.7
Abertis											
Belfast Int	3.5	4.8	5.0	5.2	5.2	4.5	4.0	4.1	4.3	10.2	-4.7
Cardiff	1.5	1.8	2.0	2.1	2.0	1.6	1.4	1.2	1.0	6.6	-15.4
Luton	7.5	9.2	9.4	9.9	10.2	9.1	8.8	9.5	9.6	7.8	-1.4
Peel/Vantage											
Liverpool	3.5	4.7	5.1	5.6	5.1	5.1	5.0	5.2	4.4	10.4	-4.0
Doncaster	-	-	0.9	1.1	0.9	0.8	0.9	0.8	0.7	-	-7.6
Durham TV	0.8	0.9	0.9	0.8	0.6	0.3	0.2	0.2	0.2	-9.2	-26.3
Ontario Teachers Pensions Plan											
Birmingham	8.8	9.4	9.0	9.3	9.5	9.0	8.5	8.6	8.9	2.0	-1.5
Bristol	3.7	5.2	5.7	5.8	6.2	5.6	5.6	5.7	5.9	13.5	-1.2
Regional and City											
Blackpool	0.3	0.5	0.6	0.4	0.3	0.3	0.2	0.2	0.2	-3.1	-8.6
Exeter	0.7	0.9	1.0	0.8	1.0	0.8	0.7	0.7	0.7	9.1	-7.6
HIAL	1.0	1.1	1.1	1.2	1.3	1.2	1.1	1.3	1.3	6.8	0.0
Other											
Leeds Bradford	2.5	2.6	2.8	2.9	2.7	2.5	2.8	2.9	3.0	2.9	2.0
Newcastle	4.7	5.2	5.5	5.6	5.0	4.6	4.3	4.3	4.4	1.4	-3.5

Note: The grouping of airports has changed over the years. This shows the situation at the beginning of the financial year 2012-13. In 2012 GIP bough Edinburgh airport and Humberside airport was sold by MAG to Eastern Airways. In 2013 MAG bought

Stansted airport, the Welsh Government bought Cardiff airport, ADC & HAS Airports Worldwide bought Belfast International, and AENA/AXA Private Equity took over the Luton concession. BAA is now called Heathrow Airport Holdings.

Sources: CRI and LeighFisher

Table 2: Operating margin (%) at major UK Airports 2004/05-2012/13 (FY) by main owners/investors

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
BAA									
Aberdeen	32.5	32.2	37.1	36.6	37.6	14.6	24.4	27.1	14.8
Edinburgh	38.7	40.6	42.4	40.5	41.5	20.1	34.3	23.9	28.5
Glasgow	29.9	31.2	36.7	30.8	35.7	9.9	28.8	19.2	10.1
Heathrow	36.7	34.7	30.1	21.5	11.1	7.3	26.0	25.7	24.4
Stansted	27.4	26.1	25.8	31.3	31.4	11.3	26.6	16.6	23.1
Southampton	40.4	39.9	35.9	24.0	21.3	-64.9	32.2	22.5	4.4
GIP									
London City	19.6	18.9	31.0	44.5	47.0	28.4	24.5	26.2	24.9
Gatwick	29.1	22.3	28.5	19.7	22.3	-6.2	20.1	22.5	21.6
MAG									
Manchester	29.4	24.7	24.1	27.8	21.6	22.8	21.2	23.3	29.4
East Midlands	34.1	31.3	14.9	35.9	25.9	24.2	16.0	14.8	23.6
Bournemouth	24.8	20.8	20.0	21.8	17.9	19.8	11.0	-0.1	27.3
Humberside	14.9	5.9	5.7	5.2	1.6	-7.1	-8.5	-1.0	-1.0
Abertis									
Belfast Int	23.5	30.2	33.7	34.0	26.3	13.7	10.8	14.9	13.6
Cardiff	39.2	26.9	30.6	33.0	25.6	7.8	15.6	2.3	-11.4
Luton	22.0	16.7	14.4	17.6	20.1	19.6	20.1	21.2	20.7
Liverpool	3.2	63.7	1.8	13.3	12.4	3.4	6.7	11.1	8.7
Peel/Vantage									
Doncaster	-	-	-	-81.5	33.8	-95.7	-49.3	22.9	-201.0
Durham TV	-10.9	-25.1	-33.0	-21.6	-44.4	-150.9	-24.6	22.9	-71.5
Ontario Teachers Pensions Plan									
Birmingham	31.0	31.9	21.0	21.9	19.7	12.8	17.8	21.6	23.0
Bristol	50.9	51.1	47.7	45.6	44.0	41.0	41.1	39.4	37.7
Regional and City									
Blackpool	-45.1	-47.6	-52.5	-52.2	-36.6	-52.9	-44.4	-26.1	-28.6
Exeter	10.9	5.6	2.1	-2.4	7.0	2.4	3.1	1.6	-1.7
HIAL	-4.8	-3.4	-6.8	-5.6	-3.8	0.3	-7.4	-2.7	-2.5
Others									
Leeds Bradford	7.8	6.5	6.9	-8.1	-12.1	-23.6	-34.7	-21.3	-22.4
Newcastle	45.9	37.1	20.8	35.6	35.0	32.1	28.3	29.1	30.3

