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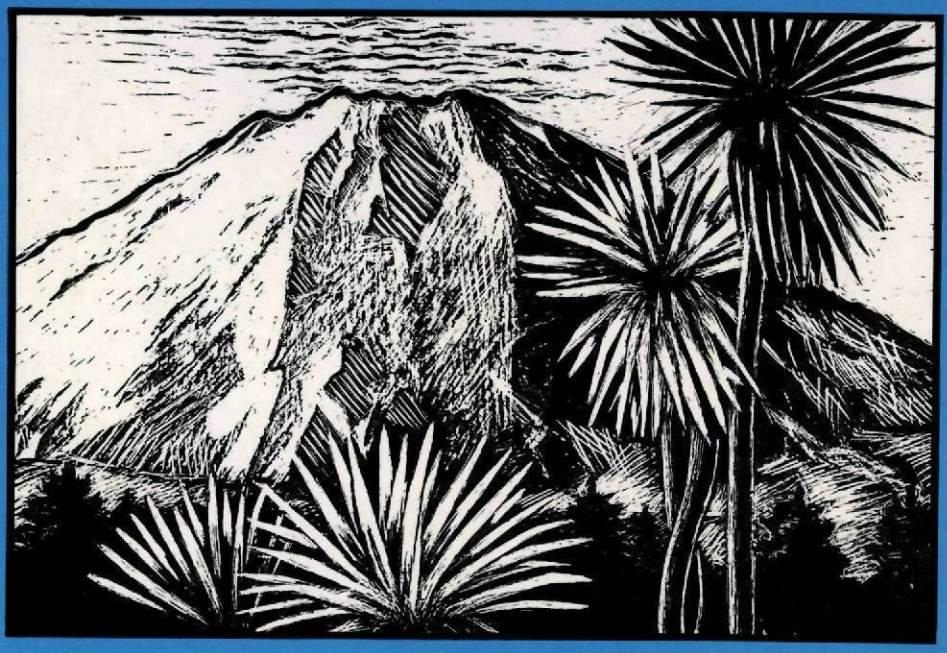

THE INFLUENCE OF AMERICAN ECONOMICS ON NEW ZEALAND THINKING AND POLICY

NZ–US EDUCATIONAL FOUNDATION
NZ INSTITUTE OF ECONOMIC RESEARCH

THE INFLUENCE OF UNITED STATES ECONOMICS ON NEW ZEALAND
The Fulbright Anniversary Seminars

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CONTENTS

Introduction

AMERICAN DEVELOPMENTS AND NEW ZEALAND APPLICATIONS IN ECONOMICS: SUMMARY OF THE CONFERENCE

Alan Bollard

The papers in this volume present surveys of developments in a number of areas of economics in the United States, thoughts on how those ideas have been transmitted to New Zealand and the extent of their adaptation and implementation here. This publication is based on papers originally presented at the Fulbright Economics Seminar: *The Influence of American Economics on New Zealand Thinking and Policy.*[1]

In the first chapter, *From Macro to Micro: The Re-emergence of Efficiency Considerations in Economic Policy*, Richard Miller introduces the topic by examining a trend in economic analysis in the US over the period since the 1930s from macroeconomic or aggregative to microeconomic or market analysis. The paper looks at three broad policy goals in the US: stabilisation, efficiency and equity; it records how economic theory has moved from concentration on the first to the second policy goal.

In commenting on this paper, Bryce Wilkinson cited Stigler's claim that in practice it is very rare for economists to influence policy. He went further

1. In this introduction I incorporate some of the comments by discussants at that meeting.

to argue that in New Zealand economists have had very limited influence on changes in policies since 1984. He also argued that it is oversimplistic to view the US as the only source of economic influence on New Zealand – the OECD, IMF, GATT, the UK and Australia have also been important sources of policy influence. Wilkinson saw the trend developed in this paper as resulting from problems with the development of macro theory, Buchanan's theories on political influence from the University of Virginia, the influence of rational expectations, and new microeconomic developments such as property rights and the contracting literature.

In *Contestability and Competition Policy: Replacement, Supplement or Impediment?* Douglas Greer criticises the development of contestability theory in the US and its application both in the US and New Zealand. He argues that contestability theory is better named as ultra-free entry into markets, claiming it is neither plausible nor observable, and there are insurmountable problems with its application to competition policy; nevertheless, it has affected competition policy in both countries for ideological reasons and because of the ignorance of its practitioners.

The commentator, Kerrin Vautier, strongly criticised this view defending the importance of potential entry and sustainability. She pointed out that in New Zealand international trade is much more important than in the US as a determinant of contestability, and that traditional anti-trust approaches have been described (by L Thurow) as anachronistic in world economies with increasing trade. She noted the distinction between whether firms can enter and whether they actually do, criticising Greer for confusing entry and performance, and potential and actual entry. The analysis of barriers of entry is important, bearing in mind that they can be quite consistent with economic efficiency. She felt that one could criticise the theory of perfect competition in the same way as the theory of perfect contestability.

Brian Easton in *From Reaganomics to Rogernomics* develops an argument concerning the importance of a group of Treasury-influenced economists in transmitting predominantly Chicago ideas from the US and applying them, at times inappropriately, in the New Zealand context.

In commenting on this paper Bernard Galvin argued that New Zealand had been very selective in its use of US economic theory. He felt there were some other important sources of influence apart from Chicago, such as

Australian developments on the exchange rate, IMF experience in indirect taxation, and British, Canadian and European ideas on State owned enterprise. In other cases, solutions to particular problems such as rigidities in the labour market were already obvious to New Zealand, while trade liberalisation policies had been in development since the 1950s and 60s.

Lewis Evans in *Public Utility Regulation in New Zealand and the US* describes the difference in institutional arrangements for regulation of natural monopolies in the two countries. Following his description of institutional structures, the paper considers theoretical developments and empirical studies of public utilities which have been carried out in the US. It then sets up a framework to evaluate their applicability to New Zealand.

The commentator on this paper, John Fountain, called for a different demand-side view of public utility as one where destructive competition could occur. He emphasised problems involving regulatory failure, such as the lack of incentives for regulators to bear their own costs, and argued that regulation was frequently treated as a public good whereas in fact there were high transactions costs involved in much of the process. Other issues raised were whether threat of regulation rather than actual regulation could be effective, difficulties in identifying cost functions, the problem of credible regulation, the costs of the regulatory process, externalities, and the potential abuse of monopoly power.

Ewan McCann in *US Theories of Monetary and Fiscal Policy* concentrates on one recent development in the literature, namely the incorporation of a government budget constraint into macroeconomic models, a feature until recently omitted from standard economic models. The inclusion affects a number of the results which the models yield. For example, under certain circumstances, monetary and fiscal policy are no longer separately identifiable as independent possibilities. This leads into the practical New Zealand issue of a dominant Treasury versus a dominant Reserve Bank. The budget restraint argument also changes the equilibrium results relating to the expansionary effects of government expenditure and financing.

Commentating on this paper, Grant Spencer discussed the influences of New Zealand Reserve Bank thinking. In the 1950s and 60s the dominant framework was the IS-LM one developed by Hicks and Hansen with an objective of stabilisation under a balance of payments restraint. The main

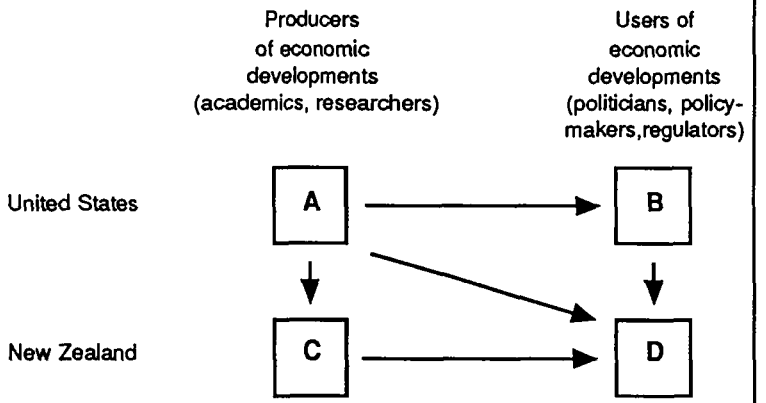
influences were British, such as the Redcliffe Report in the 1950s. In the 1970s inflation and OPEC made the Keynesian demand driven fixed price framework increasingly inadequate. New US models with supply side shocks gained influence. In particular, the monetarist framework relating to inflationary control of monetary targeting was most influential. In the 1980s rational expectations in new classical theories in the US gained more credibility, teaching lessons such as the futility of monetary policy for fine tuning, the importance of credibility and reputation, and the need to control fiscal deficits as well as the money supply.

In *Labour Markets and Social Policy - Reversing the Roles* Suzanne Snively examines the contrasts in New Zealand and the US, from the early 1970s when there was full employment and reasonably high standards of living in the former country, to the 1980s when growth had dropped and unemployment had risen significantly. She argues that in the earlier period the labour market was viewed as the foundation of New Zealand social policy; hence social welfare did not need to focus on income distribution but instead could focus on the provision of benefits to the needy. Today, with rising unemployment in New Zealand, a social policy based on the concept of full employment is no longer working: instead it should be focussed on supporting the labour market. Her argument is that New Zealand has little to learn from the US on these issues, and may in fact have been in danger of using American ideas to the detriment of local performance.

Discussing the issue David Preston argued that the buoyancy of New Zealand in the late 1960s was produced by a number of unique special features – high demand for imports, substantial income redistribution through the welfare state, an artificial shortage of labour, foreign exchange controls, wage controls through labour courts, price restraint, credit controls and high terms of trade. Many of these were exogenous and had the effect of hothousing the economy. The key policy was the acceptance of wage control, keeping wages below free market levels. He agreed that many ideas imported to New Zealand in the late 1960s from the US had been inappropriate for labour markets and social policy, such as the emphasis on North American-style free wage bargaining in an economy with a high level of unionism and high trade barriers.

