

# **Airport Privatisation and Regulation —**

## **Getting the Institutions Right**

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## **Abstract**

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### Airport Privatisation — Getting the Institutions Right

The paper evaluates the determinants of the adequate design of airport privatisation policy. The main hypothesis that will be developed is that there exist complementarities between the choice of a particular privatisation form and the design of the accompanying institutional setting for the airport sector, et vice versa. Hence, policy makers must simultaneously decide on the form of privatisation and the institutional framework within which regulation takes place. Otherwise, path dependencies may lead to inefficient outcomes.

## 1. Introduction

Airport privatisation has been — and still is — at the agenda of national air transport policies of many countries throughout the world. Privatisation may take many different avenues, ranging from only a minor divestiture of airport companies by public shareholders (for e.g. Hamburg Airport) to a complete sell-off of (former) public airports to private investors (for e.g. in Australia). Privatisation can be restricted to the operation of public infrastructure facilities by a private firm (for e.g. in Bolivia), or it can also involve privatising the airport's infrastructure (for e.g. in the UK). As airports are usually regarded to be uncontestable monopolies, privatisation is typically accompanied by some form of price regulation.<sup>1</sup> This regulation may be designed in a variety of forms as well, ranging from strict rate of return- to price cap-regulation (with various sliding scale mechanisms in between).<sup>2</sup> It may be restricted to the airside activities of airports (for e.g. Hamburg Airport), or it may also cover non airside activities (for e.g. in the UK). Not at least, airports can be privatised while all markets for airport services are fully deregulated (as in New Zealand). Against this variety of institutional settings that govern the airport sector, the question arises what determines the „best” form of privatisation and the “best” design of the institutional setting within which privatised airports operate.

This paper asks for the determinants of the appropriate design of ownership structures in the airport sector and of the institutional setting for airport service markets. The analysis is based on The New Institutional Economics.<sup>3</sup> This paradigm focuses on asymmetric information and incomplete contracts and the institutions that govern these contracts. Contracting parties are aware of the dangers of opportunism that might emerge because of informational asymmetries and the incompleteness of contracts, and they design governance structures to protect their own quasi-rents against opportunism by their respective partners. The optimal design of governance structures depends on the specific characteristics of the transaction in question. The main dimensions are the asset specificity of supporting investments and the frequency of transaction.

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<sup>1</sup> A noticeable exemption is New Zealand which privatised its major airports without any accompanying price regulation.

<sup>2</sup> The new airport at Athens may serve as an example for the application of rate of return-regulation, the BAA airports in the UK may serve as examples for airports that are regulated by a price cap-mechanism, and the airside charges of Vienna Airport are subject to a sliding scale-mechanism.

<sup>3</sup> For an overview see Richter and Furubotn (1996).

The paper is organized as follows. The first step describes the choice of airport ownership structures and the design of airport regulation as a contract problem. The second step evaluates alternative governance structures and identifies complementarities between the distribution of ownership rights and the design of the institutional setting within which privatised airports operate. The third part takes a look at the German approach to designing privatisation policy for the airport sector. Finally, the overall results of this paper will be summarized.

## **2. Airport privatisation policy as a contract problem**

Following Goldberg (1976), the distribution of ownership rights to airports and the design of price regulation can be analyzed as a contract problem. As he argued generally, regulation may be viewed as a transaction costs saving device for controlling the behaviour of natural monopolies in cases where transaction-specific investments lead to uncontestability of monopoly markets while at the same time locks the seller's investments into that transaction.<sup>4</sup> Hence, it is not only the buyer of the natural monopolist's services that needs to be protected against opportunism by the seller (i.e. monopoly pricing), but also the seller needs security of expectations, otherwise she would not invest specifically in that transaction. Regulation as a governance structure has to protect both parties' reasonable interests, otherwise inefficient outcomes will occur.

