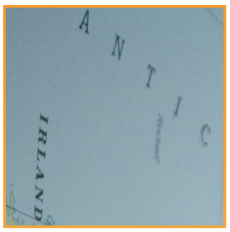
European University Institute

ROBERT SCHUMAN CENTRE FOR ADVANCED STUDIES

FLORENCE SCHOOL OF REGULATION



EUROPEAN TRANSPORT REGULATION OBSERVER

Markets in Air Traffic Control and the Evolving Role of Eurocontrol

Editors: Matthias Finger, Nadia Bert, David Kupfer

Highlights

Leading decision makers, academics and experts including Frank Brenner, Director of Eurocontrol, and Matthew Baldwin, Director for Air Aviation and International Transport Policy in DG MOVE, gathered at the 5th Florence Air Forum to discuss "the market approach" in Air traffic Control (ATC) and the evolving role of Eurocontrol. Both issues are closely related: Eurocontrol supports the introduction of market elements for certain ATC support services in order to increase efficiency in the Single European Sky without conflicting with its Member States' interest to maintain a national Air Traffic Control system. This in turn will contribute to further evolving the role of Eurocontrol and re-shaping the current structure of ATC in Europe.

One part of the discussion focussed on ***where and how market elements can play a role in air traffic management*** *whereas the other part looked at* ***what governance structure would be appropriate and which actors could take over which functions in the future.***

QM-AU-14-002-EN-N
ISSN: 2467-0405

From SES gridlock to ATC markets to evolving the role of Eurocontrol

A comment by MATTHIAS FINGER | FSR-Transport Director

The 5th Florence Air Forum marked, at least conceptually, a significant step forward. Building on the previous Forum and on a general agreement that the current gridlock of the Single European Sky (SES) is unsustainable, the Forum addressed the question of competition in Air Traffic Control (ATC) services and what such competition would ultimately mean for the evolving role of Eurocontrol.

There indeed seems to emerge a certain acceptance, especially among smaller Air Navigation Services Providers (ANSP) confronted with problems of economies of scale and corresponding costs for investments, that some of the ATC services (such as Meteorological Services, Flight Service Stations, Automatic Dependent Surveillance Broadcast, ATC training, as well as Data Communications Services) could be unbundled and outsourced to specialized providers, thus leading to reduced costs and overall efficiency gains. Some of these services could be provided by ANSPs specializing in them, as well as by privates entering this ATC market. Everyone agrees that this is a gradual process whereby services outsourcing and services provision will phase in parallel to internal transformations of the ANSPs, basically reflecting national dynamics and emerging market opportunities.

The next logical question then pertains what needs to be coordinated at the European level so as to make such ATC services markets work, considering that we are dealing with imperfect infrastructure markets that will need supranational coordination and corresponding regulation. The question also is whether there are some basic infrastructure services that can actually not be opened to competition, such as radars, flight data processors, ground infrastructures bound to the airports and others more.

This is where Eurocontrol comes in: to recall, Eurocontrol predates the SES initiative. Yet, in the context of the creation of the SES, it has been tasked by the European Commission to become the network manager, thus providing some sort of infrastructure function for European ATC. Clearly, Eurocontrol is therefore not a regulator. Rather, the regulatory function is located somewhere in the European Commission, or in a body it may designate as being/becoming the regulator, such as the European Aviation Safety Agency (EASA). Already today, EASA is the safety regulator of Eurocontrol.

But what does managing the network mean? Is this primarily a coordinating function (e.g., the coordination of the different network managing activities of the different ANSPs) or is it (evolving into) an operational function, whereby Eurocontrol gradually takes over network managing functions from the

respective ANSPs? And which of these network managing functions are actually monopolistic in the sense that they constitute a necessary infrastructure for other services that can then be provided commercially and competitively?

If Eurocontrol is to become the infrastructure provider of the monopolistic network managing functions, one specific question arises: first, can it then also be an ATC services provider? The problem here is that it would provide ATC services in competition with other ATC services providers, yet it would be at the same time the infrastructure monopolist, something which is known from other sectors to lead to potential market distortion. At the least, this would lead to the need for an economic regulator, which would have to make sure that Eurocontrol does not discriminate against its competitors. But even if Eurocontrol was precluded from also providing competitive ATC services, there would still be a need for regulating its monopolistic activities from an economic point of view (efficiency).

