Submission to the inquiry by the Productivity Commission into "new models of tertiary education"

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Introduction: About me and my submission

I am an associate professor in the Department of Economics at the University of Otago. I began my 33-year association with tertiary education in 1984 when, at the age of 17, I enrolled at Otago for my first degree. I started lecturing at Otago in 1989, and with a couple of short breaks (e.g. to do my PhD) I have been doing so ever since. As well as at Otago, I have taught at and spent sabbaticals at several universities overseas and been on secondment to the New Zealand Treasury.

I appreciate the opportunity to make a submission. I think it is very important that New Zealand's tertiary education system performs well – because (obviously!) education is a fundamental determinant of individuals' success in life and also of the performance of the economy overall.

I have chosen these four 'topics' to focus on in my submission:

1. The costs of the PBRF are hugely excessive – major efficiency gains could be easily achieved
2. New Zealand taxpayers receive very little value in return for paying for students from overseas to do PhDs and Masters
3. Universities waste too many resources on administration and bureaucrats
4. A reminder that the online education revolution, as exemplified by "MOOCs", is much more than merely posting videoed lectures online

In my opinion, all fours topics are relevant to the inquiry's terms of reference. The first three relate to the current model – including business model – of tertiary education (in short, what's wrong with it), and the fourth relates to new models on the horizon. I chose these issues in particular because I think it is unlikely that they (especially the first three topics) will be raised by many other submitters – because, arguably, many academics are uncomfortable talking publicly about such issues.

Unsurprisingly, given my history, most of my examples derive from my experiences at the University of Otago. These references to Otago should not be interpreted as criticisms of that

[1] Naturally, my submission is offered in my private capacity; i.e. it is not intended to represent the views of the University of Otago.

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university alone. Many of my Otago examples are, to greater or lesser extents, probably mirrored elsewhere too.

If you would like me to provide any more information about these topics or anything else, please do not hesitate to contact me.

Yours sincerely,

Paul Hansen

1. The costs of the PBRF are hugely excessive – major efficiency gains could be easily achieved

For the latest PBRF round – 2012 – I spent more time working on my PBRF entry, in internal practice rounds and then the final submission, and also reviewing and 'massaging' other colleagues' entries than I spent on all my teaching activities during the period leading up to submission. I estimate that I spent the equivalent of at least five weeks (maybe more?) working on the 2012 PBRF.

I am (since 2007) an Associate Professor; my salary is almost $140,000 per year, or almost $2700 per week, and so five weeks of my work time equates to more than $13,000 in salary. In addition to salary costs are, of course, the University's overheads (e.g. heating and cleaning my office, the central administration, etc), which the University charges for at an overhead recovery rate of 113% or 127%. Thus, conservatively applying an overhead rate of 100% doubles the cost of my involvement in the 2012 PBRF to $26,000.

Scaling this cost of a single individual across the University of Otago overall, it is easy to arrive at a back-of-the-envelope estimate of the total cost of Otago's involvement in the 2012 PBRF – i.e. across the entire university – of approximately $15 million. And this figure scales across all of New Zealand's tertiary education providers and research institutions that participated in the 2012 PBRF to arrive at a total of $100 million. These estimates are calculated as follows.[3]

In 2012, PBRF entries were submitted for 1168 academic staff (full-time equivalents) from the University of Otago.[4] If we assume that their average salary is at the lower end of the senior lecturer band (~$100,000 per annum), and assuming that each person spent two weeks (less than half the time I spent!) working on their PBRF – i.e. in internal practice rounds and then delivering their final submission – this corresponds to salary and overheads costs of almost $9 million.[5]

[3] Skip ahead if these calculations do not interest you.

[4] See www.otago.ac.nz/research/pbrf.

[5] i.e. 1168 × $100,000 × 2/52 × 2 = $8,984,615.

