



# COMPETITION & REGULATION TIMES

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JUNE 2000

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## INTERNET CHEAPER IN NZ: ARE OUR REGULATIONS BETTER?

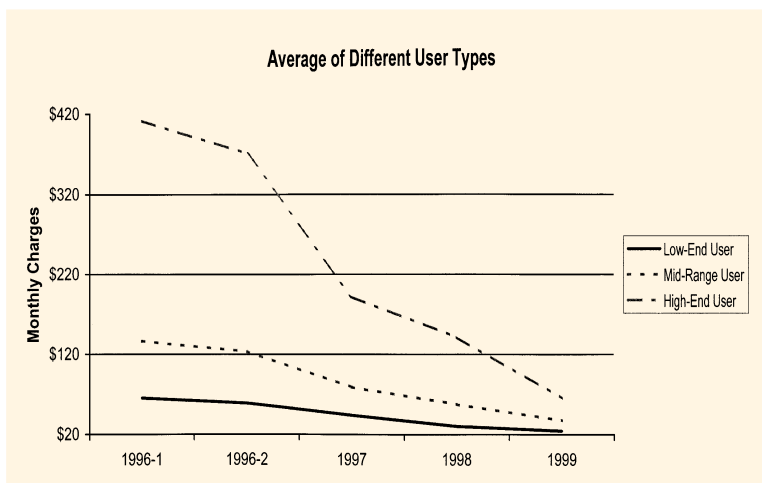
**S**trong competition is quickly reducing Internet charges in New Zealand, according to a new study from the Institute for the Study of Competition and Regulation<sup>1</sup>.

New Zealanders also enjoy cheaper and more widespread Internet access than do Australians.

Internet charges in New Zealand are falling steeply. High users (those who are on the 'net 50 hours a month or more) have benefited the most, with their monthly charges falling to a quarter or less of the 1996 price. Prices for low-end users (10 hours a month or less) started lower and have fallen by more than half in the same period. The Internet market has a number of features that lead to strong competition:

- Barriers to entry are low: a new Internet service provider needs little more than an Internet server (\$5000 to \$20,000), leased bandwidth and a helpdesk. The required bandwidth can be bought on monthly contracts - i.e., they are very flexible to reflect changing demand.
- Customer switching costs are also low: changing to a new provider requires only a connection fee (which is sometimes waived), installing some new software (which is often free), and being willing to change to a new email address (which is not an issue for businesses with a domain name).

The study shows that Internet access in Australia is at least one-third more expensive than in New Zealand. Australian high users get the worst deal relatively.



The price differential is still significant (although it is smaller) when using a purchasing-power-parity adjustment instead of the nominal exchange rate.

The lower prices are spreading the Internet more quickly in New Zealand. Good information on Internet usage is hard to come by, but Internet penetration is at least as high in New Zealand as in Australia. Measured by the number of Internet accounts per head of population, penetration is almost one-third higher in New Zealand, with Internet accounts for 13% of the population in New Zealand, versus 10% in Australia.

The lower New Zealand prices are remarkable given that Australia has, per head of population, approximately three

times more Internet service providers than New Zealand.

The data is even more remarkable given Australia's city-based population density. As another study (see "Regulating when people are few and far between" on page 4 of this issue) has found, the cost of providing local wire-line service falls (to page 2)

<sup>1</sup> Boles de Boer; David, Christina Enright and Lew Evans. 2000. *The Internet Service Provider Markets of Australia and New Zealand as of 1999*. New Zealand Institute for the Study of Competition and Regulation Inc (NZISCR) Research Paper. [www.iscr.org.nz/research](http://www.iscr.org.nz/research)

### INTERNET MONTHLY ACCESS CHARGES (WEIGHTED AVERAGE)

Level of use	Australia			New Zealand
	PPP	NER	NER	
Low	\$A22	\$NZ25	\$NZ27	\$20
Middle	\$A33	\$NZ37	\$NZ40	\$27
High	\$A58	\$NZ66	\$NZ70	\$38

PPP = Australian-dollar price converted to New Zealand dollars using OECD's purchasing power parity measure (\$NZ1 = \$A0.88)  
 NER = Australian-dollar price using nominal exchange rate (\$NZ1 = \$A0.83)  
 Weighted average adjusts price according to the market share of each provider.

## SIZE MATTERS, AND SO DOES THE PACE OF CHANGE

**T**is the season to be reviewing, judging by the new Government's industry reviews of telecommunications and electricity. But is it the season to be regulating?

The Government is to be applauded for conducting industry reviews before deciding whether and how to change its regulations. At the very least, the reviews will provide an open stock-taking of these industries, and will result in policy that is informed by producers and consumers.

Where regulation does prove to be necessary, it will be most effective if it fits with the times and recognises the features that are distinctive about New Zealand and our industries. Indiscriminately applying international benchmarks, or looking overseas for regulatory models, is fraught with difficulty and may provide the wrong answer for this country.

As Alger and Leung demonstrate in the telephony industry (see "Regulating where people are few and far between", page 4), a relatively low population density such as New Zealand's results in higher network costs per unit consumed. Using overseas models uncritically could lead to regulating prices to a level below what is feasible, resulting in inadequate investment and poor service.

In addition, the capital base of even our largest companies is modest on a global scale. The very small size of the New Zealand domestic market implies that in many industries it is efficient (and in consumers' overall interest) to have few sup-

pliers. This in turn suggests that the thresholds at which mergers and anti-competitive behaviour prompt intervention in this country should be higher than in large-market economies.

We live in an age of dynamic and rapid technological change, with its capacity to alter dramatically all facets of industry.

Innovation provides opportunities for markets to become more competitive. New and superior technologies threaten the status quo and stimulate competition. Some of the types of regulation we have used in the past could thwart innovation that benefits consumers.

For example, economies are now possible from the combined delivery of utilities (gas, electricity and telecommunications) to households and businesses. For these consumer benefits to be realised under regulation, it would have to be of a form that cuts across industries, as opposed to being industry-specific.

Rapid technological change suggests benefits from decentralising decisionmaking.

Decentralisation has benefited consumers in telecommunications with the entry of a wide variety of firms. It is also showing benefits in the electricity sector - for example, with smaller, more efficient power stations being built closer

(from page 1) very steeply as population density increases. If that were the only difference between the two countries, then the telephony-network component of Internet costs would be 5% lower in Australia than in New Zealand.

The current price difference between New Zealand and Australia should not be sustainable, because Internet providers' inputs are readily internationally tradeable, even to the extent that some Internet traffic between two points in New Zealand is already routed via Australia.