Historically, Eurocontrol is an intergovernmental organization, whose role it is to coordinate between the different national ANSPs and their respective owners (i.e., the governments) in terms of interconnection of airspace and (common) standards of interoperability. These coordinating functions can be and, to a certain extent, are already partially replaced by the European Commission. This is at least the case for the 28 EU Member States and could evolve as well through the bilateral agreements with the other non-EU States that are members of Eurocontrol though. Yet, on the other hand, the European Commission could also explicitly outsource these coordinating functions to Eurocontrol (on a contractual basis).

The above considerations can be boiled down to the question as to **what the network managing function really is:** is it a genuine infrastructure services provision (notably the management of scarce airspace in terms of flows and safety), on the basis of which all other ATC services can exist? Or is it just a transitory function of coordinating the national ANSPs, which will disappear once all (national) ATC services are unbundled and competitively offered? In the first case, Eurocontrol will most likely, and over time, evolve into *the* European (and beyond) monopolistic ATC infrastructure services provider, to be regulated by a European agency, most likely EASA. In the second case, Eurocontrol is just another inter-governmental organization that will gradually become obsolete as unbundling and outsourcing of ATC services progresses.

Whether it will be one or the other - i.e., the answer to the future of Eurocontrol - probably lies in technology, as technological developments ultimately will decide whether (or not) and for how long monopolistic ATC infrastructures services will be necessary for operational and safety purposes.

Summary of the discussions at the 5th Florence Air Forum

NADIA BERT | FSR-Transport; DAVID KUPFER | FSR-Transport

The Forum was focused on markets in Air Traffic Control (ATC) and on the future role of Eurocontrol. After an opening speech laying out the vision of Eurocontrol and the possible role of markets in ATC support services in Europe, the discussion touched on several elements (see also comments of Prof. Finger). This summary is structured around the three discussion questions of the Forum.

ATC infrastructure – What roles for markets and competition in infrastructure deployment and services?

The discussion involved different opinions on how market elements can contribute to making the European Air Traffic Management (ATM) system more efficient in spite of political problems to complete consolidation. In particular, the discussion focused on: the current European situation, the lessons that Europe could learn from the US context, and the situation of competition in ATM at the global level with specific attention dedicated to the role of the industry.

The fragmentation of European ATM is one of the biggest obstacles to increasing its efficiency. According to the International Air Transport Association (IATA), the number of control centres in Europe would have to be reduced significantly. This is however infeasible in the near future because of the political and social cost that would be incurred, especially on smaller states that would in some instances be forced to give up their national ATM system. Acknowledging the political constraints that are difficult to overcome, Eurocontrol is asking, "what is the core business of ATM that cannot be consolidated" and, how the issue of fragmentation can be tackled in a more indirect way. This is what the Centralized Services (CS) aim at. By opening up tendering for some of the CS, Eurocontrol has started moving towards competition in this field. Given the political limitations, Eurocontrol is not aiming at the full marketization of the ATM system but rather at the creation and opening of the market for some Air Navigation Services (ANS) support services. Nevertheless the debate also addressed more general issues concerning the role of markets and competition in ATM.

An important element of the discussion was the EU vs. US comparison. The US is an important point of reference for Eurocontrol to call for further reforms of ATM in Europe: ATM costs in Europe are still 50% higher than in the US, in spite of comparable conditions; average flight lengths, airspace size are equivalent, while some allowances must be made for different geography and levels of traffic handled. Regular Eurocontrol/FAA comparisons, however, suggest that gains could be made through a more consolidated European system. On the other hand, a "United States of Europe" is no realistic scenario for the near future and Member States will continue to play an important role. Still, all stakeholders present at the Forum acknowledged that the fragmentation of ATM in Europe was the main cause for its comparatively weak performance. In the context of the EU-US comparison important differences between the two continents were mentioned as well. Outsourcing in the US, for example, had already begun in the early 1980s, and today elements of ATM services such as flight service stations, automatic dependent surveillance broadcasting, air traffic controller training and data communication services are provided by privates.

