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Efficient procurement of public air services - Lessons learned from European transport authorities' perspectives.

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TITLE: **Efficient procurement of public air services - Lessons learned from European transport authorities' perspectives.**

ABSTRACT: This paper aims to derive lessons and best practices from the different European experiences by viewing issues from a public transport authority perspective. The heart of this paper is a survey of European air service procurement authorities. We discuss the authorities' perspectives on why they fund a PSO including likely future funding trends and investigate various aspects of the procedures connected with the PSO process (transparency of the subsidy amount, risk sharing with the operator, incentives for operator, vetting of the operator and use of specialist advice). This paper also explores various aspects of the obligations authorities impose upon routes and operator (e.g. maximum fare, social discounts, ticketing, timetabling, size of aircraft, air cargo requirements). A particular interest of the paper is connected with the authorities' interest in marketing the PSO as well as with the authorities' perspective on promoting and enjoying sufficient competition in their PSO tendering exercises. The derived lessons from the EU experience are discussed in the light of their use in assisting policy makers in promoting and drafting their own regional air transport programs (e.g., Russia) or in further developing existing schemes such as the Remote Air Services Subsidy Scheme in Australia.

KEY WORDS: *Aviation; public service obligations; efficiency; value for money; remote regions.*

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1. Introduction

Air services are often regarded as public goods in regions where they are not commercially viable resulting in public interest in providing or subsidising these services. As airlines around the globe find it increasingly difficult to generate sustainable profit margins (mainly because of the sharp increase in fuel costs), it is ever more important to remote regions, where passenger and cargo air transport is often essential for the social and economic development of the region, that such air services are supported by public funds. If governments, public transport or regional authorities procure such transport services (as opposed to producing them internally), a contractual relationship between a principal (transport authority) and agent (operator) exists. Depending on the set up, these schemes can differ substantially in their motivation, effectiveness and efficiency. In Europe the chosen approach is to procure public service obligation (PSO) air services, but even though Europe is renowned for its harmonisation aspirations, the interpretation and application of the PSO air service mechanism differs substantially across the European member states. Although this brings its own difficulties for the stakeholders involved, such heterogeneity is positive for the purposes of this paper which is to learn from best practices of procuring such services and to derive lessons for the Australian approach to publicly funding air services to remote regions.

The remainder of the paper is structured in 4 sections. Section 2 provides some background on the Australian and European approach. Section 3 details the empirical application, the results are discussed in section 4 and some conclusions are presented in section 5.

2. Setting the scene

Despite the austerity measures in some countries (i.e. Ireland), public support of air services to remote regions is a growing phenomenon (see for example the recent proposals in Russia) and can be found in many countries around the globe; the most noteworthy being the United States (e.g. Matisziw et al., 2012), Canada (e.g. Metrass-Mendes et al., 2011), India, Australia (e.g. Merkert and Hensher, 2011), Norway, Iceland and many member states of the European Union (e.g. Merkert and Williams, 2010). In this paper we are most interested in the European case as we aim to draw some lessons from Europe for other countries, such as the similarly federated structure of Australia.

The Australian Remote Air Service Subsidy Scheme (RASS; as one of four pillars of support for air transport in Australian remote regions) is interesting, in that, similar to the European model, it provides selected airlines with a fixed-term (natural) monopoly on the specified routes. In addition these carriers receive direct subsidies from the Australian Government through their air service contracts. The RASS contracts govern scheduled weekly air transport services to 252 remote communities in Australia throughout Western Australia, Northern Territory, Queensland, South Australia and Tasmania. The RASS scheme covers 10 geographical regions in Australia and in 2012 a total of five operators were contracted by the Australian Government. As there are only five operators across the 10 regions, two of them operate RASS air services in more than one region. Although there is no competition *in* the market, there is in principle competition *for* the market; operators are selected through an open tender process in accordance with the Commonwealth Procurement Guidelines. The RASS contracts specify the provision of both passengers and cargo (such as fresh food, or other urgent supplies) to these regions, and although mail is also carried on these flights, the latter is governed under a separate contract with Australia Post. Although regions and airports can apply for RASS scheme recognition, the funding comes centrally from the Australian Government, which is a key difference with Europe.

In Europe the chosen approach is to procure public service obligation (PSO) air services, but its interpretation and application differs substantially across the European member states.