A number of the themes emerging from these papers may be summarised with the aid of a simplified diagram, in figure 1. Simplifying to cover only the flow of ideas from the US to New Zealand and not in reverse, it may be useful to consider a conceptual framework whereby producers and developers of economic ideas are represented on the left hand side of the diagram and users are represented on the right. Producers are normally theoretical and applied researchers, be they academics or in research institutes, or government departments. Users are government servants, politicians, regulators and other policy-makers. A movement of ideas along the A-B axis represents the transmission of American research into policy in the US which may be considered a normal progression.

FIGURE 1.
TRANSMISSION OF US ECONOMICS TO NZ



This collection of papers addresses the general question "how are ideas transmitted from the US to New Zealand policy, ie. point D?" It might have been expected that the main transmission route would be A – C – D, ie. that American theoretical thinking would be filtered out and adapted by New Zealand researchers, before being put into policy application here.

In fact most of the papers point to two different routes. One is the route A – B – D, ie. the transmission of ideas from American policy straight into

New Zealand policy. The labour market is a case in point. Potentially more dangerous is the more direct route A – D. In this case, the outcome from American thinking is applied directly to New Zealand policy without being independently filtered or adapted for New Zealand (point C), nor being observed in policy in the US (point B). Examples here are some of the more radical deregulations, for example in the financial sector. The A – D route has the danger that the apparently simple economic theories are more attractive to policymakers: the simplicity of the Laffer Curve and the misapplication of contestability theory come to mind here.

A further issue investigated in several papers is whether the transmission of ideas is primarily demand or supply-driven. In New Zealand's case an overregulated economy up to 1980 engendered a high demand for regulatory change which was satisfied by the supply of predominantly US theoretical developments. The relative performance of economists in each cell in the diagram comes under some scrutiny in the papers, and in the case of the New Zealand cells, criticism. One simplified but generalised conclusion that arises is that there is a rich diversity of theory and applied economic research in the US, but only part of it has been tapped for application in New Zealand, sometimes without adequate adaptation.

Chapter One

FROM MACRO TO MICRO: THE RE-EMERGENCE OF EFFICIENCY CONSIDERATIONS IN ECONOMIC POLICY

Richard A Miller[1]

Our collective charge – The Influence of American Economics on New Zealand Thinking and Policy – allows wide latitude for interpretation. My comments will lean more to the American side than to the New Zealand side, and more to American policy experience than to American theoretical developments, although both New Zealand experience and economic theory will eventually be noted. My theme is straightforward: over the past 60 years or so, starting from the pre depression peak of the late 1920s when Herbert Hoover was president, the drift of the analytical foundation for American economic policy has been from macro or aggregative analysis to micro or market analysis. The time span – 6 decades – suggests that this drift has indeed been slow. And the terminal dates, about 1930 to today, suggest that this period may be only one part of one cycle of analytical change in a Kondratieff world of economic thought. This relative drift of macro to micro can be supported by a selection of examples drawn from the American experience. In the macro arena, the drift is found

1. The author is grateful for comments on an earlier draft of this chapter by Alan Bollard, Douglas Greer, Adrian Orr, and Bryce Wilkinson.

in the analytical underpinnings, as increased micro analysis emerges to support macro policy prescriptions. In the micro arena the drift is plainly evident in an array of signals, but particularly in the character of change in regulatory policy. An observer can easily infer an increased reliance on microeconomic analysis by noting the use (or misuse) by regulatory authorities of such concepts as joint costs and economies of scope, Beta coefficients and efficient markets, and contestability and sustainability. We are, fortunately, beyond the days when economic policy in both macro and micro areas was grounded only on market shares, concentration ratios, the multiplier, and the quantity theory of money.

While the increased relative importance of micro analysis in the US provides my theme, the broad policy goals of stabilisation, equity, and efficiency provide my organisation. Broadly and incompletely, stabilisation is macro: full employment of labour, a stable price level, and reasonable growth, ie. the avoidance of unemployment, inflation, and stagnation. Equity involves avoiding unfair outcomes, in wages or redundancies or profits or some other measure of economic performance. And efficiency is allocation of economic resources to their best use, where prices reflect costs and consumers' demands are met.

I MACRO POLICY AND MICRO ANALYSIS

First, some comments on macro policy and its developing micro foundations. The worldwide depression of the 1930s stimulated an intellectual revolution in economic analysis with which we are all familiar. Keynes's *General Theory* taught us how governmental policy makers might manipulate aggregate demand to insure stability at full employment. The techniques were the tools of monetary and fiscal policy: central bank activities to control the money supply, and treasury adjustments to the government's budget through changes in expenditures and tax rates.

The micro underpinnings of Keynesian analysis were sketchy at best. During the Great Depression micro economic prescriptions took a different route, not through aggregate demand but instead through competition and incomes policy. In the US a range of prescriptions was devoted to preserving farmers and small business firms from competitive rivalry and bankruptcy. The US depression could be cured, so this argument ran, if

only competitive rivalry could be blunted. The misused micro tools included tax laws which penalised low cost chain stores, legal encouragement of cartels and price fixing, and prohibitions of rivalry by price cutting.[2]

It is understandable that the goals of efficiency and equity should take a distant second place to full employment when only 5 of the economy's 8 cylinders were functioning.[3] The fact remains that micro tools were employed in an attempt to cure a macroproblem, and only after aggregate demand received an exogenous shock at Pearl Harbour did the US economy achieve full employment.[4]

Almost thirty years elapsed after 1936 before Keynesian fiscal prescriptions for stability were actually attempted in the US. The Kennedy-Johnson tax cut of 1964 of $10 billion was based on a multiplier of 2.5; with some lag, the GNP predictably rose to practically eliminate the $25 billion shortfall from full employment output. Keynesian economics was at last tried, and vindicated.[5]

2. States imposed progressively steeper tax rates on larger chains which were enjoying economies of scale of multiplant operations (Ross 1986). The National Industrial Recovery Act (1933) fostered cartels; fortunately the NIRA was shortlived (Scherer 1980 p.364). The Robinson Patman Act amending and strengthening the prohibitions on price discrimination were designed to blunt competitive pressures on price (Greer 1984 pp 322 – 336), (Scherer 1980 pp 572 – 581).

3. GNP in the US dropped from $104 billion in 1929 to $56 billion in 1933. Adjusting for price level changes these data suggest a drop in real output of about 30% in this period. *Economic Report of the President* 1988.

4. The US Civilian Unemployment rate in 1933 was 24.9%; many of the employed worked only part time. By 1981 the unemployment rate had fallen to 9.9%, a great improvement but hardly acceptable by either pre or post war standards.

5. At least to Keynesians. Walter Heller, a devout Keynesian, was Chairman of the President's Council of Economic Advisors; he eventually convinced President Kennedy (in mid to late 1963) and then President Johnson (after Kennedy's death in November 1963) and the Congress of the advisability of a tax cut to reduce the unemployment rate, then running at an unacceptable 5 – 5.5%. Incidentally the US has not seen an unemployment rate that low since 1974.

In the latter part of the 1960s, America became deeply embroiled in an unpopular war in Vietnam. Ignoring the Keynesian advice of his economic advisors, President Johnson attempted to increase defence spending to prosecute that war without either tax increases or expenditure cuts elsewhere. He banked on the economy's ability to produce both guns and butter, but capacity was inadequate, and stability suffered.

In macroeconomic analysis up to the mid-1970s policy prescriptions in the US rested mainly on the manipulation of aggregate demand. Capacity was presumed fixed, and possible changes in supply were ignored. The analysis thus carried the flavour of a short run equilibrium and explained how policy tools could bring aggregate demand to a socially acceptable if not optimal position at a fixed full employment output.

Given the problem of the 1930s depression, it is not at all surprising that Keynesian analysis emphasised aggregate demand; aggregate supply or capacity was not what limited aggregate output and employment. During the postwar period, however, economists devoted some attention to the preconditions for aggregate growth and for improvements in productivity, how to increase the aggregate capacity of the economy.[6] Included in this group were those who were interested in, and who emphasised, economic incentives, economists who became known as supply siders. They argued quite accurately that Keynesian analysis improperly neglected aggregate supply.[7]

In 1980, Reagan's election brought these supply siders to prominence and into roles of influence; they proposed that given the right incentives through appropriate tax rates, individuals would work harder; firms would increase investment; and growth would be stimulated. Paul Craig Roberts, a leading supply sider, has put the difference between Keynesians and supply siders in the following way:

> Keynesian fiscal policy emphasises average tax rates because Keynesians believe that taxation affects the economy by changing disposable income and thereby aggregate demand. Supply side economics stresses marginal

6. Denison 1974, Salter 1966.
7. The better known members in their ranks include Martin Feldstein, Arthur Laffer, Norman Ture, Paul Craig Roberts, Michael K Evans, Robert E Lucas jr., and Jude Wanniski.

> tax rates, because supply siders believe that taxation affects the economy by changing the incentives to work, save, invest, and take risks. This different perspective is the essence of the supply side revolution in economic policy.[8]

The best known of the supply siders' analytical tools is the famous "Laffer curve", which represents zero tax revenues at overall tax rates of both zero and 100%, with maximum tax revenue at some rate between 0 and 100. The US economy, some supply siders have argued, was on the wrong side of the curve; cut tax rates, they said; and tax revenues will rise, not fall. In the corporate sector high tax rates dampen (or misdirect) incentives to invest; lower rates would spur capacity formation.