But it is not at all clear why price differences

between New Zealand and Australia should be so great at this stage of market development. Differences in the way local telephone calls are charged in the two countries are unlikely to be a factor.

What is different is the complex way in which telecommunications is regulated in Australia. Open access to infrastructure - for instance, bandwidth - comes at a price ultimately determined by the Australian Competition and Consumer Commission, rather than a market-determined price as occurs in New Zealand.



to consumers (and thus reducing energy losses). An important issue for the future is the appropriate level of aggregation in the electricity market. The "right" answer is not clear - and it will change with costs, demand and the efficacy of tools for managing risk.

Across all sectors, looking at regulation for its impact on investment and technical change is likely to benefit consumers much more than trying to fix past problems.

The best use of industry regulation (and the best way for competition law to assist industry regulation) is to promote competition as a means to improve current and future consumer welfare.

We should beware of industry-wide "consensus views", because the very existence of such a consensus is inconsistent with the dynamic forces that drive innovation.

Today's "right answer" to regulatory questions will be different from the answers of the past, and is likely to be different for New Zealand than in other countries.

Let's look forward, not back. And let's think about what makes New Zealand different.

PROF. LEW EVANS, EXECUTIVE DIRECTOR, NZISCR

Commentators have argued that the Australian process promotes access, but inhibits competition and efficient provision of network infrastructure. The outcomes of this study proffer some support for these critics of Australia's open access regulation.

This study underlines the need for further research into the effects of the differing regulation styles of the two countries, because competition to provide infrastructure is one of the critical factors in designing good regulations.

The ISCR Competition & Regulation Times is the newsletter of The Institute for the Study of Competition and Regulation, Inc. PO Box 600, Wellington, New Zealand. Ph: 64 4 463 5562, fax: 64 4 463 5566, email: iscr@vuw.ac.nz  
ISSN 1175-2912

Contributors to this issue include Mark Berry, Judy Bethwaite, David Boles de Boer, Lewis Evans, Bronwyn Howell and Maureen Revell. The Institute also acknowledges the editorial and production input of Sue Wood & Associates and AD Communication, especially Helen Milner, Chris Montgomerie and Nikitin Sallee. The original cartoon is by Bill Paynter.

# WAS “WOMEN’S LIB” BIGGER THAN “ROGERNOMICS” FOR LABOUR MARKETS?

**S**ocial and economic historian Tim Mulcare says that the direction of labour market reforms owes more to the social changes of the 1960s than the economic reforms of 1984, and should not have come as a surprise.

Mulcare’s study<sup>1</sup> argues it was the liberal social changes of the 1960s that led to demands from women for more part-time work, more flexible working hours and longer shop trading hours. This led to the deregulation of shop trading hours in 1977, and presaged further liberalisation of the labour market, which continued through to the 1991 Employment Contracts Act.

Along the way, Mulcare’s thesis provides a fascinating insight into some of the icons of our social history - the corner dairy, Saturday rugby and “doing overtime”.

The focus of Mulcare’s work is the statutory regulation of shopping hours spanning 1892 through to the late 1970s. These set the standard working week across all trades, and effectively kept New Zealand women out of the paid work force.

Because shops were only allowed to open during certain hours of the day, and since women were the main purchasers of goods and services for families, shopping hours limited women’s ability to obtain paid work.

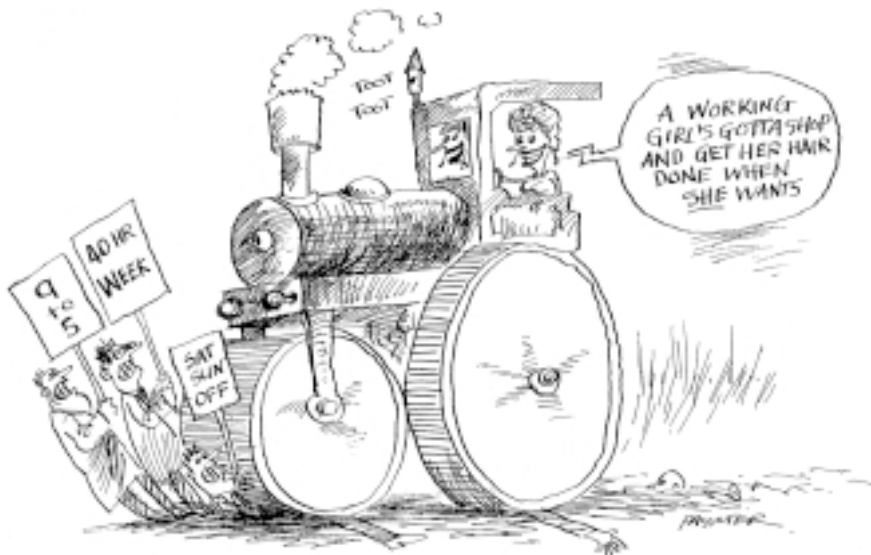
It is perhaps no surprise that this gave little cause for concern. After all, the principal beneficiaries of this arrangement were unions and their mainly male members. Governments, meanwhile, could claim the achievement of a “full employment” economy.

In short, organised labour was able simultaneously to raise real wages by reducing the standard working week, without exacerbating unemployment, in part by lowering female participation in the workforce.

Thus was entrenched the notion of a single male breadwinner.

The liberalisation of shop trading hours in the late 1970s began eroding protection for the income, employment and family status of working men.

When moves were made to allow shops to open later at night and on Saturdays, the move was firmly opposed by male-dominated unions. It was portrayed as the “thin end of the wedge” that would destroy the 40-hour, five-day week and - not to put too fine a point on it - encroach



on the time available for home concreting and playing, coaching or watching the national sport. Mulcare says that the 1892 and 1894 Shop and Shop-assistants Acts introduced the principle of a working week, and set the scene for maximum working hours negotiated by labour unions in the arbitration court under the Industrial Conciliation and Arbitration Act 1894. Hours of work in excess of the maximum, or outside statutory trading hours, were subject to hefty penalty overtime rates.

During the decades that followed, lower thresholds at which overtime rates were paid were a

key outcome of labour-union bargaining, while statutes maintained the standard working week in retailing.

Together, penal rates and trading hour statutes set a premium on the great New Zealand weekend. Only a limited range of “essential” commodities could be sold outside statutory trading hours. These were sold at higher prices to cover the cost of overtime rates paid to shop workers.

