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Quantifying Benefits and Costs under the Resource Management Act: Lessons from Commerce Commission Decision-making

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Introduction

Section 32 of the Resource Management Act 1991 ("the RMA") requires an evaluation of benefits and costs before certain actions are taken by resource management decision-makers (e.g., a local authority publicly notifying a proposed plan or policy statement). To date, there has been no requirement for those benefits and costs to be quantified, but that would change if the present Resource Management Reform Bill ("the Reform Bill") is passed into legislation. The Reform Bill, which was introduced to Parliament in December 2012 and is currently being considered by a select committee,[2] would amend section 32 (among other changes) to require the decision-maker to "if practicable, quantify the benefits and costs" of the effects anticipated from the proposal being evaluated (e.g., the proposed plan or policy statement).[3]

The requirement for quantification is likely to improve the rigour of section 32 evaluations. Quantification forces the analyst to clearly specify the assumptions underlying the analysis, and allows independent testing of these assumptions, which can have value even if there is significant uncertainty about the actual dollar values determined by quantification. Quantification can increase the objectivity of the assessment of the extent of benefits and costs, which can be used to support (or refute) more subjective claims about their magnitude, as well as allowing an objective weighting of the benefits against the costs. Indeed, it will often be very difficult to form an objective view on whether the benefits of a particular plan or policy statement exceed the costs without some idea of the numeric values for those benefits and costs.

We have, however, heard concerns expressed that quantification of benefits and costs is difficult and complex, and that this complexity will limit the use of quantification in section 32 evaluations.

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It may therefore be helpful to note that there is another high-stakes decision-making regime in New Zealand that involves quantification of benefits and costs to the degree practicable – that operated by the Commerce Commission, particularly under the Commerce Act 1986. This regime is mature, transparent, and tractable, and provides some comfort that quantification of benefits and costs under section 32 of the RMA will be feasible to implement in practice.

In the remainder of this paper we outline how the Commerce Commission approach to quantification works, and explore the implications for section 32 of the RMA, if it is amended as per the Reform Bill.

Quantification of Benefits and Costs under the Commerce Act

Section 47 of the Commerce Act prohibits acquisitions that have the effect of substantially lessening competition in a market. If a business is undertaking an acquisition that breaches section 47, the business can apply to the Commerce Commission for an "authorisation" of the proposed acquisition under section 67 of the Commerce Act. Section 67 provides that the Commission may authorise the acquisition if it is satisfied that, despite the lessening of competition, the acquisition will result in "such a benefit to the public that it should be permitted". The benefits could include things that may arise from the acquisition like rationalisation of fixed costs, higher quality products, and greater ability to innovate.

Similar provisions apply in respect of anticompetitive practices such as contracts or arrangements that may substantially lessen competition (and therefore would breach section 27 of the Commerce Act). The Commission may authorise such practices if there is a "benefit to the public which would outweigh the lessening of competition" (section 61 of the Commerce Act).

The Commission's assessment in each case is referred to as the "public benefit test". Despite the differences in the statutory wording for the public benefit test for acquisition authorisations and authorisations of anticompetitive practices, the courts have concluded that there is no material difference between the two.[4] Moreover, and importantly in relation to the proposed amendments to section 32 of the RMA, the courts have also held that, in applying the public benefit test, the Commission should "quantify the benefits and detriments to the extent practicable, rather than rely solely on qualitative judgement".[5]

In practice, the Commission applies the public benefit test by first identifying all the relevant benefits and costs, and then quantifying these benefits and costs (to the extent practicable). The identification of benefits and costs is based on an assessment of what is likely to occur in the future with (the "factual") and without (the "counterfactual") the relevant acquisition or anticompetitive practice. A similar sort of factual/counterfactual analysis of likely future outcomes would presumably be required under the section 32 amendments, where the benefits and costs are those of the "effects that are anticipated" from the implementation of the provisions of a proposal.

