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## **Flexing the slot regime: airport slot coordination in light of evolving market realities: a regulatory perspective**

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## SUMMARY

This dissertation is designed to explore the compatibility of the global and specific legal regimes governing airport slot allocation with the particular socio-economic challenges that international organizations, governments and air transport industry stakeholders are experiencing today. A multitude of socio-economic objectives are identified in this dissertation, including but not limited to the environment in terms of noise and carbon reduction policies, growing airport access issues and general debates on airport functions to society. The number of so-called ‘super-congested’ airports in terms of the full slot capacity being historically ‘occupied’ by incumbent carriers are on the rise and will be carefully studied from a policy and legal point of view.

Considering the focus of this dissertation as explained in the above paragraph, the central research questions of this dissertation are posed as follows:

- 1) To what extent can the global and specific legal regimes pertaining to airport slot coordination be used as an instrument to influence coordination decisions at super-congested airports?
- 2) What concepts or measures related to slot coordination can be identified to flex the current slot regime to better reflect the socio-economic value of a slot in coordination decisions at super-congested airports?

Chapter 1 sets out the context, scope, aim and structure of the dissertation. Notable developments relevant for this dissertation are listed and further contextualized in Chapters 2-6. Chapter 2 provides definitions and illustrates how and by whom airport capacity is currently declared and subsequently allocated in the form of airport slots to the parties that use them: airlines. The capacity declaration determines the supply-side of the coordination process, *id est* how many slots will be made available to airlines and is therefore critical for the coordination process to commence. All subsequent steps involve demand-side questions, *id est* whom the available slots will be allocated to.

In essence, airport slots are planning tools for the rationing of capacity at airports where available capacity falls short of air travel demand. Since the availability of slots is directly connected to the capacity of an airport at a particular date and time, a slot is by definition a scarce resource. The extent of slot scarcity depends on the congestion level of an airport. The qualification of an airport as slot coordinated or ‘Level 3’ under the Worldwide Airport Slot Guidelines [hereinafter: WASG], an industry best practice guide for the allocation of slots, has been used as a first proxy of a high congestion level at the relevant airport, although qualification as a slot coordinated airport does not necessarily equal super-congestion.

Fueled by air transport deregulation and liberalization measures, competition between airlines intensified and demand for air transport services has grown considerably since the 1980’s, bringing increased saturation at airports in terms of available slots. Excess demand for slots has substantial implications for airlines, coordinators and airports alike, as well as for society as a whole. A lack of access to slots constitutes a barrier to an airlines’ ability to compete for passengers and/or cargo on routes between an airport and the destinations served from that airport, especially at the world’s busiest airports. In many air transport markets, slot availability has replaced traffic rights as the main barrier to entry in the air transport industry.

Moreover, a growing socio-political focus on limiting air transport's negative externalities may culminate into discussions as to how a flight's environmental footprint could be reflected in the declaration, allocation and use of airport capacity. Besides operational requirements, therefore, an increasing number of airports add to the complexity of the parameter framework via the introduction of environmental restrictions, including limitations for night flying or caps on aircraft movements to combat aviation emissions and aircraft noise exposure, further exacerbating the capacity crunch.

Combined with the severity of political, geographic and institutional constraints in matching airport capacity supply with demand, a purely supply-side solution seems rather impossible. Nevertheless, capacity-wise the WASG continues to underline that coordination should be seen as an "interim solution", until the longer-term solution of airport capacity expansion has been implemented. This dissertation considers this expansion-oriented approach to be outdated, particularly at super-congested airports where slot scarcity is of a long-term or permanent nature, and where persistent impediments to airport access are experienced as a result.

Also, the demand-side of the coordination process has received widespread criticism from leading academics, competition authorities and industry professionals. Criticism is directed mainly towards the tenability of the principle of historic precedence, on the basis of which airlines are allocated slots on the basis of their previous use. Airlines wishing to start or expand their services at a congested airport may be hindered or prevented from doing so, as available slots are an essential input for airlines wanting to compete.

This dissertation's findings demonstrate that the role of slots has changed from a purely productive instrument used to cope with congestion to a multi-faceted concept serving various purposes. The allocation of slots carries many aspects and considerations, *exempli gratia* of an operational, commercial or environmental nature, which need recognition. This dissertation considers it questionable whether the guidelines set forth by the WASG are equipped for reconciliation with the multi-faceted and increasingly public role of slots in contemporary society.

Chapter 3 aims to provide a thorough understanding of the global framework in the context of access to airports. It clarifies that, although slot allocation may not be regulated directly under the Chicago Convention on International Aviation of 1944 [hereinafter: the Convention], access to airports is. Article 15 of the Convention on the use of airports is generally interpreted as encompassing the use of slots. It follows that slot allocation can be considered part of the process concerning access to airports, thus it must be performed in a non-discriminatory manner and subject to the national treatment principle. Consequently, States must adhere to these principles in their rules and procedures on slot allocation.

The International Civil Aviation Organization [hereinafter: ICAO] has not yet adopted Standards and/or Recommended Practices in the field of slots, and there are no other binding and/or uniform rules from ICAO on slot allocation. Nonetheless, ICAO has, produced guidance documents on slot allocation, often with reference to the WASG. In relation to traffic rights exchanged on the basis of Articles 5 and 6 of the Convention, slots are a technical modality to be allocated by the coordinator following the exchange of traffic rights in air services agreements. An airline holding traffic rights is not guaranteed the necessary airport slots, because slots are allocated separately, that is, under a different legal regime and at a later stage.

