

# WEALTH TRANSFERS IN COST-BENEFIT ANALYSIS

A Report for Auckland International Airport Ltd

Prepared by NERA

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## 1. INTRODUCTION

### 1.1. Background

This report has been prepared by NERA Economic Consulting ('NERA') following a request from Auckland International Airport Limited that we review the Commerce Commission's (the Commission's) paper *Telecommunications Act 2001: Schedule 3 Investigation into Regulation of Mobile Termination, Draft Report* (the 'Draft Report'), issued on 18 October 2004.

The purpose of the Commission's investigation is to determine whether the termination of voice calls on cellular telecommunication networks ('mobile termination') should be regulated. The Commission's stated objective for the investigation reflects the object clause contained in the *Telecommunications Act 2001* ('the Act'):

***"The Commission must consider whether regulating the service promotes competition in telecommunications markets for the long term benefit of end-users of telecommunications services within New Zealand."***<sup>1</sup>

The Commission believes that to fulfill its obligations under the Act it must explicitly count as benefits wealth transfers from producers to consumers. To support the view it claims that:<sup>2</sup>

- control as a regulatory mechanism has a different philosophical base from competition as a regulatory mechanism and thus warrants a different approach;
- one of the purposes of the Act (as contained in section 18) is the promotion of cost-based access prices, the consequence of which is a transfer of profits from producers to consumers that would occur over time if the market were competitive, and that this transfer should be counted as an economic benefit of imposing control; and
- any negative impact on efficiency through the loss of producer surplus may be separately analysed in the context of dynamic efficiency.

On the strength of its proposed treatment of wealth transfers, the Commission ultimately concludes that designating the termination of voice calls on cellular mobile networks is in the long-term interest of 'end-users'. This report specifically addresses the merits of the Commission's proposed treatment of transfers in its report. We conclude that the approach is flawed in principle since:

- it equates the consequences of regulation with the benefits of regulation, when they are separate and distinct;

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<sup>1</sup> *Draft Report*, p2.

<sup>2</sup> *Draft Report*, pp11-13.

- it is irreconcilable with the Commission's approach to assessing authorisation applications;
- it overlooks that the economic benefits of lower prices arise from new or existing customers buying more of a product or service, and not through existing customers paying less for the same quantity as before;
- it would encourage resources to be inefficiently allocated, making all New Zealanders worse off relative to a situation of no regulation;
- it results in disproportionate weight being given to static, redistributive issues, and so insufficient consideration of the impact of regulation on long-term investment decisions and dynamic efficiency; and
- the redistribution of wealth is a role most appropriately undertaken by government.

We further conclude that the approach is unlikely to be workable in practice since:

- the factor inputs that are combined to produce telecommunications services (the land, labour, capital and entrepreneurship) are ultimately owned by 'end-users', meaning it is infeasible to isolate and maximise 'end-user' surplus; and
- bare wealth transfers accruing to business customers cannot properly be classified as benefits to 'end-users' since telecommunications services form an input into a production process used to produce other goods and services.

## 1.2. Report Structure

The remainder of this report is structured as follows:

- section two explains in detail why the approach employed by the Commission in its *Draft Report* is flawed in principle;
- section three illustrates why the approach is also unworkable in practice; and
- section four concludes.

## 2. UNSOUND IN PRINCIPLE

The approach adopted by the Commission in its *Draft Report* is unsound in principle since it relies upon the fundamental misconception that the objectives of competition and control as regulatory mechanisms differ.

### 2.1. Control versus Competition

The Commission's analysis is founded on the presumption that the objectives of control and competition as regulatory mechanisms differ:

*“Control as a regulatory mechanism has a different philosophical base from competition as a regulatory mechanism. It is precisely because there is a concern about monopoly profits, and a lack of competition to drive them out, that control might be justified.”<sup>3</sup>*

This is not a valid distinction since competition and control seek to achieve the same end – an efficient allocation of resources. Competition is the dynamic process whereby firms strive against each other to secure customers for their products.<sup>4</sup> Workable or effective competition is said to exist when each market participant is constrained in its price and output decisions by the activity of other market participants. These constraints convey signals to firms that enable them to discover which goods and services consumers wish to buy, and how those goods and services can be efficiently produced and allocated.