Thus was born one of New Zealand’s lesser icons: the corner dairy. These mixed business suburban corner stores sold exempted, perishable groceries using unregulated family labour. Typically, dairies were able to charge 50-100% more for their goods than supermarkets. That cost was borne especially by households where both husband and wife were engaged in full-time work during standard hours. Restricted shopping hours also influenced where to set up shop for many years because they increased shopping demand closer to workplaces than residential areas.

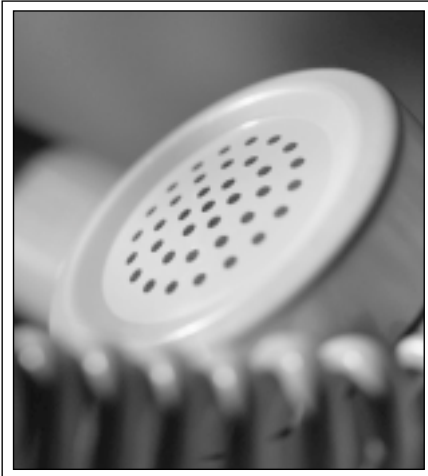
Again, it was the pressure to extend shopping hours beyond common full-time employment hours that encouraged the establishment of large, suburban shopping malls which brought down costs for consumers. We’ve come a long way since New Zealand was the butt of the joke that it was closed on weekends. But as Mulcare’s analysis shows, the pressure for change and the dismantling of regulations that determined when we could work, shop and play, came long before the reforms of 1984.

“ORGANISED LABOUR WAS ABLE TO RAISE REAL WAGES BY REDUCING THE STANDARD WORKING WEEK, WITHOUT EXACERBATING UNEMPLOYMENT, IN PART BY LOWERING FEMALE PARTICIPATION IN THE WORKFORCE. THIS WAS ENTRENCHED THE NOTION OF A SINGLE MALE BREADWINNER.”

<sup>1</sup> Mulcare, Tim. 1999. *Statutory trading hours and the standard working week: the case of New Zealand. NZISCR Research Paper.* [www.iscr.org.nz/research](http://www.iscr.org.nz/research)

# REGULATING

## WHEN PEOPLE ARE FEW AND FAR BETWEEN



**P**opulation density has emerged as a significant factor when New Zealand compares its prices with those in other countries.

Cross-country price comparison is often used to assess the performance of alternative forms of industry regulation (and as evidence of whether regulation is needed in the first place).

But a recent study shows the value of taking into account local factors, instead of assuming that price alone is a valid way to compare industries across countries.

The study<sup>1</sup> concludes that New Zealand's telecommunications costs may be 15% to 20% higher than in the US, and 30% higher than in the UK, based on differences in population density alone. The density factor is likely to be just as relevant for New Zealand's other wire and pipe networks (such as electricity and gas).

The accompanying figure shows that unit costs of local wire-line service fall very steeply as density increases (although at a decreasing rate). Thus costs in rural areas are much higher than in urban areas.

The study applies an accepted model of telephone costs used in American regulatory hear-

ings. It finds that the geographic density of customers explains most of the variation in telephony costs across the 50 US states. (The variation is huge, ranging from \$US8.50 per month to US\$38.13 per month to provide a single telephone line.)

The lessons are important when assessing different countries' approaches to regulation. Price comparisons are potentially a very powerful indicator of industry performance, because they compare actual industry outcomes.

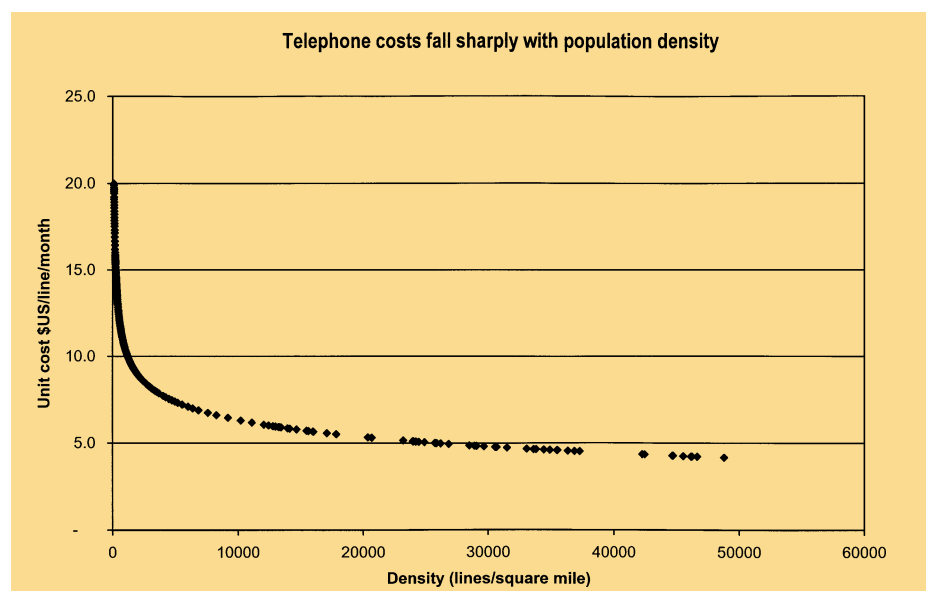
This should be superior to comparing outcomes with a hypothetical (and impossible) ideal, or comparing outcomes with the past where so many other factors apart from regulation are involved. But results are only valid if prices are compared in ways that account for local characteristics. The Alger-Leung study shows how misleading cross-country price comparisons can be unless prices are adjusted for country-specific factors such as population density.

For this reason, country price indexes for telephony, such as those reported by the OECD since 1991, and which are not adjusted for differences between countries, should be interpreted with caution.

“CROSS-COUNTRY PRICE COMPARISONS CAN BE MISLEADING UNLESS PRICES ARE ADJUSTED FOR COUNTRY-SPECIFIC FACTORS SUCH AS POPULATION DENSITY.”

Interestingly, the Alger-Leung study found that variations in some financial inputs were much less significant than population density in affecting telephony costs. For example, significant changes in wage rates had little effect. In contrast, variations in the assumed economic life of copper wire were significant - and even that factor had a different effect on costs depending on population density.

<sup>1</sup> Alger, Dan and Joanne Leung. 1999. *The Relative Costs of Local Telephony Across Five Countries*. NZIER Research Paper. [www.iscr.org.nz/research](http://www.iscr.org.nz/research)



# IS A CRONY CAPITALIST TAKING YOUR ASIAN DIVIDENDS? THE CASE FOR REGULATORY OR LEGAL CONSTRAINT

**I**n a guest lecture at ISCR, Professor Leslie Young explored the dividend payment practices of corporations in Europe and East Asia and found evidence for the theory that “crony capitalism” may have contributed to the Asian financial crisis.