But it is also clear that "markets" and competition are clearly underdeveloped in the ATM world, at global as well as at national levels. Globally two ATM system providers compete in international tenders for infrastructure deployment with the exception of Canada and Japan, where ANSPs provide their own infrastructure. In the US there is even less competition than in Europe as two US companies specializing in different fields of ATM dominate the market for infrastructure deployment. It was pointed out that markets are most effective in enhancing efficiency when there are new entrants or new types of services are being provided, as was the case in the airline liberalization. Replacing existing national monopolies with a similar, reconfigured European wide monopoly would not increase efficiency; essentially there should be at least three competitors in any market to generate competitive conditions.

Nevertheless, "competition for the market" where consortia, made up of, for example, national ANSPs and private solution partners, compete for licences in European-wide tenderings for the CS can have an integrating effect by bringing ANSPs closer to the idea of establishing joint ventures and participating in cross-border projects. It is also reaching out to Eurocontrol members that are not EU-members. They get a chance to provide a service in the EU, and they can become closely involved in the development of new services at an early stage.

Extending beyond the debate about the system of service provision and the role of markets, the discussion revealed the important role of the industry and the integrating function technological developments can have. Industry-led initiatives such as COOPANS, for example, led to close cooperation of ANSPs from five countries with them sharing investments and establishing common procurement, joint activities and managerial approaches. SESAR, has been a valuable tool for defining and validating new technological approaches, but was criticized for not making provisions for implementation. It was stressed that common rules and requirements have to be defined when moving forward with the market approach so as not to lose sight of the central goal of interoperability. The discussion revealed that there was some strong opposition to the concept of unbundling of ATM services. There are some perils connected to unbundling, as it may lead to a new fragmentation if there was no clear regulation of the system with strong requirements for interoperability.

On the other hand it was also questioned whether the term unbundling would be appropriate for the reform ideas under discussion.

Furthermore, the risk of creating monopoly situations with the CS causes some concern also on the side of the industry.

What roles and responsibilities for the key actors in an emerging ATC market?

The architecture of the SES is a crucial element that has to be addressed when moving forward with market elements in ATC support services. Indeed the institutional structure of the SES is currently relatively complex. The diversity of actors involved has been addressed, and it was pointed out that the ever growing complexity that resulted from the creation of new institutions was starting to slow down the reform process, instead of pushing it forwards. Looking at the ideas for reform from an actor's perspective and discussing future roles and responsibilities of key actors such as the European Aviation Safety Agency (EASA), Eurocontrol, Member States' ANSPs, airlines and ATM system providers was an important element of the discussion.

The ATM Industry

In the discussion over a vision for the future of the European ATM system there was strong

Liabilities in the Single European Sky[1]

DELPHINE DEFOSSEZ, GIOVANNI SARTOR, HANNA SCHEBESTA | European University Institute

One of the major challenges in delivering the Single European Sky (SES) is the fragmentation of Air Traffic Control (ATC) services. Market opening is seen as a way to achieve a less fragmented service provision, and in this vein SES 2+ foresees an enhanced role for Centralised Services (CS).

The Eurocontrol's CS initiative identified 10 air navigation services, to be provided on behalf of Eurocontrol at pan-European level by Air Navigation Service Providers (ANSP) under performance-driven contracts. Although the CS initiative concerns important services, around 30% of the examined SESAR projects (90 projects) are expected to be implemented not at pan-European, but at FAB (Functional Airspace Block) level. The FAB level therefore maintains its projected important role in complementing CS in achieving performance goals and in defragmenting service provision.

Within FABs, governance is one of the major challenges, including sovereignty and liability which still pose a difficulty in the context of cross-border ATC service provision. Eurocontrol states that a "number of FABs reported liability and sovereignty as real challenges to the introduction of the FAB"[2].

The European Commission Guidance Material for the Establishment and Modification of FAB stressed the role of the FAB agreements as a means to mitigate the risks and allocate liabilities. However, provisions regarding liability, including insurance aspects and dispute resolution, are optional.

