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**Upgrading New Zealand's  
competitive advantage:  
a critique and some proposals**

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**Abstract**

*The competitive advantage of nations* by M. Porter, and *Upgrading New Zealand's competitive advantage* by G. Crocombe, M. Enright and M. Porter, both contain a number of fascinating - though often unbacked - propositions concerning the optimal set of rules for an economy. In particular, *Upgrading New Zealand's competitive advantage* seeks to stimulate debate on those rules that will lift New Zealand out of its current recession and generate sustainable economic growth. Using the New-Classical paradigm, this paper constructs a framework within which these propositions can be rigorously analysed. In addition, a small number of modest proposals are made.

**Keywords:** Competitive advantage, microeconomics, New Zealand economy, optimal government policy.

## I Summary of *Upgrading New Zealand's competitive advantage*.

The publication of *Upgrading New Zealand's Competitive Advantage*, written by G. Crocombe, M. Enright, M. Porter and others, is a welcome contribution to the ongoing attempt to understand why New Zealand's recent economic performance has been poor - relative to many other OECD nations - and to providing a blueprint for change. The book can be seen as a mixture of applied microeconomic analysis, an application of Professor Porter's paradigm of competitive advantage<sup>1</sup> and the summary of an in-depth investigation of firms in 20 key New Zealand industries.

Many of the basic economic ideas behind the analysis are rather obvious. That any blueprint for future economic growth requires a microeconomic policy (or at least an awareness of the impact of so-called macroeconomic policy on the decisions of individuals), we endorse without reservation.<sup>2</sup> That the economic success of a nation is positively correlated with a skilled, innovative workforce using efficient production techniques and producing marketable outputs; that growth is essential to maintain wealth relative to other nations; that growth can only be guaranteed by a continual updating of skills, production techniques, strategies of firms and rules of the game - both external (ultimately, the laws of the nation) and internal to firms<sup>3</sup>; these are all so close to tautologies that they deserve little comment.

The book draws heavily upon Porter's fascinating theory of competitive advantage; although the failure to adequately reference Porter's work causes many sound arguments to appear as unbacked assertions. For our purposes, four propositions (one for each point in Porter's so-called *diamond*) stand out as warranting further investigation in the New Zealand context. First, the claim that advanced, man-made factors (sophisticated physical and human capital) are more significant for competitive advantage in the late twentieth century than basic factors (natural resources, climate, location, debt capital) is intuitively attractive but needs a rigorous theoretical explanation (Porter, pp.76-80).<sup>4</sup> In fact, Porter goes on to argue that competitive advantage can grow out of selective disadvantage in some basic factors (Porter, p.81).<sup>5</sup>

Second, the assertion that sophisticated and discerning domestic buyers are important for the international success of domestic firms is also attractive, especially when modern microeconomic theory is used to provide the seeds of a rigorous explanation (*ibid*, pp.89-91).<sup>6</sup> Further, the claim that domestic firms will gain advantages if the needs of home buyers anticipate those of other nations is rather obvious but does not suggest many policy implications; except for the government as buyer and lawmaker attempting to anticipate world demand (for example, environmental legislation associated with agricultural production).

Third, the argument that individual firms flourish when they are embedded in a cluster of related and supporting industries seems almost self-evident to anyone familiar with theories of externalities, especially those associated with human capital (ibid, pp.100-107). For example, suppose a number of industries are related through the labour market - they all require a certain type of engineering skill. The acquisition of such a skill therefore facilitates a number of career opportunities, and so is in great demand. Tertiary institutions allocate their resources so as to meet this demand. The interactions between academics, students and industrial engineers generate innovations and an ever increasing number of areas in which the skill (and its mutations) can be utilized. It would not be surprising to find many of the industries based in the same town as the more successful tertiary institutions (silicon valleys and fens spring to mind). If innovations are linked to information distribution, there may be benefits associated with all these people drinking at the same bar (especially if alcohol facilitates the speedy distribution of information). However, whether the tertiary institution comes before the industries, or vice versa (or whether the bar comes before both), is a question that, unfortunately, neither Porter nor Crocombe et al appear to address.

Fourth, the proposition that a firm's success is influenced by its strategies and organizational structure, which are in turn influenced by the domestic market structure and therefore the degree of inter-firm rivalry is both important and (again) rather obvious to micro-economists (ibid, pp.107-117). However, the claim by Porter that:

*Among the strongest empirical findings from our research is the association between vigorous domestic rivalry and the creation and persistence of competitive advantage in an industry* (ibid, p.117)

appears to have almost no sound theoretical justification. Many psychological reasons are given for the alleged superiority of domestic over foreign rivalry, but there are few economic reasons offered.<sup>7</sup> In fact, the only reasons we could find were that domestic rivals share the same national advantages (which seems to imply such rivals are not needed if foreign ones have the same - or more - advantages, ibid p.119), and there are positive externalities associated with rival firms being located in the same town or region (which is a property of location and mobility rather than nationhood, ibid p.120). Finally, Porter observes that:

*A completely open home market along with extremely global strategies can partially substitute for the lack of domestic rivals in a smaller nation.* (ibid, p.121).<sup>8</sup>

Perhaps the most exciting and original aspect of the project behind the book is the study of 20 key New Zealand industries. It is unfortunate that these studies, which are held by the Trade Development Board (and, hopefully, soon to be released) have not been well-cited to support the book's observations, and that no bibliography is represented to draw attention to their existence. These omissions transform the report from one which has the firm underpinnings of an in-depth

analysis of the opinions and attitudes of New Zealand corporate executives, to one which in large measure seems to represent a series of well known historical facts, some homilies, and some contentious assertions. Further, for many of the empirical claims made in the book, no evidence in terms of cited econometric studies is produced to support them.<sup>9</sup> Instead the authors endeavour to persuade their readers to accept these interesting conclusions by referring to a series of tables and graphs. These illustrate that certain industrialized nations whose exports are focused on high technology, high unit-value-added products have been more successful in generating high and rising living standards than another set of nations whose exports are mainly in the form of partially-processed, primary products. A critic of this contention might represent that the choice of just four other nations (Australia, Chile, Sweden and Switzerland) - out of over 150 in existence - to demonstrate this point is somewhat selective, and might wonder what the association would be if say Saudi Arabia and Ireland had been selected instead.

In summary, *Upgrading New Zealand's competitive advantage*, and the research project behind it, can be seen as an attempt to understand why has the growth rate of New Zealand's real Gross Domestic Product (GDP) per capita been so low in recent years (relative to the OECD average, for example), and to find ways to increase it. Our crude summary of the book's argument is that the growth of any nation's output in the late twentieth century is positively correlated with success in international trade (there are very few successful nations whose firms are unable to compete in international markets). Historically, New Zealand exports were dominated by primary products, and that still remains the case today despite the industrialization (and some might say the post-industrialization) of many other nations, the dramatic fall in the size of agricultural - relative to total - world trade over the last century, and the steady (relative) fall in international agricultural prices during the post-war period.<sup>10</sup> This continued reliance on agriculture, coupled with the poor performance of agricultural prices implies the New Zealand workforce has failed to acquire highly marketable skills (Crocombe et al, pp.19, 23, 46, 100). The remedy for this - according to our interpretation of the book - is to stop trying to produce these basic products more and more cheaply (ibid, p.158), and instead, to find new products that the international market wants (or can be persuaded to want) and New Zealand firms can generate a distinct advantage in producing, and then to ensure the workforce acquires skills appropriate for the efficient production of these new commodities. The industry chosen to represent those that have already been developed in New Zealand was electric fencing (ibid, pp.82-86). Apart from such small and isolated cases, New Zealand's ability to produce many agricultural products efficiently (that is, cheaper than most other nations) has not resulted in high growth rates in recent years, nor has it caused the development of internationally successful related industries. The inability to produce a highly skilled workforce which can continually innovate and diversify is a problem - possibly the main long-term problem - that must be addressed by the nation.