Professor Leslie Young’s study<sup>1</sup>, presented in Wellington in March, found that capital markets are fairly good at protecting small shareholders when the control exerted by large shareholders is obvious. But when large shareholders’ influence is harder to detect, they can and do expropriate wealth.

Small shareholders seem to be better protected in Europe than in East Asia.

“Pyramiding”, or owning shares in a company which in turn owns or dominates a second one, can ensure that control rights to a company are significantly higher than ownership rights (see box).

Control relative to ownership rights is important because those with more control than ownership (“insiders”) have both the incentive and the ability to divert company resources to the detriment of smaller shareholders (“outsiders”). About half the companies in Europe and East Asia are potentially subject to this phenomenon, because they are affiliated to a group of companies controlled by the same shareholder.

The power to expropriate can arise directly through the insider’s voting rights at the board table, and more subtly through the insider’s strong relationship with management. Methods of expropriation include, for example, unreasonable terms for sales within the group (artificially passing profits up the corporate chain to the controlling shareholder) and in the way assets are transferred within the group.

Among the questions Professor Young’s study addressed were:

- Do capital markets properly account for control-versus-ownership issues through the dividends they require?
- Does the potential for expropriation take place in practice?
- If so, does the level of expropriation vary with the level of control?
- Does the legal framework make a difference?

The study focused on the level of dividends paid. That is because dividends play a basic role in controlling

## Control v. ownership

Three key concepts underlie Professor Young’s research:

- Ownership rights: Ownership rights in a company correspond with one’s actual and imputed shareholding in it. For example, suppose you own 10% of company A, which in turn owns half of company B. Your ownership rights in B are 5% (10% x 50%).
- Control rights: Through “pyramiding”, one’s control rights can be significantly higher than one’s ownership rights. For example, suppose you own 50% of company X, which owns 30% of Y. Your ownership rights in Y are 15% (50% x 30%), but your control rights are 30% (because you effectively control all of X’s share).
- Control/ownership ratio: In the latter example, the C/O ratio is 2.0 (30% control rights versus 15% ownership rights).
- When significant shareholders (thought to be above 10% of control) have an C/O ratio greater than one, then they have both the incentive and the power to expropriate company resources to the detriment of smaller shareholders.

insider exploitation: the higher the dividend paid, the less corporate wealth remains for insiders to control, and the more shareholders are equally treated. The study found that if the controlling shareholder has more than 20% of control, then investors in both Europe and Asia expect, and generally receive, a higher dividend. This suggests that capital markets are aware of the potential for expropriation, and extract a higher dividend to compensate. So far so good.

However, outside shareholders in East Asia do significantly worse than their European counterparts. While East Asian corporations with a 20% controlling shareholder do pay higher dividends, the dividend levels are significantly smaller than in Europe. Professor Young concludes that the more developed capital markets of Western Europe better anticipate the risk of expropriation, and are better at compensating smaller shareholders for that risk. Problems arise in both regions when the controlling shareholder’s rights fall in the 10% to 20% range. Such corporations pay significantly lower dividend rates, suggesting that capital markets overlook the scope for expropriation at this level of control.

But even here the problem is more dramatic in East Asia. In Europe, such capital market failure is of little consequence, because less than 3% of

companies have a shareholder with control in the 10% to 20% range. In East Asia, by contrast, they comprise more than 15%.

Moreover, Asian firms are much more likely to be controlled by sprawling, loosely affiliated groups of companies, making it difficult for minority shareholders and analysts to discover where control lies, let alone challenge unfair practices. An “expropriation nexus” arises from the fact that in the nine most advanced Asian economies 85% of firms in the vulnerable 10% to 20% control range can be traced to only 11 ultimate owners. The same owners control more than half of all corporations with credible accounting and ownership data - and these proportions would be even higher if long-term alliances between corporations were taken into account.

Two East Asian countries, Indonesia and Thailand, were exceptional. In those countries outsiders were significantly disadvantaged even at the fairly visible 20% control level. The study suggests it is no coincidence that these two countries figured prominently in the Asian crisis. The typical investor in these countries may not even have known who were the major owners and controllers of their investments.

The study thus provides some evidence that “crony capitalism” was a significant source of the Asian economic crisis. Professor Young concludes that Asia needs greater transparency in corporate reporting, plus regulatory and legal reforms to strengthen the rights of minority shareholders. Such reforms would force the controlling shareholder to purchase more ownership rights to maintain control. This, in turn, would reduce the incentive to expropriate and might create simpler, more transparent structures that capital markets could police more effectively.

While Professor Young says there is now a consensus for such reforms in Asia, the power of small groups may manipulate political systems and thwart change. “The Asian financial crisis will have served a useful purpose if it musters the political will to confront such extreme concentrations of abusive economic power,” he concludes.

*1 Faccio, Mara; Larry H. P. Lang, and Leslie Young. Where (not) to invest - Corporate Governance and Performance: Asia and Europe. NZISCR Research Paper. [www.iscr.org.nz/research](http://www.iscr.org.nz/research)*

Leslie Young is Professor of Finance at the Chinese University of Hong Kong, and Adjunct Professor of Economics, Money and Finance at Victoria University. He has written extensively on the causes of the recent Asian financial crisis.

# MACROECONOMIC STABILITY: GOOD LUCK, GOOD POLICY OR GOOD MANAGEMENT?

**G**ood macroeconomic policy isn't the only influence keeping New Zealand's macroeconomy relatively stable. Responsive managers and new technology

deserve some credit too, says Bob Buckle.

For all that's been written about the performance of the New Zealand economy following the economic reforms of the 1980s, one key change has been almost totally overlooked: the significant fall in the variability of the macroeconomy. During the decade following the mid-1980s, New Zealand experienced an unusually stable period of economic growth. In that time the variability or volatility of quarterly real GDP fell substantially below that for the preceding decade (see top panel of Chart 1). Generally, lower volatility in the macro economy is associated with less uncertainty for business, so it is surprising that more attention has not been paid to this development.

There are three plausible explanations for New Zealand's reduced volatility: "good luck", "good policy", and "good management". The "good luck" explanation attributes the reduced volatility to favourable external macroeconomic events. The "good policy" explanation attributes it to changes to macroeconomic policy, notably fiscal and monetary policy. While these macroeconomic explanations are credible, there is a third explanation that has its roots in the idea that the microeconomic reforms of the 1980s led to improved business management practices. In particular, this "good management" explanation postulates that deregulation encouraged more responsive, financial and inventory management practices, which in turn led to a more stable macroeconomic environment.

