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COMPETITION POLICY IN SMALL ECONOMIES

-- NEW ZEALAND --

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NEW ZEALAND[1]

COMPETITION POLICY IN SMALL ECONOMIES: ISSUES ARISING

1. Introduction

This paper examines the nature of competition policy in small economies, with special reference to New Zealand. Particular attention is given to the implications of small size for promoting competition in new economy industries. The paper builds on the two reports commissioned by New Zealand Government departments from Charles Rivers Associates New Zealand (CRA): "Innovation and Competition Policy – Recent Economic Literature"; and a very preliminary draft of "the Competition Policy Dilemma in Small Economies: Some Lessons from the Economics Literature". It also draws heavily on the work of Michal Gal on competition policy in small economies.[2]

As Gal notes, many of the principles and doctrines that apply to large economies, apply equally to small ones. In both, competition policy has the goal of creating workable competition in markets and thereby seeks to improve efficiency and ultimately social welfare.[3] However, the purpose of this paper is to examine the differences of market structures between the two and the implications that these differences have for competition policy in small economies and particularly New Zealand. The paper finds that there is an inherent tension in small economies between the presence of small numbers of firms in many industries and the fact that these firms are often of sub-optimal size.

The paper is structured as follows:

- Part I examines the key features of small economies and their implications for competition policy in small economies;
- Part II examines the key features of competition in new economy industries and their implications for competition policy in small economies;
- Part III outlines issues that arise for New Zealand from this analysis.

2. Part 1: Competition Policy in Small Economies

2.1 Features of Small Economies

Smallness is a relative concept. Australians sometimes describe the Australian economy as small, yet it looks large when viewed from the perspective of New Zealand. Canadians, on the other hand,

1. This paper is submitted by New Zealand as a background document. It was prepared by Rory McLeod (Manager, Competition Policy, New Zealand Ministry of Economic Development) while on study leave at the Institute of Policy Analysis at the University of Toronto in November 2002. As such, the material does not represent the view of either the New Zealand Government or the Ministry of Economic Development.

2 Gal (2001)

3 Gal p.1442

will very often view their own economy as small given that their first point of comparison is generally the United States. For the purposes of this report, small economies are defined as those economies that are approaching the minimum size needed to operate a full set of regulatory and competition policies and institutions. This group includes New Zealand, Singapore, Hong Kong, Israel and Ireland. Economies that fall below this threshold, such as the micro states of the South Pacific and the Caribbean, are faced by a different set of issues. Somewhat larger economies, such as Australia and Canada, may face similar issues to small economies but often to a lesser degree.

From the standpoint of competition policy, a small economy can be described as combining two key features:

- It can support only a small number of competing firms in many of its industries;
- Many of its firms will struggle to achieve minimum efficient scale when catering to domestic demand only.

In small economies, there is a tension between these factors that their competition policies must address. While many of their industries have very few firms, these firms tend to be small and often inefficient by world standards. This tension can be aggravated by geographic isolation, as is the case for New Zealand, and considerably alleviated by geographic proximity to much larger economies as occurs for Singapore, Hong Kong and Ireland. The tension can be further aggravated to the extent that economies are geographically dispersed within national borders. This can lead to the presence of even smaller geographically distinct markets within the smaller economy. This is an issue for New Zealand and, to some extent, Ireland.

Each of the factors that contribute to this tension is examined briefly below before the nature of this tension is explored further.

2.1.1 Industrial Concentration

It is well established in the literature that small economies are characterised by relatively high industrial concentration levels and the presence of monopoly and oligopoly. An example of this is provided by the 1975 study conducted by FM Scherer et al of concentration levels in 12 selected manufacturing industries. Table 1 presents their findings that industrial concentration in manufacturing tends to increase as the size of an economy's population decreases. For the United States, only one industry (refrigerators) was characterised by an oligopoly. Sweden, on the other hand, had three natural monopolies (brewing, refrigerators and cigarettes) and four more natural duopolies.

Table 1: Industrial Concentration and the Size of the Market[4]

Country	Market Share of the three leading firms		Population	
	%	Index*	Millions	Index'
USA	41.1	100	204	100
West Germany	56.1	136	61	129
Britain	60.4	147	55	133
France	66.3	161	51	135
Canada	70.8	172	21	175
Sweden	83.4	203	8	256
Israel	91.0	221	3	480

* USA = 100

' The index of the inverted logarithm of the population

CRA (2002) have set out from a small country perspective, the potential economic costs of monopoly (as drawn from conventional industrial organisation literature using strict assumptions). These include:

(a) Reduced allocative efficiency due to monopoly pricing – in a situation where there are very high barriers to entry, a monopolist is faced with incentives to raise price in inverse proportion to the elasticity of demand;

(b) The possible loss of locational advantages – if monopolists are located abroad, the literature indicates that they are faced by incentives to delay investments in small economies necessary to establish a meaningful market presence (e.g. a local brand, local plant or local distribution infrastructure). The reason for this is that the monopolist earns monopoly profits from exports in any case;

(c) Losses in non-price competition - the presence of a monopolist can impact adversely on incentives to provide the optimal level of quality;

(d) The effect on the incentive to innovate – a monopolist may have less incentive to innovate either because it is able to maintain a customer base without innovation or because it is unable to fully appropriate the benefits of innovation (i.e. they largely flow to the public rather than the firm).

These costs will also potentially be present under oligopoly. Conventional industrial organisation theory suggests that the vigour of competition is related to the number of firms in an industry, their relative size and the magnitude of barriers to entry. Under oligopoly, firms can recognise that their decisions are interdependent and seek to pursue co-operative strategies that entail the same or similar approaches to a monopolist to such factors as price, quality or innovation. Co-operative approaches do not necessarily entail explicit collusion. Rather they may simply reflect recognition by one firm that any attempt to increase competition on its part may quickly be matched by similar actions by other firms and may not be worth undertaking as a result.