While the book does not seek to make specific policy recommendations, it does attempt to initiate debate and criticism by making general inferences from Porter's theoretical foundations and the conclusions of the industry studies. It is in this spirit of searching for the optimal microeconomic rules of the game that our analysis of the book's *Implications for government policy* (Crocombe et al, pp.165-177) was undertaken.

## II Implications for government policy:

It is our belief that one of the principal economic roles of the government is to devise and announce - as well as continually debate and periodically update - the rules of the game under which individuals (consumers, workers, bureaucrats and managers) and firms (if they can be viewed as entities separate from workers, managers and shareholders) chose their optimal strategies<sup>11</sup>. The long-term economic objective of the government is assumed to be the maximization of the nation's growth rate of real GDP per capita. Government policy can then be seen as choosing rules so as to encourage (i) workers to acquire - and continually update - highly marketable skills (or, rather, skills that will have a high market value in the near future), (ii) individuals to innovate with respect to production techniques for existing products, and to develop new products (possibly through encouraging the formation of new businesses), and (iii) firms to maximize profits by continually expanding their productive activities (increasing the output of existing products, or introducing new products - possibly at the expense of older, outdated products).

At any point in time, the optimal rules of the game will depend upon the environment facing the nation; for example, the current skills of the workforce, the types of outputs produced and production techniques used, the strategies of firms (including their internal rules or structure), social policies, legal precedents, the rules of other nations, famines, wars, plagues, and the histories of all these factors. In particular, there are unlikely to be environment-free optimal strategies; such as *competition is always good*, or *devaluation is always bad*.

Perhaps the authors of the book had a framework similar to that sketched above when they considered the implications for government policy of their analysis. In any event, some of the report's recommendations will now be considered in the light of the above sketch.

(1) **Move beyond macroeconomic policy** (Crocombe et al, pp.166-168). Clearly, it is important to recognise that economic success ultimately rests with individuals having the right incentives. For many economic theorists the logical conclusion of this observation is that macroeconomic analysis is non-existent; all economic phenomena can ultimately be explained through microeconomic analysis. What used to be called macroeconomic theory can now be called theory involving tractable dynamic general equilibrium models.<sup>12</sup> To call a particular economic policy *macro* would then be a comment about the paradigm - or language game - in which it was developed, rather than any intrinsic property of the policy.<sup>13</sup> However, as the book asserts that

*Sound macroeconomic is necessary but not sufficient to bring success to the New Zealand economy* (ibid, p.166)

it would appear the authors hold a somewhat simplistic view concerning the nature of macro - and micro - economics.<sup>14</sup> For example, the proposition: *Wages should be free to rise or fall with productivity* (ibid, p.166), fails to recognise that *productivity* is not an appropriate microeconomic concept for analysing the determination of wage rates.<sup>15</sup>

**Avoid the devaluation trap** (Crocombe et al, p.167).

*In 1975 one New Zealand dollar was worth one American dollar and thirty cents. Today, one New Zealand dollar is worth around sixty American cents. In fact, devaluation sets up the conditions for further devaluations, and reduces the probability of the development of sustainable competitive advantage.* (ibid, p.167).

Unfortunately, there are no facts about devaluation - or even the relationship between nominal exchange rate movements and economic prosperity - in this section; just casual observations and unsupported assertions. Of course, it may well be the case that devaluation encourages future devaluations; however, we believe that such a proposition should be justified by hard empirical evidence (at least a simple econometric analysis of New Zealand, and references to overseas studies), coupled with a satisfactory theoretical explanation.

For example, as a very crude measure, consider not nominal exchange rates but those adjusted by consumer price indices; define the *real* NZ-USA exchange rate to be the nominal exchange rate times the New Zealand Consumer Price Index (CPI) divided by the US CPI. If the real exchange rate was 100 in 1975, then at the end of 1989 it was 107.6.<sup>16</sup> That is, the decline in the nominal exchange rate was offset by the greater inflation of consumer prices in New Zealand relative to the US. How much of the fall in the nominal exchange rate was generated by the government's deliberate manipulation, and how much of New Zealand's inflation was influenced by these manipulations, remain open questions that are not even addressed in the book.

The book's usage of the term *devaluation* struck us as requiring clarification. At the present point in time, given the Reserve Bank is not directly intervening in the foreign exchange markets, New

Zealand's exchange rates are determined by market forces and so it is simply not possible for the government to devalue. However, the equilibrium exchange rates will be influenced by government policy (especially monetary policy), and so the government can orchestrate a *devaluation* by relaxing monetary conditions, for example.<sup>17</sup>

Now, it is true that a lowering of exchange rates does not directly contribute to the generation of marketable skills, innovations and optimal long-term company strategies. However, it does not obviously discourage such generation. In fact, if a particular lowering of the exchange rates increases the short-to-medium-term profitability of firms producing tradeable goods and services, any growth strategy with this lowering would appear to be more likely to succeed than the growth strategy without.<sup>18</sup> Hence, while exchange rate manipulation may not be an optimal growth strategy by itself, it may indeed be optimal when combined with measures to generate skills, innovation and optimal company strategies. Remember, the success of a fall in exchange rates will depend upon the environment. Intuitively, if unemployment is high, producer price inflation low and the current account deficit large, it is highly likely that a moderate fall in exchange rates will increase the profitability of exporters without having any adverse inflationary impact. Whether or not this improvement in profitability is sufficient to improve the current account balance will depend upon the nature of the export and import markets and their supply and demand price elasticities.<sup>19</sup> At the moment, unfortunately, monetary policy is such that exchange rates are producing large current account deficits.<sup>20</sup> It is our belief that a relaxation of monetary conditions (for example, by increasing the Settlement Cash target, or reducing penal discount rates), would cause equilibrium exchange rates to fall. This assertion, together with the large current account deficit can be summarized in the proposition: *The exchange rate is overvalued.*

## **(2) Upgrade New Zealand's human resources (Ibid, pp.168-169).**

The book highlights the failure of the New Zealand educational system to encourage the study of certain subjects hypothesized to be essential for future economic success; for example, Asian languages (in particular, Japanese and Chinese), engineering, agriculture, forestry, horticulture and veterinary science (Crocombe et al, p.103). Accepting that these subjects are indeed essential, it is our contention that the benefits to the nation - associated with students learning these subjects and staying in New Zealand after their studies - should be acknowledged by issuing tax credits for successful learning.

For example, a list of approved tertiary institutions could be drawn up (primarily universities and polytechnics), a subset of courses classified as economically useful for each institution, and a number of tax units associated with each of the approved courses passed; first-year Japanese may be given one tax unit, second-year two units, and so on. Quite how a set of approved courses



would be constructed we are not sure, but this could be determined by a committee of government officials, managers, union officials and academics. A tax unit would then provide (say) a \$100 per year tax rebate (with the value of a unit indexed to the CPI), for (say) fifteen years after the course is passed. For example, if a three year degree yields ten tax units, and the real discount rate is 5%, the present value of the tax units would be \$7,720 (if each unit is worth \$200, or the degree yields 20 units, the present value is doubled to \$15,440).

**(3) Stimulate domestic competition** (Ibid, pp.169-172).

Following the Porter thesis discussed earlier, this section appears to claim that domestic competition stimulates innovation in methods of production, outputs produced, and marketing of these outputs. In particular, it denies that New Zealand is too small to support domestic rivalry, and does not hesitate to recommend competition in sectors such as electricity generation, postal delivery, and television stations (ibid, p.170). Notice, competition is never an end in itself, merely a method for achieving sub-goals (which, in turn, enable long-term growth to be maximized), and so it is an empirical claim that domestic competition will achieve these sub-goals, and will do so more efficiently than any other market structure. Presumably competition forces individuals and firms to innovate in order to survive (otherwise the individual or firm will cease to be an active economic participant) and, further, the larger the *gene pool* of domestic innovations, the greater the likelihood that some of them will prosper in international markets.