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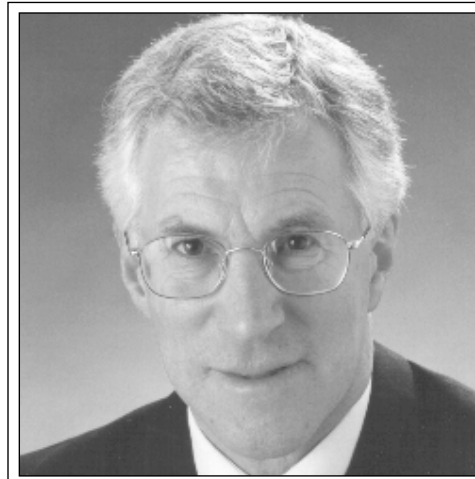
The plausibility of "good luck" as an explanation is supported by the observation that Australia and USA, New Zealand's two key trading partners, also experienced a sustained decline in volatility after the mid-1980s (also shown in Chart 1). The sustained upswing in the USA during the 1990s, the longest in its recorded history, has had a significant stabilising influence on international demand for New Zealand products, despite the Asian financial crisis. Furthermore, neither New Zealand nor its major trading partners have experienced a major sustained negative supply shock since the oil price hikes of the early 1970s.

Meanwhile, "good policy" in New Zealand in the form of changes to the institutional arrangements for monetary and fiscal policy may well have also contributed to lower GDP volatility. The Fiscal Responsibility Act 1994 and the Reserve Bank of New Zealand Act 1989 both imply a shift in the focus of fiscal and monetary policy away from short-term influences on GDP to a medium-term focus on public debt and inflation. However, this causality could easily be reversed: more stable macroeconomic conditions may have made it easier for monetary and fiscal policy to concentrate more on medium-term goals. Either way, fiscal policy has definitely been less targeted at short-run economic fluctuations than it was before the mid-1980s.

These "good luck" and "good policy" explanations focus on changes in external macroeconomic conditions and domestic macroeconomic policy. In contrast, my "good management" explanation focuses on regulatory changes and the uptake of technological innovations that encouraged better management practices by firms, and led to structural changes that have helped smooth economic fluctuations in some sectors.

I believe that several regulatory changes and technological innovations during the late 1980s and 1990s could potentially have led to greater macroeconomic stability. The removal of import licensing, export subsidies and the reduction of tariff levels have created greater incentives for New Zealand firms to seek out alternative international markets and diversify their products. Both strategies help New Zealand firms minimize risk and achieve more stable growth.

Deregulation of financial markets during the late



ROBERT A. BUCKLE, SCHOOL OF ECONOMICS AND FINANCE, VICTORIA UNIVERSITY OF WELLINGTON.

1980s provided banks and other financial institutions with more discretion and flexibility over lending decisions, thereby helping to stabilize the supply of funds for housing and business investment. In earlier years these were subject to swings in policy. In addition, easier access to credit has provided greater potential for consumers and firms to adopt methods to smooth their spending and production over time. For example, better access to credit enables firms to allow greater variation of their inventories, and use their inventories as a buffer to moderate fluctuations in production and employment. This buffer role is a key reason why inventories tend to be very volatile.

Yet paradoxically in some sectors, inventories have become less volatile during the 1990s, which in turn contributed to more stable GDP growth. One explanation for the decline in the volatility of inventories is that as the practice of spending and production smoothing becomes more widespread, it induces a feedback effect that reduces the volatility of inventories. Another explanation is that deregulation and technological innovation played an important role in reducing inventory and GDP volatility which would have occurred even if the spending and production smoothing had not become more widespread.

It appears that since the 1980s, manufacturing firms in New Zealand have been able to adopt large-scale inventory management changes of the type introduced in Japan and the USA during the late 1970s and 1980s, such as the Japanese 'kanban' or 'just-in-time' (JIT) method of inventory management. The objective of the JIT system is to minimize the stock of materials, parts and components that firms carry by having them delivered just in time for production, and to limit the inventory of finished goods by producing them just in time to meet demand. The introduction of bar-

coding and computer-based inventory management and ordering techniques assist in this process by providing almost instant marketing information about sale or use of products.

Prima facie evidence of the success in reducing inventory levels is seen in the consistent decline in the aggregate inventories-to-sales ratio for New Zealand manufacturing materials since the late 1970s (see Table 1). A smaller decline in the ratio for manufacturers' finished goods inventories and for wholesale goods is also apparent. By the end of the 1990s the manufacturing materials inventories to sales ratio had fallen to half what it was in the late 1970s. This is consistent with observations from USA research that JIT methods tend to be most widely adopted in the USA manufacturing sector, where they are more applicable for managing materials inventories.

Deregulation of the transport sector in New Zealand is likely to have played an important role in encouraging firms to adopt these new inventory management techniques. The real price of road transport services for example fell by about 14% in the decade between 1984 and 1994. This would have significantly increased the economic viability of JIT inventory management by reducing the cost of smaller, more frequent deliveries.

Inventories contribute to the business cycle and GDP volatility because an unanticipated fall in sales results in an unplanned rise in inventories. Firms respond by reducing production to restore inventories to desired levels. This in turn can exacerbate the downturn by further reducing demand. JIT inventory management techniques produce a faster reaction to sales shocks and therefore will not result in the levels of unplanned inventory accumulation previously observed.

In summary, there are good reasons to think that management responses to the microeconomic reforms may have been as important as the "good luck" and "good policy" explanations for the improved macroeconomic stability observed in New Zealand since the mid 1980s. More detailed and sophisticated research is needed before we can disentangle the relative importance of these alternative explanations.

There are nevertheless good reasons and some evidence to suggest that trade, financial and transport reforms in New Zealand may have had an unexpected and previously overlooked influence, via their effect on decisions to diversify trade, smooth spending and production levels and change inventory management procedures, on macroeconomic stability.

Robert A. Buckle is Associate Professor and Head of the School of Economics and Finance at Victoria University of Wellington. His research interests include macroeconomic policy and the microeconomic foundations of macroeconomic models, and he has authored many articles analysing New Zealand and Pacific Rim business cycles.