[4] Reproduced from Gal p 1447. Gal's data were derived primarily from F.M SCHERER, ALAN BECKENSTEIN, ERIC KAUFER AND DENNIS MURPHY *THE ECONOMICS OF MULTIPLANT OPERATIONS* (1975)

Competition amongst firms in small economies may be inhibited by the presence of relatively high entry barriers. In addition to the problems of achieving economies of scale and scope (see below), entry may be inhibited by shortages of skilled labour, limited supplies of natural resources and difficulties in accessing efficient technologies.

2.1.2 Sub-optimal Levels of Production

Gal points out that a recurring observation in studies of manufacturing industries in small economies is that a considerably larger fraction of all output is produced in sub-optimal volumes and in sub-optimal plants *vis a vis* the volumes and plant sizes that would be indicated by minimum efficient scale.[5] Such small scale operations can have a significant impact on the efficiency and international competitiveness of small firms operating out of small economies. It can lead to pressures for small firms to seek, to grow, or to enter into co-operative arrangements with other firms in order to seek improvements in productive efficiency. In small economies, however, the extent to such efficiencies can be achieved may be limited, meaning that firms are at a relative disadvantage in terms of achieving:

(a) Economies of scale – when the unit cost of production decreases as the scale of output increases. These may be plant and/or product specific;

(b) Economies of scope – where complementarities of production processes lead to the costs of producing two or more products jointly being less than the costs of producing them separately;

(c) Transaction costs reductions – where there are savings associated with production within the firm as opposed to external purchases.

Failure to achieve productive efficiencies can also have implications for the dynamic efficiency of firms in small economies. Such firms may limit the amount they spend on R&D, technology acquisition and technical progress. This in turn may mean they are forced to rely on less efficient production technologies than firms in larger economies.

2.1.3 The Challenge for Competition Policy in Small Economies

As noted above, there is an inherent tension in small economies between the presence of small numbers of firms in many industries and the fact that these firms are often of sub-optimal size. Gal describes this as the "basic conflict created by smallness".[6] In a static situation, this may entail a conflict between the achievement of allocative and productive efficiencies. In a dynamic situation, there may be a conflict between the achievement of static, particularly productive, efficiencies and the attainment of dynamic efficiencies.

Competition authorities in small economies, therefore, are confronted by a conundrum. On the one hand, an overly aggressive approach to their role may prevent efficiency enhancing outcomes from taking place. On the other, an overly permissive approach may lead to the entrenchment of market power.[7] Furthermore, they will often be faced by the requirement to make tradeoffs between market power and firm efficiency considerations.

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5 Gal p. 22

6 Ibid p. 1449

7 Khemani (1991) p. 219

These judgements can be sensitive and complex and they tend to vary from case to case. For example, increased concentration should not be taken as a proxy for increased market power. The presence of small numbers of firms does not necessarily indicate a lack of competitive rivalry. Vigorous rivalry can exist with as few as two firms in a market and in the absence of barriers to entry, a monopolist may be severely constrained by potential entrants. Even if a market transaction does slightly increase market power, the benefits that accrue from improvements to efficiency might significantly outweigh the detriments.

Where increased concentration does increase market power, any efficiency improvements resulting from the increase can be very difficult to judge. Private sector companies will often overstate the efficiency benefits that are likely to accrue. In particular, projected gains to dynamic efficiency resulting from the adoption of improved technology can be notoriously difficult to measure. Competition authorities also need to ensure that while efficiency improvements may theoretically result from increased concentration, the increased market power that results will not remove the incentive to carry out such improvements.

Given the circumstances, the relative margins of error faced by competition policy authorities in small economies are significantly larger than those faced by competition authorities in large economies. In particular, the latter are able to pay relatively less attention to the efficiency aspects of competition policy. This is because in larger economies most productive efficiencies in many industries have been exhausted and many, if not most, firms should be operating at minimum efficient scale. Accordingly, any economies that arose from specific transactions would normally arise from firm specific rather than industry specific factors.[8]

2.2 Competition Policy in Small Economies

As noted earlier, the basic objectives of competition policy are similar for large and small economies. In both, competition policy is designed to protect and promote the competitive process. The competitive process is not an end in itself but a means to an end as it promotes improvements in efficiency which in turn lead to welfare gains for society. However, the above analysis points to small economies facing an inherent tension in many industries between the presence of market power resulting from firm concentration and of firms of sub-optimal scale. This tension has a number of implications for the design of competition policy in small economies which are set out below.

2.2.1 Clear and Integrated Approach to Competition Policy

Gal argues that it is vital for small economies that "the goals of competition policy be clearly, deliberately and unambiguously defined, and that economic efficiency be given primacy over other goals".[9] Because relatively fewer impediments to the process of competition exist in larger economies, these economies may have more scope to pursue a mix of objectives, including social, equity and regional as well as efficiency objectives within the context of their competition policy. (Canada, for example, lists the promotion of small business as one of the objectives of its competition law.)

Small economies are much less able to pursue such a mix of objectives as there is a greater relative likelihood that such an approach will lead to the preservation of inefficient firms within the

8 Ibid p. 217

9 Gal p. 1451

economy. Given that small economies have many industries that are relatively concentrated, there is also a greater likelihood that the pursuit of objectives other than efficiency will lead to rent seeking behaviours by firms (such as lobbying) in the name of these objectives. Furthermore, the pursuit of these objectives on behalf of producers may lead to significant costs for consumers within the economy, thus mitigating the social, equity and even regional advantages of such an approach.

