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Senate Standing Committees on Rural and Regional Affairs and Transport
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Inquiry into Qantas' future as a strong national carrier supporting jobs in Australia
Submission by Dr Doug Fraser, A/Profs Ian Hampson and Anne Junor and Prof Michael Quinlan

We seek leave to present the Committees with the following submission. The authors of this submission are:

- Dr Doug Fraser, Research Associate, Industrial Relations Research Centre, Australian School of Business, University of New South Wales
- Associate Professor Ian Hampson, School of Management, Australian School of Business, UNSW
- Associate Professor Anne Junor, Acting Director, Industrial Relations Research Centre, Australian School of Business, UNSW
- Professor Michael Quinlan, School of Organisation and Management, UNSW

We are members of a research team conducting an Australian Research Council Linkage Project entitled *The Future of Aircraft Maintenance in Australia: Aviation Safety, Workforce Capability and Industry Development* (LP1101100335). Our industry partners (a central feature of the Linkage grant program) are made up of a broad mixture of employee, industry and training sector representatives. While believing that our research so far offers useful insights into several of the matters covered in this inquiry, we stress that the contents of the submission should not be seen as definitive findings of the project, which is not expected to be completed until July this year. Further, since time constraints prevent us from seeking feedback from our partner organisations, as required by the conditions of the grant, we are making this submission in a private capacity.

We are agreeable to this submission and any supporting documents being placed on the public record.

Given the need for timeliness, what we provide here is only a fairly summary outline of our views and recommendations. We could be happy to give verbal evidence and table supporting documentation if requested. Dr Fraser, who is the contact for this submission, will be available to meet the Committees, preferably in Hobart if hearings are held there, but otherwise in Canberra or at some other location convenient to you.

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We wish to address both terms of reference, but prefer to discuss them in reverse order, as our suggested options are tailored specifically to address the policy problems we see arising out of the present legislation and current Qantas operational strategies. As time and space constraints preclude us from going into full details of our concerns here, we append our recent submission to the Aviation Safety Regulation Review, which should fill most of the gaps in our argument below, and which has been discussed with our partner organisations. We prepared that submission on the understanding that it would be a public document, as has been normal practice with such government enquiries, but now find it necessary to provide you with a copy rather than simply a reference because that Review panel appears, for whatever reason, to have decided against making its public submissions generally available.

Based on our research to date, our major concern involves the rapid loss of aircraft maintenance, repair and overhaul (MRO) capability in Australia, which we believe is approaching the point from which it will be very difficult to recover. We argue that a lack of proper policy oversight has resulted in the great preponderance of Australia's civilian facilities and employment in aircraft maintenance being concentrated within the one company, which has shown growing determination over the last eight years to shed as much of that activity as it can, mainly to overseas providers. Even within the alleged constraints of the current legislation, Qantas has already closed a number of facilities of critical strategic importance, not only to Australia's current aircraft maintenance requirements, but to its future prospects of building a competitive presence in an increasingly globalised market worth an estimated $70 billion a year at present, and likely at least to double within the next 20 years. Looking purely at the civilian sector, there has been little evidence of any new stand-alone MRO enterprises with the potential to grow anywhere near the size which would be required to handle the predicted future maintenance load even for the major airlines, let alone for other sectors of Australian aviation.

Our concerns are particularly acute when it comes to ensuring a future supply of fully qualified aircraft maintenance engineers. Training activity for this occupation has declined more or less in tandem with the decline in Qantas's apprentice program, to the point where civilian recruitment, net of wastage, in the March quarter of 2013 was the lowest it has been since records have been kept. Defence establishments, which at the beginning of this century graduated no AME apprentices whatever, had raised their contribution by mid-2013 to over 75% of all completions. However, it would be wrong to take any comfort in that figure, since it reflects a large spike in Defence apprentice recruitment around 2008 which has since worked its way through the system. In the last two financial years the trendlines in net apprentice recruitment for the two sectors have practically overlapped, and we expect that Defence completions will have fallen off spectacularly from their mid-2013 peak by the end of the calendar year, once the statistics become available. (For more detail see the graphs on pp. 31-3 of the attached ASRR submission.)