At the constitutive level of FABs, a comparison shows that the FAB State level agreements address liability in divergent manners, if at all. Some make no mention of liability (UK-Ireland, FAB CE, Danube, Denmark-

1. ALIAS (Addressing the Liability Impact of Automated Systems) project, co-financed by EUROCONTROL acting on behalf of the SESAR JU with funds from the EU as part of Work-Package E. For more information about innovation and liability in aviation visit www.aliasnetwork.eu.
2. Eurocontrol Performance Review Commission, Evaluation of FAB initiatives and their contribution to performance improvement (October 2008), 9.

support for a more industry-centred approach. The European Commission should retain its regulatory competence while the rulemaking should be guided by industry consultation through bodies such as the Industry Consultation Body (ICB). Different stakeholders also called for a more practice-oriented R&D management, and for SESAR to supply solutions that are more in line with the vision of the industry and oriented towards deployment. An important role would have to be played by the deployment manager as the main operational stakeholder. It should be empowered by the Commission to build and maintain consensus on how new services should be deployed and provided. The main concern of the industry is that especially R&D activities are directed towards their needs. In order for investments in technological research to be fully useful they need to become more deployment-oriented, something which can be achieved only by closely involving manufactures as well as the airlines.

Airlines

Because of being "the ones paying the bills" through route charges, airlines strongly called for becoming more closely involved. Airlines clearly see the ANSPs as bottlenecks when it comes to efficiency and underlined three reasons why from their perspective ANSPs need to move on more quickly with reforms: firstly, airlines themselves, have undergone a

Sweden), thereby falling back on the general international law and State responsibility doctrines. Those agreements which explicitly address liability allocate primary liability to the State of damage occurrence. A notable exception is the NEFAB agreement, which, next to State liability, also provides for liability of the ANSP (although direct claims against staff or agents are excluded). However, in some FAB agreements strong rights of recourse against the effective ANSPs are foreseen for damages resulting from the fault of the latter. Further, the Baltic FAB and FABEC agreements require adequate liability coverage for effective Air Traffic Service (ATS) providers.

Generally, FABs agreements addressing liability confirm the primary liability of the territorial State, while the effective service providers are liable only by means of recourse. NEFAB further provides a right of recourse to ANSPs to recover incurred costs proportionate to a Contracting State's contribution to that loss or damage. The Baltic FAB agreement is interesting as it enables liability sharing by expressly stipulating that the agreement shall not prevent the State of damage occurrence and the Contracting Party of the effective ATS provider from agreeing to share costs resulting from damage.

It is true that liability issues can be addressed at contractual level. However, such negotiations can prove difficult and can significantly protract the successful conclusion of a service agreement. Moreover, the individual outcomes of contract negotiations in terms of resulting liabilities are often the result of pragmatic pressure to reach an agreement. Risks accepted for example by ANSPs may be excessive, and insurance coverage may be insufficient.

Where service provision is envisaged at FAB level, an 'unbundling' of core and supporting services may require a further rethinking of the design of liability regimes. In line with a market oriented provision of services it may be also time to reconsider a market oriented allocation of liability, breaking with the territorial State liability doctrine.

From a functional perspective, liability not only ensures the compensation of victims. It is also a form of risk regulation and management, which couples tasks and liabilities and thereby provides incentives to market participants.

Liabilities indeed could contribute to increase the likelihood of compliance through sanctions and induce risk mitigating behaviour by placing liability (also) with ancillary service providers. In addition, liability itself can become an issue on which service providers compete when bidding for contracts.

liberalization process that has made them more efficient, whereas ANSPs, the "upstream market" in the aviation value chain, remain monopolistic and state-controlled. Secondly, given their current economic situation, airlines, especially traditional network carriers, urgently need to cut their costs in order to remain competitive. Thirdly, airlines have already invested a lot into the modernisation of their fleets, which would however be useless if ground services are not mode compatible. During the Forum it was also made clear how airlines seek to have more say in achieving cost reductions in ATM. For instance, the A4 initiative is a cooperation of four airlines aimed at increasing the role of operators and supporting the process of SESAR deployment in a way that it produces maximum benefits in terms of cost reductions.

ANSPs and EU Member States

Existing ANSPs have an important stake in the future. They need to consolidate the preferences of Eurocontrol Member States for maintaining national ATM service providers with incentives to enhance their performance during the transition to a Single European Sky. ANSPs face a difficult situation and feel that this is not sufficiently acknowledged by the other stakeholders. From the ANSPs' perspective, a lot has already been achieved in terms of efficiency as seen in the regular reports of the Performance Review Body. Furthermore, Member States

Charging for Air Traffic Control Services

KENNETH BUTTON | George Mason University

Air Navigation Services (ANS) are an important element in the provision of all forms of air transportation, ranging from the military, through the civil/commercial, to the private flier. There are rules that govern safe flight, and Air Traffic Control (ATC) enforces these, while other functions of Air Navigation Services Providers (ANSP) help those flying to plan their flights and to appreciate the challenges of changing weather patterns.