TABLE 1: CHANGES IN THE RELATIVE SIZE OF INVENTORIES

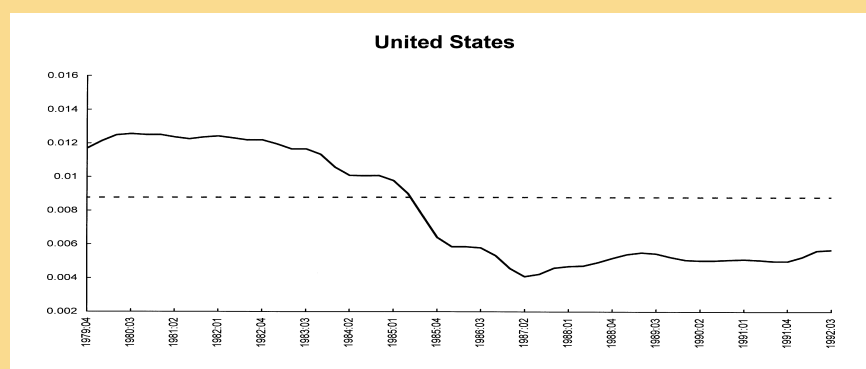
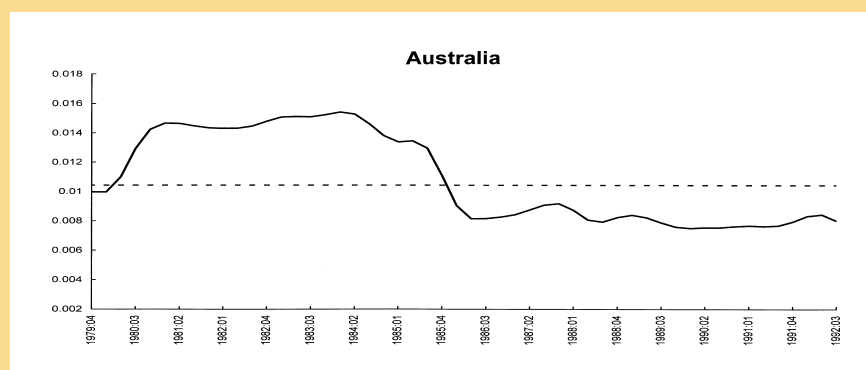
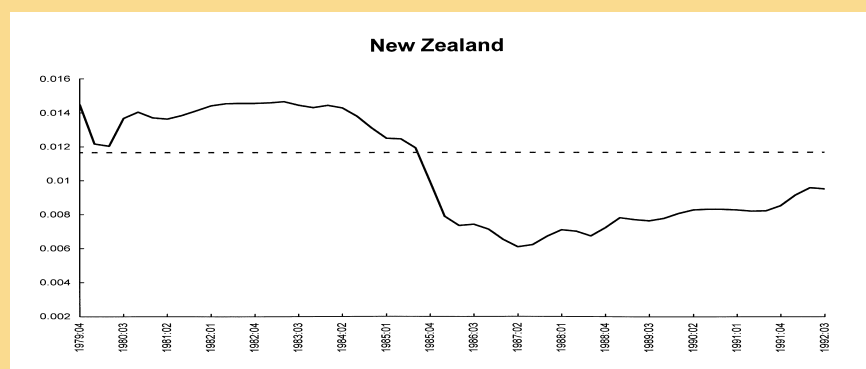
Quarter	Manufacturing Materials	Manufacturing Finished Goods	Wholesale Goods
1979(2)	0.38	0.35	na
1984(2)	0.32	0.28	0.66
1989(2)	0.27	0.25	0.54
1994(2)	0.22	0.31	0.58
1999(2)	0.19	0.30	0.54

Nominal Inventory to Nominal Sales Ratios

Source: Derived from data provided in "Key Statistics", Statistics New Zealand.

CHART 1: GDP VOLATILITY REDUCES IN THE 1980S AND 1990S

MOVING AVERAGE STANDARD DEVIATIONS FROM TREND GDP



Source: Hall, V. B., K. H. Kim and R. A. Buckle, "Pacific Rim Business Cycle Analysis: Synchronisation and Volatility", *New Zealand Economic Papers*, 32 (2), 1998, pp 129 - 159, Figure 2. Calculated as the centred average of a 21 quarter moving standard deviation from a Henderson Moving Average trend.

# GOOD CONTRACTS

## ARE AN ALTERNATIVE TO CO-OPERATIVE STRUCTURES

**H**ow to share risk between growers and processors is a common problem in many of our land-based industries. In New Zealand these issues are sometimes dealt with by co-operatives and other forms of vertical integration - some of which are statutory monopolies. But some industries handle the issues a different way.

Grower-processor co-operatives may learn lessons in efficiency from growers and processors in the wine, processed vegetable and forestry industries. That is the finding of a recent study undertaken by Haleigh Boyd, Lewis Evans and Neil Quigley<sup>1</sup>.

Their study looks at the efficiency of grower contracts used in industries with annual crop cycles but without statutory marketing boards or grower co-operative processing.

The effect of these contracts is that they closely align the interests of the growers and the processors, the study concludes. Growers have incentives to provide a balance of quantity and quality, while processors are encouraged to achieve economies of scale and to avoid hold-ups. Features identified for the wine and vegetable industries include:

- standard contracts for each type of transaction
- incentives rewarding growers for a balance of quantity and quality
- fixed base rates set at the beginning of the season, assigning risk for changes in spot prices to the less risk-averse processor; in the case of grapes, offering growers the choice of sharing sales risk with the processor

<sup>1</sup> Boyd, Haleigh; Lewis Evans and Neil Quigley. 2000. *The Efficiency of Contractual Arrangements in Private Agricultural Product Markets*. NZISCR Research Paper. [www.iscr.org.nz/research](http://www.iscr.org.nz/research)

“ PERMITTING  
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- processor investment in harvesting equipment, for quality assurance, utilisation of economies of scale and avoidance of hold-ups.

The study also examined forestry contracts and concluded that these too had evolved to meet the particular one-off harvest characteristics of that industry.

A few lessons were clear:

1. Contracts should *not be costly to negotiate*. In all three of the industries studied, standard contracts have emerged that can be varied for individual requirements.
2. Contracts should *limit self-interested opportunistic behaviour* by parties. This is done by monitoring and by incentives. In the wine industry, for example, payment based on the sugar level of grapes provides incentives to produce grapes of the quality that wineries desire.
3. Contracts should *allocate the risk to the party most willing and able to carry that risk*. For grape production, growers often have a choice between sharing the risk of the final vintage value with the winery, or taking a guaranteed price.
4. Contracts should *enable investment in transaction-specific assets* such as specialist equipment required to harvest the crop. In the case of vegetable and grape supply contracts, harvesting equipment is generally owned by the processing company, who can use it more often, more flexibly and to control quality.