As regards the airport sector, airport authorities have to invest large sums of capital in aprons, runways, and terminals, all representing investments which are sunk to a high degree and which are characterized by long working lives. In addition, expanding major infrastructure facilities has to be done in large discrete steps. As a result, once these investments have been made, the future economic fate of a regulated airport is bound to future decisions by the regulator. On the other side, the social welfare effects of airport regulation depend on the willingness of airport authorities to invest in such facilities. Because airports are often uncontestable monopolies in their location, the regulator (as an agent for the airports' users and regions) is typically tied within bilateral relationships with the airport authorities. Hence, both sides (i.e. airport authorities and the regulator) need to be protected against opportunism by the respective partner. Because indivisibilities in airport infrastructure investments prevent self-enforcement of regulatory contracts if no

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<sup>4</sup> See also Williamson (1976).

institutional safeguards against opportunism exist, appropriate governance structures have to be implemented.<sup>5</sup>

Airport regulation means that the task of controlling the behaviour of the airport company is not performed by the users of that airport, but by a regulator, who simultaneously acts as a principal for the regulated airport and as an agent for the airport users. Asymmetric information and bounded rationality prevent perfect (i.e. in the sense of neoclassical economics: first best welfare maximising) regulatory outcomes. Instead dangers of opportunism might exist. In this respect, opportunism may come in three ways: First, informational disadvantages of the regulator about the real conditions of production for the airport might lead to opportunistic behaviour by the airport company which would result in allocative and/or productive inefficiency. Second, transaction-specific investments create a lock-in effect for the airport company which might give the regulator ex post-opportunities to expropriate the firm's quasi-rents. And third, as regulation is a public good, efforts of the airport's users to control the regulator might be socially suboptimal, which gives the regulator opportunities to behave opportunistically against the users' interests. To achieve efficient outcomes of airport privatisation, the governance structure that defines the relationship between airport company, regulator, and airport users has to be designed carefully to protect the reasonable interests of airport companies and airport users. In this sense, the design of airport privatisation policy does not only mean a change in the ownership structures in the airport industry, but to design an efficient institutional framework for the airport sector that guarantees the maximum of social welfare gains that can be realized by privatisation.

### **3. Governance Structures in the Airport Sector**

Williamson (1989: 112 pp.) generally identifies four prototypes of governance structures, namely (1) market governance, (2) trilateral governance (neoclassical contracting), (3) transaction-specific governance (relational contracting), and (4) unified governance (internal organization). *Market governance* is the main governance structure for non-

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<sup>5</sup> If infrastructure investments would be dividable into fairly little steps the regulatory risk of an airport authority would be minimal. She could employ a trigger strategy realizing her planned investment step by step, making her particular next step depending on the regulator's past decisions. As long as the regulator is interested in ongoing investment the airport authority may exercise a threat of not realizing the next step of investment if the regulator behaves opportunistically by exploiting the airport's quasi-rents. Also the regulator could retaliate for opportunistic underinvestment by the airport by lowering the level of airport charges below long run marginal costs. Both threats would make the regulatory contract self-enforceable (Salant and Woroch 1991).

specific transactions of both occasional and recurrent contracting. Such transactions do not need institutional safeguards against opportunism, as all transacting parties have outside options for their investments and hence have the opportunity to end the transaction without incurring sunk costs. Buyers can easily turn to alternative sources, and suppliers can sell output intended for one order to other buyers without difficulty. These costless exit options prevent opportunism. A *trilateral governance structure* means that the contracting partners choose an independent institution as an arbitrator for conflict resolution, e.g. the legal system and its courts may act as an arbitrator. However, a precondition for an effective trilateral governance structure, i.e. a governance structure that effectively protects the contractors' quasi-rents, is a regulatory contract that is either almost complete or entails unambiguous conflict resolution mechanisms, so that the arbitrator is able to clearly detect contract breaching and to clearly identify the party that has breached the contract. *Transaction-specific governance* means that the contractors do not rely on conflict resolution by an independent arbitrator, but instead agree on self-enforcing contracts that protect each others quasi-rents. A contract is self-enforcing if the partners supply hostages to each other in order to commit to ongoing contractual relationship (Williamson (1983)). Finally, a *unified governance structure* means vertical integration between the contractors. Vertical integration eliminates the danger of losing quasi-rents as a result of opportunistic behaviour by the partner. However, agency problems within the unified governance structure might occur, as vertical integration eliminates the disciplinary exit option of market governance.