However, in some markets competition is neither present nor feasible. Some industries are characterised by the existence of highly specific investment needs (giving rise to sunk costs) and increasing returns to scale. These features often mean it is more efficient for there to be just one or a small number of service providers, thus giving rise to concerns about monopoly pricing or other forms of market distortion. In such circumstances firms with substantial market power have the ability to elevate prices substantially above long run costs and stave off new entry and expansion by rivals. Unconstrained by market forces, such firms can potentially undertake production decisions that no longer have primary regard to the needs of consumers. If prices consequently exceed the level required for cost recovery, some customer demand will not be met. In these circumstances, the resource-allocation function of competition is undermined. It is the social loss arising from this inefficiency that motivates regulation.

Economic regulation – most often in the form of controls on price and non-price terms of supply - is an attempt to improve upon this outcome by mimicking some of the disciplines of a competitive market. Specifically, regulation seeks to prevent or prohibit the exercise of

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<sup>3</sup> *Draft Report*, p11.

<sup>4</sup> Collins Dictionary of Economics, Second Edition, 1993, p80.

substantial market power, not as a means to itself, but to enhance social welfare through an improvement in resource allocation. Regulation can be thought of as a substitute for competition, where the prospect of competition or entry is ineffective or limited.<sup>5</sup> In other words, the goal of control is identical to that of competition as a regulatory mechanism. Each is a means of facilitating an improved allocation of society's scarce resources.

By attributing different objectives to competition and regulation, the Commission's analysis proceeds on a fundamental misconception. From this philosophical point of departure, the Commission ultimately concludes that the treatment of wealth transfers should differ under control *vis-à-vis* competition.

## 2.2. Wealth Transfers as Benefits

### 2.2.1. Consequences are not necessarily benefits

Maintaining its philosophical distinction between regulation and competition, the Commission claims that the treatment of welfare effects resulting under each should differ. It states that one of the purposes of the Act is to achieve cost-based prices through the elimination of monopoly profits and notes that this entails a transfer of producer surplus to consumers. The Commission then cites this transfer as a benefit of regulation:

*“...once it is recognised that the Act promotes cost-based access pricing, the inevitable consequence is a transfer of producer surplus. This transfer then becomes an inevitable consequence, and benefit, of regulation. In addition, the underlying rationale is that this is the likely outcome in a competitive market.”*<sup>6</sup> [emphasis added]

Whilst a consequence of regulation may be a transfer of wealth between producers and consumers, it does not follow that this transfer is an economic benefit of regulation. Consequences and benefits are not the same. In any case, the Commission's proposition that they are provides no basis for drawing a philosophical distinction between competition and regulation. By way of illustration, consider the following rewording of the Commission's statement:

*“...once it is recognised that increased competition promotes cost-based pricing, the inevitable consequence is a transfer of producer surplus. This transfer then becomes an inevitable consequence, and benefit, of increased competition.”*

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<sup>5</sup> Regulation is, however, an imperfect substitute for competition. Regulation can never perfectly replicate a perfectly competitive market and brings with it regulatory costs. Its virtue lies in its ability to improve upon the market situation that would have arisen *but for* regulation.

<sup>6</sup> *Draft Report*, p11

As this revised statement illustrates, if one accepts that wealth transfers are a benefit from **regulation**, they must similarly be a benefit from **competition** since they are a consequence of both. Such a view, however, is fundamentally at odds with the Commission's approach to assessing authorisation applications, where it has long maintained no distributive standard exists. Instead, it has focussed principally upon efficiency gains and losses:

***“It is essential, however, that the benefits counted be true benefits (ie, net gains to society) and not just changes in the distribution of wealth per se, or transfers between areas of the economy having a net impact of zero [...] the distribution of the benefits (or detriments) is not relevant to the balancing process”***<sup>7</sup>

This need for distributional neutrality in such assessments has been endorsed by the New Zealand High Court and the Court of Appeal.<sup>8</sup> Treasury has also recognised the inconsistency in the Commission's reasoning:

***“The Commission's assessment framework is inconsistent with its assessment framework for clearing mergers and takeovers under the Commerce Act.”***<sup>9</sup>

Both regulation and competition are fundamentally concerned with the efficient allocation of resources. It follows that the Commission's arguments for maintaining distributional neutrality in authorisation (or competition) assessments apply equally to regulation investigations. Indeed, both involve a *prima facie* lack of competition and a wide-ranging public benefit assessment. Accordingly, there is no economically sound reason for counting wealth transfers as benefits in either case.