Reagan's election also allowed these prescriptons to be turned into policy: tax rates for both corporations and business firms were cut. The problem was accurately perceived as stagflation: low or negligible growth, unsatisfactory unemployment, and high inflation. The Tax Act of 1981[9] cut rates for all individuals, with the top marginal rate cut from 70% to 50%. In subsequent years tax revenues fell below what would have been collected under the old (pre 1981) rates, but were actually above the predictions in 1981 on what the act would generate in revenue. As Lindsey (1988) argues, high income tax payers (those with incomes over US$200,000 per year) paid considerably more than was predicted and considerably more than they would have paid under the old tax rates. The increase in income necessary to produce these results was wage and capital gains income, not the underground economy coming above ground and not an increase in dividends. The composition of the top 2% of income earners shifted dramatically between 1960 and 1983 as rentiers' income of dividends and interest fell from 46% to 18.6% of their income, and as wages rose from 30.7% to account for 55.1% of their total income. This suggests (to Lindsey) an increased stimulus to entrepreneurial activity, and the rise of "new

8. Roberts 1984 pp. 5-6. In addition to cuts in marginal tax rates for individuals and for business firms, supply siders also proposed greatly reduced governmental regulation of economic activity. Hailstones (1981) gives an early discussion of supply side economics with a comparison with Keynesian analysis.

9. Economic Recovery Tax Act of 1981.

money" to the top of the economic pyramid. The Tax Act also reduced corporate tax rates and allowed accelerated depreciation schedules. Expenditures on producers' durable equipment rose dramatically.[10,11]

A major domestic macro problem in the US of the 1980s has been the federal budget deficit. Congress and the White House have been unable to hold increases in expenditures to levels which will allow revenues to "catch up". The Federal deficit was $150 billion in 1987, down from $221 billion in 1986. Under some realistic assumptions on growth, nominal revenues can be expected to rise at 8 – 10% per year. If nominal federal spending rises at close to the same rate, as political reality suggests will happen, the federal deficit will persist and the debt will grow, despite the legislation (Gramm-Rudman-Hollings) requiring a balanced federal budget by 1993.[12]

Two further observations on the US economy are in order. First, determining which group of economists, the supply siders or the Keynesians, has the preponderance of truth is difficult. Both predict that tax cuts will stimulate the economy; they disagree on the mechanism by which that is accomplished. Anointing one group as the winner of the 1980s may not be appropriate, since both mechanisms are undoubtedly at work, but the analytical synthesis similar to an IS-LM link of Keynesian and monetary analysis has yet to be produced.[13] Marshall's admonition, that both blades of the supply and demand scissors are important in determining a market's

10. In real terms, by 44% between 1982 and 1987.

11. New Zealand's fiscal and monetary prospects, options, and policy choices are more fully discussed in Easton (1987), Vowles (1987), and Scott (1987), in Boston and Holland, Ewen McCann (1988), and Whitwell (1987) in Bollard and Buckle. For an analysis of the links between US and New Zealand thinking, Snively 1988.

12. A related question is the funding of the Government Deficit. A reduction in the private saving-investment balance (gross private saving minus gross private domestic investment) after 1982 coupled with a high general government deficit required a significant net capital inflow to the US. (*Economic Report of the President* 1988, pp 109 – 113).

13. Blinder (1988) presents a strongly argued position that Keynesian economics, not supply side economics, has been fully vindicated in the US experience of the 1980's. And Greenwald and Stiglitz (1987) by a different route also support the primacy of Keynesian Analysis.

price and output, certainly has a macro analog in a full employment economy. Herbert Stein, a noted Keynesian and member then chairman of the President's Council of Economic Advisors 1969-1974, minimises the difference between Keynesians and supply siders, arguing that Keynesians have always recognised incentives; the difference, to Stein, is only one of magnitude of the effects – and, one can add, sometimes a difference in algebraic sign (Stein 1980).

Second, once past the inflation of 1979-1981 and recession of 1981-1983, the US economy has displayed remarkable stability, regardless of an observer's analytical leanings. Inflation has been modest at 4-5% per year; unemployment has been gradually falling from 7.5% to 5.5%; capacity utilisation has been virtually constant at 80%; and civilian employment has increased by over 13 million or about 13%. In the recent Presidential Campaign the Republicans emphasised the durability of this longest peacetime expansion in US history.[14] We do know that incentives matter, and matter a great deal.[15]

What of monetary policy? In the United States, the Federal Reserve Board enjoys considerable freedom from and independence of Congress and the President, and thus the Fed can exercise monetary policy insulated from the political considerations which play so great a role in fiscal policy decisions. In the 1979-1981 period, when inflation in the US was at a 50 (if not 150) year high, the burden of controlling the price level fell on monetary, not fiscal, policy and on the Fed. By monetarist standards, inflation was controlled by slowing money growth. Liberal Keynesians responded by noting the high unemployment, high interest rates, and the recession of 1981-1983.

14. There are some indications that the macro stability is becoming somewhat precarious in mid 1988. The capacity utilization rate for several recent months is over 83%, and the CPI has also moved upward at a slightly increased pace. If the monetary authorities tighten the money supply, then the long awaited slowdown may appear, possibly with some effect on the election results.

15. In the US supplyside arguments have been adopted in the setting-lowering of (imagined) tax rates and (to some extent) in expenditure restraint. New Zealand under the Labour Government has adopted a supplyside proposal that has not found favour in the US: the value added tax, in the form of GST.

Given the current status of fiscal policy (low taxes, high and increasing government expenditures, and an obese debt) monetary policy is likely to remain the prime, perhaps the only, tool to control inflation. The implied mechanism is the simple quantity theory in dynamic form: the rate of inflation is the difference between the rates of increase in real output and in the money supply.[16] And with the warming of inflation in recent months, and the political impotence of fiscal changes until well into 1989, we are likely to see monetary policy as our only tool for macro stabilization with fears of inflation dominating fears of unemployment.

In terms of the micro foundations of the quantity theory, the basic underpinning has remained unchanged (but elaborated) since the General Theory. Monetary Authorities, the Federal Reserve in the US, influence the money supply which (along with the demand to hold money balances) determine the interest rate (or structure of rates; Keynes 167-169, 197-209). The interest rate in turn influences the consumption function (Keynes, 93-95, 110-112) and the investment function (Keynes, 135-137, 143-146). The micro formulations involve the effects on individuals' decisions: households, to save and consume; business firms, to invest. And the latter is clearly a capital budgeting decision of a net present value sort.[17]

16. Velocity has shown some variability. *Economic Report of the President* 1988, pp 32-45. The Federal Reserve responded quickly to the Stockmarket crash of September 1987 by making reserves and hence liquidity "freely available". For a New Zealand perspective on the monetary and fiscal theories in the US, see McCann (1988).

17. "... I define the margin efficiency of capital as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price." (Keynes, p 135). ie. invest to the point where the internal rate of return equals the market rate of interest. Raise the market interest rate through monetary contraction, and some of the formerly profitable (NPV>O) investment opportunities become unprofitable (NPV<O). Capital budgeting theory, practice, and observation have not progressed much (if any) beyond this fundamental micro process.

II MICROECONOMIC POLICY: DEREGULATION AND ECONOMIC EFFICIENCY

The rise of micro economic analysis over the past 60 years in areas of micro policy involves an increased emphasis on the market mechanism as a device for providing proper signals, through prices, to households and business firms. The argument is essentially one of efficiency, the use of society's resources in ways preferred by consumers.[18]

Significant portions of micro policy have been directed at achieving or maintaining equity, preserving incomes or profits at the expense of efficient resource use. The drift of micro policy in the US, particularly since about 1970, has been away from equity arguments toward economic efficiency arguments, and the micro policy of the 1930s, the use of competition and incomes policy for stabilisation, was a peacetime aberration. Except for World War II and a brief period in 1971, the US has not employed economy-wide wage and price controls for stabilisation and antiinflation purposes.

Intervention into the workings of markets in the US predates the Keynesian revolution of the 30s by half a century, with the regulation of railroad and other rates by the Interstate Commerce Commission, established in 1887.[19] In rail rates the objectives were twofold: to avoid the inequities of discriminatory rates and to preserve the financial health of the railroads. The railroads would earn higher profits if competition were blunted; price competition in interstate rail rates became a federal offence. (MacAvoy 1965) In the early third of the 20th century, regulation in specific rail markets controlled entry (and exit) and set (or allowed) prices. Efficiency – market performance under regulation which simulated competitive results – was seldom if ever of much importance when compared with the

18. Some economists and others define equity and efficiency such that whatever results emerge from a free enterprise, laissez-faire economic system are both equitable and efficient. Most economists do not make such a claim, however.

19. The establishment of the ICC was not supported by an infant industry argument. First, the timing was wrong. Second, the land grants to the railroads provided the primary (and earlier) incentive to the firms to extend their rails into sparcely populated western states and territories, where traffic was slight.

goal of equity in the form of fairness. This tilt persisted until deregulation took hold in the 1970s. Regulation in other markets, where natural monopoly was thought to exist, or where competition was judged excessive, paralleled the experience in rail regulation.

Corresponding to the Keynesian developments in aggregate analysis in the 1930s there evolved the distinction, never clearly perceived before, between macro and micro economics; with it was invented the field of industrial economics or industrial organisation, focussing on the analysis of market structures and performance. As they evolved in the 1930s both macro and micro analysis shared an important characteristic, a sceptical distrust of free enterprise and its policy prescription of laissez faire. Keynesian analysis taught that macro equilibrium could occur at less than full employment. Moreover, markets could not be trusted to produce an equitable distribution of income. In contrast with Keynesian recommendations, micro prescriptions were quickly adopted in the 1930s to alter incomes to a more equitable distribution and thus to cure the depression.