Note: The grouping of airports had changed over the years. This shows the situation at the beginning of the financial year 2012-13. The operating margin is the operating profit as a percentage of the operating revenue.

Sources: CRI and LeighFisher

Table3: Passengers (millions) at the 30 largest Japanese Airports 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012	% annual growt h 08/04	% annual growt h 12/08
Akita	1.3	1.3	1.3	1.3	1.2	1.1	1.1	1.1	1.2	-2.6	-1.1
Aomori	1.3	1.3	1.3	1.3	1.2	1.1	1.0	0.8	0.8	-2.8	-8.2
Asahikawa	1.1	1.2	1.3	1.3	1.3	1.2	1.2	0.9	1.1	4.1	-5.1
Centrair	-	10.8	11.7	11.6	11.0	9.2	9.3	8.6	9.1	-	-4.6
Fukuoka	18.5	18.7	18.2	17.9	17.3	15.9	16.3	15.4	17.4	-1.7	0.2
Hakodate	2.2	2.1	2.0	1.9	1.7	1.5	1.6	1.4	1.5	-5.5	-3.8
Haneda	62.3	63.3	66.1	66.8	66.7	61.9	64.2	62.6	66.7	1.7	0.0
Hiroshima	3.3	3.3	3.3	3.3	3.2	2.8	2.8	2.5	2.7	-0.9	-4.2
Ishigaki	1.8	1.9	2.0	1.9	1.9	1.8	1.7	1.5	1.6	1.1	-3.5
Itami	19.3	18.9	17.1	16.2	15.6	14.6	14.8	12.8	13.2	-5.2	-4.1
Kagoshima	5.8	5.7	5.7	5.6	5.5	5.0	5.0	4.5	4.7	-1.2	-4.0
Kansai	15.1	16.3	16.4	16.4	15.8	13.3	14.2	13.3	15.9	1.0	0.2
Kitakyushu	0.3	0.3	1.1	1.3	1.2	1.2	1.2	1.2	1.3	44.1	0.5
Kobe	-	-	2.4	3.0	2.7	2.3	2.2	2.5	2.5	-	-2.2
Kochi	1.6	1.5	1.5	1.4	1.3	1.2	1.3	1.1	1.2	-4.0	-2.3
Komatsu	2.5	2.5	2.5	2.5	2.4	2.1	2.1	1.9	2.2	-0.9	-2.7
Kumamoto	3.0	3.1	3.1	3.2	3.1	2.9	2.9	2.8	2.9	0.5	-1.6
Matsuyama	2.6	2.7	2.7	2.7	2.6	2.4	2.4	2.2	2.3	-0.5	-2.3
Miyako	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.3	0.4	3.8
Miyazaki	3.1	3.1	3.1	3.0	3.0	2.7	2.7	2.4	2.7	-0.7	-2.9
Nagasaki	2.6	2.6	2.6	2.6	2.5	2.3	2.3	2.4	2.7	-1.1	1.3
Naha	12.7	13.5	14.2	15.0	15.2	14.0	14.5	13.7	15.0	4.5	-0.2
Narita	31.0	31.4	31.7	32.3	30.4	28.9	30.8	25.4	30.0	-0.4	-0.4
Niigata	1.4	1.2	1.2	1.2	1.1	1.0	0.9	0.9	1.0	-6.7	-3.1
Oita	1.9	1.9	1.9	1.9	1.8	1.6	1.5	1.4	1.5	-1.7	-4.1
Okayama	1.6	1.6	1.6	1.5	1.4	1.3	1.3	1.2	1.4	-2.3	-1.6
Sendai	3.2	3.2	3.3	3.4	3.0	2.8	2.8	1.7	2.7	-1.4	-3.3