The Commission quantifies benefits and costs by drawing on evidence submitted by the relevant parties (e.g., the merging parties, or the parties to an anticompetitive practice), such as financial statements, consumer surveys, internal or external studies, independent expert reports, etc. It complements this with evidence that it gathers itself, including evidence from independent experts and affected parties (e.g., customers and competitors of the merging firms).

The focus of the Commission's analysis is on changes in the welfare of New Zealand consumers and firms,[6] rather than on macroeconomic metrics such as GDP or employment. This is consistent with the approach recommended by the Treasury in quantifying benefits and costs for government policy and regulation, which also focuses on New Zealand's welfare.[7]

The Commission has carried out such quantitative analysis for many years. The earliest acquisition authorisation listed on the Commission's "authorisations register" is in 1992,[8] while the earliest authorisation of an anticompetitive practice is from 1986.[9] While it is not clear if these early authorisations involved quantitative analysis, quantification of benefits and costs has occurred in numerous Commission authorisation decisions since at least 1995.[10]

A recent example is the Commission's authorisation in 2011 of Cavalier Wool Holdings' (CWH) proposed acquisition of the wool-scouring assets of New Zealand Wool Services International.[11] In that authorisation process, CWH submitted evidence setting out its views of the benefits of the proposed acquisition (such as cost savings and the sale of surplus land and buildings) as well as the detriments (such as increases in prices and less investment and innovation). Economic experts engaged by CWH and opposing parties filed evidence quantifying many of the costs and benefits.[12] The Commission subjected the filed evidence to intense scrutiny, and held a conference to allow interested parties to present their views in person to the Commission. Ultimately the Commission authorised the acquisition, on the grounds that the benefits exceeded the costs.[13]

Over the years the models used by the Commission to quantify certain costs, such as those arising from a price increase, have become established and generally accepted. However, the Commission is often faced with benefits and costs that are quite difficult to quantify. For example, one of the potential costs associated with an acquisition that lessens competition is a reduced incentive for the merging parties to invest and innovate in order to compete with their rivals. It can often be difficult to place a monetary value on this cost, as the Commission noted in the CWH decision:[14]

> *...it is difficult to measure with any precision the cost to society of a lessening in innovation attributed to a substantial lessening of competition in a market. Consequently, a qualitative element is always a significant part of this assessment.*

Nonetheless, there are approaches that can be used to approximate the costs of a loss of innovation, and the Commission applied one of these in the CWH decision (as well as in previous authorisation decisions). In doing so, the Commission also applies its qualitative judgement, for example in determining the most appropriate quantification method and in determining a relevant monetary value to take from a range of quantified values.[15]

Applicability to the RMA

While the nature of the benefits and costs will often differ, many elements of the cost-benefit analysis undertaken by the Commerce Commission will be broadly applicable under an amended section 32 of the RMA. For example, this type of analysis was applied and filed in the Environment Court by economic experts engaged by various parties with an interest in the Waikato Regional Council's Variation 6 amendments to its proposed regional plan. [16, 17] In particular, the costs and benefits of one of the effects of the policies in the proposed plan—allocating water for consumptive uses (such as irrigation) rather than hydroelectric generation—were quantified.

It is important to note that the focus of the Commerce Commission's analysis is on changes to economic welfare, whereas the amended section 32 may have a broader scope ("the benefits and costs of the environmental, economic, social, and cultural effects").[18] It is also often the case with resource management decisions that benefits or costs are "non-market" values that are not easily quantified. For example, it can be difficult to quantify the value of a landscape or the value of the preservation of a species. However, techniques do exist for quantifying such environmental values. These include contingent valuation (which uses a survey to elicit willingness to pay for a given environmental change or feature), travel cost methods (which infer the value of a resource by how much visitors spend to travel to the resource), hedonic property value approaches (which isolate the impact of an environmental change on property values), and averting expenditure approaches (which estimate the expenditure incurred by society to avert an environmental action).[19, 20] There is often considerable merit in applying these sorts of approaches as, even if they only provide an approximation to the true environmental value, this at least indicates if the values are likely to be substantial or trivial. Furthermore, as the CWH example above demonstrates, these quantitative assessments can often be balanced with more qualitative judgements.