While efficiency should be the sole objective of competition policy in small economies, it is important that this objective is not pursued through competition law alone. Trade, investment and regulatory policies also offer opportunities for the removal of barriers to competition and it is necessary for these to be closely integrated with competition law. Various country studies show that those economies that have pursued an integrated policy approach to improving the functioning of markets have been most successful in raising growth rates.[10] Given that the potential impediments to the competitive process are greater in small economies, the need for an integrated approach to policy is correspondingly greater.

A useful strategy for small economies in this respect is to ensure that regulatory barriers to competition are minimised as these have the potential to significantly compound the existing disadvantages of small size. On the other hand, in sectors where competition is severely limited, regulation may be needed to limit the potential costs imposed by the presence of market power. Examples of both approaches occurred recently in the New Zealand dairy industry where statutory barriers to competition were removed but where the behaviour of the single remaining purchaser of milk of any significant size was subject to new regulations designed to minimise potentially anti-competitive behaviour by this purchaser.

2.2.2 Open Trade and Investment Policies

Open trade and investment policies have the potential to significantly mitigate the disadvantages of small size in the area of competition policy. Overall, such policies can significantly enlarge the scope of the market in which firms operate. As markets are opened, domestic firms that would otherwise have significant market power are exposed to foreign competition and thus price and cost margins are squeezed without the need to break firms into uneconomically small entities. On the other hand, access to export markets provides opportunities for domestic producers to achieve productive efficiencies that would not be possible if they had to rely on the home market alone.

Trebilcock goes as far as to say that a liberal trade policy is a far more potent pro-competition, entry inducing force than domestic competition or antitrust laws in most industries. He goes on to say "a liberal trade policy and a sensitively designed and applied competition policy may be productive complements and would seem to be the optimal pro-competitive mix of policies, especially for a small, relatively open economy…".[11] The conclusion that open trade and investment policies are relatively more important for small countries is supported by the empirical work conducted by Hoekman, Kee and Olarreaga. Their work shows that imports have a relatively greater impact on competition in small economies whereas domestic entry regulation (achieved through competition law and/or regulatory policies) have a relatively greater impact on competition in large economies.[12]

Some small economies, such as Singapore and Hong Kong, have drawn the conclusion that they do not require competition law at all and can rely on open trade and investment policies as well as sectoral regulation to promote competition in markets. Other small economies, such as New Zealand, maintain a

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10 OECD (2001) p. 11

11 Trebilcock p. 29

12 Hoekman, Kee and Olarreaga pp. 21-22

comprehensive competition law in addition to such policies. Part of the difference may be explained by much higher transport costs to New Zealand which can mute the advantages of trade in some areas. The Singapore and Hong Kong economies are also located next to much larger economies which in effect form markets for many of their firms. That being said, the need for competition law is under active discussion in both countries given that the non-tradable sector of both economies is growing rapidly, particularly in the area of services.

As small economies have liberalised trade and investment policies, they have also sought increasing convergence of competition and regulatory policies with larger economies. For example, many of the key thresholds in competition law have now been largely standardised between large and small economies. Such convergence has a number of advantages for smaller economies. When regulations are similar, it can lower the costs faced by firms operating across several countries. Regulatory agencies, such as competition authorities, can make use of the analysis carried out by their counterparts from larger countries while courts can take account of the case law emanating from these jurisdictions.

At the same time, it is important that small economies maintain a degree of flexibility in the implementation of competition and regulatory policies as their approach in the implantation of these policies may differ from large economies, particularly in the area of competition law (see below). For example, while many small economies may employ the same threshold tests as large economies, their approach to deciding whether these tests have or can be breached can differ considerably. In terms of any exercise to co-ordinate competition policy at the international level therefore (e.g. through the World Trade Organisation), small economies have a significant interest in ensuring that a "principles based" approach is pursued that preserves this flexibility of approach. Any attempt to develop a single set of rules at the global level has the potential to work against their interests.

2.2.3 Competition Law in Small Economies

As discussed above, a key feature of small economies is that high levels of concentration may be necessary in many industries in order to achieve productive efficiencies. In some cases, the degree of concentration present will limit the rivalry that occurs between firms. This tension will arise far more frequently than it does in large economies. Competition law in small economies needs to be structured in a manner that allows both sides of this equation to be fully considered. This would suggest that competition law needs to comprise a flexible set of instruments that can be applied on a case-by-case basis to reduce competition concerns while promoting economic efficiency.[13]

This situation has several implications for competition law in small economies. First, greater scope is needed than in larger economies to ensure that efficiency considerations are fully considered. This applies to consideration of both mergers and of co-operative agreements amongst rivals as both may be means for firms to achieve significant productive efficiencies. In the first instance, it may be useful for the law to allow competition authorities to assess efficiency considerations at the point of considering whether various transactions have the potential to breach competition thresholds (as occurs under New Zealand's merger clearance procedures).

Once a problem with competition thresholds has been identified, it isjust as important to allow firms the opportunity to put a case to show that gains from improved efficiency will outweigh losses from a lessening of competition. This may be achieved through inclusion in the law of an explicit efficiency defence in legislation (as occurs in Canada) or through an authorisation procedure based on "public benefit" (as occurs in Australia and New Zealand). If these provisions are structured properly, practice by

[13] Khemani (1991) p. 219

competition authorities in small economies should naturally evolve in the direction of giving greater weight to efficiency considerations. For example, Berry and Pickford, citing the number of cases in which New Zealand mergers have been authorised on public benefit grounds, argue that New Zealand competition authorities have developed a more tolerant approach to mergers claiming efficiencies than is the case in the United States or Canada.[14]

Second, competition laws in small economies need to avoid adopting simple rules of thumb as indicators of market power as occurs in larger economies. For example, the US merger guidelines use the Herfindahl-Hirschman Index (HHI) to measure the level of concentration in a market based on the number of firms operating in a market and their relative market shares. The index uses a numeric methodology based on very specific assumptions. Although the HHI is only a prima facie indicator of the anti-competitive effects of a merger, its thresholds have had the effect of creating a presumption of illegality.[15] Gal argues that this approach is not appropriate for small economies as many if not most mergers in small economies would cross the HHI thresholds. In a small economy situation, such an approach would create unwarranted barriers to firms seeking to realise productive efficiencies from mergers.