Of even greater concern is the loss of capacity in the training system which has accompanied the drop-off in apprentice demand. In Sydney, to quote one example, one of the two remaining RTOs with CASA part 147 approval has seen its student numbers in Aeroskills fall

from an average of 100 a year over the previous decade to 30 in 2013 and 10-15 this year. A decline in training capacity takes even longer to reverse than a decline in the number of qualified workers, because the relevant physical facilities are generally redirected to other purposes, while skilled instructors, once they leave their teaching positions, are generally reluctant to return to TAFE employment so long as other openings remain for their technical skills.

At the moment the aviation industry appears to be dominated by a false complacency where skills supply is concerned, with Qantas working on the assumption that there will always be capacity in low-wage countries to take on the maintenance load which it is no longer prepared to carry on in Australian shops, and the rest of the industry working in the expectation that it will be able to meet its ongoing skill needs either from displaced or disaffected Qantas workers or from skilled defence personnel moving into civilian work. Thanks to a glut of laid-off Qantas workers seeking new opportunities in the AME labour market, the number of unfilled vacancies fell in the last two years to the point where the occupation was taken off the Skilled Occupations List in August last year, removing its eligibility for special Commonwealth support and consequently exacerbating the decline in recruitment.

On both counts we would argue that the complacency is ill founded. While we are still in the process of gathering survey data on the subsequent career paths of skilled maintenance workers who were laid off by Qantas, we can already say with some confidence that they are unlikely to hang around forever waiting for new jobs to come up in the industry. The more likely outcome is that the older ones will take early retirement, while the younger and more agile will take the skills either overseas or to other industries where they are better appreciated. Once they cease to use their more specialised aviation-related knowledge, it is only realistic to expect that this knowledge base will either decay, or at the very least, become obsolete. We can therefore safely assume that those who are not absorbed back into employment in their occupation within a year or two will mostly be lost to the Australian MRO industry for good. In the meantime, the global labour market in aircraft maintenance shows signs of going into serious long-term skill shortage.

The two peak international organisations in the aviation industry, the ICAO and IATA, both undertook detailed projections around 2009-10 with a view to forecasting the future world demand for skilled aircraft maintenance personnel. The ICAO forecasts used a benchmark ratio of 20 skilled workers per passenger or cargo jet and three for each aircraft in the "other" category – mainly twin-engined turboprops in commercial or charter service. (Neither these nor any other of the publicly available detailed forecasts make allowance for general aviation or helicopters.) These ratios were reportedly derived empirically from representative (as opposed to best) current practice by industry experts in each member nation. They can safely be presumed to make allowance for a gradual reduction of maintenance needs relative to fleet size as more new-generation aircraft of less maintenance-intensive designs, e.g. the B787, come into service, since they were expected to hold good as averages through to 2030. Using these benchmarks, the world demand for qualified AME labour is expected to reach almost 850,000 by 2030, all of whom will need to be trained from scratch within the intervening period, as the projections assume an annual attrition rate of 5% of the current workforce.

No attempt has been made, to our knowledge, to translate these into specific forecasts for Australia. Our own calculations, about which we admittedly cannot be wholly confident because of the lack of available data, suggest that Australia is currently at around 70% of the

number of qualified AMEs that would be needed to meet these benchmarks for its fleet (once again, excluding GA and helicopters). On our projections, the number of trained personnel required to meet the full maintenance needs of the Australian fleet, assuming fleet growth at the average predicted world rate, would be around 23,000; to these it would be necessary to add another 3-4000 completions over the 20 years to make up for current shortfall. This compares against total completions of just over 700 in 2012-13, the highest in five years, of which only 200 were civilian.

Naturally these projections are made on the assumption that all necessary work would be carried out within Australia. They can thus be considered as the upper limit of the range of defensible projections, with the lower end represented by Boeing's rather more optimistic forecast of 17,000 for the whole of Oceania in the same year (in this case excluding turboprops and regional jets), which presumably makes some allowance for offshoring.

However, the ICAO and IATA projections leave little cause for optimism about the capacity of other countries to take on Australia's unwanted workload over this period. The table below shows the extent by which projected training capacity in each region of the world falls short of the number of completions required to meet the ICAO benchmarks.

