On the mechanisms that can potentially influence connectivity outcomes in the UK

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1.1 Background

The Airports Commission has considered the UK's long-term connectivity needs and concluded that, while the UK remains one of the best connected countries in the world, problems are starting to emerge and they are likely to get worse. It appears that the UK is approaching the limits of what can be achieved within its existing airport infrastructure. The problems are particularly visible at Heathrow. In terms of connectivity, while Heathrow continues to have a dominant position amongst European hubs on routes to North America and other established aviation markets, it has not been able to build on this and establish a similar position of strength in routes to emerging-market economies. Moreover, the number of domestic routes to the airport is declining, restricting access from other UK regions to Heathrow's network of international services. The Airports Commission concluded in its Interim Report published at the end of 2013, that addressing these problems will require building at least one net additional runway in London and the South East by 2030 and short-listed two potential locations for the additional runway: Gatwick and Heathrow.

The Airports Commission asked ITF/SEO to assist the Commission with reviewing any mechanisms that may help enhance the regional and long-haul connectivity outcomes in case of expansion, drawing on the current European framework within which the connectivity is provided at UK airports and commenting on any relevant European examples of how such mechanisms have been used and whether they have proved to be effective. In particular, the Airports Commission is keen on exploring to which extent there is flexibility in the slot allocation regime to be able to improve domestic connectivity and stimulate new long-haul routes.

In this report, we outline the different instruments and measures that could be taken and assess opportunities and potential problems.

1.2 Demand management measures

In the literature, the question addressed in this note relates to the topic of *demand management*: any set of measures intended to influence demand at an airport for the purpose of alleviating congestion and/or achieving some other objective' (De Neufville & Odoni 2003, p.461[1]). These measures can be administrative/regulatory (e.g. local rules, Traffic Distribution Rules), market-based (e.g. incentives, charges differentiation, congestion pricing) or a mix of both.

In the context of this note, we focus on the administrative measures and market-based measures that may be used to influence certain connectivity outcomes: the rules & guidelines for allocation

[1] R. De Neufville & A. Odoni (2003). Airport systems. Planning, design and management. New York: McGraw Hill

of slots, Public Service Obligations (PSOs), Traffic Distribution Rules (TDRs), differentiation in airport charges, airport marketing incentives and start-up aid. We will briefly outline the legal context of the measures and discuss their advantages and disadvantages for influencing connectivity outcomes in the UK (domestic and long-haul).

Slot allocation process

A slot is the right to use a bundle of airport infrastructure at a certain date and time to operate an air service. The mechanism currently used to allocate slots at Europe's congested airports (the slot-coordinated airports) is governed by an EU regulation on Common rules for the allocation of slots at Community airports.[2] The EU regulation for the primary allocation of slots is broadly based on the IATA *Worldwide Slot Guidelines*[3]. The European Commission proposed changes to the current Regulations in its so-called Airport Package[4] in 2011 in order to enhance the efficient use of scarce airport capacity, including the possibilities for secondary slot trading. The European Commission's proposal has yet to be adopted.

The objective of the slot allocation process is to encourage efficient use of airport capacity through optimal allocation of slots. When demand exceeds supply at an airport, this airport may be designated as a slot-coordinated airport, for which the slots are then allocated by the slot coordinator according to the EU slot-allocation rules[5]. According to the EU regulation, the Member State appoints a coordinator, a 'qualified natural or legal person' after having consulted air carriers, representative organisations and the airport's managing body. The coordinator should handle the slot-allocation task in a neutral, non-discriminatory, and transparent way. A coordination committee assists and advises the coordinator. The coordination committee is open to at least the air carriers or their representatives, the airport authority, and representatives of air traffic control.

The general principles of the primary slot allocation process in the EU

If not all slot requests can be accommodated at the airport, the slot coordinator gives preference to:

1. Historic or grandfather rights. Slots are allocated through 'grandfathering', based on historic precedence and a 'use-it-or-lose-it' rule: the incumbent has a grandfather right if the slot was used in the previous equivalent season for at least 80% of the time. If the slot is not used for 80% of the time in the specific season, the slot is returned to the 'slot pool'.
2. The most valuable services: commercial, all-year-round services, in particular scheduled and programmed non-scheduled services.
3. Priorities set in the so-called local rules or guidelines.

The 'slot pool' also contains newly created slots (for example, after capacity expansion), slots returned voluntarily, and slots otherwise unclaimed. Slots in the pool are allocated free of charge by the slot coordinator in a twice-yearly coordination process. In order to encourage competition and new entry, up to 50% of the slot pool is first set aside for new-entrant airlines. Incumbent airlines can apply for the other 50% of the slot pool and slots not taken up by new entrants.

2 Council Regulation No 95/93 of 18 January 1993, which was amended by Regulation793/2004
3 Worldwide Slot Guidelines. Effective August 2014. www.iata.org/wsg
4 Airport package. Proposal for a Regulation of the European Parliament and of the Council on common rules for the allocation of slots at European airports. EC COM (2011) 827 final.
5 The primary allocation of slots

Local rules

Local guidelines or local rules can be developed in the UK, as in any other EU country, to provide specific guidelines that the coordinator should take into account in the slot allocation process, provided that such guidelines do not affect the independent status of the coordinator, comply with Community law and aim at improving the efficient use of airport capacity.

Local rules are initiated by the slot coordinator or slot coordination committee. At the request of the coordinator, the coordination committee discusses and agrees on any local guidelines suggested. Any member of the coordination committee may propose local guidelines. The local rules have to be approved by the Member State[6] and communicated and approved by the Member State to the European Commission.