Third, small economies need to minimise the inclusion of rigid per se rules in competition law. In small concentrated markets, firms may seek to work with each other to overcome the disadvantages of small size and to realise scale economies. In a situation where the market is characterised by oligopoly, they may seek to compete with other firms through price discrimination rather than through direct price competition. In larger economies, such behaviours might be the subject of per se prohibitions. However, in smaller economies they could be either welfare enhancing or reducing, depending on the balance of competition and efficiency considerations. Accordingly, they should be considered by competition authorities on a case-by-case basis.

Most small economies with competition laws maintain a per se prohibition on price fixing. Some commentators have questioned the wisdom of this approach on the grounds that agreements by firms to fix prices can be welfare enhancing as the prices set tend to form price ceilings rather than price floors.[16] However, there is a strong body of opinion that a per se prohibition in this area provides certainty and clarity for business as to the nature of the law. Furthermore, price fixing is easy to sustain in oligopolistic markets with homogeneous products and high entry barriers (e.g. cement). If price fixing arrangements do have welfare enhancing properties, then the law can be structured to allow participating firms to apply for exemptions from the per se prohibition (as occurs in Australia and New Zealand where firms can apply for an authorisation for such an arrangement).

Fourth, small economies should be cautious in the application of both structural remedies and behavioural undertakings. Applied crudely, structural remedies may do little to enhance competition in small economies while they can act to significantly impede productive efficiencies. For example, if a market has an oligopolistic structure and two firms seek to merge, seeking to achieve extensive divestments from one or both of the firms may do little to improve competition while significantly inhibiting efficiency gains. Nonetheless, Gal argues that there is a role for structural remedies in small economies if applied in a sophisticated fashion. For example, in the case of a merger it may be possible to overcome most competition concerns with a relatively limited divestment while maintaining most of the efficiency gains. Furthermore, Gal suggests that structural remedies of this kind are normally a superior solution to behavioural undertakings which are notoriously difficult to enforce in small economies.[17]

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14 Berry and Pickford p. 8

15 Gal p. 1466

16 Charles River (9 September 2002) p. 58

17 Gal p. 1468

2.2.4 Implications for the Resourcing of Competition Authorities

The above analysis has some obvious implications for how competition authorities are set up and resourced in small economies. In particular, competition authorities need the capacity to be able to weigh up competition and efficiency issues for any given case. Often, the issues involved will be complex and the analysis required will be highly sophisticated. The nature of this challenge is illustrated by the suggested set of questions drawn up by CRA for competition authorities in small economies to consider the potentially adverse effects of monopoly. In the context of specific investigations, the questions in each of the areas covered – increased monopoly markups, loss of locational advantages, effects on non-price competition and effects on the incentives to innovate – would often be challenging to answer, requiring both analytical sophistication and significant data sets.

Small economies, therefore, may need to devote proportionately more resources than large economies on competition law enforcement if they wish to achieve good competition policy outcomes. At the same time, they can seek to minimise these costs in certain key respects. One is to seek to make use of the analysis and techniques developed in larger economies, adapting these to the extent possible to the conditions faced by small economies. A second means is to seek to concentrate all regulatory functions concerned with the promotion of competition into a single agency in order to achieve both cost savings and analytical synergies. This trend is already evident is several economies. In New Zealand, for example, the Commerce Commission is responsible for enforcing legislation on general competition, consumer protection, telecommunications, electricity and competition in the dairy sector.

However, Goddard and Carlton emphasise that limits in the institutional capacity of small economies will put limits on what can be achieved under competition law. They state:

> "The theoretical possibility of harm to competition from a practice is not sufficient to justify the prohibition of that practice, unless we can be reasonably confident that we can in practice, without too many false positives and without excessive cost and delay, distinguish the goats from the sheep. If the evidence needed to draw such distinctions with reasonable confidence is likely to be unobtainable, or extraordinarily costly to obtain, or beyond the ability of the court system to evaluate and apply, then it is preferable for the law to avoid the need to draw such distinctions."[18]

3. Part 2: New Economy industries: Competition Policy Implications for Small Economies

3.1 Features of New Economy Industries

CRA has carried out a survey "Innovation and Competition Policy – Recent Economic Literature" for the New Zealand Ministry of Economic Development. This survey largely considers competition issues in new economy industries. It describes a number of key features of these industries which are outlined briefly below.

3.1.1 Dynamic Efficiency

New economy industries are characterised by dynamic competition based on innovation. Both the economic literature and empirical studies confirm dynamic efficiency gains are more important for

[18] Goddard and Carlton p7

social welfare than static (allocative and productive) efficiency gains, a factor that has become particularly evident in new economy markets. Perhaps the most outstanding feature of these markets is the profitability of their leading firms (Microsoft and Intel for example). This profitability is a direct result of the commonly observed tendency of new economy markets to "tip" in favour of one product or another, rather than supporting many products. In these markets, competition does not occur in the market between firms vying for increased market share. Instead, competition is "for" the market, carried out by rivals which use technology and product characteristics as their main competitive weapons.