In addition, on a permanent basis (i.e. across all six years of the 2012 PBRF round), Otago's 'PBRF and Publications Office'[6] has a staff of at least three people and a bespoke PBRF database management system, and many senior staff (mostly at the professorial level) served on the national PBRF assessment panels (a very time-consuming activity). Thus, it is easy to imagine that this 'ancillary' involvement cost in the order of $6 million.[7] All up, therefore, the cost of University of Otago's involvement in the 2012 PBRF was approximately $15 million.

What is the equivalent figure across the country as a whole? As reported in the Tertiary Education Commission's Final Report on the 2012 PBRF,[8] 7334 PBRF entries were assessed. Given Otago represented 1168 of these entries, Otago's $15 million cost can be scaled up by a factor of 6.3 (i.e. 7334/1168) – which corresponds to approximately $94 million across New Zealand. Finally, to that figure needs to be added the running costs of the 12 peer-review panels and the Tertiary Education Commission's involvement, such that a total cost of $100 million is very easy to justify.[9]

$100 million is a lot of money (e.g. obviously, a lot more than the $26 million spent on the recent flag referendum!). And note, I have not mentioned the deleterious effects of the PBRF exercise on academics' morale and the palpable increase in cynicism and 'game playing' – sanctioned and encouraged at the highest levels – that I have observed.[10]

There have been three PBRF rounds so far – 2003, 2006 and 2012 – and the next one is in 2018. Might the same outcomes – in essence, the grading of approximately 7000 academics, each into one of four 'quality' categories – A, B, C or R – be achieved more cheaply?

It is worthwhile appreciating that as a 'sorting' problem this grading exercise is extremely rudimentary. It involves just three marginal decisions: Is a particular person: (1) either an A versus a B?, (2) either a B versus a C?, or (3) either a C versus a R? Clearly, other

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[6] www.otago.ac.nz/contacts/dunedin/index.html?dept=publications.

[7] Staff and overhead costs for the PBRF and Publications Office: 3 × $100,000 × 2 × 6 = $3,600,000. In addition, according to the Tertiary Education Commission's Final Report on the 2012 PBRF (see the next footnote for a URL reference), there were 252 panellists, of whom it is not unreasonable to assume that, say, one-eighth were from Otago. If these 32 staff (mostly on professors' salaries) each spent 9 weeks (a conservative estimate?) assessing and meeting for the PBRF: 32 × $160,000 × 9/52 × 2 = $1,772,308. Finally, let's imagine that Otago's bespoke PBRF database management system cost at least $750,000 to build and maintain. Thus, in total: $3,600,000 + $1,772,308 + $750,000 = $6,122,308.

[8] www.tec.govt.nz/Documents/Reports%20and%20other%20documents/PBRF%20QE%202012%20Final%20Report.pdf.

[9] Indeed, this additional $6 million feels like a very conservative estimate, but because it results in such a nice round final figure(!) of $100 million for the total cost let's stick with it for now.

[10] I am happy to expand on this parenthetical remark if desired.

theoretically-possible combinations – such as whether a given individual is an A versus an R – are not practically relevant.

Could such simple grading decisions be reached more efficiently – i.e. in a less costly fashion? For example, would an examination of people's CVs – with achievements since the last PBRF round highlighted (with a yellow marker!) – suffice for most people? This would greatly reduce the cost of the PBRF exercise, probably with very little difference to the grading outcomes.

[Please note that I am not arguing here that there is *no* benefit from the PBRF exercise (though I am sympathetic to the widespread view that any such benefits are small, or even negative). Instead, I am arguing that the same outcomes, in essence, could be achieved much more cheaply.]