In the airport sector, and with respect to privatisation, leaving transactions solely to the *market* would mean total privatisation without any regulation. This would avoid dangers of opportunistic behaviour by a regulator and related underinvestment by the airports. Note that in cases where airports are uncontestable monopolies, the regions which are served by these airports do not have an exit option. Instead they are bound to the behaviour of the monopoly supplier of airport services. It might be expected that unregulated airports with strong market power would raise the level of airport charges well above long run marginal costs in order to reap monopoly profits. It has been argued in the literature, however, that this should cause no concern with regard to efficiency considerations, as airports could engage in almost perfect price discrimination. Perfect price discrimination would lead to the production of the maximum of output of airport services that cover its costs. Hence, reaping monopoly rents by unregulated airports would only generate a fairly small welfare loss in terms of allocative efficiency while the airports would have all incentives to produce efficiently. Especially regulation-induced overcapitalisation (or underinvestment), X-inefficiency and costly rent seeking behaviour by the airports in a regulatory process

would be avoided. That would probably overcompensate for the small loss of allocative efficiency that has to be expected (Forsyth 2001).

Note however, that full deregulation of the markets for airport services does not automatically mean that the economic behaviour of airports is not subject to control by state authorities. Instead, even the services of a fully privatised airport are typically supervised by a national competition authority on the grounds of common competition law. Further remind the lumpy character of the airport's investments in major infrastructure facilities, which means that differentiation of airport charges according to the price elasticities of different airport users lies at the heart of the problem of ensuring efficient usage of the infrastructure facilities. In contrast, common competition law is often not suited to encourage price differentiation. For this reason competition authorities might refuse efficient differentiation of airport charges.<sup>6</sup> Hence, it might be doubtful if almost perfect price discrimination would occur after the markets for airport services had been fully deregulated. Therefore, political reliance on the functioning of fully deregulated markets for airport services may generate high social costs. If common competition law in the country under consideration is not suited to allow for perfect price discrimination, it might be wise to install another governance structure.; i.e. either an internal, a trilateral, or a transaction-specific one.

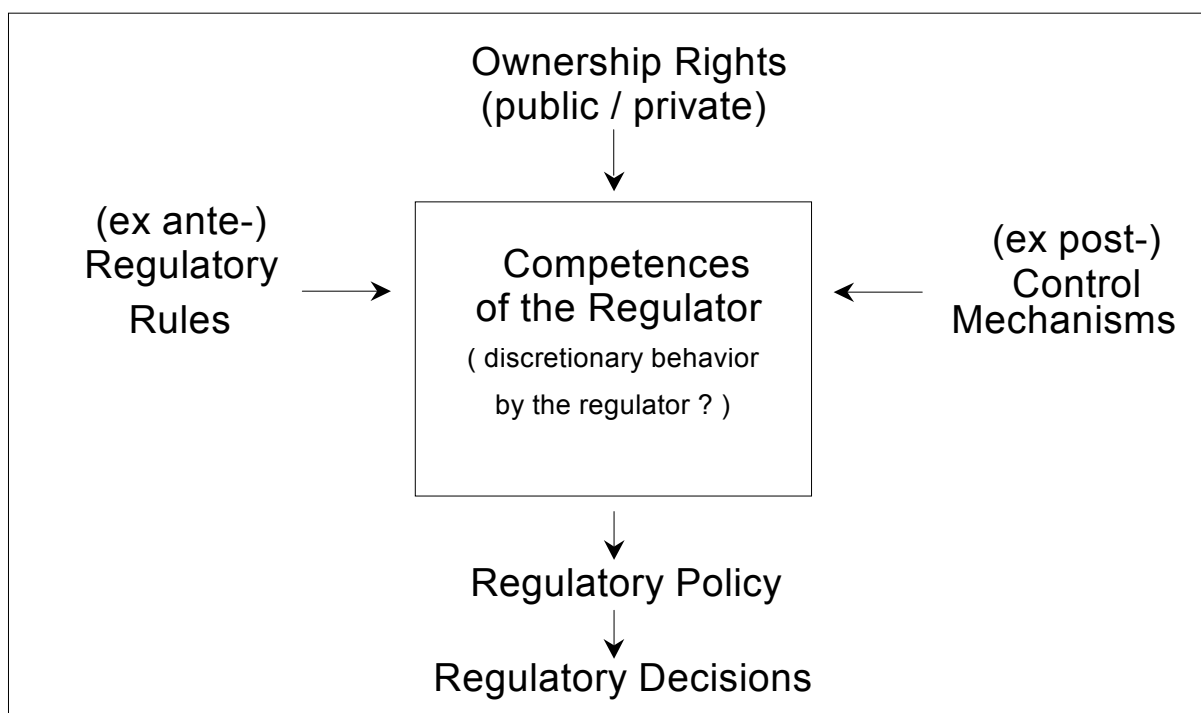
Accordingly, airport regulation may come in three ways (figure 1): First, regulation may be performed by means of internal regulation, which means that the state as owner of an airport company exercises ownership rights to control the behaviour of the company by internal command. With respect to airport privatisation, a precondition for internal regulation is only partial divestiture of airport companies by public owners. Internal regulation eliminates the regulatory risk of the airport company (because expropriation of the airports' quasi-rents by an opportunistic regulatory policy that sets the level of charges below long run marginal costs would harm the regulator herself) and hence avoids related problems of underinvestment in specific airport facilities. However, public ownership probably leads to inefficient outcomes for political-economic reasons: The regulatory