The theoretical part of the micro revolution of the 1930s encompassed the invention of monopolistic (Chamberlin 1933) and imperfect (Robinson 1934) competition, the rediscovery of oligopoly, and the sharpening of our notion of perfect competition. Microeconomic policies of that period largely ignored Pareto optimality and economic efficiency. Micro regulation of price and entry spread or was strengthened in this decade across an array of industries: transport (buses, trucks, and aviation), agriculture, financial services (investment and commercial banking, brokerage), Communication (ratio and television), electricity, pipelines, and telecommunications, some at the state level, all at the federal level. Industrial economists frequently noted that in many of these industries the structural characteristics for perfect competition seemed approximately met. In trucking, agriculture, and brokerage, particularly, scale economies were nonexistent, firms were "many", entry was "free", and firms' decisions on price and output were "independent" except when governmental regulation allowed collusion and limited entry. In other regulated industries economists judged that competition, if not perfect, could at least be workable (Clark 1940). In short, efficiency considerations were neglected in favour of equity and stability arguments.

In another vein, other economists in the post-war period began to emphasise the dynamic character of competition. (Schumpeter 1975, Fisher et al 1983 ch 2, Kirzner 1985, ch 4 and 6). They urged that market competition should be viewed as a rivalrous process rather than as a set of equilibrium conditions. And in the 70s another group of economists developed the idea of contestable markets, and by so doing shifted the emphasis of analysis from numbers and relative sizes of firms to entry conditions (Baumol et al 1982, Baumol 1982, Spence 1983); no longer would concentration ratios and Herfindahl-Hirschman indices[20] be viewed alone without considering barriers to new competition (Bain, 1956). Thus structural fewness came to be viewed as not automatically producing monopoly performance, despite the static oligopoly models of micro theory. By this theoretical development of contestability competitive rivalry and performance may exist in industrial markets with only two firms, if appropriate entry conditions exist. And even a single firm may be forced to exercise considerable pricing restraint if it fears rapid loss of sales through entry of a new rival.[21]

20. Defined as the summed, squared market shares of firms in an industry. This index is replacing the 4 (or 8) firm concentration ratio in the US as the favoured measure of market structure. When the market shares are expressed as percentages, the range is zero (many small infinitesimal firms) to 10,000 (one firm with 100% market share). Five firms each with 20% of the market produce a HHI of $(.20)^2 \times 5 = 2000$. The 1982 Merger Guidelines of the US Department of Justice used the HHI, replacing CR4 of the 1969 Guidelines.

21. Contestability has not been universally embraced by all micro economists. For evaluation: Spence (1983), Shepherd (1984), and Greer (1988). Two of the inventors of Contestability theory have recently clarified their views on how wide is the applicability of contestability in actual markets: "... Contestability theory, we think, does help to clarify which arenas are the proper candidates for deregulation and cessation of other forms of intervention. But the theory neither calls for anything like universal deregulation nor for it automatic extension without careful study of the pertinent facts, case by case." Baumol & Willig 1986 p.12.
"Specifically, we will deny emphatically that [the authors' work on contestability] offers carte blanche to mindless deregulation and dismantling of antitrust safeguards." Baumol & Willig 1986 p.10.
And for an empirical criticism: Morrison and Winston (1987).

Hints that change in regulatory policy was possible came in the mid 1970s, under Presidents Ford and Carter, who both supported a general policy of deregulation if market conditions allowed. There existed a growing feeling that regulation in specific industries was not done well, that the regulators were captives of the regulatees, and that consumer interests had too long been subordinate to producer interests (Stigler 1971, Posner 1974). Regulated prices had been allowed to deviate substantially from costs, and technical and economic efficiency had suffered. Economists again pointed to regulated industries where structural conditions suggested that competition would work if regulation were eased, and they also identified industries which, if not in strict conformance to "many small firms" requirements of perfect competition, nevertheless lacked entry barriers and could thus be expected to display approximately competitive results in prices and outputs.

And finally, society altered its views of what's possible. In the 1930s, during the depression, the political and social atmosphere encouraged an active central government which could institute policies to correct economic ills. By the 1970s, however, the political and social atmosphere had changed; big government was no longer viewed as automatically able to cure the economic diseases or even capable of adequate diagnosis. By the mid 1970s regulatory change became politically possible and received strong analytical support, not only from academics but from within the Government.

The list of industries deregulated over the past decade includes airlines, trucking, financial services in brokers and banking services, railroads, buses, telephones and telecommunications, electricity, and natural gas. The extent of micro economic analysis in the deregulatory activities can be illustrated by sketching the experience in four specific industries in which deregulation has occurred.

1. RAILROADS

Rail transportation was the first industry to come under federal regulation. In the 1870s and 1880s the rail system in the US expanded dramatically, and many city pairs were served by several or more rail lines. Fixed and sunk costs were large. As a result competition in price among railroads

was great, and profits were elusive. The rail companies attempted to restrain such competition by price fixing agreements, but the rail cartels were fragile and ineffective as monopolising techniques. In 1887 Congress established the Interstate Commerce Commission to regulate the railroads and the prices or rates they charged. For many years the traditional argument – scale economies in an unregulated industry would produce one firm charging a high price – was thought to explain the railroad regulation. The argument was applied to all service, long and short hauls. Recent studies, however, have concluded that the ICC was established not only to protect consumers from the high charges where natural monopoly prevails, but also to protect the competing railroads from their own intense competitive rivalry. The natural monopoly argument was applicable to only a few markets, those served by a single railroad, ie. to the "short haul" problem alone.

Regulation of railroads for many decades suffered from three ills: (1) the rates permitted by the ICC allowed an inadequate return to capital; (2) the management was permitted inadequate flexibility to adapt to new technology; and (3) competitive forms of transportation developed, with buses, automobiles, and airlines attracting passengers and trucks and pipelines attracting freight. The attempts to deregulate rail service produced the Railroad Revitalisation and Regulatory Reform Act of 1976 (the 4-R Act), allowing some flexibility in setting rates, but it took the ICC 3 years to utilise that flexibility to any significant degree. Additional legislation administered by an increasingly sympathetic ICC (two market oriented economists were appointed in 1979) produced continuing flexibility in pricing. After 1980 (the Staggers Act) any price which covered average variable cost (rather than fully allocated cost) was considered reasonable and hence allowed. Low rates are charged at times of slack demand and for the joint cost phenomenon of the "back haul", often empty under earlier regulation. Railroads were allowed, too, to adjust their work force to demand conditions and to abandon unprofitable lines, thus to reduce costs. Under such flexibility of prices and factor use, railroads have become more profitable, with none actually going bankrupt. And in March 1987 the 80% government ownership of Conrail, a large network serving the eastern US, was sold to willing private buyers, despite a history of Conrail's need for federal subsidies.

2. TRUCKING

Freight transportation by truck was first regulated in 1935, when the depression imposed economic hardships, including competitive losses, on many firms. Rates and entry were carefully controlled, also by the ICC, and both the trucking firms and the drivers (represented by the Teamsters Union) were the beneficiaries of the regulation: profits, prices, and wages were substantially higher with regulation than without. Shippers and ultimately consuming households paid higher rates than competitive equilibrium would have permitted.

Trucking is structurally competitive. The absence of significant scale economies and entry barriers (save those imposed by the regulatory process) clearly suggests that rivalry should be encouraged. Deregulation of trucking started in 1975, 40 years after the initial regulation, when protests before the ICC to new, independent rate fixings became ineffective. Existing trucking firms could more easily expand their services into new markets. Other steps followed, to permit greater flexibility in the pricing of service and in the entry of new suppliers into markets previously closed to new entry. Before 1980, the applicant for entry had to show that it served the "public convenience and necessity". After the Motor Carrier Act of 1980, a protestor to such entry had to show that it was "inconsistent with the public convenience and necessity". And reduced revenue for existing truckers would not satisfy the protestor's burden of proof. As a result, entry has occurred, rates (prices) have fallen, and service has not deteriorated and in some markets has improved. Old trucking firms have earned lower profits and some have gone bankrupt. And the teamsters' wages have fallen to a more competitive level. The benefits, however, accrue to shippers and ultimately to households in lower and more competitive prices for transportation services.

3. AIRLINES

Specific regulations of interstate air transportation began in 1938 with the establishment of the Civil Aeronautics Board (CAB). The CAB could regulate entry to specific routes, control rates or fares, and enforce safety regulations. For three decades the CAB's policies did not allow competition in price. Entry of new airlines into heavily travelled or dense markets

was limited, and competition took non-price forms: better meals, free drinks, more frequent flights, and (allegedly) more attractive hostesses. Load factors and profits were low. There was little incentive to control costs, since regulatory policy did not allow airlines to go bankrupt.

Flights within a state were not subject to CAB regulation, however. Comparisons of similar routes under CAB control and not under CAB control suggested strongly that CAB policies kept prices and costs considerably higher than necessary. Moreover, service to small towns, where traffic is not dense and where the revenues on these routes could not cover costs, was encouraged by subsidising the losses from excess profits earned on densely travelled routes. This cross-subsidisation enlarged the patterns of air service across the country, but some of the routes served clearly did not pay their costs.

After 1970 some of the pricing anomalies were recognised, and some attempt was made to adjust some fares to their costs, but no entry into major routes was allowed. By the mid 1970s, some flexibility was introduced by allowing charter flights subject to minimum stay and advance purchase provisions. Scheduled airlines responded with discount fares on cross country flights, and discounting spread. Airlines were given greater flexibility to set prices, and as prices fell, air travel expanded beyond expectations. Airlines greatly underestimated the price elasticity of demand by non-business travellers. The Airline Deregulation Act (October 1978) provided for the end of the CAB's authority over routes (by December 1981) and over fares (January 1983), and the CAB itself would be abolished in December 1984. By 1983 entry, exit, and prices in airlines would be uncontrolled by any regulatory agency.