2. New Zealand taxpayers receive very little value in return for paying for students from overseas to do PhDs and Masters[11]

At my university (University of Otago) – which is likely to be representative of most other universities – since 2006 *international* students applying for PhD study are treated as *domestic* students with respect to their tuition fees and eligibility for scholarships. Each year at Otago, 181 new PhD and 60 Masters scholarships, worth more than $18 million in total, are awarded (i.e. to all students, from New Zealand and overseas).[12]

For full-time students, a PhD scholarship is $25,000 per annum (usually for three years) and a Masters scholarship is $13,000 (thesis Masters) or $10,000 (coursework Masters). The waiver of tuition fees is worth many thousands of dollars too (e.g. $25,000-$50,000 for a Masters degree). In 2015 there were 1307 PhD students and 1224 Masters students enrolled at Otago; and 824 students from overseas were enrolled in post-graduate study (though not just doing PhDs and Masters).[13]

Unsurprisingly, in recent years all PhD and Masters students from overseas who have come to my department (Economics) have only done so if they receive a scholarship and fees waiver. Some of these students get employed (for additional money) for a few hours a week as tutors or to help with grading exams. Their contributions in this respect are small because for some their English is not fluent enough for teaching purposes and/or they don't want or need such jobs (and most recently, because my department has not had the money to hire them). Upon completion of their degree, these students usually leave New Zealand.

Academic staff in my department are, on the whole, willing to supervise PhD and Masters students – from New Zealand or overseas – because this is recognised in staff workload

[11] In a similar vein, but already well-rehearsed elsewhere, is the issue of interest-free loans for under-graduate students (also since 2006).

[12] www.otago.ac.nz/postgraduate/getascholarship.

[13] www.otago.ac.nz/about/quickstats.html#student.

models (e.g. rewarded with teaching reductions) and/or it is supported by research grants (e.g. that would not have been won without at least PhD student being included as part of 'capacity building'). Sometimes, too, staff supervision results in research articles (based on work done for the student's PhD). As well as receiving government funding, universities are increasingly rewarded in international ranking exercises (e.g. QS World University Rankings)[14] for the breadth of their post-graduate student body (i.e. the more PhD and Masters students from overseas, and from a wide range of countries, the higher the ranking).

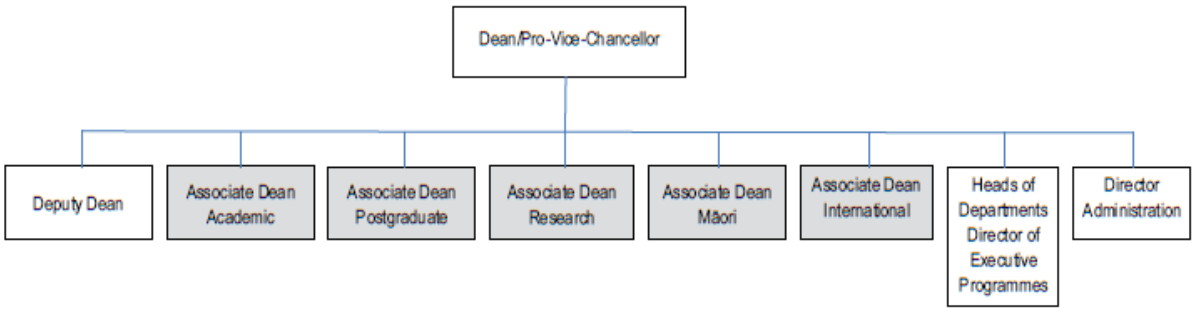
My question to the Productivity Commission is this: How much benefit do *New Zealand taxpayers* who pay for students from overseas to do PhDs and Masters get in return? (Note, such largesse is not classified as 'foreign aid'; it is treated as education spending.)

3. Universities waste too many resources on administration and bureaucrats

Like most universities, the University of Otago has three main layers of management: (1) the University overall, (2) Divisions (and Schools), and (2) Departments. According to the School of Business website,[15] there are 19 people attached to the Dean's Office of the School of Business (where my Department of Economics is based; and bear in mind, there are another three Divisions), of whom at least seven have 'Dean' in their title, as summarised by the figure below. Above that, at the University level, there is another, even larger management structure. In addition, below is a list of the administrative roles inside my own Department (~ 20 staff in total).