To help evaluate such recommendations, it seemed to us appropriate to compare New Zealand's competition policy with other OECD nations. To this end, a recent OECD report - entitled *Progress in structural reform* - proved most interesting. We will make selective use of the Report to compare New Zealand with Sweden, Switzerland, West Germany and Japan. First, the OECD is on the whole quite positive about Sweden:

*In sum, increased weight has been given to structural policies in recent years. The results are most visible in the field of domestic financial markets... In other fields, action has come later and it is still too early to assess the effects... Sweden will not alone reduce its border protection, but adjust it according to decisions made within the GATT framework... While most of the manufacturing sector is subject to international competition, efficiency of certain other sectors would benefit from increased competition.*<sup>21</sup>

In Switzerland, despite the introduction of competition legislation in 1986, the overall impression of the OECD is somewhat gloomy:

*Overall, progress of structural reform has been slow. If more distortions are allowed to persist than in other countries, particularly European ones, Switzerland's competitive position might be affected and its future growth performance impaired.*<sup>22</sup>

In West Germany, although some privatization has occurred, the State has maintained control over the railways, and postal and some telecommunications services (network transmission and telephone services). Further, the OECD remarks that:

*A number of microeconomic rigidities and distortions persist. These are particularly manifest in the labour market.*<sup>23</sup>

Japan, perhaps, is the most interesting case of all. Although public enterprises have not had a particularly large role to play, the State has never bothered to force industries to operate under orthodox competitive rules of the game.<sup>24</sup> Hence the OECD remarked:

*Japan's macroeconomic performance has been excellent in recent years, but microeconomic distortions persist*

*Government regulations and import restrictions including on agricultural products have also contributed to the differential (between retail prices in Japan and other industrial countries). In 1989, net producer subsidy equivalents still amounted to 72 per cent of the value of farm production.*

*In general, deregulation has been rather gradual in Japan. Insufficient price competition in the service sector is a problem.*<sup>25</sup>

On the bright side, however, the report notes that:

*Overall, substantial progress has been achieved over the past few years in the areas of financial liberalisation, tax reform, trade policy and deregulation.*<sup>26</sup>

It is an interesting coincidence that since financial liberalization, the Nikkei 225 Share Index fell from a peak of 39,916 (December 29 1989) to 22,630 (December 19 1991) - a drop of 43.3%.<sup>27</sup> Perhaps the inevitable costs of the follies of regulation are only paid after liberalization.

After all this lack of structural reform in nations who are meant to serve as examples to New Zealand, it is interesting to note the OECD's comments on New Zealand.

*New Zealand used to be one of the most highly regulated economies in the OECD area.*<sup>28</sup> *Since 1984, though, it has adopted the most wide-ranging set of microeconomic reforms taken by any Member government.*

*New Zealand's financial market, for example, has moved from being one of the most regulated in the OECD area to one of the most liberal.*

*Among measures taken over the last two years or so, the government has attached particular importance to trade liberalisation to improve the allocative and dynamic efficiency of the economy... Net producer subsidy equivalents for agriculture are the lowest in the OECD area..*

*Recent reforms have made New Zealand's tax system probably the least distortive in the OECD area.*

*In the area of deregulation, all of the telecommunications markets for services and for equipment were liberalised in April 1989... The deregulation of the transport sector reduced rail freight costs by around 40 per cent in real terms between 1983 and 1988... The government has deregulated domestic aviation and removed quantitative restrictions in the taxi industry. Reform is underway for ports, education and training and occupational licensing.*

*Because so much has already been attempted in a comparatively short period, it is difficult to assess the advantages of a more rapid pace of reform ... (however) there is need to reduce the growth of social expenditure... there is significant scope for greater adjustment in labour markets.... (and) the accelerated removal of remaining border protection is desirable.<sup>29</sup>*

First, notice the remarkable coincidence between the OECD's recommendations and the economic reforms undertaken by the Bolger Administration.<sup>30</sup> A possible implication is that such Reports should be given more weight than political Party Manifestos when attempting to predict the behaviour of an incoming government. Second, our reading of the OECD's Report left us feeling that New Zealand's structural reforms are viewed as some brave offshore experiment (a bit like French nuclear tests in Mururoa), that should work in theory, but have yet to be adopted by any economically successful nation.<sup>31</sup> While other nations are criticised for reforming too slowly, New Zealand is praised for leaping in - gumboots and all. Again, notice the correlation between liberalization (especially in the financial sector) and economic performance (asset price fluctuations, output growth, unemployment, bankruptcies, and so on). Perhaps New Zealand's economic performance during the late 1980's would have been worse without reform. Perhaps the current economic path is optimal for maximizing long-term growth and New Zealanders will praise the brave reformers in twenty or thirty years time. Perhaps the recent economic policies have destroyed New Zealand's productive base and set the economy back twenty years. Perhaps the Swiss - and the Germans, the Japanese and to a certain extent the Swedes - were right and caution was the optimal strategy; let some other nation find out how efficient the free market really is. Whatever the case, there can be no doubt that the *free market* rules of the game have often favoured the emergence of monopolies - hence the existence of anti-monopoly legislation in the USA and many other countries (see Crocombe, p.145). This illustrates that it is not competition *per se* that is efficient but, rather, for certain environments the optimal rules of the game may involve some degree of competition.

Finally, it is not immediately obvious that encouraging domestic competition will have any impact on the profitability of many areas in agriculture. From our reading of the Porter thesis, competition and rivalry amongst farmers should already be a consequence of the large number of farmers, coupled with the importance of the farm for providing individuals with their way of life and status. Even if the upstream processing and marketing is handled by a monopoly, it is not immediately obvious domestic competition is the answer. In particular, it should be noted that the Dairy Board does face competition from other distributors in international markets. Further, the recent low growth rates in farm profits in the dairy industry were due to falling output prices - despite rising physical output (ibid, pp.46, 70). There is no evidence to suggest this industry needs competition. It may need a drain of resources to more productive areas (which the report failed to identify), or it may need innovation to develop new products and marketing strategies (which may be optimally stimulated by competition or possibly by research undertaken by the Dairy Board). Notice also that if the real exchange rate (against, say, the US dollar) had not

appreciated over the last few years, profitability in this industry would not have fallen as sharply as it did.

**Approach to privatization and state monopolies (Ibid, p.170).**

One of the central issues in any discussion of competition policy is the quest for the optimal rules of the game in certain industries currently dominated by State Owned Enterprises. Now, in many OECD countries in the 1970's, the State owned a large proportion of many key industries. For example, consider the following industries:<sup>32</sup>

<b>Nation</b>	<b>Postal</b>	<b>Telecom</b>	<b>Electricity</b>	<b>Gas</b>	<b>Railways</b>	<b>Airlines</b>
Sweden	100%	100%	100%	100%	100%	50%
Switzerland	100%	100%	100%	100%	100%	25%
W. Germany	100%	100%	75%	50%	100%	100%
Japan	100%	100%	0	0	75%	25%

Admittedly, during the 1980's productive activity by the State declined (relative to GDP) in most OECD nations. Nonetheless, these figures do appear to indicate that several successful nations have historically relied upon a large amount of State activity - often involving monopolies - in certain key industries.<sup>33</sup>

Now, we have never seen an argument that shows a public monopoly is incapable of constructing an incentive structure that will generate an efficient, skilled, innovative workforce. For the sake of argument, we will accept that public monopolies in New Zealand have never had the right incentives. It cannot be inferred, however, that state control is bad (inefficient) or competition is essential. All that can be said is the past rules of the game were sub-optimal. In the same way, it may be possible to find external rules for a private monopoly that make it more efficient than competition (for example, if there are obvious costs such as externalities). This is an empirical issue that needs to be carefully investigated. One thing that does seem clear, however, is any incentive structure of a private monopoly can be imitated by a public monopoly, but not necessarily vice versa. In particular, the State can only influence the rules of the game facing a private monopoly (the external rules), but cannot directly influence their internal rules (at best, these will be chosen so as to maximize the long-term profitability of the firm). With a public

monopoly, however, the State can determine both the external and internal rules. To us, this observation implies the State should focus on a thorough examination of the external rules (for example, whether to allow competition, the nature of anti-monopoly legislation, etc) and internal rules (for example, employment contracts for both managers and employees) for current public monopolies rather than pursue an indiscriminate policy of privatization.