The effects of deregulation were remarkable. Prices have fallen, and they more nearly reflect costs. Wage rates greatly in excess of market rates, too, have fallen as competitive pressures forced factor prices toward competitive levels. Other costs, too, have fallen for many reasons: load factors have increased; the more efficient hub-and-spoke system of flight scheduling replaced the trunk system; labour productivity has risen markedly; more fuel-efficient aeroplanes have been put into service; and aircraft more nearly suited to market conditions on individual routes in the new hub-and-spoke system have been acquired, although the airlines are not yet

at a long run equilibrium in their capital stock. Some of these effects were not foreseen, but clearly have been beneficial results of greatly increased competitive pressures from deregulation (Kahn 1988a, 1988b; Moore 1986).

Problems remain in the airline industry, however. Quality has deteriorated, as aircraft are more crowded; flight delays, cancellations, and passenger bumping persist and may have increased; and landing slots are inefficiently allocated at peak times at busy airports. Yet safety has not deteriorated. However, deregulation can hardly be blamed for most of these flaws.

Public policy has been deficient in at least three areas. First, merger policy as administered by the Department of Transportation has allowed several mergers that on competitive grounds should have been denied. After several such mergers, several large hub cities have been left with only a single major carrier, thereby denying alternative suppliers to their customers. Second, several major airlines have constructed computer reservations systems which favour their own flights at the expense of flights of their smaller rivals who have no CRS of their own. And significant economies of scale in CRS have kept all but a few US airlines from developing their own systems. Third, the allocation of scarce landing slots at crowded times at major terminals, by failing to use prices which reflect that scarcity, exacerbates the crowding problem at peak travel times. The lesson from these three problem areas is clear. Deregulation and free markets cannot provide socially good solutions to all problems in air travel. The market is not adequately contestable and needs bolstering from adequate competition and regulatory policies in the areas of mergers, landing slots, and CRS to avoid the worst problems of unconstrained or unsupervised monopoly.

4. TELEPHONES

In the US telephone communication has been (and continues to be) both very good in reliability and quality and widely available at modest cost. Over 150 million telephones serve over 97% of all households and virtually all business firms. The American Telephone and Telegraph Co. (AT&T) established its monopoly position in the US telephone market in

the 19th century based on patent ownership. The local distribution of telephone communication appeared to be a natural monopoly, and many but not all of the local independent telephone companies became part of the nationwide Bell System through merger. This structure – one large company blanketing the country with some small local companies – was protected once the regulatory process started in the early 20th century; the dominant firm monopolistic structure was not an explicit legislative or regulatory decision.

Starting in 1956, deregulation came gradually with a series of judicial decisions (not regulatory decisions) favouring entry into AT&T's monopoly: (1) a mechanical cup attached to a telephone to enhance privacy; (2) a mobile radiotelephone system attached mechanically to a telephone; (3) customer-owned switching equipment, eventually without an AT&T protective coupler; and (4) microwave transmission, used by small communications companies to provide low cost long distance service in competition with AT&T in markets of dense traffic. Each of these decisions required the regulatory agency, the Federal Communications Commission,[22] to re-evaluate its policies regarding allowed rates.

Pricing policy nation wide had kept rates to households below costs of servicing those households; these household customers were subsidised by profits from long distance and business service. The advent of microwave transmission starting in 1959 signalled that AT&T's long distance profits would gradually be eroded by the entry of competitors into lucrative long distance markets. Private carriers soon entered, and in 1969 a small microwave common carrier, MCI, entered in direct competition with AT&T in the sale of communication service in a high density long distance market. In 1971 the FCC recognised this new freedom of entry as a new policy in "specialised communications", where for entry to be possible the entrants required connections to AT&T's local monopolies. AT&T objected to such interconnections, but eventually they were required, and competition in long distance jeopardized the source of subsidies to the household users. In addition AT&T was not allowed by regulatory authorities to raise its rates to cover costs of providing local service.

22. Established in 1934 to regulate interstate telephone service; intrastate rates are regulated by state commissions.

In a quite separate but important matter, as the result of a consent decree in 1956, AT&T was forced to limit its activities to regulated areas and to license its patents. In return its nationwide monopolistic structure remained intact, but it could not enter unregulated businesses. Thus, while other firms were free to enter AT&T's high profitmarkets, AT&T was not free to seek profits outside its area of regulated markets. The long term prospect for AT&T was not good. The economic theory behind an antitrust case filed in 1974 saw the telephone industry as three parts: long distance, telecommunications equipment, and local service. Only the last – local service – was considered a natural monopoly and hence appropriate for continued regulation of price and entry. The others were viewed as candidates for deregulation. The remedy sought by the Justice Department was divestiture of the operating companies (providing local service) from long distance and equipment supply, which would remain with a slimmed down AT&T. The company saw its opportunity to settle this suit, to avoid the profit squeeze from long distance entry and local regulation, and to obtain release from the 1956 consent decree. And so the antitrust case was settled in early 1982. The operating companies were divested (as of 1 January 1984), to provide local service under state regulation, while AT&T retained the long distance system and acquired its freedom to enter unregulated markets.

The effects of the 1984 breakup are now coming clear. Prices in long distance service will more closely reflect costs as competition takes hold from new firms employing new microwave technology, and as prices for local, particularly household, service rise to reflect more accurately the costs of that service. The equipment market had been deregulated and is workably competitive. Thus the changes over three decades have allowed an approach to workable competition in two of the three parts of the telephone industry where competition is possible, equipment and long distance, while regulation has been retained in the natural monopoly of local service.

Two additional issues are currently receiving wider scrutiny from regulatory authorities; both reflect the increased use of microeconomic analysis in local telephone service. First, metered local service is being adopted in calling areas formerly priced at flat rates (a flat rate for unlimited local calls). Second, profit ceilings defined as a percentage return on invested

capital are being replaced by price ceilings pegged to some (moving) benchmark (eg. the CPI). With both, incentives would be more appropriately built into the decisions of customers (to economise calls) and of telephone firms (to lower costs).

How can one summarise the effects of the move to deregulation during the past decade? Increased competitive pressures as firms in regulated industries are freed from regulatory constraints have brought the benefits which economists have generally expected.[23]

1. The level of prices has fallen, and fallen sharply in certain industries: trucking, airlines, long distance telephone service, and brokerage commissions, to approximate the costs of many of those services.
2. The structure of prices has been altered, to reflect costs of providing specific products or services within particular industries: local telephone prices (still under regulation) have risen as the subsidy from long distance profits became unavailable to the divested Bell operating companies after the AT&T breakup; airline rates more closely approximate the costs of serving particular routes, although there are some recent indications that monopoly behaviour is reemerging; and rates for truck and rail back hauls, often not allowed under regulation, were set low, close to marginal cost. In financial services and banking, as well as in trucking, rail, and telecommunications, the adjustments of rates and prices has brought them closer to the costs of providing the particular products.
3. Product variety has expanded, as airlines, banks, brokerage houses, and telecommunication firms have supplied an increased array of goods and services to match customers' varied demands.
4. Labour costs have fallen, as overpaid airline pilots, truck drivers (Teamsters), and others have felt competitive pressures in the labour market, and as employers, particularly in railroads, telephones, and

23. On this point see Kahn (1988c). For an evaluation across deregulated US industries, Boyer (1986). For an analysis of deregulation in New Zealand Industries, Bollard and Easton (1985); Miller et al (1987), and Ayto and Bollard (1987).

airlines, have reduced their work forces. And more efficient utilisation of capacity, particularly in rail, truck and air transportation, has reduced capital costs.

Behind these effects lie a newly discovered concern with economic efficiency and a renewed faith in the competitive powers of market rivalry as a means to approach or to attain that efficiency. Economists have long preached that a central role of the market mechanism is to provide the goods and services that consumers want by allowing market prices to reflect costs, by encouraging entrepreneurial enthusiasm, and by removing the deadening visible hands and feet of governmental regulation. Private avarice can be harnessed for the public good by a competitive environment.

III NEW ZEALAND THINKING AND POLICY

The alert reader will note that I have virtually ignored New Zealand.[24] We are charged to offer some comments on the interchange of economic ideas between America and New Zealand. We are not short of hypotheses about the possible routes of American influence on New Zealand thinking and policy: (1) The constant stream of economists in both directions, often academics, sometimes under Fulbright grants. (2) The international exchange of academic journals. (3) The demonstration that policies in one country achieve success, hence are adopted and adapted by the other. (4) The simultaneous shift in economic and political ideology.

24. The New Zealand studies of deregulation and competition policy are hardly scarce. A small selection would certainly include Bollard (1987) and Vautier (1987) as well as others cited previously. For studies of deregulation in those specific industries whose recent US experience I have sketched:
Transport: Guria (1987)
Telecommunications: Fountain (1987), Touche Ross (1988)
Public Utilities: Evans (1988)
Gregory (1987) has noted that the 1984 Treasury study *Economic Management* proposed "two `essential efficiency conditions'": "output must be worth at least as much as the resources used, and it must be supplied with the least consumption of resources." (Treasury, 1984, p 276). Those two conditions reflect in turn economic (or allocative) efficiency and technical (or productive) efficiency. The latter is, of course, included in the former; an economic activity may be productively efficient (produced at least cost) without being allocatively efficient; but not vice versa. Roger Douglas has

Tracking such influence – from America to New Zealand, as our topic directs – runs against innumerable difficulties. Ideas are public goods, fully exchanged at low or zero price without diminishing their stock. Ministers receive advice from diverse sources, and we know little of how that advice is processed into policy decisions. Political processors give weight in policy matters to diverse interest groups, and re-election is to a politician as primary a goal as survival to a business firm. Moreover, we run the risk of committing *post hoc ergo propter hoc* fallacies. Despite these and other difficulties I offer several tentative observations.