Shin-chitose	17.6	17.9	18.4	18.3	17.7	16.5	16.7	15.8	17.5	0.1	-0.3
Takamatsu	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.4	-0.3	-1.3
Toyama	1.4	1.4	1.3	1.3	1.2	1.0	0.9	0.9	0.9	-4.3	-5.0

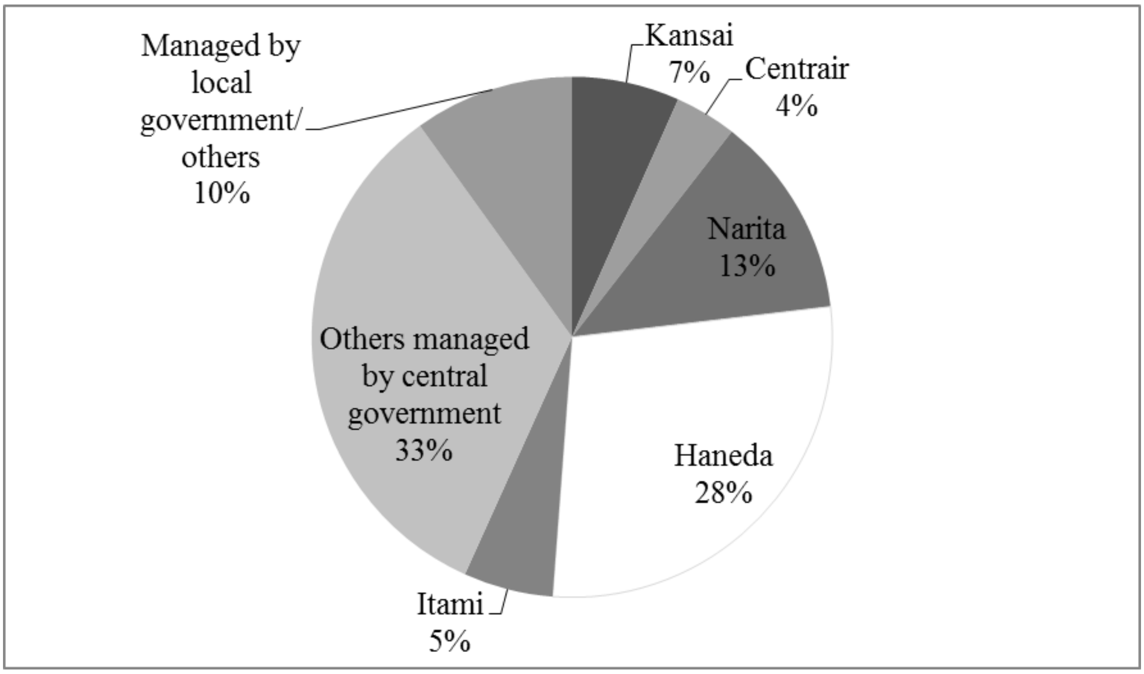
Source: Kuko Kanri Jokyo Chosho (Investigation for Conditions of Airport Control)

Table 4: Financial performance of Kansai airports (2004/05-2012/13 FY)

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Operating revenues ($US million)	1,073	1,078	1,090	1,094	1,022	891	921	910	1,049
Operating costs ($US million)	853	844	825	836	840	762	725	727	773
Operating margin (%)	21	22	24	24	18	15	21	20	26
Operating profit ($US million)	219	234	265	258	183	130	196	183	276
Net profit ($US million)	46	-183	101	112	-69	1	76	85	186
Interest bearing debt at year-end ($US bn)					12	11	11	10	10