In such markets, price competition may be relatively unimportant. Of far greater significance is whether firms are forced by the prospect of technological rivalry to improve the functionality and quality of their products and services, to improve production processes or to innovate in other ways. As such, it is important to be able to draw a distinction between three types of rents:

- Ricardian rents which reflect access to scarce resources and skills;
- Schumpeterian rents which occur to innovators and occur because innovation does not occur instantaneously;
- Monopoly rents arising from the exercise of monopoly power.

Ricardian and Schumpeterian rents "are benign sources of rent from an anti-trust perspective… as they encourage investment in valuable knowledge assets and innovation".[19] Although these rents may be considerable, they tend to be transitory unless renewed by continuous innovation. It is monopoly rents that competition law should be concerned with in new economy industries. These result not from inherent scarcity or innovation, but from the ability of monopolists to indefinitely inhibit competitive entry by rivals by maintaining barriers to entry in a market. Such barriers may include exclusionary conduct (e.g. exclusive control over entrenched distribution systems), government licenses or the exclusive tying of products.

However, the dynamic literature draws an important distinction between rents earned by a monopoly firm and monopoly rents. In new economy industries characterised by network effects and/or economies of scale, a market may support a few or perhaps only a single product or products. However, in such markets, a monopolist cannot have rents earned represented as monopoly rents if the monopolist faces the ongoing threat of having the market tipped over to another firm facing a superior product. In this case the rents are returns to innovation (Schumpeterian) rather than true monopoly rents.

3.1.2 The Importance of Oligopoly

Schumpeter argued that there are two reasons why the possession of some degree of monopoly power by a firm is necessary for it to engage in innovative activity. First, prices above marginal cost provide an internal source of funding for research and development. (R&D provides little in the form of tangible collateral and there can be significant information asymmetries between firms undertaking R&D and potential lenders. Thus obtaining external finance for R&D is often difficult.) Second, the possession of some monopoly power enables an innovator to reap profits from the investment and thereby provides the incentives to undertake it in the first place.

A great deal of literature has recently been produced on the characteristics of market structure in new economy industries. There is a growing consensus in this literature that the ideal market structure for

[19] CRA 9 September 2002 p. 14 quoted from Teece and Coleman (1998)

such industries lies somewhere between perfect competition and complete monopoly. At both these extremes there are limited incentives for firms to innovate whereas it is somewhere in the middle that such incentives are maximised.

A recent contribution to this literature is William J Baumol's book *"The Free Market Innovation Machine: Analyzing the Growth Miracle of Capitalism".*[20] Baumol argues that the market structure that maximises the rate of innovation is oligopoly:

> The heart of the story is the key role of oligopolistic competition in the process of free market growth…one of the primary reasons for any other economic arrangement even to approximate the capitalistic growth record for any considerable period is the absence of oligopolistic rivalry in those other economies. I need only add a word of explanation for the emphasis on oligopoly, with its small number of large competing firms, rather than any other market form. The answer, whether or not fully convincing, is straightforward. Monopoly will not do because by definition, it is immune, or largely immune, from competition and that can materially weaken its incentives to invest in innovation. At the other extreme the small firms that inhabit the world of imperfect competition …tend to lack the resources (to innovate)…Almost by definition, it is only in oligopoly, where a few large (often giant) firms dominate a particular market, that competitive races amongst established firms can occur, and only in oligopoly that rivals observe and keep track of one another's behaviour. Thus almost all of the innovative rivalry...occurs in the economy's oligopoly industries. So, paradoxically, it is an economy's oligopolies, which are often particularly suspect as a threat to public interest, that may well prove to be the main industrial contributors to growth and standards of living.[21]

3.1.3 Co-operation between Firms

The CRA analysis underlines the importance of co-operation between firms in new economy industries. In general, firm co-operation is the private sector response to externalities. For example, part of the reason firms co-operate in R&D is to internalise knowledge spillovers as well as share fixed costs. But the literature suggests that co-operation can be welfare enhancing for other reasons such as risking sharing, realising economies of scale or avoiding potentially (though by no means always) wasteful competition between technological standards. The potential for co-operation to unlock these benefits lies at all levels of production, not just research. Importantly, the literature shows that firms operating in dynamically competitive markets will often choose to co-operate at precisely the times that it is in society's interests as well as their own.

Piraino characterises firm co-operation of this kind of behaviour as a "joint venture". He says:

> "Joint ventures are a unique form of business organisation which require their own anti-trust approach. If the various forms of business organisation were classified along a continuum, joint ventures would lie at the mid-point between cartels and mergers. Joints ventures are distinguished by partial integration. They are more integrated than cartels but less integrated than mergers. Joint ventures are further distinguished from cartels by their pro-competitive purpose. In a joint venture, partners integrate their resources for a specific efficiency objective, such as the production or marketing of a new product. The efficiencies created by

[20] Baumol (2002)

[21] Ibid pp. 44-45

> joint ventures are similar to those resulting from mergers. Through their collaboration, the partners in a joint venture often can produce a product which none of the partners could have produced on their own. Yet joint ventures also differ from mergers. Unlike mergers, they do not involve a complete integration of the partners' operations. Each of the partners of the joint venture continues its separate existence and continues to compete with its partners outside the scope of the venture. Thus joint ventures are less restrictive to competition than mergers."[22]

CRA conclude that the literature suggests a conclusion for policymakers, that the key to unlocking the benefits of innovation in new economy industries lies in setting conditions where both competition and co-operation are unrestricted and permitted to co-exist and reinforce each other. As with competition, the primary role for government in promoting efficiency enhancing co-operation lies in removing barriers to such co-operation. So long as these barriers are removed, such co-operation will emerge wherever and whenever firms view it as a useful adjunct to their competitive activities.