First, both countries' use of monetary policy for stabilisation reflects a mix of both pragmatism in the absence of fiscal control as well as the persuasion of the monetarists.

Second, both countries have cut income tax rates probably as a way to stimulate economic activity as micro principles suggest. Policy makers here could have heard the American supply siders.

Third, the press for the deregulation of markets in both countries received intellectual support from industrial economists in the US. It goes without saying that support for a policy of absolutely no government interference in markets is heard from the business communities in both countries,[25] but among academics only a small minority of extreme libertarians would go that far. Competition policy, firmly rational and strongly enforced, has an important place in both economies.[26]

argued that various projects under National's "Think Big" policies failed the Treasury's (and economists') first efficiency condition of allocative efficiency. Douglas (1987). None of this argues, of course, that the source of these ideas was the US or US economists. I can find few clues to the source of Douglas's economics, although Sharon Crosbie reported that he has read Peter Drucker, a US management economist, *The Dominion* 3 October 1988 p 20. Douglas's 1980 volume seems to embody self taught micro supply side analysis. Basic economic rationality is well known and sometimes applied in setting public policy; often political considerations take precedence.

25. For a call that falls only centimetres short of calling for repeal of the Commerce Act 1986, see Kerr (1988).

26. Even Baumol and Willig (1986), two of the strong proponents of contestability theory, also support continued "antitrust safeguards". See footnote p.10.

Last, stirrings heralding New Zealand's shift toward a market economy occurred at least a decade ago. In 1979 Ian McLean discussed "more market", the "use of the market to regulate the decisions of individuals and firms rather than the use of direct Government controls" (Easton 1987, p. 139). The election of 1984 signalled a shift toward increased reliance on less regulated markets, and while the micro to macro shift occurred in both New Zealand and the US, the shift was much quicker, more pronounced, and over more economic markets in New Zealand than in the US. To Mr Lange, inequality of income is (as he put it in 1986) "the engine which drives the economy" (quoted in Vowles p 2), through the workings of incentives in a free market economy. New Zealand was ready for freer markets; American economic experience provided an example and American economic analysis provided a rationale, both of which may have been quite unnecessary given Labour's perception of the New Zealand economy in 1984. While all these influences (and others) played a role, there are likely as many different ways to evaluate their relative importance as there are observers.[27]

27. Brian Easton 1988 has provided a perceptive and strongly argued analysis of the US (particularly Chicago) economists' influence on current economic thinking and policy in New Zealand. I defer to his evaluation of these issues, noting only that some of the micro analysis labelled Chicago School is, and has been for a long time, embraced by non-Chicago economists. It is clear, however, that the macro- to micro shift, with efficiency receiving more relative weight in policy making, has taken place in both the US and New Zealand. Whatever the links between the two countries, and there are many, this parallel is striking. Moreover, this change has taken place in other, but not all, developed economies with increased emphasis on the market system in countries of diverse political persuasions. But that story is for another time.

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Chapter Two

CONTESTABILITY IN COMPETITION POLICY: REPLACEMENT, SUPPLEMENT, OR IMPEDIMENT?

Douglas F Greer

Seldom has a new economic theory been promoted with such extravagant exhortation by its natural and foster parents - in this case Baumol, Panzer, Willig, and Bailey. Contestability theory was introduced as an "uprising in the theory of industry", a "fundamental" contribution to industrial organisation (Baumol, 1982; Baumol, Panzer, and Willig, 1982). Moreover, the crowing claimed that this was not just a theory. It was a theory that could "readily be applied" to governmental affairs, one that was "extraordinarily helpful in the design of public policy", especially regulatory and competition policy (Bailey, 1981). These boasts were apparently believed by many, so the influence of contestability theory spread rapidly to Washington, DC, Wellington, NZ, and elsewhere.

I shall consider this spread only as it relates to competition policy. A brief outline of my observations may be revealed by resort to some queries:

Q. What is contestability?
A. It is ultra-free-entry into markets.

Q. If true, what are its implications for competition policy?
A. Revolutionary.

Q. Is contestability theory plausible?
A. No, generally not.

Q. Is it observable in reality?
A. Rarely if ever.

Q. Are there problems with its application to competition policy?
A. Insurmountable ones.

Q. Has it nevertheless influenced competition policy?
A. Yes, in both the US and New Zealand.

Q. Why the influence given its unreality and impracticality?
A. Ideology and ignorance apparently.

I WHAT IS CONTESTABILITY?

For over a century economics has recognised the importance of entry and exit. They comprise a market's regulatory thermostat, assuring that prices and outputs are neither too high nor too low, but just right. Ideally, exhorbitant prices and profits attract newcomers to the market, and these entries drive prices and profits down. Ideally, depressed prices and long term losses push sellers out of the market, and these exits allow restoration of normality to those remaining. Neoclassical theory required actual entry and exit to achieve these results, not just potential entry and exit. Moreover, the flux was accompanied by an assumed multitude of small firms. That is to say, neoclassical theory centred on perfect competition. It did not posit potential entrants constraining the behaviour of large monopolists or oligopolists due largely to potentially easy entry and exit.

During the 1950s and 1960s entry theory was vastly improved by Bain (1956), Sylos-Labini (1962), and Modigliani (1958) among others. Internal market conditions concerning such features as the number of sellers no longer received all the attention for monopolies and oligopolies. External conditions concerning potential competitors, such as the height of barriers against entry, were increasingly considered important. Indeed, it was recognised in a rather casual way that a monopolist would be powerless to exploit its position if entry was, in fact, perfectly easy. This, however, was considered an unrealistic case, which is apparently why theorists failed to elaborate upon it until Baumol and company came up with contestability theory.

A contestable market is one where internal conditions, such as the number of incumbent firms or economies of scale, are utterly irrelevant to performance because three external conditions control all scenarios. First, easy birth: Entry is ultra-free (to use Shepherd's (1984) expression). This freedom of entry derives from an assumption that all firms - actual and potential - have identical technologies, cost functions, production capacities, distribution opportunities, and product differentiation capabilities. Second, easy life: The entrant can fully establish itself before an existing firm can respond with price cuts. "If", as Shepherd explains (1984), "the entrant obtains an advantage, even a tiny price difference, it will prevail absolutely and displace the existing firm, with no interaction or sequence of moves." Third, easy death: Exit is absolutely costless. Sunk costs are assumed to be zero, which means that all costs incurred during entry can be fully recovered in the event of exit. All capital equipment, for instance, can be used elsewhere or readily sold without loss other than normal user cost and depreciation.

In brief, a contestable market is vulnerable to hit-and-run entry: "Even a very transient profit opportunity need not be neglected by a potential entrant, for he can go in, and, before prices change, collect his gains, and then depart without cost, should the climate grow hostile." (Baumol, 1982, p.4).

In a contestable market the force of potential competition alone is sufficient to produce the same performance as perfect competition.

- Excess profits attract hit-and-run entry so in equilibrium they never occur.
- Production inefficiencies would prompt hit-and-run entry, so they are eliminated in equilibrium.

Moreover:

- Internal conditions, such as firm market shares or numbers, will not influence observed price levels.
- Economies of scale and scope set cost conditions that rigidly determine the number and size distribution of firms in equilibrium.

What, then, have contestability theorists achieved? The answer hinges on point of view. Supporters of the theory, especially those who extract policy implications, see it as proof that a monopoly may act just like a

perfectly competitive firm, so allowing a monopoly may be just fine. On the other hand, critics might cheer the theory only for demonstrating that the conditions necessary for contestability are much too bizarre to ever materialise in real life. The importance of internal market conditions is therefore underscored. These two views introduce our next two sections.

II IF TRUE, WHAT ARE CONTESTABILITY'S IMPLICATIONS FOR COMPETITION POLICY?

Competition policy rests on postulates of desirability and necessity. First, the policy is considered desirable because competition is usually desirable where in this context "competition" refers to workable competition in the usual sense - including, for instance, numerous firms, no artificial inhibitions to entry, well informed buyers, and price rivalry (Greer, 1984). Competition is desirable because it is an attractive means of achieving valued ends. Its means are decentralised, open, fair decision making. Its ends are, in general, various degrees of allocation efficiency, production efficiency, innovation efficiency, and equity. This implies that antitrust is not hopelessly at odds with economies of scale or technological progress.

Second, competition policy is considered necessary because the desired degree of competition does not always occur automatically. The policy assumes that, in its absence, mergers among competitors would be much more common, cartels would flourish, and exclusionary practices would proliferate, all because businesses tend to profit by such anticompetitive activities.

Contestability theory leaves the postulate of desirability intact. Potential competition is as desirable as actual competition. However, to the extent contestability is thought to actually prevail, it reduces competition policy to excess baggage. Given contestability one need not worry about mergers that create monopoly or about collusive activities. A cavalry of hit-and-run contestants is always ready to ride to the rescue.

This, of course, is not really new. A century ago economists like Frank Giddings (1887) and George Gunton (1888) were challenging the need for US antitrust policies on grounds that potential competition was just as potent as actual competition (see Martin, 1988a, for a summary). More recently, the Chicago School of economic thought has questioned the

necessity of antitrust because easy entry is seen to prevail quite broadly if not universally (Bork 1978; Reder 1982).