NEW ZEALAND INSTITUTE FOR THE STUDY  
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### CONFERENCE

#### Competition Law at the Turn of the Century:

Wellington, 3 - 5 November 2000

This conference, hosted by ISCR, will provide an opportunity to review the outcomes of the first 14 years of the New Zealand Commerce Act, and consider forthcoming changes to New Zealand's competition and regulatory regimes. The Institute has been fortunate to secure leading speakers and commentators including:

- Professors Frank Mathewson, Dennis Carlton, Lewis Evans and Neil Quigley,
  - Terence Arnold QC, Lyn Stevens QC and Ian Millard QC, and
  - David Goddard, Kerrin Vautier and Bryce Wilkinson
- to address the conference.

Conference topics will include:

- competition law in a small market economy
- competition thresholds
- vertical restraints, penalties and remedies
- the Ministerial inquiries into the electricity and telecommunications markets
- the goals of the Commerce Act
- monopolisation
- international perspectives

Places at the conference will be limited. Registrations of interest can be made with Maureen Revell at the Institute (64 4 463 5562, email [iscr@vuw.ac.nz](mailto:iscr@vuw.ac.nz)) or via the Conference page on our website ([http://www.iscr.org.nz/what's\\_new](http://www.iscr.org.nz/what's_new)). The conference page will be regularly updated with conference information, so watch that space.

5. Contracts should *make clear the property rights* of the parties to the contract. For example, processors generally appear to take ownership of vegetables and grapes on delivery, following sampling and acceptance of the crop. This balances the grower's desire to transfer title as soon as possible after the processor takes physical possession of the crop, with the processor's requirement to meet quality standards.

The study suggests that in agricultural industries where vertical integration is absent, contracts can be effective in establishing relationships between producers and processors and in addressing issues such as risk sharing, monitoring and incentives, and opportunism in the face of transaction-specific investment. The contracts considered in the study do not support the contention that the transactions between agricultural producers and processors require vertical integration through a co-operative structure. Transaction-specific assets, perishability and other contractual problems are not unique to any of these industries. The contracts studied show that these problems can be addressed by efficient contracts between producers and processors.

The importance of this result is that it implies that co-operative structures need not be favoured by legal statute. If co-operatives are the efficient means of organising an industry, then they require no shoring up by means of legal statute.

Permitting the freedom for organisational structures to evolve is extremely important in the rapidly changing environment that is opening up opportunities for firms of all sizes.

“ THESE CONTRACTS...  
  
CLOSELY ALIGN THE  
  
INTERESTS OF  
  
THE GROWERS AND  
  
THE PROCESSORS. ”



## Making e-Commerce work for business Victoria University of Wellington

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# BEING CERTAIN ABOUT WHAT YOU ARE REGULATING - AND WHY

**I**n his editorial on page 2, ISCR's Executive Director, Prof Lew Evans suggested that unique aspects of New Zealand, combined with the pace of change, might mean that effective New Zealand regulations will be different from those overseas.

Even so, Prof Evans says in this feature article, there are some overseas lessons that should not be ignored.

Natural monopolies interest Governments because their potential to extract monopoly rents from consumers (and from the competitive parts of the same industry) can be large and damaging.

It is widely acknowledged that attempts to regulate natural monopolies, however laudable their intentions, often have unintended consequences. Regulating, then, is often a question of choosing among less-than-ideal options.

Take, for example, the proposition that "cpi-x" regulation is a neat and tidy way to regulate natural monopolies. ("Cpi-x" simply means that prices are regulated so that they can increase over time no faster than the rate of inflation (cpi) minus some percentage (x).)

The use of cpi-x has been advocated because it is based on relatively objective information, and it is not easily manipulated by those that are being regulated. Also, because the cpi-x formula is transparent, it is less likely to be subject to the folly or whim of the regulator.

But cpi-x has some problems, particularly when applied to a firm as a whole:

- With certain exceptions, cpi-x price regulation requires central planning, and thereby loses its supposed objectivity. In determining "x" the regulator has to make a guess about cost levels - as well as demand - into the future, and this is notoriously difficult. If the central planner's view is wrong, consumers may suffer poorer quality, lack of

new products and even higher costs.

- To set x, a regulator requires information about the costs and profits of firms in the industry. Because firm managers know more about their businesses than the regulator does, and can hide information and carry out hidden actions, the regulator may have very limited ability to be effective in both setting x and monitoring performance to it.

Even the threat of regulation has the effect of stimulating firms to hide information and take actions that defeat the regulator.

- Under cpi-x the regulator directly influences investment by what it allows to affect "x". The regulator therefore shares accountability for investments and performance of the industry, as occurred with rate-of-return regulation. *This gives the regulator incentives to act in the firm's interest even to the extent of inhibiting entry by competitors.*

In the United States, industry performance of some utilities is now being inhibited by protection of assets that competition would now bypass (i.e., that would be shut down by open competition but which are protected by a regulatory pact).

The potential problems with cpi-x regulation are examples of a range of issues that affect whether regulation achieves what it sets out to do.

Industry price regulation has worked best when aimed at addressing problems that arise from

an absence of competition. Price regulation is difficult to justify when it is used for purposes other than to limit monopoly profits.

## Regulating to redistribute income

One may be tempted, for example, to use price controls to transfer income from one group of customers to another. This can be very inefficient, and not actually succeed in helping the targetted group. Consider these problems:

- Price controls do not target the less-well-off groups who are supposed to receive the transfer. For example, if you charge businesses more in order to cross-subsidise households' electricity costs, you help high-consuming rich households more than lower-consuming poor ones.
- Meanwhile, the cross-subsidy will increase the costs of producers, and thus raise the prices that all, including poorer consumers, pay. The consumer who enjoys lower electricity prices at home becomes a loser when prices go up at the supermarket.

“ USING PRICE CONTROLS TO TRANSFER

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### Cpi-x in New Zealand

The Government's "Kiwi Share" in Telecom limits increases in the wired access fee for New Zealand households. It is an example of cpi-x regulation that targets a well-defined element of telephony service. In this example, x is zero.

### Matching regulation to the technological revolution

Technological change is making the job of regulators more difficult and, at least arguably, reducing the need for regulation. New technology is:

- Lowering the costs (raising the efficiency) of network industries. For electricity it is increasing the efficiency of generation plants of all sorts and reducing their economies of scale. This means that generation entry is more likely in locations close to demand where transmission losses are lower.
- Substantially lowering the costs of contracting, pricing, exchanging information about and managing the delivery of electricity.
- Rapidly altering the characteristics of networks. Different networks can communicate more easily with each other. They can bypass each other (e.g. wire and wireless). They can be put to new uses - for example, telecommunications data carried on electricity networks.