At both Heathrow and Gatwick local rules are in place[7] but none of these are intended to influence connectivity outcomes. The three local rules at Gatwick relate to the allocation and distribution of night movements and night noise quota, late hand-back of slots and procedures with respect to time-critical operations (State flights[8], emergency landings, humanitarian flights, recovery flights). The four local rules at Heathrow relate to the allocation and distribution of night movements and night noise quota, ad hoc operations, administration of the Heathrow movement cap and procedures for temporarily reduced capacity.

German slot guidelines: applications of equal status

The new runway at Frankfurt has resulted in the allocation of a considerable number of new slots to both incumbents and new entrants[9]. For competing slot requests from 'applicants of equal status' under the EU principles for slot allocation the German slot coordinator has drafted locally specified slot allocation guidelines[10]. The 'flexing' of the slot regime through the local guidelines seems to give the German coordinator some flexibility regarding competing slot requests. The aspects taken into account in the slot allocation guideline mirror partly the additional slot allocation criteria in the IATA WSG[11] (par. 8.4.1), which also mentions that the coordinator should give consideration to factors such as the development of the airport's route network, markets (domestic, short-haul and long-haul), competition and requirements of the travelling public. Yet, the German guidelines on the route development have been further specified in relation to the hub function of Frankfurt Airport, amongst other things.

The following aspects are taken into account in the Frankfurt guidelines:

- Best possible utilisation of scarce resources by daily services in comparison to non-daily services, type and availability of the aircraft, additional routes offered by the new inclusion of

6 Or any other competent body responsible for air transport in question

7 See www.acl-uk.org

8 "The Queen's Flight and flights carrying Government Ministers or visiting Heads of State or dignitaries from abroad on an official visit, as confirmed by the Foreign and Commonwealth Office" (Source: Gatwick local rule 3).

9 According to German slot coordination, maximum peak-hour capacity at Frankfurt will be 114 movements per hour (57 arrivals+ 57 departures) in summer 2015 (http://www.fhkd.org/images/pdf/hp_eckwerte_13.pdf). Capacity will eventually grow stepwise to 120 movements per hour.

10 Guideline for the allocation of scarce slots at coordinated German Airports

11 https://www.iata.org/policy/slots/Documents/wsg-6.pdf

a region or country, optimal mixture of long-haul, medium-haul and short-haul routes to preserve or *improve the hub function.*

- Service quality of the planned service (direct or connecting services, membership in an airline alliance).
- User-friendliness (creation of possibilities of choice among several airlines in certain individual markets, accessibility of transport services for consumers, optimisation of a route in heavy demand e.g. as a connection to a region or capital, balanced range of charter and scheduled services for holiday and business travellers, while taking account of the requirements of freight transport).
- Paying attention to fair competition by providing opportunities for potentially interested parties to enter the market for a certain service (new regional connection, heavy demand etc.), taking already existing services, their load factor and operation into consideration, fair implementation of restrictions through new official or legal requirements.
- Taking environmental concerns into account (arrival and departure times, size of the aircraft employed, noise and pollutant emissions).
- Safeguarding public transport interests (significance of the service for the national and European location, for the competitive situation in individual markets, for the consolidation of the airlines operating in the market).

In line with the IATA WSG the German guidelines state that there is no order of precedence for the individual decision criteria. Depending on the slot supply and demand, and current number of transport connections at this moment in time, as well as of the airlines operating them, the criteria shall be weighed up in an individual case.

The Frankfurt case shows that certain flexing of the slot allocation regime, at least for competing slot requests, may be possible by specifying the EC Regulation/IATA WSG through local guidelines. In practice, this means that when both the hub carrier and another airline apply for the same slot at FRA, alternative timings for the non-hub applicant are sought (e.g. within an hour from the requested time slot). This allows Lufthansa to maintain and enhance its hub operation/wave-system at FRA.

Influencing connectivity outcomes with local rules: opportunities

- The Frankfurt case shows that a certain flexing of the slot allocation regime can be achieved through local guidelines that build on EU Regulation and IATA guidelines, at least for competing slot requests. Primary criteria still hold for the initial slot allocation (historic users, use-it-or-loose-it, new entrant rule), but a local specification has been made for the additional criteria to preserve or strengthen the hub function in case of applicants of equal status. It is not entirely clear to what extent implementation of these guidelines is in accordance with the EU Regulation but no decisions have been challenged so far.
- In case of Gatwick or Heathrow, one could imagine a local rule that determines the use of particular piers, terminals and slot timings to facilitate or enhance certain connectivity outcomes. Another example could be an explicit local specification in the guidelines that favours applications for scheduled services to new long-haul destinations over short-haul international destinations or services on new long-haul destinations over services on existing long-haul destinations in case of applicants of equal status. Such a specification would be in line with the current IATA WSG (par. 8.4.1b) that states that "The balance of the different types of

services (scheduled, charter and cargo) and markets (domestic, regional and long haul), and the development of the airport route network should be considered".