As with any other services, those provided by ANSPs require investment, financing, and planning. These needs can be met in a number of ways; the most traditional in the ASNP context seeing ANSs being treated as a public service with the government providing investment, managing the undertakings, and being involved in a significant part the design of systems. In part, this has been an historical legacy with much of the structure and technology of ATC, in particular, being linked to military needs. It was also an approach that, until the 1980s was consistent with other elements in the air transport supply chain, and especially airlines and airports, which were also largely publicly owned and regulated, and were often in receipt of public subsidies.

The world has changed, there has been a trend in all elements of the aviation sector to seek to move away from heavy-handed government planning, and to allow market forces more sway in the way it functions; we have seen airlines privatized and their markets opened to competition, and airports being corporatized or privatized. In the context of ANSPs, this has resulted in more private sector participation through such things as public/private partnerships as with UK NATS, and greater outsources, as begun by the US Federal

have shown the political will to compromise on sovereignty over the national airspace so as to achieve greater system efficiency in the European skies. Smaller ANSPs perceive themselves as being pushed to the sides with larger ANSPs exerting too much influence, especially when it comes to defining performance targets and research projects within the SESAR program.

From the Member States' perspective the creation of markets for ATC has been criticized as a "leap into the unknown" because of the many issues that need clarification. There are, for example, questions of who has liability under the new provision structure, how would investments be maintained in a private environment, and what would be the links with the International Civil Aviation Organization (ICAO).

Yet, it was also stated that the involvement of ANSPs in consortia to participate in tendering procedure for the CS can trigger a learning effect towards a more integrated system; ANSPs may discover the benefits of outsourcing one support service and of acting as a supplier of another service for other ANSPs.

EASA

If Eurocontrol pursues a role in service provision it would require safety oversight by EASA. It was questioned whether Eurocontrol as a supra-EU organisation could be under the oversight of EASA, an EU organization. At this time, there are Eurocontrol members that are not EU Members and have not bilaterally agreed on accepting EASA oversight.

Aviation Authority. Administratively, there has been the widespread adoption of corporatization, with ASNPs, while in many cases still public entities, ceasing to be a direct arm of the government and permitted to seek funding from private sources.

While there is clearly fine-tuning to be completed regarding these structural issues, the matter of pricing users for their use of ANS has been given somewhat less attention. The underpinning of much of what is still done, and for example that of Eurocontrol's new charging regime, can be traced back to concepts laid out at the 1944 Chicago Convention; namely that pricing should be non-discriminatory and cost based. The laudable objective being of this approach being that countries should not be allowed to favor their own carriers, and that ensuring cost recovery would help facilitate this.

The trouble is that such an approach misses some of the very *raison d'être* for pricing. Optimal pricing basically allocates the services that are available efficiently according to the value users derive from them, indicates when prices rise above costs, that more investment may be justified, and generates a flow of revenue to finance the system. Simple cost recover only relates to the third of these; it *de facto* is purely supply driven, and contains no consideration of the demand side for ANSs. Additionally, the advent of Open Skies in many of the world's international airline markets together with the widespread use of hub-and-spoke networks in various forms, has considerably reduced the ability to discriminate in the ways feared in 1944.

Of course, there is no such thing as a perfect price system, and ANSs certainly have features such as interactions between systems, the indiscrete natures of the hard and software used, and the multifaceted nature of the services offered, that hardly match the ideal, basic price model. The issue is rather whether, the ANS system, and its users, would be better served by moving away from what may loosely be termed engineering driven charging regimes, with a focus primarily on the technology used, as for example the NextGen initiative in the US and the Single European Sky in Europe, to one that pays more attention to improving the efficiency of the use of the system and provides automatic indicators as to where changes are needed. Without the types of insights that economic prices provide it is difficult to have efficient decisions regarding optimal provision and use of any ANS; appropriate pricing is pre-requisite of efficiency and not some after thought.