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<sup>6</sup> In many countries decisions by the national competition authorities against anti-competitive behaviour may be challenged by the offenders before courts, which could overrule the competition authorities orders. The effect on the efficiency of market outcomes might be twofold: On the one side such a governance structure protects the suppliers' quasi-rents against opportunistic orders by the competition authorities. On the other side, it might lead to a tendency by competition authorities to base their orders against anticompetitive conduct on considerations with regard to the suppliers' costs or on a comparison on a particular supplier's prices in different markets on which the supplier operates. In this way the competition authorities might try to avoid overruling of their orders by the courts.

process is likely to be influenced by pressure groups and self-interested politicians and hence by political considerations that might not be in the interests of the airport's users. Without going into political-economic details here why — and if always — public ownership is likely to generate considerable inefficiencies<sup>7</sup> it might be noticeable that airport privatisation is often justified as a means to improve the efficiency of airport services. Obviously, expectations about improved efficiencies of privatised airports must rest on the assumption that privatisation leads to a depoliticization of the regulatory process. That is only credible if state authorities cannot influence the airport's management decisions by internal regulation; i.e. if full privatisation (or at least a major divestiture of public airports) takes place.

Figure 1: Elements of a Regulatory System



Source: *Wolf (2003)*.

Alternatively, and second, regulation can be strictly bound to ex ante-specified rules which are enforceable before courts, thus leaving the regulator no discretion. Such rules would effectively protect the airport company's quasi-rents and thus would facilitate complete airport privatisation without inducing problems of underinvestment. However, while

<sup>7</sup> There exists a considerable body of literature on this subject. For an overview see e.g. Vickers et al. (1988: 11 pp.) and Brenck (1993: 56 pp.).

eliminating the dangers of opportunism by the regulator, such governance structure might give airports the opportunity to behave opportunistically, as such rules are unavoidable inflexible. E.g. the well known rate of return-regulatory mechanism, that guarantees the airport company a fair and reasonable rate of return on employed capital whatever its costs, represents such a rule, which eliminates the (otherwise existing) hold up-problem of the airport operator, but also gives the company incentives for over-capitalization (Averch and Johnson 1962). Furthermore, ex ante-rules make regulation heavy handed because the rules must be tailored to control for all action parameters of the airports. E.g. a fixed price cap gives the airport incentives to lower the quality of its services in order to circumvent regulatory restrictions, unless rules are implemented, that explicitly control for service quality. A rate-of-return mechanism gives the airport incentives to set an inefficient structure of charges in order to create additional demand at peak times (which can be used to justify the building of additional airport capacity) unless the structure of charges becomes subject of regulatory control (Bailey et al. 1974). All in all it is very doubtful if regulating a private airport by ex ante rules leads to better results in terms of social welfare than internal regulation by means of public ownership. Indeed, as Vickers et al. (1988: 40 pp.) conclude after examining the results of empirical studies about the relative performance of private and public companies, private companies that are heavily regulated tend not to perform better than public ones.

Inflexible and heavy handed regulation may be avoided by allowing for discretion by the regulator, especially by giving her the opportunity to sanction opportunistic behaviour by the airport by lowering charges ex post, thus making regulation a repeated game between the airport and the regulator. This might probably reduce incentives of the airport to exploit informational advantages from the beginning, which in turn reduces the need for continuously ex ante-control of all action parameters of the company. E.g. regulatory discretion would enable the regulator to lower price caps if she detects quality dumping by the airport, thus weakening the airport's incentives to lower the quality of her services, and, hence, making ex ante specification of quality standards by inflexible rules avoidable. However, a precondition for efficient outcomes of a discretionary policy is again the existence of institutional safeguards that protect the airport's quasi rents. Otherwise, regulation may fail to achieve efficient infrastructure investments by the airport.