**Maintaining an open economy** (Ibid, p.171).

The book approves of New Zealand's unilateralist approach to the removal of protectionist barriers as it forces domestic firms to become more competitive.

In Britain, much has been made in recent years of the folly of any policy of unilateral disarmament, as it involves both a weakening of a nation's defenses and the loss of a bargaining chip in bilateral disarmament talks. Perhaps the collapse of CND in Britain, and the perception of the British Labour Party's defense policy as a liability in the 1987 general election, were both due to the power of this argument.

Even if the unilateralist position has some validity for weapons of mass destruction, New Zealand's recent history has cast doubt on its validity for protectionist trade barriers. Agricultural protection in many of our major trading partners (Japan, Europe, USA) ensures that New Zealand's comparative efficiency in agricultural production cannot be exploited (ibid, p.65). On the other hand, the removal of New Zealand's protectionist barriers have coincided with (some might say contributed to) the collapse of many of our import substitute industries. In the short-to-medium-term at least, this has had a negative impact on our economic performance.

Now, it could be argued these failed industries did not deserve to survive, as they were inefficient. But then, by the same argument, much of Japan's and Europe's agricultural sectors do not deserve to survive, yet neither of these highly successful regions has seen fit to allow our agricultural products free access. Perhaps our noble poverty will shame them into opening their doors. Perhaps we would have been better to follow their examples and recognise that a strategy of protection is often an optimal response to the protectionist strategies of others.<sup>34</sup>

It is our belief that a bilateral approach to tariff strategies is appropriate at the present point in time. In particular, New Zealand should seriously investigate the possibility of economic - and then political - union with Australia, Japan and other Asian-Pacific nations.<sup>35</sup> For, accepting that currently New Zealand has little else to offer the world apart from basic factors, the quickest way to acquire sophisticated domestic demand, rival firms and whole families of industry clusters is simply to adopt Australia and Japan.

At this point, Porter's definition of a nation starts to look a bit strange. At one moment, New Zealand and Japan are two separate nations, and then suddenly they merge. Is a treaty of nationhood sufficient to reap all the benefits listed in the book<sup>36</sup> or is there something more?<sup>37</sup>

Perhaps the concept of nationhood should be replaced by an *economic region*. If two firms face the same external rules of the game (laws) and have access to the same set of markets, they operate in the same economy. Hence in the US, ignoring State-specific rules (for example, different local income tax rates), the economy and the nation coincide. This coincidence is no longer the case in Europe, however, as common economic rules are rapidly moving beyond national boundaries. Further, firms a and b belong to the same region - with respect to the town C - if the transport costs from a to C, and b to C are similar. Hence, firms in New York and San Francisco belong to the same region with respect to Mexico City, but not with respect to Seattle. If the concept of an economy is the most important characteristic of a nation for the Porter thesis, then New Zealand should benefit from economic integration with its Pacific and Asian neighbours.<sup>38</sup> In fact, it may turn out to be optimal for every country to share the same set of rules; reducing the world to a single nation (we say *may* because even if the Porter thesis is correct, it ignores externalities; Japan may be succeeding at the expense of nations like New Zealand and Ethiopia). On the other hand, if it is an economic region (or perhaps just a region) that defines a nation, then neither Sweden nor Switzerland are small nations like New Zealand.<sup>39</sup> One of New Zealand's main problems - and most obvious characteristic - would then be its geographic isolation, combined with its small population. An implication of this focus on economic regions would be the requirement of a minimum population to ensure long-term economic growth rates comparable with other OECD nations. For example, the minimum population required for New Zealand to become a viable economic region might be 30 million. The question for New Zealanders would then become whether such a population increase is too high a price to pay for economic growth.

#### **(4) Improve business access to capital (Ibid, pp.172-174).**

Yet another interesting - though unbacked - assertion about New Zealand is the failure of the financial sector to encourage long-term investments in productive activities (ibid, pp.140, 173, 174). Certainly, it would appear that the rules of the game for the last few years have discouraged productive investment (the purchase of equipment associated with increased output or new methods of production), but encouraged speculative investment (the purchase of existing assets, held primarily on expectations of future price increases; especially commercial property and equities). The development of rules that encourage productive investment are, in our view, essential for future prosperity. For as was observed in the book

*The limited availability and high cost of capital represent important constraints to the development of the New Zealand economy. (ibid, p.172).*

Now, one way to encourage productive investment is to discourage short-term speculative investment activities; for example, by the introduction of a short-term capital-gains tax (ibid, p.174). While we whole-heartedly agree with the intentions behind such a tax, it is necessary to carefully consider the practical consequences of its introduction. First, such a tax may play a crucial role in co-ordinating the expectations of asset portfolio managers. If such managers focus on forming expectations of the long-term revenue stream associated with an asset, rather than the short-term movement in its price, there may be a reduction in short-term price fluctuations as well as increase in the average time between purchase and sale.<sup>40</sup> Second, monitoring costs will be low for those assets whose transactions are recorded on the auctioneer's computer - for example, shares - but high for other assets - for example, short-term financial assets without secondary markets. If assets with high monitoring costs are excluded from the capital gains tax, then no doubt financial institutions will devote resources to developing such assets; thereby undermining the intentions of the tax.<sup>41</sup> Third, the incentive implications of the tax will depend upon its particular form. For example, a tax rate that depends in a smooth manner on the time between purchase and sale may be superior to one involving discrete tax changes, if monitoring costs involved in calculating the time are low but not if these costs are too high.<sup>42</sup> Finally, discovering the optimal holding time - after which tax is not paid - may be crucial for the effectiveness of the tax. Too long a time may stabilize asset prices at the expense of reducing information that may be important for investment decisions (the information previously carried in relative price movements is now lost), while too short a time may fail to discourage speculative activity.

**Eliminate the government deficit, rethink the structure of government expenditure, and restructure superannuation (Ibid, pp.172-173).**

If the government is determined to eliminate - or at least drastically reduce - the government deficit in the short-term (and hence reduce the *crowding out* effect on the private sector, by lowering interest rates), the goals and implications of all forms of government expenditure must be carefully evaluated. Of course, even without the sub-goal of deficit elimination, such an evaluation is desirable. For example, in the light of the USA's recent pronouncements declaring its role as the world's policestate, and the reputation effect of the Gulf War, the probability of New Zealand being successfully invaded by another nation must be considered to be quite low. New Zealand's military contribution to the *new world order* could come in the form of specialist teams rather than an all-round military unit. Such a rationalization of New Zealand's military activities may well lead to substantial cost savings by itself. One possibility is for New Zealand to develop specialist medical units that could be placed at the disposal of the United Nations during periods of war and

natural disasters.<sup>43</sup> Alternatively, the New Zealand military could be given the specialist role of policing the Antarctic and its surrounding waters - particularly against environmental abuse.

Further, the recent increase in New Zealand's overseas debt (from 49% of GDP in 1983 to 70% in 1990), indicates that the proportion of New Zealand assets owned by foreigners has been increasing (although we have been unable to find any statistics on foreign ownership). Now, it seems self-evident that the more of New Zealand's assets a particular nation owns, the less likely it is to invade (unless its asset ownership is threatened by compulsory nationalization or some such government policy), and the more likely it is to come to New Zealand's aid if invaded by a third party. These observations, if accepted, would seem to imply that defense expenditure should be inversely linked to the proportion of foreign ownership. For example, an increase in foreign-owned assets - relative to total assets - by one percentage point leads to a fall in defense expenditure - as a proportion of GDP - of 2% (not two percentage points).<sup>44</sup>

The book, however, chooses to focus on health, education and welfare:

*Our goal of high and rising standards of living cannot be achieved if government continues to divert billions of dollars from the productive sector to support a welfare system that reduces savings and distorts incentives.* (ibid, p.172).