The Military

Any reforms in the ATM system have to be closely coordinated with the Military. Indeed, the civil and military ATM are closely linked and taking correctly account of military needs from an early stage is crucial so as not to put the success of a reform at risk because of an incompatibility with military needs. The matter of military airspace was only briefly touched upon in discussions, in the context of integrating the military and civil ATM systems. The challenges here are that Eurocontrol Member States have different arrangements with their Military, and with super-national entities such as NATO, that are often difficult to discuss for security reasons. However, the Military was absent at the current Forum and will have to be included into the debate at a future stage.

Markets or Monopolies?

An important element of the discussion in this panel from an academic standpoint was the question to what extent the different elements of the ATM value chain were natural monopolies or not. Because of this, markets may not always be useful. Indeed, while certain components like radar systems are natural monopolies others are not. Furthermore a natural monopoly does not mean that the monopoly is everlasting, as technological developments change the characteristics of the system and can create new space for competition.

Market regulator, network manager, etc.: how will and how should the role of Eurocontrol evolve in the future?

Eurocontrol takes over different functions in the SES and has recently started itself a discussion about its future roles. In the discussion reference was made to the publicly available twelve vision points that formulate several ideas forward. Also, Member States have agreed to launch a study group to discuss the contentious issue of Eurocontrol's legal framework, something they have long refrained from doing. During the discussion, many of the positive contributions of Eurocontrol were pointed out by different stakeholders. The unique experience, know-how and wide scope of technical expertise was acknowledged, as well as its impartiality as an international organisation, which for some would make it the ideal candidate for market oversight. Another strong point noted was Eurocontrol's unique integration with military requirements; Eurocontrol has been closely working with NATO, which is an important asset in this regard. Furthermore it has technical expertise and operational experience, including that entailed in running the Maastricht Upper Area Control Centre.

Several present and possible future roles of Eurocontrol were discussed during the Forum such as market controller, European ANSP, network manager, service provider, European Aviation Agency.

Network manager or market regulator?

From Eurocontrol's perspective it would make sense to link the CS and the network manager and then further enable EASA in its oversight function: EASA already oversees the network manager and it could do so also for the CS. This would also be a first step towards a new system, as EASA could build up competence in this new field and further establish EASA as the ATM regulator.

The discussion on the future of Eurocontrol also saw different opinions in regards to the role of markets and to the idea of Eurocontrol as a "market regulator". Some stressed the fact that ATM was a monopoly that was born out of safety considerations to provide for a system in which ATM services are provided on an exclusive basis. When it comes to ATC support services, competition is possible, but only on the level of procurement decisions at the national, ANSP-level and therefore outside the sphere of competence of Eurocontrol. Network management is the administration of a public service rather than the regulation of a commercial market. From this perspective, a decision has to be made whether the network manager should be an integrated or a bundled monopoly or whether its different functions and services should be provided by a variety of entities. The next question would then be which functions and services are best provided at which geographical level and under what governance structure.

Service Provider

There was little disagreement that Eurocontrol should not further extend its role as a service provider itself. Such a step would put it into direct competition with other ANSPs. The initial proposal by the European Commission to set up Eurocontrol as an independent service provider in the form of an industrial partnership, which was taken back by the European Parliament, would have led to a cartel, rather than to a market. It was however underlined that, because of its vast expertise, Eurocontrol should play a role in the CS.

In the discussion the CS were identified as pointing towards the possible future role of Eurocontrol. There would be a stronger industry orientation with the network manager clearly at the core and a strong role for the industry although bound by and under the oversight of the EU governance structure. The functions of deployment manager and network manager would converge over time.

Towards a European Aviation Agency?

Other roles that could be envisaged were also discussed: Eurocontrol could join together with EASA and become a true European Aviation Agency. If it was to become in charge of market oversight in ATM services, it would also have an important industry dimension; it was pointed out that the European ATM Industry is likely to soon face competition from emerging economies, and thus there is the need to set standards and licences in a coherent way to promote the development of the European ATM industry.

While it is clear that Eurocontrol wants to stay out of "regulation", it can and will have to play a role in standardisation and licencing, two fields in which Eurocontrol had always played an active role.

Further Readings

Eurocontrol, *The Eurocontrol History Book*

Written by John McInally, former Eurocontrol official, this History Book is a description of the key institutional, legal and organisational events and decisions that have determined the progress of the Eurocontrol Organisation and its Agency through the past fifty years.