### 2.2.2. Promoting efficient resource allocation

Long-term consumer benefit is determined by the allocation of real resources and the forces guiding consumption, production and investment decisions. The economic benefits from lower prices arise not from bare transfers of wealth from consumers to producers, but from the increased consumption by customers previously precluded from doing so due to prices exceeding their willingness to pay. Benefits are generated because the quantity produced of a product or service is otherwise inefficiently low since consumers who are willing to purchase it at cost reflective levels are unable to do so.

In other words, it is possible to increase the welfare of some consumers without making any other party worse off.<sup>10</sup> Wealth transfers are immaterial in this assessment since gains to one

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<sup>7</sup> Commerce Commission, *Guidelines to the Analysis of Public Benefits and Detriments*, October 1994 (revised December 1997).

<sup>8</sup> See for instance: *The New Zealand Co-operative Dairy Company Ltd v Commerce Commission* [1992] 1 NZLR 602; *Ravensdown Corp Ltd v Commerce Commission*, 9 December 1996, Pankhurst J and Lattimore, HC Wellington AP168/96, pp29-36; *Telecom Corporation of New Zealand Ltd v Commerce Commission* [1992] 3 NZLR 429 (CA).

<sup>9</sup> The Treasury, *Treasury Report No T2004/774: Briefing for EDC Local Loop Unbundling and Fixed PDN in New Zealand*, 10 May 2004, p7.

party are wholly offset by losses to another. The long-term interests of consumers are best served by regulation aimed at maximising *total* economic welfare,<sup>11</sup> thereby improving the efficiency of the resource allocation. This is well accepted amongst economists. The New Zealand Treasury has similarly stated:

***“An efficiency based approach is best aligned with the purpose of the Act, as the long run interests of consumers is served by allowing producer surplus to incentivise innovation and entry into the market.”***<sup>12</sup>

Instead, by counting wealth transfers as the primary economic benefit from regulation the Commission risks creating an inefficient allocation of resources whereby the overall benefits to New Zealand are outweighed by the costs of regulation.<sup>13</sup> In such circumstances, New Zealanders are in fact worse off relative to a situation of no regulation. Treasury has recognised this shortcoming in the Commission’s methodology:

***“Treasury disagrees with the approach the Commission has taken, as including distribution effects in a cost benefit analysis could justify regulation where there is an inefficient outcome, but offsetting wealth transfers.”***<sup>14</sup>

[...]

***“Treasury considers that the assessment framework should only include efficiency gains, as these gains are the actual benefit to New Zealand and this approach is consistent with the Telecommunications Act.”***<sup>15</sup>

Similarly, the Ministry of Economic Development has stated:

***“Efficient telecommunications markets for the long term benefit of end users’ is equivalent to ‘net economic benefits’.”***<sup>16</sup>

By counting wealth transfers as benefits, the Commission increases the magnitude of the apparent static efficiency benefits, and thus the likelihood that those benefits will exceed any foreseen dynamic efficiency detriments. In doing so, it boosts the likelihood of producers

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<sup>10</sup> This is also known as a ‘Pareto improvement’.

<sup>11</sup> Total economic welfare is calculated by adding together consumer surplus and producer surplus.

<sup>12</sup> The Treasury, *Treasury Report No T2004/774: Briefing for EDC Local Loop Unbundling and Fixed PDN in New Zealand*, 10 May 2004, p7.

<sup>13</sup> It is also worth noting that imposing regulation is not a costless exercise, which will compound existing inefficiencies.

<sup>14</sup> The Treasury, *Treasury Report No T2004/774: Briefing for EDC Local Loop Unbundling and Fixed PDN in New Zealand*, 10 May 2004, p18.

<sup>15</sup> op. cit. p7.

<sup>16</sup> Ministry of Economic Development, *Clause by Clause Analysis*, p13.

being deprived of surplus, and potentially fair returns on efficient investments. This may in turn undermine the incentives those producers might otherwise have to undertake efficiency enhancing investments and innovations.