Member States may impose PSOs on dedicated routes, if they feel that air services are vital for the economic and/or social development of the regions these routes serve and that without subsidies and/or regulatory measures to protect them no satisfactory scheduled air services to these regions would be maintained. Although the member states must respect the conditions and requirements set out in Article 16 of the Air Services Regulation 1008/2008, the interpretation of the “air service adequacy” depends on the judgement of the Public Transport Authority imposing the PSO. As a consequence and also because of geographical differences across the EU (e.g. Greece having many small islands and hence potentially many qualifying regions) there is substantial heterogeneity and imbalance of application between different regions across Europe (EU) in terms of the provision of PSO operations (e.g. Williams and Pagliari, 2004). For example, in Norway and the thin routes serving the Shetland Islands in Scottish PSO operators use rather small aircraft to provide the vital air services to the remoter communities in these regions. In contrast in France, many PSO routes are served by big aircraft such as A320 or even Boeing 777-300ER partly because these routes have high traffic in the summer months. Since these routes are often also competing with ground transport, previous research has extensively focused on whether some of these PSO routes are legitimate (e.g. Gordijn and van de Coevering, 2006; or more recently Bråthen and Halpern, 2012, highlight the social and economic benefits of PSOs in Europe) or rather a product of market protectionism (e.g. Merkert, 2011) and lobby group intervention.

In terms of existing empirical literature, there appear to be two strands. One is interested in the cost/benefits of supporting such services. Cabrera et al. (2011), for instance, found that subsidies paid to Spanish PSO operators result in market distortions, and Calzada and Fageday (2009) revealed that Spanish PSO routes which benefit from price discounts given to island residents, exhibit higher prices but similar frequencies than the rest of the routes. The other strand is primarily concerned with the efficiency of the operators and ways that would help to make the transport contracts and eventually the operations of PSO air services more efficient. With that regard Merkert and Williams (2010) found in their cross-country study on the efficiency and practice of European PSO air operators revealed that operators that are in an early stage of their contracts are, according to their findings, more efficient than those that are close to the renewal/re-tendering phase of their contracts. This indicates that there are insufficient incentives to improve efficiency before retendering occurs. This phenomenon may be a result of the too little competition and almost non-existent cross-border competition for the PSO contracts during the mandatory tendering process. This can act as a salutary reminder for Australia (and other countries) as the Australian system does not have significant interstate competition for the market either. As the European PSO operators' experiences pointed to contract attributes being part of the problem in terms of inefficiency, Merkert and Hensher (2011) analysed European and Australian public air service contracts. Their results suggest that Australian contracts are not only simpler and clearer, but also perceived by senior airline management to be more complete. In addition, there appears to be more trust between Australian carriers and their relevant public transport authorities compared to the European counterparts, which results in lower transaction costs for the Australian carriers. In sum, we find that the literature has recently been well developed along the lines of PSO operators' efficiency analysis, ex post cost/benefit evaluations and contractual analysis as well as the operators' perspective with regard to their contracts and their relationship to the transport authorities. What has been missing, however, is the authorities' perspective and their motivations for procuring PSO air services. This paper aims to address this area, and makes use of the heterogeneity of the European system to highlight best practices by analysing the different views/approaches of the analysed European countries and their procurement agencies/authorities.

3. Methodology and sample

As the prime interest of this paper is to derive lessons from the views/perspectives of Europe's PSO aviation transport authorities, we undertook a survey and contacted all of the authorities who get involved in PSO procurement in the relevant member states. In order to identify the routes, contracts and responsible authorities we first carried out a document review and analysed all tender information from the recent past that was publicly available.

We then contacted more than 30 transport authorities and as a result identified some 20 of them as PSO sponsoring authorities (the Icelandic Road Administration being responsible for PSO air service procurement in Iceland is a good example of the how diverse the responsible authorities across the member states are, which is an additional observation from this research). The next step was to identify and engage with the person within those sponsoring authorities, who is actually responsible for air PSO procurement/development. We took that step very seriously, as it is often a very specific person who undertakes this role and who is therefore in the position to respond to our questions accurately. Whilst initially we interpreted, that the public transport authorities were secretive (as one might expect given the perceived lack in transparency and level of subsidies involved), through the very time-consuming respondent recruiting process (and the even more time consuming post-survey follow up emails) we concluded that it was rather language barriers and the difficulty of identifying/tracking down the responsible PSO person in each of the PSO procuring countries, which made our task more difficult. Once we had overcome these two hurdles, the respondents were actually surprisingly eager to help and very interested to receive the promised summary of results, indicating an interest in what their colleagues elsewhere around the EU were doing. Only two authorities refused to complete the survey claiming it was policy not to respond to such external enquiries. In line with our pre-research undertakings we have made efforts to generalise the answers presented, and to remove any local references that might easily identify the specific author or department of a comment or practice.