When I first enrolled as a student at the University of Otago in 1984, the size of the administration – at all three layers – was a tiny fraction of this. Of course, the world has changed since then, and Otago has three times the number of students that it had in the 1980s. Nonetheless, it seems unlikely that the current size is anywhere near the optimal size.[16] Large amounts of resources are being swallowed up by this administrative burden (e.g. contributing to overhead recovery rate of 113% or 127% mentioned earlier).

Senior Management Organisational Structure for the Division of Commerce



[14] www.topuniversities.com.

[15] www.otago.ac.nz/business/about/dean/otago020076.html.

[16] The University of Otago is currently enrolled in a review of support services and staff, presumably with the ultimate goal of reducing general staff numbers.

Administration Roles in the Department of Economics

- Members of Senate (4 people)
- Foreign Policy School representative (1 person)
- MIntSt Board of Studies/Admissions subcommittee representative (1 person)
- Member of PPE Steering Group (1 person)
- Member of Staffing Advisory Committee (1 person)
- Commerce Divisional Board representative (1 person)
- Sciences Divisional Board representative (1 person)
- Humanities Divisional Board representative (1 person)
- Commerce Research Committee representative (1 person)
- Core Board of Studies representative (1 person)
- Head of Department (1 person)
- Deputy Head of Department (1 person)
- HR advisor to HoD (1 person)
- Academic Board (5 people)
- Director Undergraduate Studies (1 person)
- Research Committee (5 people)
- Seminar Organisers (incl. Brown Bags) (1 person)
- Course Advisors (5 people)
- Course Approvers (2 people)
- ECON 400 and 500 Coordinator (1 person)
- ECON 900 Coordinator (2 people)
- Dissertation Marker (1 person)
- *EcoNZ@Otago* magazine Editor (2 people)
- Exchanges (1 person)
- Web coordinator (1 person)
- Social Convenor (2 people)
- Maori Liaison (1 person)
- Schools/Undergraduate Student Liaison/Engagement (2 people)
- Ethics Committee (2 people)
- Maori and Pacific Islands Early Intervention (1 person)
- Business Engagement (2 people)

4. A reminder that the online education revolution, as exemplified by "MOOCs", is much more than merely posting videoed lectures online

For people who have not experienced a bona fide online course themselves – such as available (often for free!) from the likes of Coursera[17] or Udacity[18], for example – there is a common tendency to imagine that such courses are little more than videoed lectures (e.g. 50

[17] www.coursera.org.

[18] www.udacity.com.

minutes long) that have been posted on the internet. For example, a colleague of mine based his scepticism about the educational quality of MOOCs on the basis of his knowledge of filmed lectures being played at 2 am on television channels in Germany in the 1970s!

The purpose of this final part of my submission is to encourage the Productivity Commission to appreciate that such misconceptions are quite common, and so the Commission's own thinking and communication in this respect should be as clear as possible (e.g. to dispel such misconceptions).

In fact, anyone who has experienced a modern MOOC (as I have) will know that their advantages vis-à-vis traditional means of delivering education (sometimes referred to as 'chalk and talk') derive from these main features:

- Short and endlessly repeatable lessons (e.g. 5-10 min video clips, corresponding to most people's effective attention span, and that can be played at multiple speeds)
- Opportunities for synchronised testing and feedback (e.g. at the end of each 5-10 min lesson)
- A wide range of integrated ancillary educational resources, such as links to other videos, Wikipedia and news articles, etc
- Online communication and sharing, such as forums with other learners and also teachers (e.g. worldwide streamed 'Q & A' sessions)

Terwiesch and Ulrich (2014)[19] summarise the technology supporting the above features like this (p. 1): "The focal technology relevant to [education providers] is not the MOOC but rather a technology embedded within the MOOC – chunked asynchronous video paired with adaptive testing, a technology we call 'SuperText'."

[19] C Terwiesch and K Ulrich, *Will Video Kill the Classroom Star? The Threat and Opportunity of MOOCs for Full-time MBA Programs*, Wharton School of Business, University of Pennsylvania, 2014. Available from (including an interview with the authors): https://mackinstitute.wharton.upenn.edu/2014/will-video-kill-classroom-star.