Region	**Total required by 2030**	**Annual training need**	**Annual surplus/ shortfall**
Africa	58635	3769	-3169
Asia-Pacific	289510	19010	-14745
Europe	330522	22977	-8352
Latin America	101226	6881	-5566
Middle East	59905	4107	-2062
North America	325171	13586	15824
World	1164969	70331	-18071

The real significance of these figures is that the biggest shortfalls are expected to arise in precisely those parts of the world to which Australian carriers are increasingly turning to meet their maintenance requirements. While a number of countries in Asia, notably Malaysia, are making serious efforts to address the training deficit, it is far from certain that all the current supplier countries will be able to step up their training effort even to the level required to meet their own domestic needs. If significant capacity constraints emerge in these regions, simple supply and demand mechanisms will make it possible for suppliers there to increase their prices significantly in a tight market, just as labour shortages will push up the labour component of total costs in many countries whose primary attraction currently lies in their cheap but well qualified labour force. Both factors are likely to reduce the cost differential between performing heavy maintenance in Australia and offshore, just as sovereignty considerations will come increasingly into effect, translating into public demand for Australia to become more self-reliant again as the world supply of MRO becomes more uncertain.

Above all, we need to remember that a large proportion of Australia's maintenance requirement will continue to have to be met within Australia for the foreseeable future because it cannot feasibly be sent offshore – either because the nature of maintenance (e.g. overnight and weekly line maintenance on domestic flights) means that it has to be done on the spot, or because it is either impracticable or not cost-effective to fly the aircraft overseas for service. We note that in its 2011 submission to the Senate committee examining the Qantas Sale Act Amendment Bill of that year, the ALAEA estimated that even if all the heavy maintenance were sent offshore that it was possible to send offshore, around half its

existing members in Qantas would need to remain employed in Australia. To this must be added the burden of maintenance on aircraft used in regional airlines and general aviation, where it is arguably even more critical that the effort be kept up because of the considerably greater average age of this proportion of the fleet. Correcting any shortfall in this part of the industry will be even more difficult and time-consuming than in the case of the major airlines because such aircraft, according to the ICAO benchmarks, need twice the proportion of licensed engineers who, depending on the mix of licences required, take roughly a year longer than unlicensed AMEs to train up from scratch to the necessary standard. The challenge for general aviation is all the greater because our research in that segment of MRO indicates that many workers who have done all their training and experience in the sophisticated workshops of a major airline prove to be ill-adapted to the more old-fashioned skills required to keep the older planes flying.

The truly worrying risk is that many nations (Australia not excepted) will react to their chronic inability to meet the full demands for properly skilled labour by familiar methods such as resorting to the use of unqualified personnel, intensifying the work of those skilled engineers who are available, and skimping on internal quality control. In the worst case this could lead to a repeat of the kind of thing American carriers experienced with their initial forays into offshore maintenance in the period immediately following deregulation. While strong concerns already exist about the quality of work done in some of the offshore maintenance plants to which Qantas has already directed work (Prof Quinlan can provide detail on these), we see the real safety threat as emerging on a regional or global scale through the inadequacy of skilled labour supply to meet basic safety requirements. This makes it essential for Australia to rebuild its capacity to the point where it can achieve a reasonable level of self-reliance across all parts of the fleet.

While some of the figures we have just quoted can be seen as a worst-case scenario (albeit a credible one), the evidence is sufficient to show that even by the most optimistic expectations, Australia's current situation is something of a fool's paradise. An added consideration is that according to the IATA projections, the global shortfall of qualified personnel can be expected to peak around the end of the current decade – right at the time when a high proportion of the existing Australian licensed workforce will be reaching retirement age. The magnitude of the task involved in rebuilding the workforce to the level required is illustrated by the graphic projections we have made on pages 34 and 35 of the attachment.

It follows that action is needed in the very near future to restart Australia's training effort and start building up the physical facilities for aircraft maintenance in preparation for a fairly quick and substantial rise in demand. We have seen little evidence that market forces are currently having any effect in bringing about such a resurgence of activity, or are likely to do so any time soon. On the contrary, because the rest of the industry has always relied on Qantas to make up the deficit, any continuing rundown of its facilities will have an impact on the labour market – and hence on passenger safety – that extends far beyond the specific segment of traffic handled by Qantas itself.