Thus, to the extent contestability theory undermines the necessity assumption of antitrust policy it is obviously revolutionary. It greatly aids antitrust abolitionists. Although the theory has indeed been used by advocates of *laissez-faire*, it is important to note that it could assist arguments favouring more antitrust, not less. Those who doubt its realism could nevertheless invoke the theory to encourage policies that achieved greater ease of entry. Arguments favouring antitrust have long been grounded on older theories of entry and its difficulty. Antitrust advocates also like to think of themselves as realists (Fox and Sullivan, 1987), and contestability can seem quite fanciful to many observers.

III IS CONTESTABILITY THEORY PLAUSIBLE?

It is easy to imagine a possible case of contestability. Picture a blind flower vendor monopolising some street corner. Hit-and-run entry would be controlling. Countless potential entrants would have access to identical technologies and the other prerequisites for a "hit". They could post a slightly lower price without the sightless incumbent noticing, thereby precluding a quick retaliatory price response. Finally, if a "run" became necessary, their sunk costs would be zero as their water tubs could easily be moved to another street corner or converted to janitorial work.

So much for hypothetical possibilities. The plausibility of contestability theory suffers three fatal debilities - internal inconsistency, unbelievable assumptions, and complete collapse with even slight relaxation of its assumptions (nonrobustness).

Shepherd (1984) has identified two readily apparent inconsistencies in the theory. The first stems from conflicting implications in the easy birth and easy life assumptions, as I labelled them earlier. How can we have an immense hit-and-run potential entrant, one big enough to completely displace the incumbent monopolist, and at the same time have an incumbent unwilling or unable to respond expeditiously with price cuts in the event that such entry actually occurs? Shepherd's second inconsistency lies in a clash between the easy life and easy death assumptions. The less time taken by the hit-and-run entrant to hit-and-run, the more plausible the easy-life

assumption of an unresponsive incumbent. Yet, the less time taken by the hit-and-run entrant, the less plausible the easy-death assumption of zero sunk costs because entry costs could move toward zero, if at all, only with expanded time (for the sale or relocation of capital, for instance).

Moving beyond Shepherd's list, it is easy to spot an inconsistency for any contention that contestability is universal or mostly so. A contestable market is one that has hit-and-run potential entrants, but those potential entrants cannot themselves be subject to contestability. A hit-and-run potential entrant must somehow have sufficient spare capacity to completely displace incumbents. But having that unused capacity implies some existing inefficiency on the part of the hit-and-run potential entrant, and such inefficiency can be attained only by a firm not subject to contestability. Taking this reasoning one step further, the easy birth assumption of the theory implies complete symmetry for the incumbent and hit-and-run potential entrant. One is assumed to be, in a sense, the mirror image of the other in all relevant respects. This in turn implies that the incumbent would be, or could be, a hit-and-run potential entrant vis-a-vis its potential entrant. But this is something inconsistent with the implied noncontestable, protected status of the theory's hit-and-run potential entrant. Hence, an inconsistency might arise even without claims of universality for the theory.

The foregoing does not directly question the reality of the theory's assumptions taken individually. However, most observers find them unbelievable. Here is a sample of assessments:

> [The theory] rests on particularly unreasonable assumptions... (Jacquemin, 1987)

> I view contestability theory as more circles within circles - an aesthetically pleasing creation whose conformity to reality is at best questionable. (Scherer, 1986)

> In particular, the theory depends on the twin assumptions:
>
> (a) that there are no sunk costs; and
> (b) that an entrant can come into a market, and set up on full scale, before the existing firm(s) respond by changing price.
>
> Both these assumptions are dubious in respect of real-world markets. Assumption (b) is the opposite of the natural assumption to make, since price can be generally altered more rapidly than a new firm can establish itself in the market. (Vickers, 1985)

We need go no further because now even the parents of the theory admit its unreality and try to salvage it by redirecting our attention to what might be called "imperfect" contestability as opposed to "perfect" contestability. Most industries, state Baumol and Willig (1986) "can be expected to depart in some important respects from the model of perfect contestability, and it will therefore generally be necessary in applying the theory to assess the economic significance of the deviations."

This brings us to the issue of robustness. Do the theory's indications of very potent potential competition hold up as we move from the fanciful assumptions of perfect contestability to real world conditions of, at best, imperfect contestability? In theory , only slight deviations from perfect contestability cause the theory to collapse (Schwartz and Reynolds, 1983; Schwartz, 1986; Stiglitz, 1987). For instance, as sunk costs rise only slightly above zero they obliterate the profitability of hit-and-run entry. At least that is the verdict of theory. It is backed up by empirical evidence, as we shall see.

IV IS CONTESTABILITY OBSERVABLE IN REALITY?

Most theories are developed to explain real experiences, as Keynes developed his General Theory for the Great Depression. This cannot be said of contestability theory. Hit-and-run entry is extremely rare if it exists. One encounters distress sales of obsolete or perishable goods across territorial markets. But nontrivial instances of genuine hit-and-run entry have to my knowledge never been documented. To be sure, the theory posits no actual entry in equilibrium. But the real world is never in equilibrium, and it seems reasonable to ask contestability proponents for some solid earthly examples. Relying on imperfect contestability for a fallback is not very helpful because that would put us in the same position we were in before perfect contestability came on the scene, and degrees of contestability can neither be easily defined nor measured.

Still, imperfect contestability could be empirically important for purposes of antitrust policy. To assess this possibility the difficulty of defining imperfect contestability can be handled pragmatically. If imperfect contestability is sufficiently important empirically to obliterate significant associations between a market's internal structural conditions and its

observed conduct and performance, then antitrust policy could relax its concern about large scale horizontal mergers and other such items of traditional antitrust focus. If, on the other hand, imperfect contestability is, as a factual matter, typically not significant, then ominous associations between the variables of a market's internal structure, conduct, and performance would remain intact, and antitrust policy could continue on its traditional course confident that it was serving the public interest, assured of not being frivolous. Traditional policy might be slightly amended in rule of reason cases to allow defendants the opportunity to prove sufficient contestability in their particular case to overturn the conventional *prima facie* evidence against them. But empirical failure for imperfect contestability would allow the conventional presumptions for anticompetitive conditions to stand unscathed, and would moreover justify a very heavy burden of proof on those wishing to attempt contestability defences.

This important point can be illustrated with an instructive example. The parents of contestability claimed that the airline industry was an extremely close match for the theory, perhaps the best match available. They said conventional indices of internal competition could then be safely disregarded when assessing proposed horizontal mergers in the industry's post-deregulatory environment. The US Civil Aeronautics Board adopted this view, with results explained by Elizabeth Bailey in an article written when she was a member of the CAB:

> Another step in altering antitrust policy to reflect contestability theory was taken by my colleagues and myself at the CAB when we refused to use traditional market share measures to preclude mergers. In the Texas International and National acquisition case, for example, the Department of Justice recommended disapproval based in large part on market share data ... [However] the CAB reasoned that the markets were readily contested and did not find that a merger would be anticompetitive. (Bailey, 1981.)

Numerous subsequent airline mergers were allowed by similar reasoning. The Northwest-Republic and TWA-Ozark mergers, for instance, brought together pairs of direct competitors accounting between them for approximately eighty percent of the departures from Minneapolis/St Paul and St Louis, respectively. But airlines are not sufficiently contestable to warrant this approach. Careful studies have accumulated, at least six to date, showing convincingly that market concentration ratios and the

numbers of airlines occupying markets make a significant difference in fares in the same direction as posited by traditional antitrust. Moore, for instance, compared two classes of city-pair markets - those served by one to four airlines and those served by five or more. Holding other variables constant, he found that the unconcentrated markets, with five or more carriers, enjoyed price levels of 24% to 41% lower than the concentrated markets. (Moore, 1986. The others include Graham, Kaplan and Sibley, 1983; Call and Keeler, 1985; Bailey Graham and Kaplan, 1985; Morrison and Winston, 1987.) The mergers, plus related developments such as the demise of post-deregulation entrants like People Express, yield current results summarised recently by Business Week (August 8, 1988, p.24):

> Now no powerful mavericks are left to drive fares down. The obvious candidates for acquisition ... have been snapped up. The largest airlines have finally carved up the country's major cities into hubs dominated by one or two carriers.
>
> This stability allows airlines to charge more and hike their operating margins. Even Frank Lorenzo's Continental Airlines Inc., once known for starting price wars, has been raising most fares.

This application of imperfect contestability has thus been a big mistake. (Kahn, 1987.) The influence of internal market conditions, as revealed in standard industrial organisation research on the industry, has shown imperfect contestability to be so imperfect that it should have been ignored or greatly de-emphasised for purposes of antitrust policy.

Moving to a broader range of evidence we may ask whether, in general, imperfect contestability is sufficiently robust and widespread to undermine competition policy's traditional focus on the internal conditions of markets. In my judgment the answer is clearly no. Any standard textbook on industrial organisation provides hundreds of relevant references (Scherer, 1980; Greer, 1984; Martin, 1988a). Our brief survey begins with items that show the preponderant significance of internal as opposed to external market factors then concludes with external factors:

1. If imperfect contestability were sufficiently controlling, collusive restraints of trade would be much less common than they are. Moreover, it has been demonstrated that the incidence of collusive restraints is significantly associated with such internal conditions as market concentra-

tion and the number of firms (Hay and Kelley, 1974; Fraas and Greer, 1977).

2. Price increases frequently follow intense merging activity. Besides the example of airlines discussed earlier, carefully researched examples concern steel (Parsons and Ray, 1975) and microfilm (Barton and Sherman, 1984).

3. More generally, several dozen studies besides those in airlines have shown a positive relationship between price level and various measures of market concentration. (For surveys and especially thorough studies see Rhoades, 1982; Heggestad, 1979; Weiss, 1987; Marion, Mueller,et al, 1979; Greer, 1984; Marvel, 1978.)