3.2 Implications for Competition Policy

The literature would appear to indicate that the key to promoting the efficient development of new economy industries lies in the removal of barriers to entry rather than focusing on concentration per se. (Baumol describes this as improving the "contestability of markets".)[23] From a static viewpoint, such concentration would be interpreted as a monopoly with a deadweight loss to society. However, the literature makes clear the importance of understanding how the product came to lead the market. Without barriers to entry, it is likely that the rents earned by innovation are returns to innovation.

Evans and Schmalensee stress "in particular, the analysis of market power in new economy industries must consider the vulnerability of leading firms to entry powered by drastic innovation, not just to the entry of firms producing equivalent products with known processes. Analysis of this sort of fragility may require difficult judgements about the likelihood of disruptive innovations in the future, but simply to assume such innovations cannot occur is to ignore history and to impart substantial and obvious bias to market power analysis in important sectors".[24]

Evans and Schmalensee go on to state that the complexity of new technology markets argues for the abandonment of traditional rule of thumb competition analyses used in large economies such as the United States in favour of a more detailed rule-of-reason analysis. However, they recognise that such analysis tends to be extremely resource intensive, requiring a high level of technical sophistication which will need to be constantly updated as these industries develop. They conclude that "the only apparent approach to mitigation of these problems is to develop presumptions and structured rules of reason that reflect new economy realities and that are designed to lighten the courts' analytical burden. When the world is changing rapidly, an approximate analysis of today's conditions is much more likely to be useful than an exact analysis of conditions a decade ago".[25]

Piraino agrees that in new economy markets, competition authorities need not be unduly concerned with the increased levels of concentration per se associated with monopolies or joint ventures. However, he argues that many commentators have overlooked the extent to which monopolies can become

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22 Piraino p. 9

23 Baumol p. 165

24 Evans and Schmalensee (2001) p. 47

25 Ibid p. 17

entrenched in such markets. These monopolies have a considerable incentive prolong their market power. Because of low marginal costs, most of the incremental revenues earned by such monopolists "go directly to the bottom line". "Thus the profits earned by extending a high technology monopoly often exceed the costs of the exclusionary practices required to achieve the extension."[26]

Piraino goes on to argue that monopolists in high technology industries are often provided with considerable natural advantages in terms of maintaining their market power. New economy industries tend to yield market power to the first movers of a new technology. The phenomenon of "sunk costs" can also create substantial entry barriers. In addition to these natural barriers, monopolists may also attempt to put in place such artificial barriers as various types of exclusionary conduct, exclusive dealing arrangements and predatory pricing strategies.[27]

Piriano suggests that instead of concerning themselves with the structure of a new technology industry, courts should assess the conduct of individual firms in the market, whether these take the form of monopolies or joint ventures. This would be with a view to deciding whether such conduct is overly restrictive of competition. Conduct analysis of this kind is far more familiar territory for courts than sophisticated economic analyses of entire sectors. If the conduct were found to be anti-competitive, courts could generally avoid any structural moves to reduce the concentration of firms, but simply outlaw the conduct.

These views were brought together in a 2001 study conducted by CRA for the UK Office of Fair Trading. The study concluded that there was no case for abandoning the application of competition laws to the new economy. However, it was important that competition laws were sufficiently flexible to deal with new economy issues which meant focusing laws on conduct and its alleged anti-competitive effects. It was also important to approach individual cases with caution, because there could be significant costs to intervention and unintended consequences could often result. As a basic guideline, the study recommended that competition authorities should only intervene in new economy markets when the potential for harm was large and the potential benefits from intervention were great.[28]

3.3 Implications for Small Economies

Baumol warns against exaggerating the pervasiveness of new economy industries, based on dynamic competition through innovation, even in large economies. He states "there is strong evidence that the bulk of innovation is contributed by a few industries – the economy's "high-tech" industries – and in a very small number of countries." Using R&D as a proxy for innovation, he argues that industries where competition is most likely to be based on innovation include computer and data processing services, drugs and medicines and office, computing and accounting machines. Other industries where innovation is likely to be an important factor in competition include manufactured optical and photographic equipment, communications equipment and electronic components. Baumol goes on to present figures which show that of the $500 billion spent on R&D in OECD countries in 1997, around 85% was spent in G7 countries and 43% was spent in the USA alone.[29]

Furthermore, it would be misleading to propose that there are any links between market concentration and innovation for the economy as a whole. The OECD has conducted a review of empirical

26 Piraino (2002) p. 8

27 Ibid p. 8

28 CRA (March 2002)

29 Baumol p. 35

findings in this area which concludes that on the whole there is little evidence that firm size or high concentration is strongly associated with a higher level of innovative activity.[30] The OECD findings are backed up by a recent empirical survey of Canada's manufacturing sector. This found that the adoption of new technologies was positively correlated with agglomeration (i.e. the location of a large number of firms in close geographical proximity). However, small single plant firms were more likely to adopt new technologies than large multi-plant firms.[31]

Baumol also warns about the limits of extending a contestability of markets approach to competition policy:

> "Where contestable markets got into trouble, and appropriately, was that some lawyers used it say that there can be no monopoly power. We say that perfect contestability is a theoretical construct which is not more realistic than perfect competition but more useful as a guide to regulation. Increasing contestability is also a feasible policy to adopt by reducing regulatory barriers to entry etc because that will drive you towards efficiency in markets. My argument is that while this was a useful concept in things like railroads, where the rules now in place explicitly are based in contestable markets, or in telephone regulation, where for example in New Zealand they are explicitly based on contestable market theory, that's not the important place. The important place is in innovative industries where they can make all the difference in the world."[32]

For small economies, therefore, the application of updated competition frameworks to take account of the features of new economy industries will be appropriate to a greater or lesser extent, depending on the presence of such industries. Where new economy industries exist in markets that are genuinely contestable, with low barriers to entry, this may remove the tension that exists in small economies between market power based on concentration and small firm size (as there is in effect, no market power). However, in individual cases, it will still be important to investigate whether significant barriers to entry exist for new economy industries and whether significant welfare gains can be achieved by their removal.