Whether or not it was the intention of the authors, the reader is left with the impression that health and education are not productive, which is clearly nonsensical. It might be argued that health care for the elderly and the unemployable is unproductive, but humanitarian and political reasons prevent the government from dramatically cutting back on such expenditure. Even if attention is focussed solely on transfer payments such as benefits and pensions, the claim that these reduce savings and distort incentives is yet another unbacked empirical assertion presented as a self-evident truth. For example, if a reduction in benefit payments causes unemployment to rise in the short-to-medium term, it may very well be the case that total saving falls. There may even be cases where the new path followed by the economy causes private wealth to be lower - at every point in time - than it would have been without the benefit cuts. Further, the emotive phrase, *distorts incentives*, seems to imply there exists a distortion-free incentive scheme. Once it is recognised that the optimal action for any individual will depend upon the rules of the game (including eligibility for unemployment benefits and retirement pensions), the concept of distortion would seem to imply the existence of an optimal set of rules; with any sub-optimal set being distortionary.<sup>45</sup> However, the book fails to prove that the current welfare system is sub-optimal (which indeed it may be).

Finally, most New Zealanders are probably willing to accept that the method of determining retirement income must be reevaluated (and, possibly, dramatically altered). Clearly, one of the most important characteristics of any superannuation scheme is continuity; the scheme observed by an individual when aged twenty is the scheme they observe at retirement age. Consumption



and asset portfolio decisions during the individual's working life will be influenced by the (expectations of the) implications for retirement income. The more she correctly predicts these implications, the better will be her consumption and investment decisions during her working life.<sup>46</sup>

**Tackle Financial market weaknesses (Ibid, p.173).**

The book's attitude to the financial market deregulation of recent years could be considered somewhat confusing. First, it is described as a positive move (ibid, p.173), without any explanation. Second, we are told that *the New Zealand capital market points management towards low-risk investments that provide short-term returns* (ibid, p.126); presumably at the expense of high-risk markets, such as venture capital (ibid, p.173). Third, *much of the investment that did occur went into real-estate and share speculation rather than productive investment* (ibid, p.140). Finally, *the share market crash of 1987 showed the boom created by an immature, deregulated financial sector and easy credit was an illusion* (ibid, p.154). The latter two propositions sit very uncomfortably next to the former two. If real-estate and share speculation in 1980's New Zealand can be described as low-risk, we are left wondering what the result would have been if the financial markets had moved into high-risk ventures.

As with the book's attitude towards domestic competition amongst producers, the commitment to financial market deregulation is presented without any sound empirical or theoretical justifications. The casual empirical observation that financial market deregulation has been highly correlated with first, speculative activity coupled with credit and asset price explosions, and then asset price implosions, bankruptcies and credit implosions could, presumably, be due to years of regulation dulling the competitive instincts of financeers - hence causing a few teething problems - coupled with the government deregulating too slowly. However, such stories will simply not do. The aim of any set of rules for the financial sector is to encourage productive investment by existing companies and also to encourage new business formation. There is little evidence to support recent financial market deregulation as being an optimal strategy, but plenty of evidence to suggest that deregulation encourages speculative trade in existing assets - at the expense of productive investment. This is not an attempt to condone the previous regulations, but merely to point out complete deregulation has yet to prove itself to be more efficient than previous rules - let alone optimal. Once again, it should be noted that high-growth nations, such as Japan and Germany, have survived with highly regulated financial sectors (although deregulation has been a feature of recent years).<sup>47</sup>

**(5) Provide the proper incentives (Ibid, pp.173-174).**

That the government *has an obligation to provide the unemployed with the incentives and opportunities to upgrade their personal skills* strikes us as a clear recognition that the unemployed often lack the skills and motivation to re-enter the productive workforce (ibid, p.174). If the government is able to identify a set of marketable skills, some of which can be obtained by every unemployed worker whatever their aptitudes, then there is a strong case for linking unemployment benefits to such skills acquisitions. Of course, if the government is unable to provide training for - or is unable to guarantee the marketability of - certain skills, the case for linking benefits to training is somewhat weakened.<sup>48</sup> The relationship between the unemployment benefit and the incentive to work does not strike us as being quite as simplistic as the assertion, *there should be a meaningful difference between working wages and unemployment benefits to provide an incentive for all who are able to participate in the workforce* (ibid, p.174). First, if the unemployment benefit is seen as social insurance or a retraining subsidy for those unlucky enough to have chosen the wrong skills when young (because these skills are now redundant), then it may be optimal for these benefits to be large. Second, the knowledge of large unemployment benefits may encourage individuals to undertake risky projects (new businesses, new production techniques, new products), due to the reduced downside risk, which may have a positive net impact on long-term growth. Finally, low unemployment benefits may encourage an expansion of the *black economy*, rather than an expansion of legal economic activity. Given an individual is currently receiving the unemployment benefit and can see no prospect of legal employment in the future, low downside risks possibly coupled with high effective marginal tax rates may encourage illegal - but discourage any search for legal - employment.<sup>49</sup> That is, while poverty may force the unemployed to find work, there is no guarantee it will be legal employment (and so increase tax revenue).

**(6) Upgrade local-demand conditions (Ibid, pp.175-176).**

As mentioned earlier, one of the most interesting aspects of Porter's thesis is the claim that it is the quality - rather than quantity - of domestic consumers that matters (Porter, pp.86-100). In particular, firms have more chance of being internationally successful if their domestic customers are the most sophisticated and demanding in the world, and anticipate changes in world preferences.

If these claims are correct (and we believe they contain more than an element of truth), the problem for the government is to increase the sophistication and leadership qualities of domestic consumers - rather than simply increase the nation's population. Granted that it is not the role of the government to shape the preferences of the public, the main objective of government in consumer affairs would seem to be to provide information to consumers and to make producers more responsive to the demands of consumers.<sup>50</sup> In particular, a sophisticated, demanding group

of consumers can be encouraged by forcing manufacturers to reveal more information about their products, and giving consumers more power to discover information. In addition, the government would have a role to play as a major information generator and regulator. For example, by forcing food producers to reveal a comprehensive list of ingredients (and possibly even details of inputs such as fertilizers), and simultaneously informing the populace about the various ingredients (booklets describing the side effects of colourings, preservatives, and so on), the government may encourage consumers to develop a more discriminating diet. Monitoring of company claims would be carried out by government departments, consumer groups and even individuals. Penalties could be imposed on firms and managers for misleading and fraudulent information, with rewards given to those who initiate the investigation. In particular, it would be considered the duty of every employee to inform their superiors - and then the government and public - of any misleading information. Rewards would be given to those who encouraged complete information (including consumer groups), with penalties imposed on those who did not.<sup>51</sup>

At a social level the government might wish to encourage more aggressive complaining by consumers. For example, an advertising campaign could be developed in which complaining about faulty or unsatisfactory merchandise is presented as being the duty of all good citizens. To assist the campaign a law could be passed requiring all visual advertisements (newspaper, magazine and television, but perhaps not radio) to provide an address for all complaints and suggestions related to the product(s) being advertised.<sup>52</sup> Further, a campaign could be launched that stresses good firms are those that listen to the ideas of consumers (especially how to improve the quality of the output), while firms that fail to respond to the wishes of consumers do not deserve to survive.

Finally, the anticipation of changes to foreign preferences can be encouraged by immigration (including returning New Zealanders), travel, more rapid information flows, and regulation. The shorter the lag between the introduction of concepts overseas and then domestically, the greater understanding domestic consumers and producers will have for world trends (popular music is an obvious example). However, while travel and rapid information flows remove many of the disadvantages of being a consumer in New Zealand, there is no guarantee domestic preferences will ever lead the rest of the world - except by chance. Government regulations, while sometimes risky, are more likely to prove effective for a geographically isolated nation with a low proportion of exports related to the manufacturing sector.<sup>53</sup> For example, environmental issues have been recognised as being important by marketing agencies world-wide - presumably reflecting the changing attitudes of consumers. If New Zealand were to lead the world with environmental legislation - especially with regards to agricultural fertilizers - New Zealand agriculture would be in a strong position to exploit any movement in world preferences away from synthetic, and towards natural, products. Put simply, legislation can be introduced that will enable producers to exploit New Zealand's *clean, green* image (ibid, p.176).