In terms of the survey content, we asked the respondents 30 (primarily closed) questions that we aimed at identifying current practice and views on future developments in the following five areas (for the detailed questions see Appendix A):

- Output/Routes, Subsidies, Justification of programme
- Procedural questions on their PSO programme
- Common PSO contract specifications
- Marketing efforts and route development aspirations
- Operator selection criteria and competition

The survey questions have been developed in collaboration and tested/piloted with various stakeholders of the European PSO aviation scene, including both transport authorities and senior regional airline management (in fact, one of the authors used to be commercial director of a European PSO airline). The survey was eventually carried out in early 2011.

Regarding the sample it is noteworthy that ten EU Member States (Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain, Sweden and the UK) and two European Economic Area countries (Iceland and Norway) currently impose PSOs, with France and Norway accounting for around one half of these. We have surveyed authorities from all of these states and have received valid responses from 16 participating authorities, which when combined manage 91 PSO contracts, as shown in Table 1. As detailed above, because of language barriers, difficulties tracking down the correct person (in cases where we could not get through to the person responsible for PSO air services we aimed for the head of the authority to reply) and restrictive authorities' information sharing policies, we were unable to obtain responses from Spain, the Azores, Greece, Scottish central government and some of the more obscure French PSOs run by island or Chamber of Commerce entities. We feel, however, that our sample provides good diversity of type and geographic coverage of the continent allowing some significant patterns to emerge.

Table 1 illustrates that some authorities are responsible for more than one PSO route. As we felt that we could not ask these authorities to complete a survey for each individual route (in the case of France that would be 21 surveys) but asked them to use their judgement and generalise on their practices. A key implication of the multi-route responses is that certain answers needed to be viewed by weighting based on the number of managed contracts, as the patterns do change, often

significantly, when this weighting exercise is undertaken. In much of our discussion we, thus, present both un-weighted and weighted summaries of the data.

Table 1: Sample of participated authorities

Procuring authority	Country	Routes
Finnish Ministry of Transport and Communication	Finland	1
French CAA - Air Transport Directorate	France	30
Bavarian Ministry of Trade, Infrastructure, Transport and Technology	Germany	1
Thuringia Ministry for Construction and Transport	Germany	1
Icelandic Road Administration	Iceland	7
Galway County Council	Ireland	1
ENAC - Air Transport Development Division	Italy	7
Portuguese Civil Aviation Authority	Portugal	1
Argyll and Bute Council	Scotland	1
Irish Department of Transport - Airports Division	Ireland	6
Comhairle nan Eilean Siar (Western Isles Council)	Scotland	2
Orkney Islands Council	Scotland	1
Shetland Islands Council	Scotland	1
Trafikverket	Sweden	9
Welsh Assembly Government	Wales	1
Ministry of Transport and Communications Luftfartsseksjonen / Civil Aviation Section	Norway	21
Total (16)	11	91

Note that some PSO contracts cover more than one route.

4. Results

Despite the heterogeneity across the analysed European countries (resulting from both geographical variety and difference in the interpretation of the PSO mechanism), we find interesting patterns in the perceptions of the transport authorities that have participated in our survey. In this section we discuss the responses of the transport authorities broken down into the five key areas of our survey.

4.1 Output/routes, subsidies, justification of programme

As PSO air services often involve not only regulatory but also financial public support and hence the internal justification of any PSO programme is a key question (value for money). For that reason, we started our questionnaire with that question and asked the authorities to rank different potential justifications for the PSO programme under their control. As shown in Table 2, although the results show that the main justification differs across the participating authorities, there is a trend towards three key justifications.