In the absence of ICAO rules on the matter, guidelines for the allocation of slots at congested airports were first developed by airlines and dedicated ‘slot coordinators’ almost half a century ago via the issuance of what are now known as the WASG. In States where the WASG apply, whether directly as guidelines or because they are implemented in regional or national laws, the exclusive responsibility for the allocation of slots is vested with the independent slot coordinator, who ensures slot allocation takes place through a system of fair, non-discriminatory and transparent rules so as to ensure optimal utilization of airport capacity.

Slots are available for allocation from the slot pool or potentially through the alternative means of, *inter alia*, secondary slot trading or remedy slots. They are attached to the capacity of one particular airport but are generally not attached to any specific route. Hence, slots are flexible concepts which can be used by airlines in a wide range of downstream markets, *id est* on any route of the airlines’ choice, save for pre-defined exemptions.

Although not legally binding *per se*, States that have adopted domestic regulations on slots often draw on the guidelines enshrined in the WASG, making the global air transport industry largely subject to the same regulations. However, as demonstrated by Chapter 2, the structure of the air transport market has advanced fundamentally since the key guidelines for the allocation of slots at congested airports were first developed. Yet, as capacity falls short of demand at more and more airports, the principles of the Convention and the WASG have more impact than they did at the time they were conceived.

Chapter 4 explains that States may also have their own legislation on slots. In some instances, WASG principles have been incorporated into national or regional law, making the provisions directly enforceable by the State or region concerned. The variance in regulatory policies of the selected jurisdictions of the European Union, the United States, the United Kingdom, China, Mexico and Australia with respect to slot allocation at (super-)congested airports have resulted in different approaches pertaining to slot scarcity and are illustrative of the non-binding nature of the WASG guidelines.

Neither the general regime for slot allocation which has been explored in Chapter 3, nor the special regimes for slot allocation discussed in Chapter 4, offer structural solutions to remedy the specific challenges faced by super-congested airports. Yet, the continuous attempts made by States around the world to revise existing rules and practices for slot allocation epitomize the shared global quest for a slot regime that alleviates the specific challenges faced by super-congested airports.

Chapter 5 analyzes multiple concepts that could assist in drafting structural solutions for the specific issues experienced at super-congested airports relating to this dissertation’s research questions, primarily in the field of reflecting the full socio-economic potential associated with slots in coordination decisions. Among these concepts are the debate on who holds the legal title to a slot, the functional and financial independence of the coordinator, the application and use of the new entrant rule and secondary slot trading, as well as the relationship between slot allocation and competition law. The lessons learned from Chapters 1-5 are displayed in Chapter 6 and formulated in general conclusions.

One of the overarching conclusions of this dissertation is that the declaration of capacity and the resulting allocation of slots carries many aspects and considerations, *exempli gratia* of an operational, commercial or environmental nature, which need recognition and regulation, including re-regulation. However, the heterogeneity of airport infrastructure reduces the likelihood of finding general capacity declarations or slot allocation principles matching the

particular situation of each and every airport. Airports are complex systems and each will have very different needs and coordination parameters that are liable to affect the allocation of slots. This means that a 'one size fits all' approach to slot coordination is not possible, and the coordinator needs to take into account the individual needs of each airport.

Furthermore, a degree of coordinator discretion and flexibility when making allocation decisions is deemed to support the fundamental requirement of coordinator independence to account for the variance in local situations. In turn, this room for discretion and flexibility will enable the coordinator to respond to ever-changing market realities, specifically as local situations differ and may therefore require different solutions.

To this end, a host of measures to flex the slot regime are recommended in Chapter 6 to help solve the principal tensions that exist between ensuring the stability and continuity of international air services on the one hand, and the incorporation of socio-economic objectives and easing market access on the other hand, which come together in the nexus of scarce airport capacity. The following topics are addressed and supplied with recommendations: the optimal declaration, allocation and use of slots, enhancing the use of existing capacity, the inclusion of airport-specific strategic objectives, measures to ease airport access, and the role of States vis-à-vis the role of the slot coordinator and air transport industry stakeholders in a 'flexed' slot regime.

An overarching recommendation holds that a future slot regime should be cognizant of the shifted role of the coordinator from performing merely technical functions to resembling the role of a policymaker. At super-congested airports, slot coordination ultimately comes down to making decisions which airlines can and cannot operate to and from an airport. With slot scarcity levels and the risk of judicial reviews of coordination decisions rising, coordinators play an increasingly important role in the correct application of the slot allocation rules. After all, airlines are all in the same 'game' for the last available slot pair and the coordinator continuously has to make trade-offs between applicants of equal status. Though the coordinator has been delegated public functions, by no means was the slot coordinator intended to perform the task of policy making. Arguably, at super-congested airports, the coordinator has inevitably been assigned a role it was never intended to perform.

Since the slot situation at one end of a route may impact the slot situation at the other end, internationally established deadlines and rules are paramount. In the author's view, however, global compatibility does not imply that the same rules for the allocation of slots must apply around the world. A coherent global approach to slot coordination, and more generally airport access under air services agreements, does not exist whereas airlines navigate all the variations in place today. Although there are clear benefits in terms of scheduling consistency if the coordination process is applied consistently across all coordinated airports, there should be freedom to diverge from any such global guidelines in order to optimize the capacity of each airport considering the specific local issues and patterns of air transport activity, particularly at super-congested airports.

Hence, this dissertation finds that local coordination solutions through a 'flexing' of the global and specific slot regimes are justified to reflect local market conditions, for instance due to variances in airport size, functions to society, the nature of the capacity constraints and prevailing competitive conditions, provided that these differences in situations can be adequately proportioned to the degree of 'flexing' sought.