The Commission attempts to reconcile this trade-off between depriving producers rent and harming dynamic efficiency by undertaking a qualitative assessment of dynamic efficiency impacts. However, this approach lacks the rigour applied to the static welfare analysis. Whilst it is difficult to measure dynamic efficiency quantitatively it is nonetheless surprising the Commission made no attempt to do so in the cost benefit assessment.<sup>17</sup> The impact of dynamic efficiency on long-term consumer welfare may often outweigh the incremental static effect from price changes and so should be given considerable attention.<sup>18</sup>

### 2.2.3. Redistribution as a goal of regulation

The Commission's interpretation of the Act as being consistent with its redistribution proposals is the subject of significant controversy. Although we do not here attempt to interpret what the Act intends on distributional issues, we note that determining the appropriate distribution of wealth is a very complex issue. It is unlikely to be necessary or desirable for the Commission to undertake a redistribution role by facilitating wealth transfers via regulatory intervention, as Treasury explains:

***“We consider regulation is best used to improve the efficiency of markets. The Government has other policy instruments to address concerns about distribution of income.”***<sup>19</sup>

The Commission has itself acknowledged the difficulties implicit in undertaking a redistributive role:

***“Distributional issues are subjective and the Commission's views on them may have no greater validity than anyone else's. For example, there is no a priori reason why the status quo should be favoured over a new distribution of wealth; nor why a large group of the population (eg, consumers) should be more deserving than a small group of the population (eg, producers).”***<sup>20</sup>

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<sup>17</sup> For example, the Commission customarily estimates dynamic efficiency impacts quantitatively in the context of authorisation applications.

<sup>18</sup> This is principally because investment and innovation leading to the inception of new products and services provides the entire producer and consumer surplus as a potential economic benefit, whereas regulation, at best, uses price movements to bring about incremental changes in the level of total surplus.

<sup>19</sup> The Treasury, *Treasury Report No T2004/774: Briefing for EDC Local Loop Unbundling and Fixed PDN in New Zealand*, 10 May 2004, p8.

<sup>20</sup> Commerce Commission, *Guidelines to the Analysis of Public Benefits and Detriments*, October 1994 (revised December 1997), p14.

The redistribution of wealth should take place using the most effective policy tools available, and it is unlikely that the Commission possesses such tools. The regulator's principal policy objective should be to maximise total surplus through promoting efficient resource allocation and that surplus can then be redistributed through governmental mechanisms such as taxation policies and targeted subsidy schemes.

### 3. UNWORKABLE IN PRACTICE

Not only is the consumer welfare standard adopted in the Commission's *Draft Report* unsound in principle but also it is unworkable in practice since:

- the factor inputs that are combined to produce telecommunications services (the land, labour, capital and entrepreneurship) are ultimately owned by 'end-users', and so it is infeasible to isolate and maximise 'end-user' surplus; and
- bare wealth transfers accruing to business customers cannot properly be classified as benefits to 'end-users' since in those circumstances telecommunications services are an input into a production process used to produce other goods and services.

#### 3.1. Identifying 'End-Users'

It is extremely difficult to isolate the welfare impact of regulation upon persons as 'end-users' since those persons will similarly be affected in their capacities as land owners, workers and investors. Attempting to isolate and maximise consumer surplus is infeasible since the impacts upon producers and 'end-users' are indistinguishable. Put simply, every producer is also an 'end-user'.

To illustrate, consider the impact upon the 'end-users' of Telecom's mobile telephony services. Many of these 'end-users' will also be employees and shareholders of the company. Indeed, Telecom employs approximately 0.25 per cent New Zealand's workforce<sup>21</sup> and comprises approximately 25 per cent of the market capitalisation of the NZSX50 index.<sup>22</sup> Likewise, a significant proportion of Telecom stock is owned by financial institutions tasked with investing people's financial assets – these people will also be 'end-users' of telecommunications services.<sup>23</sup>

It follows that the Commission cannot be confident that it has identified 'end-users', much less maximised the economic benefit accruing to this group. To do so with any precision is simply infeasible since there is ultimately no way to distinguish between welfare impacts upon producers and 'end-users'. For every dollar a person gains in his capacity as an 'end-user' of mobile telephony services following regulation, that person may lose more or less than a dollar in his capacity as employee, land-owner or shareholder. The Commission's

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<sup>21</sup> See Telecom New Zealand, *Some quick facts about Telecom*, accessed on 10 January 2005 from: <http://www.telecom.co.nz/content/0.3900.200650-1548.00.html>; and Statistics New Zealand, *Labour Market Overview 2003*, accessed on 10 January 2005 from: [www.stats.govt.nz](http://www.stats.govt.nz)