Influencing connectivity outcomes: potential problems

- It is not possible to earmark or reserve slots for a certain use of newly created slots except for the use of services covered by Public Service Obligations. Carriers can apply for a slot, with a certain intended use, before deciding to use the slot for a different type of service or exchange the slot with another airline. In other words, the use to which a slot is put and even the airline by which the slot is held can and often does change after the slot is awarded. Such changes are determined by the slot holder not the coordinator or the government.
- Any local rules would only apply to the allocation of newly allocated slots, not to existing slot use. Existing slots, subject to historical precedence cannot be forcibly removed from carriers to make them available for other use.
- The Member State (e.g. UK government) itself cannot propose local guidelines or local rules but is dependent on the slot coordinator and the slot coordination committee for any proposals for local rules/guidelines.
- Policy uncertainty: the local rules and guidelines regarding the allocation of slots need to fit in the EC Regulation. It is not up to the UK government to independently decide on the allocation of slots. For example, if and when the EC proposal on a new slot regulation would be adopted, it would downplay the role of local rules and makes it more difficult to implement them[12].
- It appears unlikely that in the context of the strong demand for airport capacity in SE England a coordination committee, coordinator or the European Commission would accept a local guideline that favours a single carrier or carrier group.
- Local rules may undermine the most efficient use of airport capacity from an economic point of view. A local rule is an administrative criterion applied by the slot coordinator. It is an administrative intervention in the market that will not necessarily result in use of a slot by the airline that attaches the highest value to the slot.

Conclusions

Local rules might be a useful instrument in influencing connectivity at the margin, as the Frankfurt example shows. However, the fact that slots –apart from use for PSOs and use by new entrants- cannot be earmarked and the fact that the UK government will depend on initiatives from the coordination committees or slot coordinators for implementation are potential barriers to the effectiveness of the instrument. There is also uncertainty regarding the future of local rules, although it is unclear if, when and in what form a new EU proposal on slot regulation will be adopted.

12 Local guidelines/rules not only have to be notified to the European Commission by the Member State as in the current Regulation but also would need to be pre-approved by the European Commission in the EC's "Proposal on common rules for the allocation at slots at European Union Airports (COM 2011 827 FINAL). In addition, the proposal states "the option of resorting to local rules should be restricted" because "experience has not shown that local rules are useful" and "it cannot be excluded that such rules lead to discrimination". The proposal states that local guidelines may only concern "the supervision of the use of slots allocated" or "the amendment of the definition of the series of slots". The European Commission states that environmental aspects can be fully covered in the coordination parameters, whereas regional connectivity can be ensured in the context of Public Service Obligations. However, it is difficult to predict if the proposal for a new slot regulation will be accepted any time soon in its current form.

1.3 Public Service Obligations

The UK government may establish services under Public Service Obligations in order to maintain scheduled air services on routes considered to be vital for the economic development of the region they serve but unprofitable for any airline to operate under competitive market conditions. Governments, public transport or regional authorities procure such transport services under contract (or could produce them internally). In Europe, procurement of air services under a Public Service Obligation (PSO) is governed by EU Regulation 1008/2008 on the common rules for operation of air services in the Community[13]. The general approach is to procure services under a PSO through competitive tendering (art. 17). PSO carriers can either receive financial compensation to cover operational losses or be granted a route monopoly to protect them from price competition for a period up to four years, after which the situation shall be reviewed.

Criteria for introducing PSOs

Criteria for introducing PSO routes have been relatively loosely defined in European law. Article 16 of Regulation 1008/2008 states that Member States may impose a PSO with respect to scheduled air services between an airport in the Community and an airport:

- Serving a peripheral region in its territory.
- Serving a development region in its territory
- or a thin route to any airport on its territory, when the route is being considered vital for economic and social development of the region which the airport serves.

The Member State shall only use the PSO to ensure a minimum provision of scheduled air services, which no air carrier would operate if they were solely considering commercial interests. When a Member State wishes to impose a PSO, it must communicate the text of the envisaged PSO to the European Commission, to the other Member States concerned, to the airports concerned and to the air carriers operating the route in question.

Furthermore, in evaluating the necessity and adequacy of the PSO, the EU Regulation requires that the Member State should take into account:

- The proportionality between the PSO and economic development of the region concerned.
- Alternative modes of transport, in particular when existing rail services serve the envisaged PSO route with a travel time of less than three hours.

In sum, the Member States must respect the conditions and requirements set out in Article 16 of the Air Services Regulation 1008/2008, but the interpretation of the 'air service adequacy' largely depends on the judgement of the authority introducing the PSO.

Guidance on the Protection of Regional Air Access to London

For the UK, a test of "necessity and adequacy" has been laid down and specified in the DfT's *Guidance on the Protection of Regional Air Access to London* (19 December 2013)[14]. The *Guidance* for example defines 'peripheral regions' (Article 42): "A peripheral region is defined if the total journey time to London Zone One by public surface transport from the main urban centre(s) is more than

13 EC Regulation No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community

14 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266383/pso-policy-guidance.pdf

three hours". A development region (Article 46) has been defined as: "An airport shall be considered as serving a development region if its catchment area includes areas in receipt of UK regional aid". The catchment area of an airport concerns "the area within an average one-hour travel time radius, unless the area is one of unusually sparse population. This would provide a means of judging which airports serve regions most in need of the economic and social benefits, which an air link can potentially bring" (Article 45). And a route (Article 48) "[..] shall be considered as a thin route if, at the time that a PSO application is received, fewer than 50,000 passengers a year use the route".
Furthermore, a Value of Money assessment (based on the cost-benefit analysis) is needed to prove the PSO case. Specific requirements for the CBA have been laid down in an Annex to the *Guidance*.

PSOs and slot allocation

Under EU Regulations, where PSOs have been imposed on a route serving a coordinated airport a Member State may reserve the slots required for the operations envisaged on that route, assuming there are available slots in the pool. If no carrier wants to operate the route under a PSO or the Member State does not issue a call for tender, the slots shall be either reserved for another PSO route or returned to the pool.