Table 2: Results regarding main justification for PSO programme

Category	Lifeline Services (ensuring modern life)	Tourism to the remote region	Regional Development	Access to an onward domestic hub for the remote region	Access to an onward international hub for the remote region	Increasing the hinterland reach of the national / regional centre	Other
Mean	4.27	4.67	3.53	4.6	4.93	4.53	5.73
# 1 priority	5		4			3	

Note: We employed a seven-level Likert scale (1=most important, 7=not relevant)

The results shown in Table 2 suggest that public authorities see PSOs primarily as serving two separate needs. For really remote or isolated communities delivering lifeline services (most often selected as number one priority) which ensure modern life (access to health, social services, administration, education, visiting friends and relatives) is seen as critical in these communities. Other countries see the PSO programme primarily as a means to underpin economic and regional development (on average the best score and therefore on average most relevant to the authorities) in the selected communities. That “Increasing the hinterland reach of the national / regional centre“, was ranked as the third most important justification, is somewhat unexpected. However, upon reflection this can be interpreted in the way that some countries have very strong and centralised capital cities, and ensuring modern and civilised life requires, from their perspective, that their outlying citizens can get to these centres of administration, culture and sophistication. The other telling response is that for all options (including “providing lifeline services”) the authorities selected surprisingly often “Least relevant”. This also becomes apparent through the means of the responses being for all but one category higher than 4. This indicates that authorities usually justify their PSO programmes typically with one particular objective/aim and that sub-objectives or the combination of categories play only a very minor role in the justification process. In retrospect we wonder whether these justifications, which can involve significant public spending, were based upon any objective studies or reviews, or whether they were the conclusions of common sense analysis by the officials, the inheritance of previous regional legacy practices, or the effective lobbying by representatives of the beneficiary regions.

In terms of expectation for the future, we were expecting that most authorities would indicate a reduction of their spending on PSO air services (given the on-going austerity and recent example such as the substantial cut in PSO air service funding in Ireland). It was therefore surprising to see that 5 authorities were actually planning to increase their spending on PSO air services above inflation, 3 would increase it in line with inflation, 3 would leave it at current levels and only 5 would reduce it. If we weigh this by the number of contracts, it would still be 15 contracts for which spending would rise above inflation but for the majority of contracts (34) the authorities are expecting no change in public spending. This is an interesting finding illustrating the enduring importance of PSO air services in Europe.

Slightly less positive is the authorities' forecast when asked whether any of their routes are under threat of termination as six authorities answered this question with yes. Given that these were the authorities who control the large programmes (in total they manage 56 contracts), it is however hardly surprising that some of the routes in their portfolio, but not their programme as a whole, is under threat of termination. Overall, therefore the future looks buoyant from an authorities' perspective regarding European PSO air services. A most revealing answer from the authorities was in reply to the question on whether they see any of their routes becoming ready to move to free market unsubsidised solutions. All authorities indicated that this would not be the case in the foreseeable future. Although the legislation holds out the hope that PSO status may be only temporary and that some routes will move to unsubsidised or unprotected status – in reality no sponsoring authority is currently expecting this. This also underlines the point that no authority feels their PSO routes status is borderline. Of

course the Irish case is one where PSOs have been cancelled, because of an austerity agenda and improved and acceptable alternative transport modes. Tellingly, none of the cancelled routes now support a free market scheduled air link with Dublin after cancellation. Regarding contract length it is expected that nothing will change, as along with EU legislation, the authorities plan to tender contracts that will be between three to four years (85% of routes; however, that two authorities opted for shorter periods and one for a longer period surprised us).

4.2 Procedural questions on their PSO programme

This section of the survey aimed to reveal insightful details regarding the authorities PSO procedures including the transparency around the awarding process, risk sharing with the operator and incentives for operators. As subsidies for PSO services have been the centre of much political debate, we were surprised that most of the authorities indicated that the subsidy awarded to the successful bidder would be actually available as shown in Table 3. What is usually not published are the bids of the unsuccessful bidder, although four (small) authorities indicated that all financial aspects of bids for PSO-routes are made public after the contracts have been awarded, which in their view ensures transparency in the tender process.