**(7) Stimulate new business formation** (Ibid, pp.176-177).

The establishment of new firms may be discouraged by legal barriers (legalized monopolies, licensing, the costs of dealing with the bureaucracy), the tactics of existing firms, or the availability of finance. While the first cause is relatively easy to overcome, the other two causes may prove more difficult. The development of a venture capital market may be ideal in theory, but could prove rather difficult to establish in practice. For example, the recent collapse of the DFC may indicate that it is not possible to establish a specialist development bank in a deregulated financial sector. Also, the creation of legislation that prevents existing firms from competing aggressively with newcomers may prove to be extremely difficult, as it will inevitably rest upon establishing the existing firm(s) engaged in unfair or unsustainable tactics with the express intention of driving the new firm out of business. Clearly, any attempt to stimulate new business formation in current monopolistic or oligopolistic markets will be more difficult than attempts in markets with many existing firms, each with a relatively small value of assets.<sup>54</sup>

### III Concluding remarks.

*The competitive advantage of nations* and *Upgrading New Zealand's competitive advantage* both contain a number of fascinating propositions. Unfortunately, very few of them strike us as having been conclusively established - either theoretically or empirically - using reasoned arguments. While this severely limits the contributions these books can make to New Zealand's search for the optimal rules of the game, it does not necessarily invalidate the propositions themselves - many of which are probably true. Our meditations on selected propositions were an attempt to indicate what they might mean and how one might go about establishing their truth, or otherwise. In particular, we attempted to construct a logical-linguistic-economic framework within which the propositions can be analysed. To the best of our abilities we have developed the framework so as to resemble as closely as possible the New-Classical paradigm (primarily, rational behaviour in a dynamic microeconomic setting). While we have hopefully clarified a number of issues, we have done little more than scatter a few seeds in the field of understanding. The crop? Growth and prosperity. Let us pray for a bumper harvest.

### References.

- B. R. Copeland, Strategic interaction among nations: Negotiable and non-negotiable trade barriers, *Canadian Journal of Economics*. 23 (1990), 84-108.
- G. T. Crocombe, M. J. Enright and M. E. Porter, *Upgrading New Zealand's competitive advantage*. Auckland: Oxford University Press, 1991.
- The Dominion, December 19, 1991.
- J. Dieudonne, *Foundations of modern analysis*. New York: Academic Press, 1969.
- The Economist, December 30, 1978 and December 21, 1985.
- C. Johnson, *Japan's public policy companies*. Washington D. C.: American Enterprise for Public Policy Research, 1978.
- J. Kennan and R. Riezman, Optimal tariff equilibria with customs unions, *Canadian Journal of Economics*. 23 (1990), 70-83.
- K. Kuga, Tariff retaliation and policy equilibrium, *J. of International Economics*. 3 (1973), 351-366.
- OECD, *Progress in structural reform*. 1990
- Y. Otani, Strategic equilibrium of tariffs and general equilibrium, *Econometrica*. 48 (1980), 643-662.
- M. E. Porter, *The competitive advantage of nations*. New York: The Free Press, 1990.
- R. P. Short, The role of public enterprises: An international statistical comparison. in R. H. Floyd, C. S. Gray, and R. P. Short (eds), *Public enterprise in mixed economies*. Washington D. C.: International Monetary Fund, 1984.
- J. Williamson, *The open economy and the world economy*. New York: Basic Books, 1983.

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<sup>1</sup>See, for example, M. Porter, *The competitive advantage of nations*.

<sup>2</sup>We accept, of course, that society is more than a collection of isolated neoclassical individuals. In particular, society represents a shared linguistic, literary and customary heritage that has emerged from a history of interactions involving hundreds of millions of individuals.

<sup>3</sup>For a firm to be more than a collection of individuals it must have a set of rules. We associate this with the concept of *structure*, used throughout the book (Crocombe et al, p.30). Even a dictatorship has at least one rule; whatever the boss says goes. A firm's strategy is then chosen given the internal rules. Presumably, the internal rules provide a mechanism for changing themselves (a constitution). If the objective of the firm is unambiguous, the internal rules can be treated as part of the firm's strategy (here, the objective is the unchanging rule that determines all else). Otherwise the internal rules are chosen by some political process involving the firm's owners (for example, voting at the annual general meeting of shareholders).

<sup>4</sup>Basic factors are defined by Porter to be those that a nation passively inherits (climate, location) or can create with a relatively modest or unsophisticated investment (debt capital). Of course, this gives rise to a spectrum rather than a discreet classification.

<sup>5</sup>Classic examples would appear to be Japan and Singapore. The basic argument would seem to be that a rich endowment of basic factors encourages the populace to become lazy - as short-term prosperity comes easy - while an absence of such factors forces the populace to rely on human capital, effort and innovation as the main roads to wealth. Possibly an interesting exception to this is Saudi Arabia, whose real GDP grew at over 5.9% from 1967 till 1987 (see *International Financial Statistics*).

<sup>6</sup>Using basic principal-agent theory, if consumers are thought of as the principal and firms as agents, the poorer the monitoring technology available to the principal, or the greater the disutility of monitoring, the lazier the agent will be. Of course, the problem is complicated by the recognition that consumers have little direct power over firms, except through agents such as politicians, while firms (managers) are more responsive to their direct economic principals - shareholders. Alternatively, basic game theory could be used to explain why product quality and innovation may depend upon the fussiness of consumers. For example, if consumers attach little value to minor product improvements, the costs to a firm may outweigh the conjectured benefits of such improvements, thereby resulting in a Nash equilibrium for firms where no improvements take place.

<sup>7</sup>*Strong domestic competitors create particularly visible pressures on each other to improve... Rivalry among domestic firms often goes beyond the purely economic and can become emotional and even personal... Foreign rivals, in contrast, tend to be viewed more analytically. Their role in signalling and prodding domestic firms is less effective, because their success is more distant and often attributed to unfair advantages... Intense domestic rivalry helps break the attitude of dependence on basic factor advantages because local rivals have them as well.* (Porter, pp.118-120). Perhaps these assertions could be justified by arguing domestic managers have imperfect information about the environments faced by foreign rivals; in which case greater information might be desirable rather than greater domestic competition. Further, even if personal feuds do stimulate innovation, there is no reason why such feuds cannot be encouraged with foreigners, or even between employees of the same company (for example, academics at the same University), as the aim is to motivate people, not firms or institutions as entities in their own right.

<sup>8</sup>One possible conclusion from Porter's thesis is that firms respond better to negative - rather than positive - incentives. While the actions of entrepreneurs (and workers) may be motivated by the

expectations of large profits, they are more efficiently motivated by the threat of large losses and eventual extinction. If this conclusion is accepted then the optimal government policy may very well involve creating as hostile an environment for firms - and workers - as possible. In particular, domestic firms should be continuously disadvantaged relative to foreign rivals; for example by high corporate tax rates and overvalued exchange rates (it is possible to infer this type of reasoning - perhaps erroneously - for example in Porter, pp.81-85, 96, 118, and Crocombe et al, p.167). However, international mobility of capital means firms move to the softest - rather than the toughest - environment, so while domestic firms may be the toughest in the world, unfortunately there are none of them (any proposition about the empty set is true). Put simply, a major concern of ours is that (our reading of) the Porter thesis tends to emphasise the sticks and downplay the carrots. While beatings may toughen one's skin, there is always a danger that one's back will be broken in the process.

<sup>9</sup>For example, the Porter theses discussed above, and the claim that *devaluation sets up the conditions for further devaluations, and reduces the probability of the development of sustainable competitive advantage*. (Crocombe et al, p.167).