Influencing connectivity outcomes with PSOs: opportunities

- PSOs are fully compatible with the slot allocation regime in the sense that slots may be reserved for PSO routes at congested airports, assuming there are available slots in the pool.
- The UK government has direct influence on connectivity outcomes, as it can impose PSOs according to Regulation 1008/2008. PSOs are well established in UK aviation policy, including specific UK guidelines. The UK government may impose PSOs on dedicated routes, if it judges that air services are vital for the economic and/or social development of the regions these routes serve and that without subsidies and/or regulatory measures to protect them no satisfactory scheduled air services to these regions would be maintained. In case of Heathrow and Gatwick (before and after expansion), one could argue that airport charge levels, slot prices on the secondary market and airport capacity scarcity do not make it commercially attractive for airlines to operate thinner domestic services to the regions out of Gatwick and in particular out of Heathrow whilst the connection to central London airports as well as the onward connectivity they deliver is of considerable economic importance to the regions.
- Although EU Member States have to communicate the text of an envisaged PSO to the European Commission, no approval by the European Commission is needed.

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Influencing connectivity outcomes with PSOs: potential problems

- PSOs can only be implemented on routes between Community airports and airports within the territory of a Member State. This means they are not suitable for long-haul routes.
- PSOs are intended to be imposed on routes serving peripheral regions, development regions and on thin routes deemed vital for socio-economic development. This means they may be suitable for services from Gatwick/Heathrow into the smaller UK regional airports but not to large UK cities. The UK *Guidance* for PSO routes clearly defines which regions/cities may be considered for PSO service.
- The UK *Guidance* currently rules out PSOs on an airport-to-airport basis. In its *Guidance on the Protection of Regional Air Access to London* (19 December 2013), the DfT states that the government needs to consider the adequacy between two cities or regions, not between a city or a region

and a specific airport. Article 23 of the *Guidance* states that "If an airport or another airport within 60 minutes journey time of the same urban centre provides services to any one of these airports, it will be considered as having a service to London. This means that the withdrawal or reduction of a service to, for example, Heathrow will not be enough to trigger the consideration of a PSO as long as it is considered that there is an adequate service provided by the combined services offered to the London airport system as a whole". As a consequence (Article 24), "interconnectivity opportunities or the final onward destination of passengers are not relevant to the consideration of adequacy under the Regulation".

However, based on Regulation 1008/2008, PSOs *can* be imposed on an airport-to-airport basis. According to Article 16.1 Member States "may impose a public service obligation [..] between an *airport* in the Community and an *airport* serving a peripheral or development region in its territory [..]". This would mean that Gatwick or Heathrow could be specified within the PSO under EU rules, if UK guidance were to change.

- PSOs may undermine the most efficient use of airport capacity from an economic point of view. The use of scarce airport slots by PSO routes does not necessarily represent the optimal use of scarce airport capacity, i.e. it undermines use by the airlines that attach the highest value to those slots.

Conclusion

Currently PSO routes in the UK are found only to its peripheral regions. Given experience elsewhere in Europe (e.g. Italy, Paris) and the room for interpretation of Article 16 by Member States, it would be possible to impose PSOs on domestic routes out of the London airports. However, revision of DfT's Guidance on PSO routes would be needed to allow for airport-specific PSOs.

1.4 Traffic Distribution Rules

The UK government may, as any EU Member State, impose Traffic Distribution Rules (TDRs) to regulate the distribution of air traffic between airports based on Council Regulation 1008/2008 on the common rules for operation of air services in the Community (Article 19). TDRs shall meet the following criteria:

- Airports serve the same city or conurbation.
- The airports are served by adequate transport infrastructure providing a direct connection to the city within 90 minutes.
- The airports are linked to one another and to the city or conurbation they serve by frequent, reliable and efficient public transport services.
- The airports offer necessary services to air carriers and do not unduly prejudice their commercial opportunities.
- TDRs shall not discriminate among destinations inside the Community or on grounds of nationality or identity of air carriers.
- TDRs shall respect the principles of proportionality and transparency and shall be based on objective criteria.

The Member State has to inform the European Commission of its intention to impose TDRs or to change any TDR. The European Commission will evaluate and decide whether the Member State may apply the measures.

TDRs are or were effective in a range of cities across the EU (Paris, Lyon, Rome, Milan, London[15]), albeit under the old Regulation 2408/92 on access for Community air carriers to intra-Community air routes[16]. As far as we know, to date no TDRs have been implemented under the new Regulation 1008/2008.

Most TDRs are imposed to ensure that certain types of traffic do not use an airport for reasons of congestion or environmental concerns (e.g. noise nuisance at an inner-city airport) and to stimulate carriers to use other airports serving the same conurbation. In case of Milan, TDRs were implemented in order to force carriers to move their operations from Milan Linate to Milan Malpensa.[17] TDRs in London were used to exclude full-freighter traffic from using Gatwick and Heathrow at peak hours.[18] In particular the TDRs for Paris and Milan were strongly opposed by some carriers as they were considered to be discriminatory.