In summary, the proposed amendments to section 32 of the RMA, if they are implemented, will increase the rigour and objectivity of RMA decision-making. While the changes might increase complexity, the regime operated by the Commerce Commission under the Commerce Act provides comfort that the quantification of benefits and costs (to the extent practicable) can be achieved in a manner that is transparent, robust and tractable.

Notes

[1] We acknowledge the helpful comments of Will Taylor.

[2] The select committee's report is due in June 2013 – see http://www.parliament.nz/en-NZ/PB/Legislation/Bills/3/7/a/00DBHOH_BILL11932_1-Resource-Management-Reform-Bill.htm.

[3] The exact wording is that the section 32 evaluation must "(a) identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions [e.g., the policies, rules and methods of a proposed plan], including the opportunities for (i) economic growth that are anticipated to cease to be available; and (ii) employment that are anticipated to be provided or reduced; and (b) if practicable, quantify the benefits and costs referred to in paragraph (a) ...".

[4] See *Air New Zealand and Qantas Airways Limited v Commerce Commission* (2004) 11 TCLR 347 at [33] and *Godfrey Hirst NZ Ltd v Commerce Commission* (2011) 9 NZBLC 103,396 at [88]-[90].

[5] These are the Commerce Commission's words in its draft Authorisation Guidelines (March 2013), referring to the High Court decision of *Air New Zealand and Qantas Airways Limited v Commerce Commission* (2004) 11 TCLR 347 at [319] and the Court of Appeal decision of *Telecom Corporation of New Zealand Ltd v Commerce Commission* [1992] 3 NZLR 429 at 447 per Richardson J.

[6] Technically consumer and producer surplus.

[7] See New Zealand Treasury (2005), "Cost Benefit Analysis Primer", Version 1.12, December.

[8] See http://www.comcom.govt.nz/authorisations-register/

[9] See http://www.comcom.govt.nz/anti-competitive-practices-authorisations-register/

[10] See Commerce Commission (1997), *Decision 302*, 21 July. This decision refers to early decisions in 1995 and 1996 where benefits and costs were quantified.

[11] Commerce Commission (2011), *Decision No. 725*, 9 June.

[12] NERA Economic Consulting was engaged by CWH.

[13] Although to date CWH has not actually acquired New Zealand Wool Services International, for commercial as opposed to Commerce Act reasons.

[14] Commerce Commission (2011), *op cit.*, at paragraph 278.

[15] *Ibid.*, at paragraphs 306-311.

[16] *Carter Holt Harvey Ltd & Others v Waikato Regional Council* [2011] NZEnvC 380.

[17] NERA Economic Consulting and Professor Lewis Evans were engaged by Wairakei Pastoral Limited in this process.

[18] It is interesting to note that the proposed section 32 refers to "economic growth", but only in the sense of "opportunities for ... economic growth that are anticipated to cease to be available". The proposed section 32 also refers to "employment". In this regard we note that one of the critiques of what is often referred to as "economic impact analysis" or "input-output multiplier analysis" is that such methodologies typically take no account of the opportunity costs of the resources used in the project. For example, such methodologies often assume that there is an idle workforce, whereas the jobs created by a new project may actually be filled by people already working in other jobs. If the objective is to assess the effects of a decision on economic welfare, then a proper analysis would include all relevant opportunity costs. See, for example, Ronald C. Griffin (1998), "The fundamental principles of cost-benefit analysis", *Water Resources Research*, 34(8), 2063-2071.

[19] A high-level summary of these, and other non-market valuation techniques is in Tom Tietenberg and Lynne Lewis (2009), *Environmental and Natural Resource Economics*, Eighth edition, Pearson-Addison Wesley, pp.39-50.

[20] As one example, a cost-benefit analysis in the Variation 6 proceedings included valuation of the environmental costs of increased nutrient discharge from dairy farming, such as costs associated with damage to water resources, damage to ecosystem biodiversity and damage to human health. This was based on a study which predominately used the averting expenditure approach to valuing these costs.

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