<sup>10</sup>The share of agricultural production of world trade has collapsed from 76% in 1888 to 9% in 1988; whereas the relevant shares in manufacturing and services have risen from 9% to 57% and 15% to 34% respectively (Crocombe et al, Table 10, p.27). Further, the price of butter (in US dollars) rose by 491% from 1950 till 1989, wool rose by 264% from 1950 till 1987, while the average consumer price index for industrial nations rose by 639% from 1950 till 1989, and wholesale prices rose 425% from 1950 till 1986 (*International Financial Statistics*, Wholesale, Consumer and Commodity Prices).

<sup>11</sup>Intervention in the economy can be viewed as a secondary role of government, only to be resorted to in emergencies. For example, the publicly known rules of the game for the financial sector should be constructed so that the general levels of commodity and assets prices never fluctuate too rapidly. Intervention by the Reserve Bank in short-term money markets, so as to control commodity price inflation, implies either an emergency, or the current rules of the game are inappropriate given the current environment, or there are no rules better than intervention. Notice, the rules may involve mechanical behaviour on the part of the government (if market conditions are x, then so many units of type y bonds will be sold, and everyone knows it), but not discretionary behaviour.

<sup>12</sup>It is not surprising that many macroeconomic textbooks now look like micro ones (see, for example, Blanchard and Fischer's *Lectures on Macroeconomics*). Perhaps the macroeconomist would retort that any attempt to base government policy solely on microeconomic principles is like trying to build a bridge using sub-atomic physics.

<sup>13</sup>For example, economic policy could be developed using econometric models that are incapable of evaluating certain propositions concerning employment legislation, movements away from direct to indirect taxation, controlling inflation via high nominal interest rates, and so. If the language of the decision-makers is unable to even express such propositions, it is quite possible their truth-value will be considered irrelevant when attempting to find an optimal government policy. Perhaps this is recognised with the word *focused* in the claim *The economic debate in New Zealand has traditionally focused on macroeconomic variables* (Crocombe et al, p.166).

<sup>14</sup>If any operational distinction is to be made between micro and macroeconomic analyses, it will probably lie in the status given to aggregated variables such as growth rates of real GDP per capita. To incorporate such (macro) variables into a microeconomic framework it could be imagined that the population - through some voting procedure - determines an objective function for government policy. That is, to ensure the government has a single long-term goal to focus upon, the millions of microeconomic observations each year must be aggregated to a single number. In general, the growth rate for the population and each good (and service) could be

calculated, and the objective function expressed as a function of the history of all these growth rates. For simplicity, we will assume the objective function can be expressed as the maximization of (some measure of) the long-term growth rate of real GDP per capita. Notice, this number can be modified to incorporate environmental damage as a specific cost. Alternatively, the maximization problem could include long-term environmental sustainability as a constraint.

<sup>15</sup>Either the firm will take wage rates as given (with wage rates determined by an equilibrium concept such as market clearing), or a worker's wage will emerge as the outcome of a bargaining process between (groups of) workers and firms. In either case, measurements of average output per worker need not bear any relationship whatsoever with equilibrium wage rates. Further, productivity is unlikely to be unaffected by relative price movements. For example, if output per worker increases but the output price falls (possibly due to an appreciation of the exchange rate) - causing profits to fall - is it likely that the employer will acknowledge productivity has increased and so agree to increase wage rates? It is our contention that a careful examination of this type of question is far more important than the chanting of empty political slogans.

<sup>16</sup>Using the IMF's *International Financial Statistics*, New Zealand lines rh and 64, and USA line 64.

<sup>17</sup>Mathematically, let  $g$  be the publicly announced government strategy,  $p$  the list of goods, services and asset prices, and  $z$  the excess demand vector. Notice  $p$  may be interpreted as a function from histories of states of nature (at each date) to spot prices, the number of dates may be infinite (and so  $p$  is at least an infinite-dimensional vector), and  $g$  may be a function (for example, from histories of states and prices) or an infinite-dimensional vector, rather than a point in some finite-dimensional space. A perfect foresight equilibrium is then given by  $z[p, g] = 0$ , and if  $D_{pz}[p, g]$  is nonsingular (more generally, a linear homeomorphism), the implicit function theorem ensures there exists a function,  $f(\cdot)$ , such that  $p = f(g)$ ; equilibrium prices depend on government policy. For a discussion of the implicit function theorem in infinite dimensional spaces, see Dieudonne, p.270.

<sup>18</sup>Possible exceptions to this rule include (a) growth strategies that require the initial profitability of the tradeables sector to be low (few successful countries have adopted such strategies unless the initial date is taken to be 1945), and (b) growth strategies in which the long-term consequences of the lowered exchange rate outweigh the short-to-medium-term advantages (to a large extent this will depend upon the link between exchange rates, inflation, and the optimal government response to inflation). Notice that from an exporter's viewpoint, a fall in the exchange rate is equivalent to an increase in the foreign price of their output, and so leads to an increase in measured productivity. Finally, it would appear that the book regards devaluation as sub-optimal as the increased profitability *would reduce the pressures on New Zealand firms to upgrade their competitive advantage and differentiate their products*. (Crocombe et al, p.167). As mentioned earlier, this strikes us as an example of negative incentives being preferred to positive ones. Also it seems to imply there is an absolute measure of competitive position, independent of prices, despite the fact that an obvious characteristic of New Zealand's recent economic history has been the relative decline in output prices (thereby worsening our competitive position).

<sup>19</sup>For a general statement of the Marshall-Lerner conditions - for a static economy with an initial current account balance of zero - see Williamson, p.152.

<sup>20</sup>The estimated current account deficit to March 1991 was \$2,342 or 3.3% of GDP. See Quarterly Predictions, September 1991.

<sup>21</sup>*Progress in structural reform*, 1990, p.56.

<sup>22</sup>*Progress in structural reform*, 1990, p.57.



<sup>23</sup>*Progress in structural reform*, 1990, pp.21-23.

<sup>24</sup>The two largest public enterprise employers were Japan National Railways and Nippon Telegraph and Telephone, with 432,000 and 308,341 employees respectively in 1975 (C. Johnson, 1978, pp.152-153).

<sup>25</sup>*Progress in structural reform*, 1990, pp.19-21.

<sup>26</sup>*Progress in structural reform*, 1990, p.20.

<sup>27</sup>*The Dominion*, November 22, 1991.

<sup>28</sup>This is a sentence that has been used many times - especially by proponents of the free market - but almost never supported by any facts. It is as though so many respectable journals and institutions have used it that it *must* be true. To establish the proposition, one would need to look at the set of economic regulations for each OECD nation, and then define a relation of *more highly regulated* (mathematically, it would require defining an ordering - asymmetric and transitive - on a subset of propositions; namely those pertaining to economic regulation). Of course, the relation may not be complete (it may be the case that New Zealand and Sweden cannot be compared with each other, or even New Zealand and the United States of America), and it may not even have a lattice structure (for any two nations there exists a third nation - or at least a set of regulations - that is more highly regulated than both; as it may be logically impossible for regulations A and B to hold simultaneously. For example, *all telecommunications networks must be controlled by the State* and *all telecommunications networks must not be controlled by the State* are not obviously both lesser regulations than *all telecommunications networks must and must not be controlled by the State*, as this last regulation is logically inconsistent in any nation with a telecommunications network). In which case, the proposition about New Zealand may devoid all scientific meaning; reducing it to nothing more than political rhetoric. Of course, it could be argued that the proposition does not need to be formally established, for it is intuitively obvious (like free markets are good and public monopolies are inefficient). But if the future of the nation is to be based on intuition, why do we not follow the Tibetians method for choosing the Dalai Lama and send agents from Treasury to find the individual with the best intuition (perhaps the child who recognises Roger Douglas's briefcase) and let them run the economy, instead of shrouding the issue with pseudo-science.

<sup>29</sup>*Progress in structural reform*, 1990, pp.48-50.

<sup>30</sup>While a reduction in benefit payments and deregulation of the labour market were approved by the current government, it would appear that a proposal of accelerated tariff reductions was rejected by Cabinet.