In some respects, competition authorities in small economies may initially be better placed than their large economy counterparts to examine the effects of new economy. Small economy competition authorities should already be used to applying a flexible approach to individual cases. Such an approach, made necessary by the importance of productive efficiency considerations, may need to be extended further to enhance the consideration of dynamic efficiency issues.

As noted above, however, the competition issues in new economy industries are complex and are already posing significant analytical and resourcing challenges to the competition authorities of larger economies. Small economies need to ensure that sufficient resources are devoted to this task and they draw on the work conducted in larger economies as appropriate. The advice from Evans and Schmalensee that "presumptions and structured rules of reason" be developed by competition authorities for the consideration of new economy cases would appear to be particularly appropriate for small economies.

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30 OECD (2002) p5 (On the other hand, the survey found empirical studies support the view that there is a strong positive link between product market competition and productivity growth.)

31 No (2002) p. 35

32 From Alan B Krueger "An interview with William J Baumol" *Journal of Economic Perspectives, Summer 2001*

4. Part 3: Current Issues for New Zealand

New Zealand represents the classic case of a small economy. A recent brief survey by Lew Evans compared New Zealand's market structure and firm performance with the rest of the world.[33] This found that:

- Markets in New Zealand have very few firms of reasonable size and are therefore relatively concentrated;
- Firms are tiny on a world scale;
- When compared to the rest of the world, New Zealand firms use relatively more capital, have a relatively high operating profit and relatively high total costs per unit of revenue.

Evans suggests that firms in New Zealand need higher profits in order to cover the higher costs of capital. While it may seem surprising that firms are more capital intensive in a small economy such as New Zealand, this can probably be explained by the absence of economies of scale and the need for higher capital intensity as a result.

A number of issues currently facing New Zealand competition policy are set out briefly below. This list is not intended to be exhaustive but rather to serve as illustrations of the types of issues that emerge from the analysis set out in this paper.

4.1 Competition, Regulatory and Trade Policies

New Zealand has, for many years, recognised the drawbacks of relying on competition law alone to provide for competitive conditions in small concentrated markets. The Commerce Act was introduced in 1986 and its presence has been accompanied since by extensive programmes of regulatory reform and (often unilateral) trade liberalisation. Regulatory reform has been based on a set of commonly understood competition principles that have been employed throughout Government. (As noted previously, the dairy sector was recently reformed along these lines – one of the last "traditional" sectors in the New Zealand economy to be opened to greater competition.) Trade liberalisation has been recognised as a fundamental means of exposing New Zealand industries to greater competition at the same time as mitigating some of the scale disadvantages they face. The process of trade liberalisation has led to comparatively low industrial tariffs, liberal services markets and open conditions for foreign investment.

A key focus of regulatory policy in New Zealand in coming years is likely to be on developing appropriate regulation for new economy industries, network industries and government regulated monopolies. A major challenge in this area will be to ensure that regulation allows both dynamic competition and co-operation between firms to take place. It will also be important to ensure that regulation itself is not imposing barriers to entry. In this respect, the recently passed Electronic Transactions Act is a useful step forward. This allows for statutory legal requirements for writing, signing, and retaining and producing documents to be met using electronic methods.

As the scope for further reduction of border barriers has now been largely exhausted, New Zealand's external economic policy has increasingly focused on "regulatory" co-ordination" with other countries. This has the objectives of regulatory co-ordination include ensuring that costs for businesses operating across countries are minimised and seeking to adopt "regulatory best practice" within New

[33] Evans L p. 8

Zealand based on knowledge of the experience of other countries. In the area of competition law, for example, the key thresholds under the Commerce Act are the same as those that prevail in Australia and many other jurisdictions. A key challenge for New Zealand will be to seek to further co-ordinate its approach to competition law with Australia, as Australia examines its competition legislation over the coming year.

4.2 Competition Law

An in-depth analysis of New Zealand's Commerce Act is beyond the scope of this paper. However, a key feature of the Act is that it permits the Commerce Commission and the Courts a good deal of flexibility in terms of how they approach individual cases. Per se provisions have been kept to a minimum (limited to price fixing and certain forms of exclusionary conduct) and there is a strong rule of reason flavour running through the Act's provisions. In addition, companies themselves can apply for authorisations under the Act both for mergers and for certain forms of co-ordinated conduct (such as joint ventures). The Commerce Commission can grant authorisations if it is satisfied that the public benefits set out in the application outweigh the detriments. Efficiency considerations are a key factor taken into account in assessing the public benefits of an application. The Commission can also take efficiency considerations into account (but to a much more limited extent) when assessing applications for clearances for mergers.

However, efficiency issues will need to be the subject of ongoing consideration. For example, an assessment is perhaps needed of why so little use if made of the Act's authorisation provisions. Over the last three years, the Commerce Commission has received only one to three business acquisitions and restrictive business practices authorisation applications per year. Some consideration may be needed as to whether cost and/or time considerations inhibit applications. Potential applicants may also be influenced by the fact that their competitors have legal standing under the processes that are followed to consider applications. (Ironically, competitors are most likely to oppose an authorisation in situations where vigorous competition would remain in the market if it were granted.)

4.3 Competition Law and New Economy Industries

The recent CRA report "Innovation and Competition Policy"[34] is critical of several aspects of the Commerce Act in terms of its suitability for new economy industries. The report says that the Act:

- Is too focused on competition (rather than efficiency) in its purpose statement;
- Focuses on static efficiency tests and on a time horizon over which the dynamic implications of any actions are difficult to assess;
- Was recently strengthened to introduce the concept of joint dominance (as opposed to unilateral dominance) through the introduction of the "substantially lessening competition" test for the assessment of mergers. It thus provides the Commerce Commission with the potential to make a much wider range of decisions based on evidence of, or the potential for, co-operative action;
- Includes a per se prohibition on price fixing.