Traffic distribution rules in Paris

According to the French traffic distribution rules for Paris[19], an EU airline cannot operate routes to Community airports with a frequency of more than 4 times per day to and from Orly, with specific conditions for the capacity used during peak periods. If an airline wants to operate more than four return flights daily it must use, for flights between 7.00-9.30am and 6.00-8.30pm, planes of a minimum capacity that is calculated on the basis of the annual number of passengers carried. There are five categories ranging from 40 to 200 seats and based on annual numbers of passengers ranging from less than 100 000 to more than three million.[20] The objective of the TDR is to promote the use of Paris CDG as the international gateway, to restrict traffic at congested Orly and only use it as a 'gateway to Paris'

The TDRs have been changed several times since 1994 after European Commission decisions and airline complaints by Viva Air, TAT European Airlines and UK authorities. Amongst other things, the European Commission judged that the French state was not allowed to discriminate among the EU destinations that could be served from Orly, which was originally the case in the TDR. The UK complaint argued that the system is discriminatory and disproportionate. It would discriminate against companies with smaller aircraft, which cannot meet the conditions of the decree, and makes it more difficult for new entrants to penetrate the market. The European Commission did not find that the rules discriminate specifically in favour of French carriers, nor against British carriers or new entrants as such. However, the European Commission concluded that the rules are not proportionate to their objective, that is to direct traffic from Orly to Charles-de-Gaulle, since the minimum aircraft size on the different routes is fixed as a function of the traffic volume from all Paris airports, rather than only on the traffic to and from Orly. The European Commission's decision therefore obliged the French government to modify the rules.

15 The London TDRs were already in place before Regulation 2408/92 was effective.

16 EC Council Regulation No 2408/92 of 23 July 1992 on access for Community air carriers to intra-Community air troutes.

17 Redondi (2013). Traffic distribution rules in the Milan airport system: effects and policy implications. Journal of Transport Economics and Policy 47(3), 493-499.

18 http://www.acl-uk.org/UserFiles/File/BAA%20TDR%20consultation%20paper%20_LHR.pdf

19 "Arrêté relatif à la répartition du trafic intracommunautaire au sein du système aéroportuaire parisien" of 15 November 1994, last amended in 1999. See: http://www.admi.net/jo/19990421/EQUA9900496A.html

20 See http://europa.eu/rapid/press-release_IP-95-237_en.htm

Influencing connectivity outcomes with TDRs: opportunities

- The advantage of TDRs is that –using traffic criteria- certain traffic segments can be given access to certain airports serving the same conurbation and not to others. Examples of such criteria are passenger volumes by route, frequencies or segment (for example, passenger versus full-freighter aircraft).

Influencing connectivity outcomes with TDRs: potential problems

- TDRs do not guarantee or stimulate the development of certain connectivity outcomes. They merely tend to redistribute connectivity over a set of airports serving the same city or conurbation. There is no obvious way TDRs can strengthen long-haul or domestic connectivity at Gatwick or Heathrow, in particular because Regulation 1008/2008 explicitly states that TDRs shall not discriminate between destinations.
- TDRs pose risks in terms of government failure in correcting any perceived market failure. TDRs are static and focused on the status quo, while the market is changing fast. As they override the market, TDRs may lead to suboptimal welfare outcomes.
- The performance of TDRs in Europe has been poor. Airlines tend to search for loopholes in the TDRs as the Milan case demonstrates[21]. Some TDRs have been opposed by the airlines because of their *de facto* discriminatory nature.

Traffic Distribution Rules for Milan

In 2000, after the opening of the new terminal in Malpensa, the *Bersani Decree* introduced Traffic Distribution Rules for Milan's airports. The objective of these Traffic Distribution Rules was to steer traffic away from Linate in favour of the new Malpensa International airport and turn it into a second hub for Alitalia (Redondi 2013).[22] For each Community carrier, it limited the frequency of scheduled services from Milan Linate to each European airport system or individual airport according to size of the destination, based on passenger traffic in 1999. The European Commission allowed the Italian government to apply the TDRs as laid down in the *Decree*..

The frequency limitations for Linate were as follows (Redondi 2013, 494-495):

1. One daily return service to destinations with traffic between 350,000 and 700,000 passengers per year.
2. Two daily return services to destinations with traffic between 700,000 and 1,4 million passengers.
3. Three daily return services to destinations with traffic between 1.4 million and 2.8 million passengers.
4. No limit for services to destinations with traffic higher than 2.8 million passengers.
5. One daily return service to 'Objective 1 regions' and European capitals
6. Carriers operating from Linate to Community airports with annual traffic of more than 40 million passengers in 1999 were allowed two daily return services.

To meet the TDR conditions, the Italian and regional governments made large investments to improve access to Malpensa by surface transport and extend the catchment area of Malpensa. A

21 Redondi (2013). Traffic distribution in the Milan airport system: effects and policy implications. Journal of Transport Economics and Policy.

22 Redondi (2013). Traffic distribution in the Milan airport system: effects and policy implications. Journal of Transport Economics and Policy.

train connection, the Malpensa Express, was introduced to Milan central station and several improvements in the highway system in the Malpensa area were undertaken.

The TDRs did not achieve their objective. Allowing Linate to continue to operate to the main Italian and European destinations (instead of closing the airport) caused the undoing of Malpensa as and contributed to its de-hubbing: business passengers for larger European destinations disliked the long access times to Malpensa and preferred nearby Linate, cannibalizing demand and yields for feeder flights to Malpensa. For long-haul destinations, passengers preferred transferring at another European airport over a direct flight (with a longer access time) from Malpensa. The limited market potential of Malpensa and restrictions at Linate forced airlines to search for new market opportunities: as such, the TDRs stimulated the growth of low-cost airport Bergamo-al-Serio, located 40 kilometres east of Milan. Interestingly, Redondi (2013) concludes that –even including the low-cost growth at Bergamo-al-Serio, the TDRs resulted in a lower air traffic growth in the Milan area than would have been possible without the TDRs.