- Using price controls to transfer income may require artificial barriers to competition that are themselves both inefficient and detrimental to the target "poor" group. In a competitive market "wealthy" customers would move to suppliers who don't cross-subsidise - thus removing the source of the wealth that the regulator seeks to transfer. One can regulate to block competition but that, ironically, reinforces the problem that one was trying to solve - and meanwhile reduces the price pressure and innovation that benefits poor and rich consumers alike.

### Regulating for the long term or short term

The perceived need to reduce prices normally arises from an absence of competition. Yet price controls can themselves become a barrier to competition. Any entrepreneur who wants to enhance quality and variety would think twice

about competing not just against other firms, but also against artificially low prices worked out between those firms and a regulator.

Regulation also usurps some property rights because it restricts what can be done with a firm's resources. Yet unless firms can invest with some surety of being able to capture returns, investment will be inhibited. This suggests that the effectiveness of any regulatory regime, and of maximising its benefit for the economy in the medium term, rests on keeping property-right violations to a minimum.

Ironically, regulating to keep prices low in the short run can damage consumer welfare in the longer term.

### What do the owners want?

The range of regulatory options extends from the least intrusive (general competition law that affects all industries and all firms) to heavy industry-specific regulation (such as price regulation) to, at the extreme, government ownership.

State or non-profit trust ownership has often been adopted as a potential solution. Trusts, for example, seek to solve the monopoly problem by returning profits to the users of the service. These forms of ownership, however, are difficult to regulate because of the organisations' commitment to various nonfinancial objectives in addition to commercial goals. Similarly, if there is weak commitment by the state to protect private property rights, private firms will also assume mixed objectives, including maximising their position of influence, and become equally difficult to regulate.

### Competitive entry is the key

While this discussion appears to be a list of regulatory problems, the key points are:

- that *any* regulation which inhibits competitive entry is most unlikely to be in the public interest, and
- barriers to entry can occur in subtle and unintended ways (see "Internet cheaper in NZ: Are our regulations better?" on page 1).

### New Zealand is distinctive = small

New Zealand's largest company, Telecom NZ Limited, employs capital of about US\$1.8 billion.

That is:

- small by international standards for a telecommunications company
- about the same as clothing manufacturer Benetton
- smaller than clothing manufacturer Tommy Hilfiger
- much smaller than plastic watch-maker Swatch.

It was not by chance that in the US regulated utilities maintained blue-chip stock status for much of last century.

Regulation targeted at particular problems is more likely to be effective, the more so if the problem is sharply defined and the potential consequences of the chosen regulatory tool in the environment in which it is applied (see editorial on page 2) are well understood.



# THE WORLD IS SPINNING FASTER

**I**f you think things are changing faster and faster, you're right - and that has implications for how markets are regulated.

The average time between the introduction of a new product and the appearance of competitors has shrunk from 33 years in 1900 to only three to four years in 1986 in the US, according to recent estimates (see table).

It is almost certain that the pace of change has accelerated since then. For example, the software controlling some telecommunications networks is now replaced *monthly* as new capabilities and standards are developed.

This has direct implications for commercial regulatory policy. Agarwal and Gort<sup>1</sup> say, because faster change erodes the basis for regulating business. Greater competition disciplines

the firm that first moves into a market, and at the same time reduces the potential for regulations to be effective, the authors say.

Yet despite their market power being reduced, firms still have strong incentives to innovate because of their rapid access to much larger markets worldwide.

The increased pace of change has resulted from skilled labour being more mobile, improved communication spreading technical information more rapidly, an increase in the numbers of potential entering firms, and the growth in market size.

Globalisation and the information and communications revolution are bringing dramatic change that should be shaping our view of economic and social policies, yet it remains very difficult to measure them or assess their relevance.

“FASTER CHANGE ERODES THE BASIS FOR REGULATING BUSINESS.”



EXAMPLES OF ENTRY	Product is introduced	Competitor appears
Zippers	1904	1929
Smoke Detectors	1932	1946
Gyroscopes	1911	1952
Video Cassette Recorders	1966	1975

<sup>1</sup> Rajishree Agarwal and Michael Gort. 1999. *First Mover Advantage and the Speed of Competitive Entry*. University of Central Florida and Buffalo New York Research Paper. [gort@acsu.buffalo.edu](mailto:gort@acsu.buffalo.edu)

# BREAKING UP IS BAD TO DO

**W**ith the proposed enforced break-up of Microsoft now before the US courts, it is timely to review the costs and benefits of previous attempts to regulate Microsoft.

Between 1991 and 1997 there have been 29 other anti-trust actions against Microsoft. As might be expected, each anti-trust action has hurt Microsoft's share price - by an average of \$US3 billion, according to a new study<sup>1</sup>.

But each intervention has also hurt the wider industry including Microsoft's rivals, the study has found. The study's authors calculate that each anti-trust action against Microsoft led to the share prices of 159 competing and complementary firms falling by about \$US1 billion. Equally, each time an anti-trust action against Microsoft suffered a legal set-back, share prices across the whole in-

dustry (including Microsoft's competitors) rose.

It is interesting to speculate about the source of these responses. In theory, if an anti-trust intervention is not in the public interest, it will raise the costs of other firms in the industry by introducing the spectre of wider intervention that will be costly to them, or by generating uncertainty that deters investment and innovation. It may also move the management focus of all firms from competitive performance in the market to competition through the courts. Whatever caused investors' reactions, there is clearly a dichotomy between investors' views and those of management. Although the anti-trust interventions were carried out by government agencies, many were promoted and encouraged by Microsoft's rivals.

If the investors are right, it would seem that using competition law as a competitive tool was

neither in the public interest nor in the interests of the firms who did it.

On April 3, US District Judge Thomas Penfield Jackson ruled that Microsoft had a monopoly in the personal computer operating system market and had used its power to bully and bludgeon its rivals. The ruling is likely to see Microsoft forced to split itself up into separate divisions. The sharemarket responded instantly. Microsoft shares fell 15% in value overnight, which fed through to a 5% slump in the Nasdaq index. However, by the end of the week, the Nasdaq had experienced its biggest rise ever, as buyers flocked to pick up shares they now perceived to be undervalued!

<sup>1</sup> *Bittlingmayer, George and Thomas W Hazlett. 2000. Dos Kapital: Has antitrust action against Microsoft created value in the Computer Industry?* Journal of Financial Economics 55:3 329-360.