These considerations lead to the third prototype of regulatory governance, namely ex post-control of regulatory outcomes. Implementing a governance structure that heavily relies on ex post control mechanisms means giving the regulator freedom for discretion that allows to skim off monopoly rents of the airport ex post by lowering charges below long run marginal costs for a while, while protecting the airport's quasi-rents by exerting a threat of

sanctions on the regulator if regulatory outcomes are proved to be inefficient. The idea is to make regulation more light handed by designing a relational regulatory contract that is self-enforcable.

As mentioned earlier, self-enforcement of relational contracts needs hostages that each of the contractors supply to their counterparts. As belongs the airport her investments in major infrastructure facilities represent such a hostage, as such investments bind her economic fate to future decisions of the regulator. On the part of the regulator, her competences to regulate may represent an effective hostage that might protect the airport's quasi-rents. Hence, protection can be offered by the threat on the regulator of loosing her competences. To make this threat credible, regulatory outcomes have to be controlled by an independent institution that is allowed to stop regulation at all. But even this control institution might behave opportunistically. Therefore guidelines are needed what constitute inefficient outcomes of regulation. In order to preserve flexibility of the system, these guidelines necessarily have to be somewhat vague. A further safeguard could be a division of competences between different institutions (a) of assessing the efficiency of regulatory outcomes and (b) of deciding about the future of regulation. If so, those institution that is commissioned to detect inefficient regulatory outcomes would not profit from the abolition of regulation. This would probably reduce her incentives to cheat. To sum up, a precondition for improving the efficiency of regulation is the implementation of a system of checks and balances with various institutions involved.

However, such an institutional setting remains to represent a very incomplete contract with only vague guidelines on what constitute inefficient regulatory outcomes. Hence, it would be wise to install additional elements into the system that may serve as safeguards to protect the airport against unduly regulatory decisions. Appropriate safeguards may be (a) the abolition of the single till-principle, which would mean that the airport's revenue from non airside activities is shielded from misbehaviour by the regulator, and (b) delegating the task of regulating designated airports to an institution, which is responsible for regulation of all airports that are subject to regulation (or even also of other regulated industries like electricity, gas, and telecommunications). If so, the regulator has to take into account the effects of her decisions regarding one particular airport on the whole airport system (resp. on the system of all regulated industries). Note, that different airports will realize their investments at different times. Therefore, exploitation of one airport's past investments in immobile assets by the regulator would probably lead to the unwillingness of other airports to further invest in major infrastructure facilities. Hence, the responsibility for the whole airport system would defuse the problem of indivisibilities of infrastructure investments, which lies at the heart of the credibility problem.

Although the introduction of a regulatory system that heavily relies on ex post-control mechanisms may improve the efficiency of regulatory outcomes, the building and operation of the needed institutions comes not without costs. These costs may be probably higher than maintaining public ownership or designing ex ante-rules. They must be weighted against the expected improvements in efficiency through regulation by ex post controls. It may be expected that these costs will become smaller compared to the benefits of such a system the more airports will become subject to ex post control under a unified legal framework, as the operation of the needed institutions is likely to be characterized by economies of density. In contrast, it can be expected that the smaller the number of airports that will become subject to privatisation, the less attractive is the introduction of effective ex post-control mechanisms. Thus, the building and operation of an institutional setting that heavily relies on ex post controls is the more attractive, the more airports operate under that setting.

Figure 2 — Governance Structures in the Airport Industry: Complementarities

Need for specific infrastructure investments \ Ex post-Control of Regulatory Policy	effective	Not effective
small	Freedom for discretionary regulatory policy and full privatisation	
big		

Quelle: *Wolf (2003)*.

The discussion so far leads us to the following results with regard to the appropriate design of privatisation policy for the airport sector: First, complementarities exist between the

optimal choice of the form of privatisation and the design of the legal framework within which privatised airports will operate. Full privatisation is only feasible if the institutional framework guarantees effective protection of the airports' quasi-rents (figure 2). Otherwise airport privatisation has to be restricted to a minor divestiture of public airport companies or to the operation of public infrastructure facilities by a private contractor. The latter would mean that the state would be responsible for infrastructure investments.

Second, if the governance structure ensures effective ex-post control of regulatory policy, inflexible ex ante-regulatory rules can be avoided, and regulation should be more light handed than if it is based on such rules. Hence, light handed regulation needs strong institutions.