Workforce development across the industry has become another illustration of the old organisational rule of thumb: if it’s not somebody’s job, it’s nobody’s job. We would argue that this is precisely the kind of systemic market failure which has traditionally justified a greater level of government activism in handling the coordination problems involved in the transition to a new and more sustainable industry model.

It would be unfair to lay the whole responsibility for this emerging crisis at the feet of Qantas. Indeed, to the extent that Qantas claims to be trading on an unlevel playing field, it might reasonably claim as one of the reasons that it has for some time been carrying far more than its fair share of the workforce development burden. Conversely, if a solution is to be found for the looming shortfall of capacity, Qantas's current leading-edge facilities and its unparalleled high-level skill base must be a key part of that solution.

We turn now to the first term of reference, and consider some of the policy instruments which might be required to address this problem.

We preface these comments with the remark that the supposed safeguards for Australian jobs and the Australian skills base which were built into Section 7(1)(h) of the *Qantas Sale Act* 1992 can most kindly be described as cosmetic. We have addressed the subject in more detail in a separate submission we are preparing for the Senate Economics Committee on its reference to the current amendment bill, but to summarise: the drafting of the relevant provision – in surprising contrast to the precision of the clauses that surround it – is so loose as to be effectively unenforceable. The provision to make it self-enforcing by writing the mandatory articles into the articles of association of Qantas Airways Ltd ignored the possibility of their being circumvented through the medium of subsidiaries or subcontractors which were separately incorporated, an expedient which has since led to many of the other provisions of Part 3 being effectively nullified. In present circumstances – particularly as, we would argue, there are strong doubts about the Parliament's constitutional power to impose different requirements on a now fully privatised entity – we see the outcome of the amendment bill as largely symbolic; that said, we do recognise that symbolic actions (as was shown in the cases of GMH and Toyota) can have a highly material influence on the commercial decisions of the enterprises concerned.

For the purposes of meeting our current concerns, we argue that the critical objective is to keep as many as possible of the current (and perhaps of the recently closed) Qantas maintenance facilities in operation, and their workforce usefully employed, against the time when market pressures will better guarantee their continuing utilisation. Whether this takes place under Qantas ownership is arguably less critical. While many of its principal competitors in the international market (e.g. SIA, Malaysian Airlines, Lufthansa and Emirates) have found very profitable synergies in operating an airline conjointly with an MRO, and in principle a set of world-standard maintenance facilities and a highly experienced workforce could be regarded as an asset in a rapidly growing world market for contract MRO, Qantas under its current managerial strategy seems locked into a mindset of treating them as a cost. Short of a radical turnover in its current board, its senior management and perhaps its major institutional investors, it is predictable that even were the Parliament or the Minister successful in imposing behavioural requirements on it that ran contrary to its current approach, any such changes in behaviour would be implemented with a bad grace and their intent circumvented as ingeniously and enthusiastically as were those in the Sale Act.

On balance, therefore, we feel that despite the considerable risks involved in such a move, the objective might be more effectively reached by requiring Qantas to divest its maintenance facilities before they are run down any further. We envisage that its management would find such a requirement very congenial; at the same time, the prospect of developing them into a viable and competitive stand-alone MRO organisation would almost certainly be greater for a company which depended for its survival on being able to offer a competitive service in that

specific product category. Hiving off these facilities as a going concern would also open up opportunities for combining forces with some of the major defence contractors, other civilian MRO businesses and possibly sections of advanced manufacturing, generating the kind of economies of scope which will be vital if Australian MRO is to develop competitive presence in a globalised industry driven by rapidly evolving technology. Commercial independence from the parent airline could conceivably also offer the opportunity to develop innovative organisational forms which put the knowledge base of the workforce to more effective use, possibly including some kind of consortium involving a measure of employee ownership.