Finally, the Milan TDRs incentivized airlines to search for loopholes in the TDRs. By employing multiple carrier code assignments, several airlines were able to increase their frequencies from Linate and circumvent the TDRs. For example, Alitalia increased its flight frequency to London Heathrow and Paris Charles de Gaulle by using the assignments given to subsidiaries and carriers it had previously acquired: Air One, Volare Airlines, and Alitalia Express. In the same way, Lufthansa, by using its subsidiary, Air Dolomiti, increased its frequency to Frankfurt well above its formal limit of two daily return services.

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- Practical implementation of effective TDRs can be difficult, for example because of required data availability and data reliability.
- There is no direct linkage between the TDR Regulation (1008/2008) and the slot allocation regulation (793/2004). Even under a TDR that forces an airline to use a specific airport, the airline would still need to acquire a slot through the regular slot allocation procedure.

Conclusion

In sum, TDRs may be useful to ensure that certain types of traffic –based on objective and transparent criteria which are not discriminatory towards destinations, identity or nationality of the carriers- do not use specific London airports and search for alternatives elsewhere/ do not serve the London airports at all. But, apart from the many practical problems with TDRs in practice, they are not well equipped to stimulate domestic or long haul connectivity at Gatwick or Heathrow.

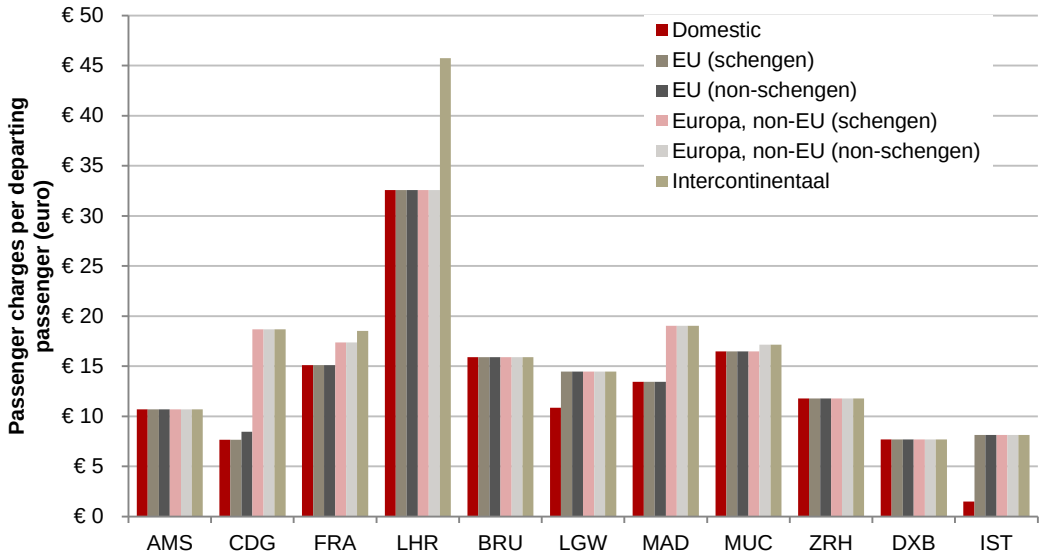
1.5 Differentiation in airport charges and taxes

Airport charges –all costs charged to the airport users for the use of the airport facilities- are governed by EU Directive 2009/12/EC. The Directive defines the common framework for the regulation of airport charges in order to ensure that charges set by the airport are not discriminatory towards airport users. Airport users or representatives of airport users have to be consulted regularly with respect to the airport charges system, the level of charges and the quality of services provided. Charges may be modulated for reasons of environmental and public interest. As such, Gatwick and Heathrow can use charges to influence connectivity outcomes.

As Figure 1.1 shows, a number of airports apply different passenger charges for different types of destinations. In general, domestic per passenger charges are lower than international charges. In other words, charges can be used to influence connectivity outcomes.

However, as Gatwick and Heathrow are both privately owned, the instrument is not within the direct reach of the UK government, with the possible exception of further differentiation of Air Passenger Duty (APD), the UK departure tax.

Figure 1.1 Passenger charges differentiation (tariff per departing passenger) by type of destination: domestic, EU (Schengen/ non-Schengen), Europe and intercontinental



Source: SEO benchmark airport charges 2014[23]; figure only includes the airport per passenger charges (landing and take-off charges, APD not included).

Heathrow's pledge to reduce charges for domestic flights

Heathrow Airport recently announced lower airport charges for domestic flights to stimulate domestic connectivity and gain passengers back from competing European hubs. Heathrow proposes to reduce passenger charges by 10 GBP per passenger.[24] The airport argues that this is not only to the benefit of the domestic passenger as it will enhance access to onward long-haul destinations and increase the traffic base for new long-haul flights.

Airport charges differentiation in an airport network

The introduction to the Directive 2009/12/EC on airport charges states explicitly that for reasons of traffic distribution, Member States are able to allow a managing body for airports serving the same city or conurbation to apply a common charging system (Article 4 and 5) and differentiate charges. By varying airport charges at different airports, airports can try to increase/decrease the use of airport infrastructure or reduce environmental impacts. Member States are required to inform the European Commission of any such arrangements.