Table 3: Summary of main positions to transparency of subsidy

	No we don't publish (but declare to EC), because of commercial confidentiality	No we don't publish, but it is available under freedom of information request	Yes we publish because of the requirements of transparency with public funds
Transport authorities	5	4	7
Routes	11	39	41

Our results indicate further, that there is a split in responses on whether the subsidy as such is guaranteed (assuming satisfactory performance) or reduced dependent upon audited performance of the operator. It is interesting to see that the authorities' interpret the rules differently with regard to what is actually being agreed at the time of contract signing. What we tried to tease out is whether the subsidy amount is the maximum that will be paid if the operator can demonstrate that they need it all, or whether the subsidy will be reduced if the operator performs better than their financial projections at the time of bid. Particularly when the responses are weighted the pattern suggests that the large PSO programmes tend to the maximum subsidy interpretation of the legislation. The level of subsidy is then fixed at commencement or linked to inflation over the contract period for most authorities. As the maximum length of a PSO contract has recently been extended (EU legislation) from three to four years, predicting costs of various aspects has become more difficult indicating an imbalance of risk with regard to costs that the operator may endure, and that the sponsoring authority will underwrite. Only a minority of tenders seem to accept a first year subsidy request, which then can be changed from year to year based upon inflation or other agreed criteria. Most authorities indicated strong interest in budget certainty at the outset of the PSO contract with a wish for no unexpected or unplanned subsidy changes. This position is reportedly very off putting for operators (confirmed by five operators) when there are no fuel price adjustors (and allowance for other cost variables outside of the air operator's control) built into the PSO air contracts, as is common in PSOs for other modes of transport, and in nearly all other aviation contracts.

4.3 Common PSO contract specifications

Most sponsoring authorities (14/16) try to influence travel affordability by specifying a maximum fare. However, by weighting the replies we reverse the picture to some extent (39 routes without a cap), suggesting that in some of the larger PSO programmes (possibly more concerned about regional development than lifeline links) the affordability issue is less key. It would be interesting to examine

in more detail how the operators use (or misuse) this additional freedom in their pricing, on what essentially are monopoly routes.

Table 4: Summary of what maximum fares include

	Airport taxes	Passenger taxes	Luggage charges	Credit card payment charges	Date change flexibility	Name changes	Priority boarding	In-flight refreshment
Authorities	10	9	7	5	3	1	1	2
Routes	36	30	34	36	3	1	1	8

Note: The option "Other" was not selected by any of the respondents

Among those authorities who specify maximum fares, there is a strong view that these fares must include primarily airport and passenger taxes, but a significant proportion also includes other aspects as standard, as shown in table 4. As free market aviation continues to disaggregate/unbundle the fare there is therefore a tendency for established PSO routes to continue with practices that are becoming less commonplace around the industry. One potential unintended consequence of these requirements is the complexity this can inadvertently impose on a bidding airline which does not have the capability to easily cater for these additional impositions in their IT and booking systems.

Table 5: Summary of type of fare concessions that the PSOs specify

	Pensioners	Student and child	Other social	Discounted (advanced booking)	Local residents	None specified	Other
Authorities	5	6	1	2	6	7	1
Routes	31	61	21	2	41	21	30

Similarly, although not unexpected, the typical PSO contract also includes various requirements and types of fare concessions that are pre-specified by the authorities. Beneath the maximum fare price it is then left to the discretion of the operator to offer further discounted fares. That PSO contracts are pre-specified by the authorities to support particular socioeconomic aims is similar to general public transport policy. What is different in the aviation context is, however, for local residents at the remote end of the route to enjoy favoured treatment, particularly in the larger programmes (on not less than 41 routes).

Elaborating the complexity and IT/booking system requirements identified in Table 4 further, we find it interesting that most authorities require from the selected operator have an online booking system (10 authorities), that they have their flights displayed in a GDS (8 authorities, but 76 routes) and also that they have an interline arrangement with an operator at the connecting airport. We do understand that these specifications are aimed at providing onward connectivity beyond the hub destination and also in providing visibility for the destination on a world-wide basis. From another point of view, however we also see a danger in the requirements, that they represent a potential market entry barrier (as substantial investments, mainly of time, may be required to pre-negotiate such arrangements speculatively in advance of completing an air operator's submission, for what are often very thin routes).