Finally and third, the building of ex post control-mechanisms will especially be suitable in countries that had privatised (or plan to privatise) not only a single but a greater number of airports.

#### **4. Airport Privatisation Policy: The Case of Germany**

This section takes a look at the policy of airport privatisation in Germany that has emerged until today. The focus is on the design of the institutional framework for the German airport sector and its consequences for airport privatisation strategies of public owners and the regulatory policy. The aim is to identify shortcomings of the institutional design of privatisation policy, and to make recommendations for its improvement.

##### ***The Current Institutional Framework for the Airport Sector and the Privatisation Policy Up to Today***

Up to today, most German airports are under full public ownership by the *Bundesrepublik Deutschland* (central government), the *Länder* (counties) and municipalities, which make these airports subject to internal regulation. Recently, four airports have been privatised, other airports are planned to be privatised without a concrete schedule, however. In addition to internal regulation all airports are subject to external price control. Legally the Federal Government is responsible for external regulation on the grounds of the *Luftverkehrsgesetz* and the *Luftverkehrszulassungsordnung* (German sector-specific aviation law). However, she had delegated the task of regulation to the *Länder*, which in fact now are sole regulators of the airports within their regions, controlling the behavior of the airports formally by means of the aviation law, and informally by means of executing public ownership rights.

There are no legal guidelines about what constitutes efficient outcomes of regulation, nor are their independent institutions that assess those outcomes. Hence, regulatory decisions cannot be offended before courts, leaving the Länder with much scope for regulatory discretion. However, there is an element within the system that give the airports some protection against opportunistic behaviour by the regulators: German aviation law restricts the regulators to act only on request of the airports, i.e. they cannot change price caps unilaterally, but only if the airport companies agree.<sup>8</sup>

Informally the Länder agreed on a legally not-binding code of conduct that guarantees the airports a rate of return that is comparable to the capital costs on the capital markets (Arbeitsgruppe Verwaltung und Recht 1980). Hence, in practice regulation is based on a rate of return-mechanism.

Currently the incentives that would be generated for a totally privatised airport by this institutional setting are far from clear, as it is not known how the courts will decide in case of dispute between a regulator and an airport operator when the latter refers to the code of conduct.<sup>9</sup> If the airports could rely on the ongoing existence of rate of return-regulation, than clearly a privatised company has little incentives to improve productivity. If alternatively a privatised airport company will not trust on ongoing current practice, then she will have incentives to dump the quality of its services in order to circumvent regulatory restrictions. In any case, favourable outcomes cannot be expected as long as this institutional setting is governing the airport sector.

According to the results on existing institutional complementarities that were achieved in the last section, full privatisation is unlikely to take place. In fact, almost all of the airport privatisations up to today were restricted to minor divestitures of public airport companies, while the only exception represents the privatisation of public infrastructure facilities by a private operator.

To eliminate the misincentives that are generated by rate of return-regulation, and against the background of the then existing plans to privatise Hamburg Airport, the Free and Hanseatic City of Hamburg recently tried to improve regulation of the airport by introducing a price cap regime which obliges her to decide every five years on new price

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<sup>8</sup> An alteration of this situation is possible, but would necessitate contractual agreement between the Länder and the airports.

<sup>9</sup> Up to now, no case of dispute was ever brought before courts. The reason might be that the Länder as co-owners of airports can prevent an accusation by internal command.

caps, while refraining from changing the regulatory restrictions between the regular regulatory reviews. The regime was put into effect in spring 2000. However, she did not employ a regulatory system of checks and balances, which — according to the results of the last section — may be explained by the fact that Hamburg Airport is the only airport within the region of the City of Hamburg, so that the building and operation of a system of ex post controls might have been too costly to control for the behaviour of this airport alone. As a result, the regulatory system now lacks clear ex ante-specified regulatory rules beyond the ongoing 5-year-period as well as effective ex post-control mechanisms, hence providing the airport company with virtually no protection against regulatory discretion after the first regulatory period has ended. Against this background, and according to the institutional complementarities described in the last section major divestiture of the airport by the public shareholders — the Federal Government, the Land of Schleswig-Holstein, and the City of Hamburg — could not be expected. In fact, while the Federal Government and the Land of Schleswig-Holstein sold their shares of the company to a private investor in July 2000, the City of Hamburg refrained from full privatisation and stills holds the majority of shares of the airport company.