The Book is a record, in one document, of the circumstances surrounding these events and the nature of the performance of Eurocontrol against what was required of it.

***

Button, Kenneth and Neiva, Rui, Economic Efficiency of European Air Traffic Control Systems, *Journal of Transport Economics and Policy, Volume 48, Part 1*, January 2014, pp. 65–80

This paper is concerned with variations in the efficiency of European air navigation service providers. Much analysis has been conducted on the efficiency of airlines, but less has been done on air traffic control, or strictly air navigation services. The diversity of air navigation service providers in Europe allows comparison of thirty-six European systems from 2002 to 2009. The bootstrapped data envelopment analysis framework adopted assumes a multifaceted output function with both physical and policy inputs. Attention is paid to the relative efficiencies of different types of air navigation service providers and the implications of financial structures.

***

Performance Review Commission, *ATM Cost-Effectiveness (ACE) 2011 Benchmarking Report with 2012-2016 outlook*

This report is the eleventh in a series of annual reports based on mandatory information disclosure provided by 37 Air Navigation Services Providers (ANSPs) to the EUROCONTROL Performance Review Commission (PRC). This report comprises factual data and analysis on cost-effectiveness and productivity for 37 ANSPs for the year 2011, including high level trend analysis for the years 2007-2011. The scope of the report is both en-route and terminal navigation services (i.e. gate-to-gate). The main focus is on the ATM/CNS provision costs as these costs are under the direct control and responsibility of the ANSP.

Costs borne by airspace users for less than optimal quality of service are also considered. The report describes a performance framework for the analysis of cost-effectiveness. The framework highlights 3 key performance drivers contributing to cost-effectiveness (productivity, employment costs and support costs). The report also presents detailed productivity comparisons for 63 Area Control Centres (ACCs) grouped in 3 clusters of different traffic complexity characteristics. Finally, the report analyses forward looking information for the years 2012-2016, inferring on future financial cost-effectiveness performance at both system and ANSP levels, and displaying future capital expenditures and future capacity plans.

***

Eurocontrol/FAA, *Comparison of Air Traffic Management-Related 2012 Operational Performance: U.S./Europe*

This document is a joint publication of the Air Traffic Organisation System Operations Services of the FAA and the Performance Review Commission of EUROCONTROL in the interest of the exchange of information.
The objective was to make a factual high-level comparison of Air Traffic Management performance between the US and Europe. The initial focus was to develop a set of comparable performance measures in order to create a sound basis for factual high-level comparisons between countries and world regions. The specific key performance indicators (KPIs) are based on best practices from both the Air Traffic Organisation System Operations Services and the Performance Review Commission.

***

Grebenšek, A. and Magister T. (2013) Is European benchmarking methodology favouring a narrow segment of air navigation service providers? *Journal of Air Transport Management, 27*, 29-33

This paper looks at the calculation of composite flight hours used input to performance benchmarking of European air navigation service providers. The way the en-route part of the composite flight hours is obtained, potentially rewards busy air navigation service providers serving larger airports with additional composite flight hours, thus making them more productive and financially cost-efficient. It also examines the financial effect of the methodology and links it to economic cost-effectiveness.

QM-AU-14-002-EN-N
ISSN: 2467-0405

Florence School of Regulation,
Transport Area

European University Institute
Convento di San Domenico,
Via delle Fontanelle 19
San Domenico di Fiesole (FI)
50014 · Italy

Contact FSR-Transport:
fsr.transport@eui.eu

FSR Transport

The Florence School of Regulation (FSR) is a project within the European University Institute (EUI) focusing on regulatory topics. It works closely with the European Commission, and is a growing point of reference for regulatory theory and practice. It covers three areas: Communications and Media, Energy (Electricity and Gas), and Transport.

The FSR-Transport Area's main activities are the European Transport Regulation Forums, which address policy and regulatory topics in different transport sectors (Rail, Air, Urban, Maritime, Intermodal transport and Postal and delivery services). They bring relevant stakeholders together to analyse and reflect upon the latest developments and important regulatory issues in the European transport sector. These Forums inspire the comments gathered in this European Transport Regulation Observer.

Complete information on our activities can be found online at: *fsr.eui.eu*