<sup>22</sup> NZX Website, *Telecom Corporation of New Zealand Limited Security Details: 10 Jan, 2005* accessed 10 January 2005 from: [http://www.nzx.com/market/security\\_details/by\\_security?code=TEL](http://www.nzx.com/market/security_details/by_security?code=TEL), and NZX Website, *Market Data – 10 January 2005*, accessed 10 January 2005 from: <http://www.nzx.com>

<sup>23</sup> A significant proportion of Telecom's shareholders may not be New Zealanders. Similarly, a significant proportion of 'end-users' of Telecom's mobile telephony services may be foreigners, eg, foreigners calling into New Zealand will pay mobile termination charges. In other words, there will be both foreign producers *and* 'end-users'.

methodology would conclude that such a person was better off, despite the fact that he may be indifferent or possibly worse off following regulation.

In essence, the Commission seeks to count as a benefit redistribution of wealth between one 'end-user' or class of 'end-users' and another, favouring some over others in an incalculable way. Such redistributions are unlikely to have improved consumer welfare in aggregate. Accordingly, the Commission's methodology is not only flawed in principle, but also it neither achieves what it intends in practice, nor is it able to. The issues raised above are immaterial if regulatory policies aim to promote efficiency since the total benefits that are available to 'end-users' in all guises, eg, consumers, workers and shareholders, will be maximised.

### 3.2. Intermediate Users

The Commission defines 'end-users' by reference to section 5 of the Act:

*“... an end-user, in relation to a telecommunications service, means a person who is the ultimate recipient of that service or of another service whose provision is dependent on that service.”<sup>24</sup>*

Despite stating that intermediate users of telecommunications services are *not* counted amongst 'end-users',<sup>25</sup> the Commission notes that business customers *are* counted amongst 'end-users'.<sup>26</sup> These statements are contradictory since bare wealth transfers accruing to business customers cannot properly be classified benefits to 'end-users'. Mobile telephony services procured by business customers constitute an input into a production process used to produce other goods and services. In other words, business users are 'intermediate users', not 'end-users'.

To illustrate this, consider a restaurant. It will likely demand telephony services for confirming reservations from customers and ordering ingredients from suppliers. These telecommunication services form one of many inputs into the production of the final product, ie, the serving of meals to its clientele. The restaurant is therefore an intermediate user of telecommunications services, not the end or ultimate user. By contrast, the restaurant owner would be considered an 'end-user' when using his home telephone to call the mobile telephone of a friend since the service is not being used to produce a good or service to be sold to a third party.

The above illustration highlights the impracticability of the Commission's proposed measure of benefits. In order to maximise benefits to 'end-users' as defined by the

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<sup>24</sup> *Draft Report*, p13.

<sup>25</sup> See *Draft Report*, p14.

<sup>26</sup> *Ibid.*

Commission, all business users of telecommunications services must be excluded. Instead, to maximise 'end-user' benefits as per its stated intention, the Commission would need to estimate the welfare impact on the *restaurant's customers*. This is clearly an impossible goal.

#### 4. CONCLUSION

This report has addressed the merits of the Commerce Commission decision to count wealth transfers from producers to consumers as economic benefits of regulation in its *Draft Report*. We conclude that the Commission's analysis rests upon the fundamentally flawed premise that regulation and competition seek to achieve different objectives. Their respective goals are in fact identical - each is an alternative means of facilitating an improved allocation of society's scarce resources. The Commission nevertheless maintains a philosophical distinction and claims that the treatment of welfare effects resulting from each should differ.

Specifically, the Commission counts the transfer of wealth from producers to consumers brought about as a consequence of regulation as a benefit of regulation. This approach is unsound in principle and is likely to be unworkable in practice. The welfare calculus contained in the *Draft Report* cannot therefore provide a reliable indication of the long-term benefits to 'end-users' of regulating mobile termination services.

Rather, the net benefits of any proposed regulatory measure should be assessed against a total welfare standard, ie, the implications for the sum of both producer and consumer surplus. By amending its approach in its *Draft Report* to achieve this, the Commission would be bringing its evaluation framework into line with that endorsed by the courts, the government and its own approach to discharging its wider responsibilities under the *Commerce Act*.