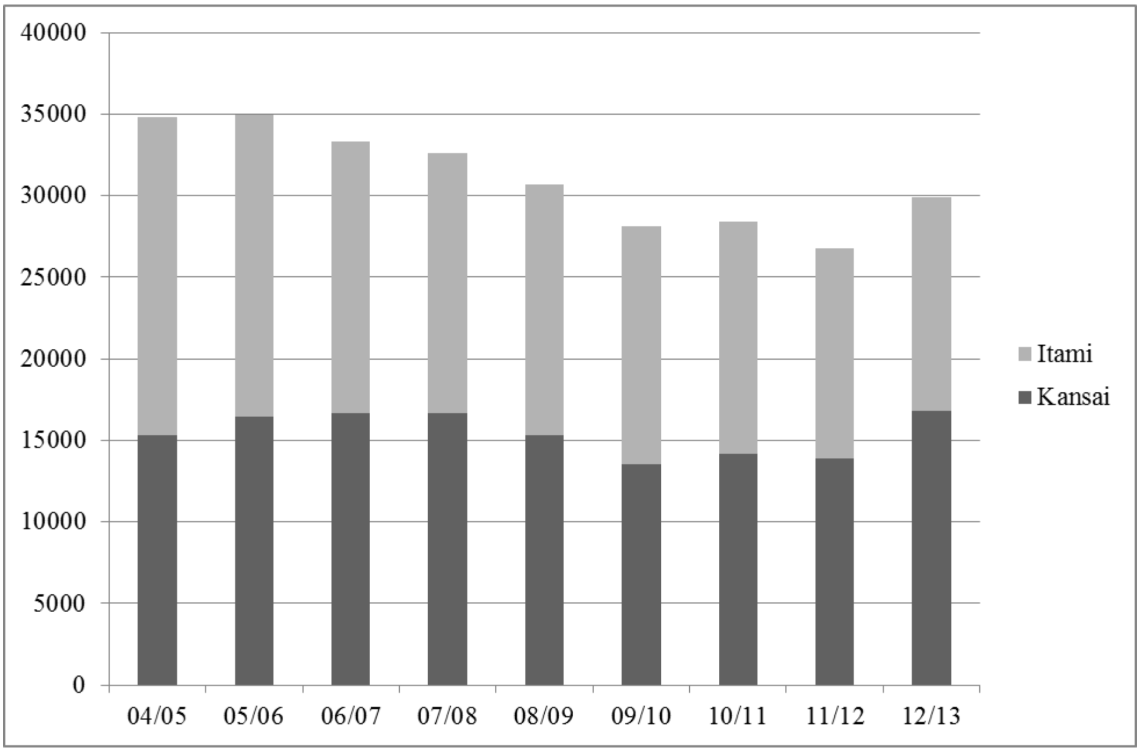
Note: 2012 includes KIAC (April-June) and NKIAC (April-March). In the year Kansai airport generated an operating profit of $US 222 million and Itami $US 54 million.
Source: NKIAC

Figure 1: Passenger numbers at Japanese airports 2012



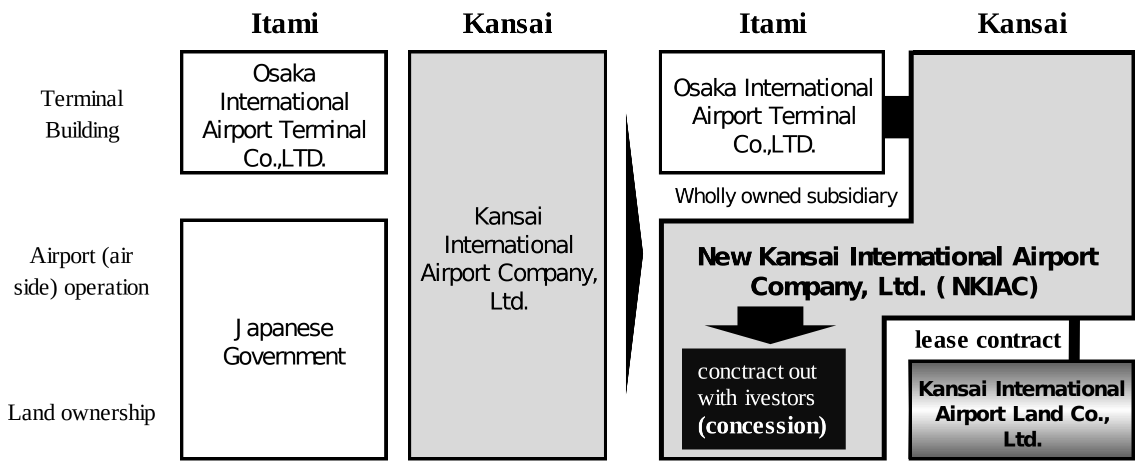
Source: MLIT

Figure 2: Passenger numbers (000s) at Kansai and Itami airports (2004/05-2012/13 FY)



Source: NKIAC

Figure 3: The changing structure of management of Kansai and Itami airport operators



Note: New Kansai International Airport Company, Ltd. (NKIAC) is wholly owned by the Japanese government. The shareholders of Kansai International Airport Land Co., Ltd. are NKIAC (67%) and municipal governments (33%).

Source: Compiled by the authors