Another aspect of contemporary debate, not only in relation to PSOs, but also in the low cost carrier context, is that of financial support (in the form of discounted airport charges) from regional airports to airlines. This is potentially an indirect (semi-visible) way of subsidising PSO air services and our results show that authorities are aware of such practices primarily at remote (4 authorities) and regional airports and less so at major airports (2 authorities). However, a detailed analysis shows that the extent of discounting increases in the larger programmes (33 routes to remote airports and 31 routes to main airports are potentially supported by the airports). With more central government

planning and intervention the larger PSO programmes appear to ensure that airports play more of a role in helping facilitate the air services. Problematic for policy makers however is that as more major airports enter private ownership is it less likely that they will be financially indulgent in supporting their remote or PSO routes. For instance Cardiff Airport offered discounted charges on the first round of the new Welsh PSO, whilst they dropped this discount in future rounds.

Regarding aircraft and timetable pre-specification the view of the authorities varies slightly, but all of them try to essentially achieve the same goal; that of securing minimum service level requirements. In this context for operators, the two most important criteria are size of aircraft/capacity and airport infrastructure. The absolute minimum aircraft size we found specified was an eight seater, but for many authorities the minimum aircraft specified is a pressurised 30 seater. Airports infrastructure may dictate possibilities as some airports in remote regions have very short runways and inferior runway surfaces and can only accommodate particular aircraft, such as the BN Islander. For timetabling the obligations set by the authorities vary depending on the underlying objective of the PSO. For instance not many authorities insist on a weekend operation, although a 7 day / week role in supporting tourism and VFR traffic is often recognised. All PSO contracts and authorities recognise that the minimum service aim that is to facilitate a day's work for travellers at each end of the route wherever possible.

In addition to passenger service obligations, we also explored the aspirations of economic development and the delivery of lifeline services and the apparent lack of interest or awareness of air cargo in the PSO specification. Only three authorities indicated that their PSOs would carry significant air cargo and mail. When taking the weighted results into account the results show even less interest in air cargo suggesting the big PSO programmes consider air cargo even less than the small PSO programmes. Only 10 routes specify cargo requirements in the PSO tender, which is surprising as initially our presumption was that authorities would be interested to improve economics to islands by say combining mail, newspaper, ad hoc freight and passenger services on the one flight. There is little evidence this is happening, although from personal experience we know some of the smaller Scottish Isles such as Barra take mail and newspapers on the PSO flight. On the larger routes we find no evidence of the freight integrators (DHL, FedEx etc.) or postal services establishing regular contracts with PSO services.

4.4 *Marketing efforts and route development aspirations*

Marketing a PSO route is in our view essential to develop the route in a business that benefits from tourism and other factors and thereby can become more commercially viable. Interestingly, nine of our 16 analysed transport authorities did not specifically require the operator to market the PSO route. This suggests that many sponsoring authorities presume that the operator will market the route anyway, but do not concern themselves with this aspect of fulfilment. Even more interesting is then that 15 out of the 16 authorities know that their operators spend less 5% of the public support for the route on sales and marketing, which suggests that overall not much focus is expended in terms of developing the route. This appears counterproductive as any success in building the patronage on the route has a direct impact on the subsidies required into the future. One point worth considering is that the sponsoring authority, rather than the air operator, is actually often better placed to invest in marketing. These days much tourism marketing is now destination marketing rather than route marketing, and an airline with a temporary presence on a route will find it difficult to take a long term view of the destination. At the very least partnership marketing should be encouraged between the air operator and the other stakeholders in the region.

Another aspect worth considering in this matter is how do airline franchisee's account for their marketing spend. Small franchise partners of larger groups will in effect have much of their marketing done under the parent brand, and will pay their marketing contribution through their franchise fee. Yet another facet of this issue is how does an airline account for its marketing effort in its tender budget submission. If it enters a large amount for marketing it could lose the tender, because it requests too much subsidy. If it earmarks a small amount for marketing, it maximises its chance of success in the tender, but the marketing effort will therefore tend to be under-resourced by these

calculations. None of these tendencies augurs well for the long term health of the route. One view is that the authority should recognise that it is in effect sponsoring the marketing and that it should more consciously take control of (or at least an interest in) this budget. This would additionally have the benefit of putting all respondents on a level playing field, and allow the exercise to be properly resourced for the long-term good of the route. Under one scenario the authority could specify in the tender that the air operator should have a marketing budget of at least €XX, and the tender submission should specify how they will effectively spend it.