As the London airports have different owners, there is no single/common airport managing body to achieve coordinated differentiation of charges between the different airports in the London

23 http://www.seo.nl/pagina/article/benchmark-luchthavengelden-en-overheidsheffingen-1/
24 FT, 2 April 2015; see also http://your.heathrow.com/reducingdomesticpassengercharges/

airport system. Lower charges to stimulate certain connectivity outcomes (e.g. to domestic destinations) depend on the strategies of each individual airport operators and outcomes are not guaranteed..

Influencing connectivity outcomes with charges and taxes: opportunities

- In theory, Directive 2009/12/EC would allow airport operators to influence connectivity outcomes based on the charges levied to the airlines/other airport users at the London airports.
- An analysis by Mendes de Leon[25] shows that Member States have much greater autonomy in influencing airport connectivity through the coordination of charges, where a single company or authority sets charges for multiple airports, than through TDRs. Amongst other things, EU Regulations state that TDRs may not discriminate among destinations. No such restriction applies to an airport network for airport charges differentiation. Moreover, approval by the European Commission is not needed for the differentiation of charges, only notification is required.

Influencing connectivity outcomes with charges and taxes: potential problems

- Gatwick and Heathrow are not government owned or operated. Hence, this means that the UK government cannot directly influence the charge levels or differentiation of charges. Only APD, the passenger departure tax, can be determined by government. The current APD is already differentiated according to distance class. Further differentiation might be used to stimulate domestic connectivity out of the UK airports.
- No differentiation is currently possible of APD by UK airport. Further differentiation of APD might therefore enhance conditions for the development of domestic connectivity in the UK in general but could not target *specific* London airports. Moreover, it is not clear if any differentiation in APD would provide sufficient incentive to influence connectivity outcomes.

Conclusion

Differentiation of charges can be an effective instrument –within the boundaries of Community law- to influence connectivity outcomes. However, the possibilities for the UK government will be limited in practice. Gatwick and Heathrow are not government owned or operated, so the UK government cannot directly influence charge structure and level. As the London airports have different owners, no airport management body is available to coordinate differentiation of charges between airports. As APD is not an airport-specific tax, while it might be used for creating more favourable conditions for domestic connectivity growth in general, it could not be used to stimulating domestic connectivity at specific London airports.

1.6 Start-up aid/ incentives

Airlines are not always prepared to run the risk of opening new routes from unknown and untested airports. Therefore airports or government authorities sometimes provide airlines with start-up aid as an incentive to offer flights to specific destinations or regions.

[25] See SEO (2013), Incentive Policy and Traffic Distribution Rules. SEO report nr. 2013-18 (in Dutch).

Many airports in Europe are to a greater or lesser extent government owned/operated. To ensure a level playing field, EU *Guidelines on State Aid to Airports and Airlines*[26] set out the conditions under which government funded start-up aid/incentives are allowed. As both Gatwick and Heathrow are private entities, the Guidelines do not directly apply to these airports unless they are allocated state resources. The regulations may, however, apply to regional UK airports with public sector stakes (e.g. Luton, Birmingham, Manchester Airport Group). The regulations also apply to start-up aid from the UK government to airlines under the *Regional Air Connectivity Fund* (see below).

Two main types of incentives to airlines can be distinguished:

- Airport/airline arrangements considered as 'State aid granted to airlines for launching a new route with the aim of increasing the connectivity of a region', complying with Article 107(3)(c) of the Treaty.
- Airport/airline arrangements not considered as state aid, complying with the *Market Economy Operator* principle.

The first type of arrangement is only allowed for routes linking:

- An airport located in a remote region to another airport (within or outside the Common European Aviation Area).
- An airport with fewer than 3 million passengers per annum (regardless of its region) to another airport within the Common European Aviation Area. An airport with more than 3 million passengers per annum and less than 5 million passengers per annum not located in remote regions can be considered only in exceptional cases, but airports with more than 5 million passengers per annum not located in remote regions, such as Heathrow and Gatwick, are excluded.

Support to airlines serving such airports can be provided up to a maximum of 56 months and is not allowed to cover more than 50 percent of the airport charge.

The second type of arrangement is allowed when the relationship between the airport and the airline complies with the *Market Economy Operator Principle*. This is normally the case if:

- The price charged for the airport services corresponds to the market price.[27]
- It can be demonstrated through an ex-ante analysis that the airport/airline arrangement will lead to a positive incremental profit contribution for the airport.

At present the European Commission considers the latter test, the ex-ante incremental profitability analysis, to be the most relevant criterion for the assessment of arrangements concluded by airports with individual airlines. In this respect, the European Commission considers that price differentiation is a standard business practice, as long as it complies with all other relevant competition and sectoral legislation. Nevertheless, such differentiated pricing policies should be commercially justified to comply with the *Market Economy Operator Principle*.[28]

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26 Guidelines on state aid to airports and airlines. C(2014) 963. See for details the Communication from the Commission — Guidelines on State aid to airports and airlines http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2014:099:FULL&from=EN

27 European Commission Guidelines on State aid to airports and airlines (2014). Section 3.5.1.

28 This test should be based on available information and foreseeable developments at the time when the public funding was granted and it should not rely on any analysis based on a later situation. See European Commission Guidelines on State aid to airports and airlines (2014). Section 3.4