The challenge, however, lies less in persuading Qantas to separate off its MRO capability than in guaranteeing a continued market for its services. Any legislative package intended to safeguard this level of demand would need to be couched in such a way that it imposed an equal level of responsibility on all players in the Australian airline industry if Australia is to meet its international obligations. This implies that it would be neither fair nor adequate (nor "compatible with wider policy settings") to impose on Qantas alone the responsibility for using the services of this developing new Australian MRO segment. Nevertheless, having regard to the other terms of reference, we look first at the options that might be available to impose such a requirement on Qantas.

We argue that in the absence of any obvious legal basis for imposing behavioural regulation on Qantas alone, the only practical means of influencing its behaviour is for the Commonwealth to acquire some type and level of equity in it. While the precise nature of this equity is probably not a central consideration, we suggest that a debt guarantee is probably the mechanism most likely to answer the demands of Qantas for assistance without making any short-term demands on the Budget. Issuing such guarantee would provide the Commonwealth with a legitimate case to take such measures as it considered appropriate to preserve its investment, in the same way as any other party making a major investment in a public company.

However, we believe that the lobbying from Qantas has derailed the process to the extent that it has posed the issue as a simple choice between an unconditional, unlimited guarantee and no action. There is a fair choice of models available for a more circumscribed and conditional type of guarantee which would still assist the airline to meet any additional capital requirements which it cannot meet under its present business model, while providing the level of prudential controls which the electorate might reasonably expect on an investment potentially involving a large cost to the taxpayer. In particular, we suggest that independently of any other conditions imposed on the investment, the guarantee might reasonably be:

- applied for a defined term, subject to periodic review by Parliament;
- limited to a set maximum amount of debt (again subject to periodic review);
- applicable only to investments made by the original entity Qantas Airways Limited in pursuance of operating domestic and international air services under its current business name, consistent with the existing legislation;
- hypothecated to the extent that it cannot cover funds borrowed to cover recurrent business costs or for the operation or development of businesses located or incorporated outside Australia;
- subject to monitoring by the Auditor-General;
- subject to specific requirements in the case of default or bankruptcy, including a provision that the Commonwealth be the first secured creditor after staff entitlements have been paid.

We put these forward as examples of the kind of prudential control which any responsible government might be expected to place on such an extraordinary guarantee made to any entity not directly accountable to the Minister. The creation of such a set of conditions might be the basis on which further conditions could be applied ensuring that the company complies with relevant policy objectives for the term of the guarantee.

In terms of specific mechanisms, one possible option which we suggest might be worth further investigation is the "golden share" which the government of Singapore holds in many of its quasi-state enterprises. Such a share would convey specific rights not available to an ordinary shareholder, such as the requirement for Ministerial approval or veto of any appointments to the board or specified senior management positions or in the case of specified types of strategic business decision (e.g. decisions to undertake major investments or divestments, set up subsidiaries, engage in areas of activity which represent significant departures from its traditional core business, or accept significant levels of equity from competitors or alliance partners), but would be made in the expectation that neither the Minister nor the Department would be involved in the day-to-day detail of managing the company.

The alternative would be simply to impose specific obligations – in the present case, the use of Australian maintenance facilities for a specified minimum percentage of its maintenance budget – as conditions of the guarantee in their own right. This would be the more straightforward and transparent approach, but probably be more vulnerable to gaming than the golden share option.

We are the first to acknowledge that Qantas would find any such conditions highly unwelcome. However, if it is serious in its claims to be hampered by the inability to access higher levels of foreign equity, and if the threat to its survival in the absence of such access is as strong as claimed, it might reasonably be expected to take the guarantee even with the conditions attached. Put differently, imposing public interest conditions on the guarantee would be an effective way, both of testing the sincerity of Qantas's claims to be put at a competitive disadvantage by the constraints on its equity, and of reassuring the public that favours were not being done to an individual business to compensate for its own lack of commercial acumen.

That said, we believe the Committees should also be looking at alternative options that are not specific to a single company. One theoretically possible approach might be to impose obligations directly as conditions of the aircraft operator’s certificate for operators serving a market above a specified size. We cannot say with certainty that such an approach is legally feasible, given that the requirements for an AOC have their origins in the Chicago Convention and may be subject to international restrictions on the kinds of condition that can be applied under them. However, it might be possible to make such a case given the known safety implications of unregulated offshoring, and we believe the option is one that your Committees should foreshadow for further feasibility testing.