In terms of route development and revenue growth it is also interesting to consider who receives the net benefit if revenues are above tender submission projections. One potentially perverse aspect of the way some PSO contracts are designed is that the operator receives no additional benefit from above target performance. Put another way the operator bears all the downside risks and none of the upside rewards. In other words the best margin the operator can enjoy is what is predicted in their bid. Again, no incentive to make this route a success story (over and above of the fulfilment of the tender submission revenue projections). The response of respondent authorities is somewhat encouraging for operators, as reportedly many authorities do find ways to inject incentive into the system either by sharing the upside, or by letting the operator completely retain the results of their above target performance, as shown in table 6.

Table 6: Summary on who receives benefit once revenue is above tender projections

	The operator	The sponsoring authority via reduced subsidy	Both parties	Other
Authorities	7	4	5	1
Routes	42	10	39	1

It is noteworthy that some of the authorities who aim to benefit by having to pay less subsidies and enjoy all the upside rewards, explained that their hands are tied by the legislation. In these cases the authorities indicated that they are aware of this weakness in their contracts; leaving operators with no incentive to grow the route; and yet portrayed themselves as powerless in the face of their legal advisors.

4.5 Operator selection criteria and competition

Regarding the selection of operators we find it interesting that pre-screening processes before full tender and formal operator audits after selection but before the formal award are rarely used by our analysed transport authorities (both only applied by three authorities). The two aspects checked within the submission tender documents are the operating licences and some light financial fitness criteria (in line with EU legislation). What appears to be much more common is to use specialist aviation or other consultants in the selection process (8 authorities did so for their in total 76 routes). The larger PSO authorities one might think would have more internal expertise to manage the process without specialist help. Nevertheless our weighted results suggest that the larger authorities actually rely on specialist help more than the smaller. It would be interesting to find out if those authorities, who had used consultants, were satisfied with their advice and the hand holding they received.

With respect to the level of competition for the PSO routes, 13 authorities (controlling 83 out of 91 contracts) indicate that there is not sufficient competition. When asked what the authorities would do to increase the number of bidders for their PSOs, the majority of authorities indicated that they see the EU Journal as their marketing effort. We find this unconvincing and argue that, if as has been acknowledged subsidies will be reduced where there is real and keen competition, then it should be very much in the sponsoring authority's interests to do all they can to increase competition. From operators we know that if the first time they hear about an opportunity is when reading about it in the EU Journal then it is invariably far too late to bid. With only four weeks typically to respond there is not enough time for research, source local suppliers and develop a winning strategy. Nevertheless, it is likely much of the 'competition' in effect happens informally. Often there is an obvious lead

contender and maybe one other aspirant who will try their luck. However many other operators will have given the opportunity a cursory look before deciding against bidding. Although this suggests that there is more competition than the formal final line up, it is still worth stressing that the authorities could do more to improve the competition for, and hence the efficiency of, their routes (in line with Merkert and Williams, 2010). The EU could help the process by creating a more user friendly database of current, and more pertinently, future tenders listing current operators, current aircraft types, route passenger numbers, dates due for re-tender and re-award, and the sponsoring transport authority and their contact details. Currently much cross boundary research is required by operators to find this sort of information that could be readily centrally compiled. Additionally transport authorities should be prepared to host meetings with potential future bidders between tender rounds. Alternatively open days are another way to improve communications between transport authorities and prospective operators.

5. Conclusions

This paper set out to learn from the European transport authorities perspectives and to derive some recommendations for the various stakeholders. Some general observations can be made that have emerged despite the heterogeneity of the European PSO approaches and that are therefore useful to any PSO context, including Australia. Based on the analysis undertaken, we believe that it is most important to make the entire PSO venture most attractive to operators (incentives to grow patronage, more equitable risk sharing, removing unnecessary or outdated complications and specifications etc.). This should result in higher levels of competition, which is to be encouraged, particularly at the cross border level. The performance of the PSO contracts should be monitored with a view to route improvement and hence eventually less public intervention and support. The authority's understandable wish for budget certainty is perversely likely to have several unintended effects. The tender competition is likely to be reduced because of the higher risks involved. Counter intuitively asymmetry of risk results in increased subsidy because the operator will err very much on the side of price safety with regard to assumptions on fuel costs, airport charges, currency fluctuations (with the US dollar being so important in aviation) airport rentals and suchlike.

