

# Chapter X

## Competition, Regulation, and Broadband Diffusion: The Case of New Zealand

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### ABSTRACT

*New Zealand offers a through-provoking case study of the effects of different competition and regulatory policies on broadband diffusion rates. Despite having one of the highest rates of Internet connection and usage in the OECD, widely available broadband infrastructure, and low broadband prices, broadband uptake per capita languishes in the bottom third of the OECD. While low uptake has typically been attributed to competition and regulatory factors associated with New Zealand's 'light-handed' regulatory regime, this chapter proposes that a more credible explanation lies in a combination of New Zealand's legacy of demand-side regulations, in particular the retail tariff options for voice telephony, and the limited value being derived by New Zealand residential consumers from the small range and narrow adoption of applications used currently that necessitate broadband connections. The New Zealand case illustrates the effect that legacy regulations can have on both the diffusion of new technologies per se and the choices made by consumers between different generational variants within that technology. The case indicates a need for more research on the effect of telecommunications industry regulations on demand-side uptake factors.*

### INTRODUCTION

Despite being one of the leading countries in the adoption<sup>1</sup> and use of Internet access, and having (1) a sophisticated e-commerce infrastructure and internationally very high numbers of e-commerce transactions per capita; (2) a population regarded as avid early adopters and users of applications such as electronic funds transfer and electronic

commerce (Boles de Boer, Evans, & Howell, 2000); (3) widespread and early deployment of a variety of high-speed broadband technologies; and (4) internationally low prices for broadband products, New Zealand's broadband uptake per capita has been consistently in the lower third of the OECD<sup>2</sup> (see Table 1). The simplistic explanation typically offered for low broadband uptake has been New Zealand's telecommunications competition and

Table 1. Relative OECD Internet connectivity and uptake rankings, 2003 (Howell, 2003, p. 39)

Internet Metric	New Zealand		Australia		USA		South Korea		UK		France	
	#	Rank	#	Rank	#	Rank	#	Rank	#	Rank	#	Rank
<i>Connectivity Statistics</i>												
ISP Accounts/100	14	9 <sup>th</sup>	12	10 <sup>th</sup>	18	5 <sup>th</sup>	23	1 <sup>st</sup> =	11	12 <sup>th</sup>	5	21 <sup>st</sup>
Household %	48	5 <sup>th</sup>	47	8 <sup>th</sup>	50	3 <sup>rd</sup>	-	-	38	10 <sup>th</sup>	12	23 <sup>rd</sup>
School Availability	22	4 <sup>th</sup>	17	5 <sup>th</sup>	27	2 <sup>nd</sup>	5	19 <sup>th</sup>	16	9 <sup>th</sup>	6	18 <sup>th</sup>
Internet Hosts/1000	10	8 <sup>th</sup>	95	10 <sup>th</sup>	272	1 <sup>st</sup>	14	26 <sup>th</sup>	63	13 <sup>th</sup>	31	19 <sup>th</sup>
Web Sites/1000	5	11 <sup>th</sup>	9	13 <sup>th</sup>	47	1 <sup>st</sup>	6	17 <sup>th</sup>	25	4 <sup>th</sup>	4	20 <sup>th</sup>
Domain Names/1000	22	11 <sup>th</sup>	19	16 <sup>th</sup>	38	5 <sup>th</sup>	21	14 <sup>th</sup>	51	1 <sup>st</sup>	9	20 <sup>th</sup>
Secure Servers/million	20	3 <sup>rd</sup>	19	5 <sup>th</sup>	301	2 <sup>nd</sup>	11	28 <sup>th</sup>	141	8 <sup>th</sup>	38	21 <sup>st</sup>
2		0										
<i>Broadband Statistics</i>												
BB Subscr/1000 <sup>8</sup>	7	19 <sup>th</sup>	9	17 <sup>th</sup>	47	4 <sup>th</sup>	173	1 <sup>st</sup>	6	20 <sup>th</sup>	11	15 <sup>th</sup>
DSL Subscr/1000 <sup>9</sup>	14	15 <sup>th</sup>	8	20 <sup>th</sup>	15	14 <sup>th</sup>	130	1 <sup>st</sup>	7	21 <sup>st</sup>	12	17 <sup>th</sup>
DSL Coverage %	85		85			65		90		66		91
<i>Uptake Statistics</i>												
Hours/month/ISP account	21	2 <sup>nd</sup>	18	4 <sup>th</sup>	26	1 <sup>st</sup>	-	-	10	7 <sup>th</sup> =	10	7 <sup>th</sup> =
	(Xtra)		(Telstra)		(AOL)				(All ISPs)		(All ISPs)	

regulatory framework (Ministry of Economic Development, 2006).

In an industry where sector-specific regulation, and local loop unbundling (LLU) in particular, have been strongly advocated and widely adopted internationally<sup>3</sup> with the specific objective of accelerating broadband uptake rates,<sup>4</sup> New Zealand has stood apart from most of its OECD counterparts. Principal differences are its historic reliance upon competition law and minimal regulation to shape participants' actions,<sup>5</sup> and its reluctance to impose competitive access obligations on its solitary privately owned national fixed-line network operator (Boles de Boer & Evans, 1996). In the absence of detailed market analyses, 'competition problems' attributed to the different regulatory approaches have become convenient scapegoats upon which to lay the blame (e.g., Network Strategies, 2006) for the New Zealand broadband uptake 'problem.'<sup>6</sup>

The credibility of the 'competition problem/regulatory differences' explanation for low broadband uptake begins to fail, however, when juxtaposed against New Zealand's OECD leadership in virtually every other indicator associated with uptake and utilization of the Internet. The same competitive and regulatory framework applying during

the rollout of broadband infrastructures appears not to have impeded investment in, or uptake and utilization of, all other non-broadband Internet-related infrastructures and applications.<sup>7</sup> Neither does it appear to have impeded investment in or internationally competitive pricing of broadband services.<sup>8</sup> The primary characteristics that competitive markets are presumed to deliver, and which are the primary objectives of regulatory intervention when the competitive process is impeded—low prices, timely introduction of new services and higher product qualities, and universal availability and prices<sup>9</sup>—have already been achieved. The additional benefits that are typically expected from increased competitive intensity—greater provider variety and consequent marginal improvements in service quality—do not appear to be sufficient to account for the substantial differences in broadband diffusion per capita between New Zealand and countries with smaller Internet-using populations, higher absolute prices for broadband access, and less widely available infrastructures.<sup>10</sup>

The New Zealand case study begs the question of what role specific regulatory interventions play in determining broadband diffusion rates. Firstly, how has New Zealand been able to achieve sup-

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