A second approach would be to impose such requirements within a framework of structural regulation. The rationale behind this approach is that after some two decades of ostensibly open competition, the Australian domestic aviation market shows strong signs of reverting to a duopoly structure not too different from that which applied from the 1950s through to the end of the 1980s. The fact that the industry has re-coalesced into a duopoly without any regulatory intervention suggests that it may have the characteristics of a natural duopoly, i.e.

an industry where the size and characteristics of the market are such that two competitors are the greatest number it can support without regulation to impose a greater level of competition in defiance of the dynamics of the market. While this may seem initially counterintuitive, given that the domestic market is so much larger than it was in the period in which the Two Airline Agreement applied, it remains a credible proposition if one assumes that the achievable economies of scale in air services are considerably greater than the size of the early market could support, and consequently that the conditions for duopoly have been reinforced rather than negated by market growth.

The obvious difference between the present duopoly and the earlier one is that it is a bifurcated duopoly, with each of the players operating a full-service and a budget brand and consequently competing in two distinct segments of the market. A further layer of complication is added by the way the regional airline segment has become steadily more concentrated, to the point where each of the major domestic players controls one of the main competitors in that market too, with the third competitor, Rex, showing strong signs that it is preparing to exit the market. Were this to happen, the duopoly would become even more strongly entrenched, with the removal of any risk that a regional airline might expand to offer significant competition to the majors on their main intercapital routes.

This brings us to a second characteristic of classic natural oligopoly (of which duopoly forms a sub-class): not only is it the structure towards which the market naturally gravitates, but it is the structure which most efficiently meets the needs of the market. It is easy to see the potential efficiencies and economies of scope which come from servicing all three market segments with a single operator, given in particular the flexibility available by being able to reassign some aircraft types to any given segment in response to fluctuations in demand (something that already happens with the Qantaslink DASH-8s, for example), and the opportunities for coordination of schedules, ticketing, fare-setting, etc. From that perspective it would serve the interests of economic efficiency for government to support such a structure actively.

On the other hand, as was shown through the period of the Two Airline Agreement, a secure oligopolistic structure works to the disadvantage of many kinds of competition, and consequently of consumer welfare. Once again, classic regulatory theory suggests that this is the kind of environment in which it is both appropriate and efficient for governments to impose some controls on the duopolists in order to ensure, for example, that key regional markets continue to be served, and that they are not able to converge too closely in their offerings (e.g. parallel schedules), in return for somehow guaranteeing stability in the market structure and consequently providing greater certainty for investors. It is in such a context that a government might legitimately require the two main competitors to continue making use of Australian maintenance facilities until such time as the evolution of the market makes such regulatory constraints superfluous.

We stress that we are putting these forward as representative illustrations of how the problem might be approached, rather than as an exhaustive list of fully evaluated options immediately implementable in the form presented. The regulated duopoly model in particular might be very difficult to sell, and would require considerable time and thought to turn into an implementable legislative framework. Consequently we are not suggesting them as specific recommendations which might come out of this inquiry, but rather putting them forward as examples of how the range of defensible policy approaches goes well beyond the limited set of choices that have so far circumscribed the political debate.

In that context, we are the first to acknowledge that it is a moot point whether the more radical of these suggestions are "consistent with wider policy settings". While entirely sound in terms of orthodox economics, they admittedly belong to a class of policy instruments which has been very much out of fashion in Australia over the last two decades, and the skills to design such instruments are undoubtedly in very short supply in the public service today. However, they do appear to be more compatible than Qantas-specific ones with the currently dominant policy priority of allowing competition between the domestic providers on an equal footing. Conversely, the Qantas-specific options have the advantage of being more pragmatic and more limited in their possible repercussions. The most honest course is to admit that no solution which stands a chance of working is going to be fully consistent with the current wider policy settings in the broadest sense, since it is precisely these settings which have brought the Australian MRO industry to the brink of a crisis which they show no signs of forestalling.

As already noted, we are happy to expand on any of these points in verbal evidence, and we refer you once again to the attachment which provides not only further detail on the issues raised in this submission, but much useful research-based information on other relevant issues (particularly as regards safety and the licensing system) which may be raised in other submissions.