In our view, it is important that the authorities should change their perception and see that the route does not 'belong' to the operator but 'belongs' to the authority. This in effect would have substantial positive impacts on long term branding, ownership and strategy and would result in the authority retaining marketing responsibility, specifying marketing budget or fostering partnership marketing (e.g. subcontracting to economic/tourism development agencies or taking a keener interest in the winning air operator's marketing strategy, and making this a declared part of the section criteria). The authorities should also become more pro-active (i.e. in bringing down real and perceived entry barriers) in between tenders, as once a tender is published it is too late for talking & preparing/strategy and attracting new entrants. In order to increase competition there should be maximum transparency (in areas such as current subsidy levels, and details of the previous tender bids) in order to facilitate competition/level playing field and the authorities should signal openness to new aspirant operators (not just the incumbent, who know doubt they have come to know every well). An approach that has worked for railways is that authorities could own assets/aircraft and lease them to the operator, which would bring down market entry barriers. If that is not feasible, then the authorities could opt for longer PSO contracts to allow operators to achieve a sufficient return on investment. Authorities should in any case accept that they must share future price uncertainties with operators in order to improve both, competition for contracts and operators' efficiency. In our view, transport authorities should get the benefits of any growth on the route when retendering and allow operators to enjoy some profits/incentives for making revenue progress in the shorter term during the PSO contract period. A consistent and more transparent framework, with an active centralised information gathering/providing European secretariat is currently missing. A better exchange of PSO success and best practice across the continent could also ensure all authorities improve their game. Indeed we contend that global comparisons could be instructive and are keen to foster such further studies.

It seems to us that operators should challenge the standard local contract as local interpretations are not consistent across the EC. They should in particular seek fuel price adjustors and other cost / risk sharing measures (e.g. future airport tax and rental increases) as well as realistic ways to grow the route with the authority's cooperation.

Local airports should be mindful of their regional economic development role and not just balancing of the airport's books within their perimeter fence. Major airports should consider slot access of their regions/domestic market (self-regulation might be wise to avoid the possibility of eventual legislative intervention). In addition it is important to align the airports and transport authorities objectives, which in theory should be straightforward as many of the airports are in public ownership, but is much less so in practice.

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Appendix A

The following set of questions shows the template that we used in our survey:

Output/Routes, Subsidies, Justification of programme

1. Which PSO routes is your department responsible for?
2. Prioritise, in order of importance, the main justifications for the PSO programme under your control (use numbers 1,2,3 etc)
3. Is your spend on the PSO programme set to rise or fall in the coming years?
4. Are any of your PSO routes under threat of termination?
5. Are any of your PSO routes ready to move to free market unsubsidised solutions?
6. How long is your next batch of PSO awards going to be for?

Procedural questions on the authority's PSO programme

7. Do you publish the subsidy awarded to the successful bidder? Please explain your rationale in the box provided.
8. Do you publish the subsidy bids of the unsuccessful bidders? Please explain your rationale in the box provided
9. How flexible is the subsidy amount agreed in the tender?
10. How does the subsidy change from year to year?

Common PSO contract specifications

11. Does your PSO specify a maximum fare?
12. Please tick what the maximum fare includes (various add-ons)
13. What type of fare concessions does the PSO specify? Please tick all relevant
14. Do you require your selected operator to have (various online features)
15. Do airports offer discounted charges to PSO services?
16. If you specify a minimum sized aircraft, what is your rationale? Please express in terms of comfort, capacity, passenger acceptance or other criteria
17. What timetabling requirements do you specify (e.g., early in the morning and evening for commuters)
18. If you specify a weekend timetable what is your rationale? (leisure, tourism, friends and family etc)
19. Does your PSO route carry significant air cargo and mail?
20. Do you require the operator to have any minimum cargo capacity?

Marketing efforts and route development aspirations

21. Do you require selected operators to market the PSO routes?
22. Typically what percentage of the subsidy do operators declare spending on sales and marketing?
23. If revenue is above tender projections, who receives the benefit?
24. Put another way what incentive does the operator have to exceed their tender income projections?

Operator selection criteria

25. Do you have a pre-screening process before full tender?
26. If you have financial fitness criteria please summarise the main areas of concern or interest
27. Do you formally audit operators before award?
28. Do you use specialist aviation or other consultants to advise you in your selection?
29. Do you have sufficient competition for your PSO routes?
30. Could you summarise any efforts to increase the number of bidders for your PSOs