<sup>31</sup>One of the difficulties of any critique of so-called New-Right, free market policies is the lack of any theory supporting their hypotheses. This is not to say that such theories cannot be constructed, but rather that the proponents of such views seem unaware of the need to provide a linguistic framework in which the truth of their assertions can be established. We look forward to the day when the works of first-rate economic theorists who specialize in propositions concerning the free market - like Arrow, Debreu, Hahn, Mas-Colell and Radner - and economists who are not quite so theoretical - like Lucas and Prescott - are cited by those wishing to praise the free market.

<sup>32</sup>*The Economist*, December 30, 1978, p.39, and December 21, 1985, p.72.

<sup>33</sup>In fact, for the period 1978-1980, 15.3% of Sweden's Gross Fixed Capital Formation was undertaken by public enterprises. In West Germany for 1978-1979 the figure was 10.8%, and in

Japan for 1978-1981 11.2% - there was no available figure for Switzerland (R. P. Short, Table 1, pp.116-117), while employment in public enterprises as a proportion of the total labour force in the late 1970's was 8.2% for Sweden, 7.2% for West Germany and 2.8% for Japan. Again, there were no available figures for Switzerland (*The Economist*, December 30, 1978, p.40).

<sup>34</sup>For examples of equilibria with endogenous protection see Kuga, 1973, Otani, 1980, Kennan and Riezman, 1990, Copeland, 1990.

<sup>35</sup>Although one of the reasons for this suggestion was to highlight Porter's use of the terms *nation* and *domestic*, it is our belief that a major Asian-Pacific monetary and economic zone will emerge over the next few years. One of the principal reasons for this belief is the rise of the European economic zone - by the turn of the century there may be as many as 700 million Europeans sharing common economic rules - thereby forcing Asian nations to develop a similar structure.

<sup>36</sup>For example, *Competition with foreign firms is a powerful stimulant to improvement, but it is rarely an effective substitute for domestic rivalry* (Crocombe et al, p.31).

<sup>37</sup>Is a German firm less of a rival to a Dutch one than a Californian firm is to one based in New York?

<sup>38</sup>If a common language and cultural heritage are important aspects of an economy, the process of integration could be slow and possibly painful. Labour mobility would be one of the main difficulties for the new Pacific Economic Region, but could be remedied in a few years by compulsory Japanese at primary school level. Notice, Europe as a whole - and to a certain extent particular nations in Europe (Spain, Switzerland), and even the United States - suffers from a diversity of cultures and languages that may also limit the mobility of labour.

<sup>39</sup>While neither country belongs to the European Community, both belong to the European Free Trade Area (EFTA). Almost no tariffs on manufactured commodities have existed between these two organizations since 1973 (see, for example, Williamson, p.299). Clearly both these countries benefit from their location (considered a basic factor in Porter, p.75), and their economic relationships with the European Community.

<sup>40</sup>It should be noted that asset brokers have little incentive to increase the average time between purchase and sale, as their livelihood depends upon the continual trading of assets.

<sup>41</sup>Perhaps one of the few universal economic laws is that any attempt to control the trading of a subset of goods or assets will result in (i) the illegal trading of such goods and (ii) the development of substitutes outside of the definition of the subset.

<sup>42</sup>The continuous-time tax = [capital gain]·[a - b·t], where t is the time between purchase and sale, and if  $t \geq a/b$ , no tax is paid. The discrete-time tax = [capital gain]·c, for  $t < t^*$ , zero otherwise. With low monitoring costs for t, the continuous-time tax removes the problem associated with the discrete-time tax of selling the asset immediately after  $t^*$ .

<sup>43</sup>These units could be used to assist in New Zealand public hospitals during those periods when they are not serving the United Nations. In a small way, this may help to improve the health system.

<sup>44</sup>For example, if foreign-owned assets increase from 10% of total assets to 20%, and defense expenditure is initially 2.2% of GDP, then it will fall by 20% to 1.76% (for the year ended March 1989, this would have corresponded to a saving of \$280 million).

<sup>45</sup>It is often argued that welfare payments create distortions because they discourage people from working hard. Now, suppose a particular individual works hardest when she has a loaded gun pointing at her head. Does this mean any system not involving a loaded gun pointing at her head is distortionary?

<sup>46</sup>Notice, this is not an issue of optimal rules so much as the relationship between beliefs and actions. Let  $T$  be a list of propositions representing the truth (for example, about the future or, at least, the laws of motion),  $B$  a list of beliefs and  $a(t; B)$  the action of an individual at date  $t$ , given beliefs,  $B$ . If topologies can be found for the spaces of beliefs and actions, and  $a(t; \cdot)$  is a continuous function from the beliefs to actions, then - in some sense - the closer  $B$  is to  $T$ , the closer  $a(t; B)$  is to  $a(t; T)$ , for every date,  $t$ . If  $T$  is influenced by future laws, then commitment by the government will ensure  $B$  is close to  $T$  (perhaps this provides a reason for keeping election promises).

<sup>47</sup>See, for example, *Progress in structural reform*, pp.9, 20, 21, 23.

<sup>48</sup>For example, if ten percent of the workforce are registered unemployed, it may be considered inefficient to spend funds on training an unskilled 55 year-old. In such cases unemployment resembles social insurance rather than a training subsidy.

<sup>49</sup>The effective tax rate is the payment to the government - both tax and reduced benefit - for every additional dollar earned and declared. If the ultimate punishment for illegal economic activity while receiving a benefit is the cessation of the benefit, then the lower the benefit payment, the lower the downside risk and so the greater the incentive to engage in illegal economic activities. If an individual is unskilled and recognises there are hundreds of thousands of skilled workers searching for employment, it may indeed be rational for them to pursue a life of crime. To the best of our knowledge, economic theory has been rather silent on rational behaviour for criminals - be they unemployed, politicians, or bankers.

<sup>50</sup>Sophisticated can now be taken to mean informed and discerning. The role of information has long been recognised in economic theory. For example, in a two-period general equilibrium model, if properties of goods can be discovered only through consumption then there will be room for mutually advantageous trades on the second date. Finally, information about the characteristics of goods can be viewed as a public good (person A's knowledge does not decrease the value of the information to person B), with high production and low distribution costs.

<sup>51</sup>Suppose a company (misleadingly) advertises their potato chips as being preservative-free. Any employee aware of the existence of preservatives must inform senior management. If no action is taken the employee can then inform the government. The company and senior management will be fined (say, a maximum of fifty percent of their annual salary per complaint) according to some scale, while the informer receives a proportion of the company fine and all the management fines.

<sup>52</sup>For example, every television advertisement must feature an address (of some specified minimum size) for at least five seconds: The Suggestions Officer, Chinese Herbal and Medicinal Imports, PO Box 600, Wellington.

<sup>53</sup>For a brief discussion of regulation and competitive advantage, see Porter, p.92. As Crocombe et al point out, strict regulations for product standards, and the introduction of tough new environmental legislation would force firms to alter their production techniques and the quality of their outputs (ibid, p.176). Although there is no guarantee such regulations will improve the profitability of domestic firms, there are two main reasons as to why this might occur. First, if New Zealand's regulations in, say, product safety are tougher than other nations', then these regulations will play a protectionist role; the small size of the New Zealand market will discourage

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large multinationals from modifying their production techniques to meet the new standards, thereby making these standard products ineligible for the New Zealand market. Further, if the cost of modifying (already produced) foreign products is large, New Zealand firms - with production techniques based around the new regulations - may find themselves able to underprice foreign rivals (in the domestic market). Second, if the new regulations anticipate future foreign regulations and the preferences of overseas buyers (for example, with environmental legislation), then New Zealand firms will gain a competitive advantage in world markets. This second source of increased profitability is clearly more risky than the first. Domestic regulations that incorrectly anticipate foreign regulations and preferences could have tragic consequences for many exporting firms (as they are forced to develop production techniques that focus on features no-one else in the world cares about). Further, a situation may develop where every nation determines their regulations based on their expectations of future world regulations, which could result in a very sophisticated guessing game that increases the uncertainty faced by firms and does nothing to improve the well-being of consumers.

<sup>54</sup>Given the distribution of expected rates of return for a potential firm, the smaller the value of its assets, the more likely finance will be made available.

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