To satisfy the positive incremental profit contribution test, the airport must demonstrate that over the duration of the arrangement it is capable of covering all costs stemming from the arrangement with an airline (for example, an individual contract or an overall scheme of airport charges) with a reasonable profit margin on the basis of sound medium-term (24 months) prospects. In order to assess whether an arrangement concluded by an airport with an airline complies with the *Market Economy Operator Principle*, expected non-aeronautical revenues stemming from the airline's activity are taken into consideration along with airport charges, net of any rebates, marketing support or incentive schemes. Similarly, all expected costs incrementally incurred by the airport in relation to the airline's activity at the airport are be taken into account. Such incremental costs could encompass all categories of expenses or investments, such as incremental personnel, equipment and investment costs induced by the presence of the airline at the airport. Finally, when assessing airport/airline arrangements, the European Commission will also take into account the extent to which the arrangements under assessment can be considered part of the implementation of an overall strategy of the airport expected to lead to profitability at least in the long term. If the agreement turns out to be unprofitable for the airport the aid (i.e. the discounts on airport charges provided) is to be considered illegal and the beneficiaries have to pay it back.

Start-up aid under the Regional Air Connectivity Fund (RACF)

The Regional Air Connectivity Fund is a UK government initiative for start-up aid to airlines to stimulate connectivity from and to regional airports. It has to meet the conditions of the EU guidelines on state aid. The Fund is intended for PSO routes and for the launch of new routes from regional airports that handle fewer than five million passengers a year.[29] Bids for funding need to come from consortia (route promoters) consisting of at least an airport and an airline and where applicable a local authority. The new routes need to create net economic benefits for the region. New services should be expected to be profitable after three years. Funding can cover up to 50% of the aeronautical charges. Funding is only available for routes within the Common European Aviation Area. The initiative was launched in 2013 and by March 2015, the Department for Transport had received 19 bids for new routes.

Influencing connectivity outcomes through airline start-up aid and incentives: opportunities

- Start-up aid offer airport operators and regions an effective tool to influence on connectivity outcomes, as it can provide incentives (e.g. discount on airport charges) to airlines that may want to fly to specific destinations or regions.
- The Regional Air Connectivity Fund provides a government-led incentive to develop regional routes in the UK, meeting conditions of EU state-aid guidelines.

Influencing connectivity outcomes through airline start-up aid and incentives: potential problems

- As Heathrow and Gatwick are privately operated, the UK government has no direct influence on what kind of incentive programmes the operators will offer. The interests of the airports are likely to differ from those of the government.

[29] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/397875/start-up-aid-initial-application-guidance-2a.pdf

- Route development under the Regional Air Connectivity Fund is also ultimately dependent on initiatives from airlines and regional airports.
- Start-up aid can only be provided where no air service already exists between the two airports under consideration or any airport within a 60 minute journey time radius of the airports. This means that it will not be possible to provide start-up aid for airlines operating out of Gatwick or Heathrow when an alternative service exists from another London airport within the 60 minute radius.

Conclusion

The operators of Heathrow or Gatwick (as well as other airports) may provide incentives to airlines for offering services to specific destinations or regions. However the government has no direct influence on the incentive programmes of these private airports. Through the RACF, the UK government has an effective instrument for regional route development although it is the market that decides how connectivity eventually evolves.

1.7 Synthesis

Table 1.1 provides a summary of the different instruments on the following criteria:

- Effectiveness: how well targeted is the mechanism? Does it achieve its objective to influence connectivity outcomes in the short- and medium-term? Does it have unintended consequences?
- Applicability: is the instrument within the scope of policy-makers authority and ability to determine outcomes?
- Experience: was the instrument successfully applied before?

Table 1.1 Summary of the instruments to influence connectivity outcomes

	Effectiveness	Applicability	Experience
Local rules & guidelines	-Can influence connectivity outcomes at the margin; -No earmarking of slots possible;	-No direct influence of UK government -Policy uncertainty with respect to future of local rules -Approval by EC needed	Frankfurt case indicates that some 'flexing' of slot regime may be possible
PSO	-Effective in stimulating regional connectivity; -Compatible with slot regime -Applies only to intra-Community routes	-Within UK policymakers' responsibility - Revision of DfT guidelines would be required to apply to specific airports. -No approval by EC needed	Many successful examples in the UK and elsewhere in Europe
TDRs	-Can influence distribution of connections in an airport system -Risk of unintended side-effects; airlines search for 'oopholes	-Within UK policymakers' responsbility -Approval by EC needed	-No new TDRs under the 'new' Regulation -Various TDRs under the 'old' Regulation

Differentiation of charges	-Charges can be effective incentives to influence (but not guarantee) certain connectivity outcomes - APD can be differentiated to affect connectivity across the whole network but cannot be differentiated by airport.	-Except for APD, not within UK policymakers' reach - Differentiation of charges between London airports cannot be coordinated as now in separate ownership.	-Differentiation used by many airports in Europe
Airport marketing incentives & start-up aid	-Incentives and start-up aid can be effective policy for airports to develop new routes	-RACF within UK policymakers' reach but effectiveness lies eventually with airports and airlines.	-RACF currently in place

With respect to domestic connectivity we conclude that PSOs would be suitable for developing connectivity to smaller UK destinations from either Gatwick or Heathrow if DfT guidelines were to be revised to allow for specifying specific London airports. The Regional Air Connectivity Fund is a useful government incentive for increasing domestic connectivity but, as with the differentiation of airport charges and airport marketing incentives, they depend on airlines and airports to take the initiative.

With respect to long-haul connectivity, possibilities are clearly smaller, not only because most administrative measures apply to the intra-EU market only, but also because potentially suitable instruments (airport marketing incentives, airport charges differentiation) are largely outside the sphere of influence of the UK government.

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