Another privatisation project that is currently under way in Germany is the privatisation of the three Berlin airports (Schönefeld, Tegel, and Tempelhof), which all belong to one airport holding company.<sup>10</sup> The Federal Government and the City of Berlin as shareholders plan an outright sale of the holding company to a private consortium. Against the background of the currently poor protection of fully privatised airports against regulatory opportunism, total privatisation should only be expected after reform of the system of airport regulation in Berlin. Indeed, the public shareholders committed by contract to employ a rate of return-mechanism when deciding upon charges. In addition, the contract allows the future private airport operators to introduce a new and additional passenger charge, which will be at 7,50 Euro per passenger, and which will be allowed to be charged for 30 years. Hence, after privatisation regulation will be partly based on an ex ante-specified price cap, which will last for 30 years and which will make the Berlin airport system by far the most expensive airport in Germany.

Other German airports that are planned to be privatised within the next years are Cologne, Frankfurt, Munich, and Stuttgart. According to actual known plans all of these privatisations will be restricted to minor divestitures by current public shareholders. With this, it may be very doubtful if privatisation will lead to improved efficiency of airport

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<sup>10</sup> The holding company is the Berlin-Brandenburg Flughafenholding GmbH.

services. However, as long as the actual legal framework for the airport sector remains intact, holding the majority of airport shares in public ownership may probably be the best privatisation strategy of the current public owners to ensure efficient investment by their airports. A shift of future privatisation strategies to full divestiture by public owners might only be expected to take place after the Federal Government will re-delegate competences for external regulation from the Länder to herself and will build an institutional setting that heavily depends on ex post-control.

### *A Sketch of a Proposal for an alternative setting*

According to the number of airports in Germany and especially of the number of airports that are already or are going to be privatised, it might be worthwhile for Germany to build and operate an institutional setting for the airport sector, that heavily relies on ex post-controls of regulatory outcomes, and thus enables full privatisation without taking recourse to inflexible ex ante-regulatory rules. However, a precondition for this to happen would be that the Federal Government recoups the competences for airport regulation, and installs an independent regulatory agency that ideally should be responsible for the whole German airport sector. Otherwise, potential economies of density of such an institutional framework will not be realized, which will be a barrier for the Länder to implement effective ex post-control mechanisms and full privatisation and hence to improve the efficiency of the German airport sector.

Wolf (1997 and 2003) sketches a proposal for institutional reform roughly along the line of the UK system of airport regulation. His proposal for a new institutional setting aims at facilitating full privatisation while at the same time minimizing actual by facilitating potential regulation.<sup>11</sup> It is based on a division of powers between three institutions, namely (a) the Federal Ministry of Transport, (b) one institution that acts as a regulator, and (c) the competition authority. In short, the duties of these institutions are as follows:

- The task of the Federal Ministry of Transport is to decide on the designation of particular airports for regulation and also on the re-designation of airports that are actually designated. She can only act on request by either the regulator or the competition authority.

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<sup>11</sup> Interestingly, Australia seems to move now in the same direction, as it plans to replace actual regulation by some form of “monitoring“.

- The task of the regulator is to decide on airport charges of designated airports.
- The task of the competition authority is to supervise the behaviour of the airport and of the regulator as well as of regulatory outcomes. She may request designation of airports for regulation as well as re-designation of airports by the Transport Ministry.

The concept of potential regulation realizes itself within the interaction between these three institutions: When the system starts to be operated, no airport should be subject to actual regulation by the regulator, but only under supervision by the competition authority. This authority monitors the behaviour of all airports. If she detects misbehaviour by one of the companies, she could threaten that company a request of designation. If an actual request occurs, the Transport Ministry has to decide on it. In case of designation the regulator has to decide on the airport's charges using a price cap which then will not be changed for a prespecified . If the airport prove to behave well under regulation, the competition authority may request re-designation by the regulator.

## **5. Conclusion**

This discussion in the preceding sections has shown that complementarities exist between the legal framework for the airport sector and the privatisation strategy of public owners. Designing privatisation policy means to decide simultaneously on the airports' ownership structures as well as on the legal framework that cover the airport sector. Privatisation will only lead to improved efficiency of airport services if regulation is designed to be light handed. However, light handed regulation needs strong institutions, otherwise inefficient outcomes will occur.

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