[34] CRA (9 September, 2002) pp. 3-5

Each of these criticisms requires further consideration. The current purpose of the Act is "to promote competition in markets for the long term benefit of consumers within New Zealand". The phrase "long term benefit to consumers" is, in economic terms, very close to, if not the same as, the concept of efficiency. (The phrase "long term" in fact could be seen as giving particular weight to the concept of dynamic efficiency.) Certainly this is the approach followed by the Commerce Commission. In a recent speech, the Chair of the Commission said:

> Parts II and III of the Commerce Act do not have their own purpose statements. The Commission is therefore guided by the purpose statement of the Act which is "to promote competition in markets for the long term benefit of consumers within New Zealand". The Commission considers that an efficiency-based approach to the analysis of agreements and business acquisitions is consistent with the objectives of the Act."[35]

In the case of mergers, Berry and Pickford stress that the Commission will take into account dynamic efficiency considerations when considering public benefits and detriments. In assessing the possibility of dynamic efficiency gains and losses, the Commission takes into account the degree of intrinsic dynamism in the industry as a whole. This includes advances in technology and in products, the sources of that dynamism (whether internally or externally generated), the frequency of product innovation and the level of research intensity (sums spent on R&D).[36]

At the same time, the Commission is faced with the challenge of improving its understanding of dynamic efficiency as the importance of new economy industries in the New Zealand economy grows. As noted above, the issues involved are complex and are challenging much larger competition authorities. As in other areas, the Commission is able to draw on their analysis and experience.

The new "substantially lessening competition" test under Section 47 of the Act was intended to provide a somewhat wider and suppler instrument for the assessment of mergers rather than a tougher test. It allows joint dominance to be considered on the same basis as unilateral dominance, which makes sense from the standpoint of economic theory. It also means that the test employed is the same as that employed for contracts under Section 27 as well as that employed by many other countries for mergers (e.g. Australia, the European Union, the United States and Canada).

In applying the test to mergers, the Commission has taken a flexible approach. In particular, the Commission's new framework indicates a greater willingness to have a regard to dynamic market processes rather than simply focusing on the market share of the merged entity. This would appear to be an improved approach for the consideration of mergers in new economy industries. Since its introduction, the new test has not led to the Commission declining a greater proportion of merger clearance applications, with all but two of the first 22 applicants having been approved (including an application for a clearance between two telecommunications companies, Telstra and Saturn). At the same time, the analysis employed is more complex and entails a greater resource commitment for both the Commission and applicants.

It is worth noting that CRA came out strongly in favour of the substantially lessening competition test for considering mergers in new economy industries in the United Kingdom. It believed this test was more suitable than the alternative "dominance" test because new economy markets are often characterised by a single dominant firm in any case. The report concludes that "for many mergers in the new economy,

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35 "The Commission's Approach Across its Responsibilities" – Speech By John Belgrave to the Competition Lawn and Policy Institute of New Zealand, August 2002

36 Berry and Pickford p. 9

the relevant question is whether a merger will strengthen or weaken competition in the process of determining the dominant firm".[37]

The CRA report also comes out strongly in favour of a prohibition on price fixing for new economy industries (although it argues that per se prohibitions should be limited to price fixing).[38] This recommendation is based on the Evan and Schmalensee's conclusion that "fixing prices or preventing competitors from distributing their products generally will harm competition even if dynamic competition is vigourous".[39]

5. Conclusion

This paper argues that there is an inherent tension in many small economy industries between the potential for market power based on concentration and sub-optimal firm size. Gal describes this as the "basic conflict created by smallness". This tension is likely to mean that small economies will need to pay relatively greater attention to specific efficiency considerations in the context of competition policy.

This tension entails a number of specific policy implications for small economies vis-à-vis large economies. Small economies may need

- To place relatively greater emphasis on trade and regulatory policies than on competition law. There is a need for an integrated approach to all three policy fields in small economies. In particular, open trade and investment policies offer small economies the potential to overcome some of the disadvantages of smallness;

- To maintain relatively greater flexibility in their competition law to allow for the assessment of efficiency. This should entail minimal use of per se rules and rules of thumb allowing each case to be assessed on its merits;

- To spend relatively more resources on the enforcement of competition law given the flexibility required under the law and the need to examine each case on its own merits.

The growth of new economy industries entails real challenges for competition policy and law. In particular, sufficient flexibility is needed to allow for the assessment of dynamic efficiency in terms of both competition and co-operation between firms. If they already have a flexible competition policy, small economies may to an extent be well placed to rise to these challenges, although the nature of the analysis required is likely to put added pressure on resources. To the extent that dynamic competition exists (often as competition "for" rather than "in" the market) the presence of new economy industries may reduce the problems caused by concentration for small economies. At the same time, their competition authorities will need to recognise that often there are both natural and artificial barriers to entry in new economy industries and that firms in these industries have a strong incentive to maintain these barriers.

New Zealand is an example of a classic small economy and its competition policy frameworks reflect most of the features that should be present in a small economy. In the future, New Zealand faces the challenges of:

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37 CRA (March 2002) p. 129

38 Ibid p. 61

39 Evan and Schmalensee p. 1

- Building on the gains provided by open trade and investment policies through the improved co-ordination of competition and regulatory policies with key trading partners;

- Ensuring that provisions within competition law designed for the consideration of efficiency factors are workable in practice. This applies particularly to authorisation provision for both mergers and restrictive business practices;

- Developing its competition policy, law and institutions to take account of the features of new economy industries.

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