4. Inefficiencies in production, commonly called X-inefficiencies, are associated with internal measures of monopoly power and collusive conduct to a degree that seriously undermines the significance of imperfect contestability. (See Greer, 1984 for a survey.)

5. Concentrated industries yield substantial rents for their workers, directly by higher wages and indirectly through greater unionisation that in turn fosters higher wages (see, e.g. Kwoka, 1983; Haworth and Reuther, 1978; and Dalton and Ford, 1977). Contestability is also too feeble here, then.

6. Over 100 studies have tested the relationship between market share and/or market concentration on the one hand and various measures of profits on the other. A solid majority of them find positive linkage. (For surveys see Scherer 1980; Martin, 1988a). Contrary to claims of the Chicago School, efficiencies are not the sole explanation of these results (Martin, 1988b; Allen and Hagin, 1988). Indeed, if the results for X-inefficiencies and wages just mentioned could be taken into account more thoroughly, the profit-power relationship would certainly be bolstered. By one estimate, the effect of concentration on profits is underestimated by as much as 65% when, as in almost every past study, labour market conditions are not taken into account (Karier, 1985).

7. Significant imperfect contestability cannot be detected even within industries, except in ways that confirm the role of traditional antitrust

rather than question it. As suggested by the theory of mobility barriers (Caves and Porter, 1977), the most likely source of contestability for any single firm would be its rivals already in the market. Yet we do not see number-one ranked firms swapping places with fifth ranked firms very easily or very regularly in any major industry, especially not industries that might, on traditional grounds, be considered the likely targets of competition policy. A number of recent studies covering hundreds of industries have concluded that dominant firms persistently maintain their positions of power over decades of time (Mueller, 1986; Utton, 1986; Geroski, 1987). As Geroski (1987) put it, "Dominant firms do decline, but the notion that there is anything quick, systematic, or inevitable about it is doubtful." This conclusion is especially damaging to imperfect contestability when coupled with the often brazen behaviour of dominant firms, especially when products are differentiated. Consider two simple examples of pricing by market share that are completely contrary to the teachings of contestability: Kodak has 90% of the film market in the US and sets prices high, while Fuji, with only about 10%, prices 5% to 10% below Kodak. In Japan, it's the reverse. Kodak has a 12% share there and prices below Fuji, which persistently holds 70% of that market. (Forbes, November 22, 1982, pp. 55-56.) In the US petrol industry, retail market shares vary substantially by region. Local market leaders price relatively high, as Exxon does in Washington, DC. Market stragglers price relatively low, as does Exxon in San Francisco, California. Chevron switches roles with Exxon in these very same markets (Allvine and Patterson, 1972).

8. First mover advantages are also inconsistent with contestability. In such cases "pioneering" brands or products have persistent advantages over "me too" brands or products (Bond and Lean, 1977; Whitten, 1979; Schmalensee, 1982). The reverse side of this, and equally inconsistent with contestability, is the "fast second" strategy, in which leading firms let small firms undertake the major risks of innovation knowing that if an innovation does prove popular it can recapture leadership by imitating the innovation and exploiting its power of brand image, superior distribution spread, or the like. Such behaviour may be found in computers, razor blades, automobiles, detergents, soda pop, wrist watches,

and motion picture technologies (Brock, 1975; White, 1983; Greer, 1984; Baldwin and Childs, 1969).

9. Among many possible miscellaneous items, I cannot resist mention of one. Studies of hundreds of firms reveal that antitrust indictments for price fixing cause prices to fall (Feinberg, 1984). There would be no cushion for such price changes if contestability was sufficient to be of practical import to competition policy.

Moving from internal to external market conditions, there are several types of research directly addressed to the latter. If imperfect contestability were important enough to warrant substantial changes in competition policy, then it would be important enough to undermine the empirical significance of the barriers recognized in conventional industrial organisation analysis. Specifically, contestability centres on sunk costs, while conventional analysis centers on such other factors as economies of scale. Although direct tests of the explanatory power of sunk costs have not been conducted because of measurement problems, we have numerous research findings concerning external conditions that imply a minor economic influence for imperfect contestability. Consider the following:

1. Firms regularly violate principles of limit pricing (and contestability) by pricing sufficiently high in the face of potential entry to earn excess profits for decades of duration, profits that could not be earned if imperfect contestability were strong enough to let us relax antitrust policy (Masson and Shaanan, 1982; Mueller, 1986). Even in cases where imports are the source of decline in market power, the process of entry displacement typically proceeds much more slowly than implied by contestability theory (Hilke and Nelson, 1988). What explains these several findings? Smiley (1988) shows that although limit pricing is rare, other entry deterring strategies abound with "surprising" frequency – including intensive advertising, R & D preemption, and reserve capacity expansion. Technical barriers also abound.

2. The barriers found to deter entry are thus those of conventional theory. For instance, the test results of Khemani and Shapiro (1986) "tend to confirm that barriers to entry arise from economies of scale at the plant-

and firm-level, from investments in advertising, and from high capital requirements". Moreover, behavioural or strategic barriers, such as those associated with loyalty discounts in pricing, exclusive dealing, and tying, have been shown to be associated with the long-run maintenance of significant market power (Gibbon and Utton, 1986). Notable technical and behavioural barriers have been shown to exist even in markets that might seem highly contestable – such as those for dentists, plumbers, cooling contractors, tyre dealers, veterinarians, drug stores, and farm equipment dealers (Bresnahan and Reiss, 1987).

3. The ideal empirical test of contestability's robustness would compare two segments of the same market, differing only slightly in sunk costs. If a small elevation in sunk cost in one segment produced markedly greater barriers in comparison to the other, then the theoretical proofs of contestability's poor robustness would receive empirical support. The market for industrial gases, like acetylene and oxygen, has two segments - a bulk segment, where producers sell directly to large customers like General Motors, and a small-lot segment, where producers sell to independent distributors who in turn sell to welding supply stores serving small customers like construction companies. During the 1960s the dominant established US producers Union Carbide and Airco encountered growing competition at the gas manufacturing level because of changing technology and fresh entrants. This competition spread rapidly in the bulk segment of the industry but never reached the small-lot sales segment because of exclusive dealing and tying imposed by Union Carbide and Airco (Brock, 1984). Similarly, the US trucking industry is divided into Truckload (TL) and Less-Than-Truckload (LTL) segments. After deregulation, the vast bulk of new entry (and the most heated price competition) occurred in the TL segment. Entry (and price competition) has been significantly less intense in the LTL segment because that side of the business requires some minimal loading dock facilities and warehouse space for purposes of shipment aggregation and parcel routing (Boyer 1986; Moore, 1983). Once again slight variations in sunk costs (and economies of scale) have made a huge difference. More broadly, the comparative difficulties of entry into

generic versus non-generic pharmaceuticals, private-label versus advertised-label canned foods, and hundreds of other central versus peripheral situations would seem to cast still further doubt that contestability is robust enough to have imperfect realisations that are more than rarely relevant to competition policy.

A fitting conclusion to reality's many revelations, both internal and external, may be borrowed from Bresnahan and Reiss (1987)

> In recent years... antitrust policy debates have been heavily influenced by the view that most industries have very free entry. Our results show that that view is incorrect as an empirical matter...

V ARE THERE PROBLEMS IN APPLYING CONTESTABILITY TO COMPETITION POLICY?

Assuming for the moment that contestability theory was consistent, plausible, robust, and generally consequential, if only imperfectly so, what problems would arise in applying the theory to competition policy? Purely as a practical matter the difficulties of faithful application have been nicely identified by Bollard (1987):

> There is no doubt that to carry out the sequence of tests advocated by Baumol, Panzer, and Willig would be extremely difficult to do in practice and to defend in a courtroom. It depends crucially on cost function estimation. The functional form needs to take account of the likely multiproduct nature of the operation, and should not prejudge cost properties likely to be relevant in contestability such as (dis)economies of scope, subadditivity, etc... The practical problems in this sort of estimation are immense. Apart from conceptual and econometric difficulties, most firms would not be able to supply the disaggregated data necessary, and even if they could would not want to reveal it to potential entrants for commercial reasons.

Once we step back from the abyss of econometric cost estimation to consider the more casual estimates of entry barriers that might be associated with notions of imperfect contestability, we still encounter a thicket of brambles. Salop (1986) has written a little recipe for "Measuring the Ease of Entry" which has considerable value and ingenuity. Still, it is more a grocery list than a true recipe. Beyond noting the many factors that need to be taken into account, Salop's efforts depend heavily on arbitrary assumptions and subjective judgement. Schmalensee (1987) puts the matter this way:

> There is some agreement [among economists] on what relevant factors one ought to consider. But there is much less agreement about how to assess those factors, and even less about how to combine them into an overall measure of the difficulty of entry.

Contributing to the confusion are several conflicting definitions of what constitutes a "barrier" to entry. Stigler (1968) defines a barrier narrowly as "a cost of producing... which must be borne by a firm which seeks to enter an industry but was not borne by firms already in the industry". This excludes economies of scale. It could even be interpreted to exclude patents. In contrast, Bain (1956) defines barriers broadly to include all factors that allow established firms to raise price above minimal average costs "without inducing potential entrants to enter the industry". Economies of scale qualify for Bain, as do product differentiation and capital requirements. Still other definitions have been offered by Demsetz (1982) and Ferguson (1974).

Let's for the moment accept the spirit of the contestability literature which considers sunk costs as the main barrier to entry. Adoption of this definition does not move the analysis very far along, however. Aside from serious problems of measurement, such as selection of a time frame for salvage operations, Schmalensee (1987) identifies two further failings:

> [First] it is not clear either in theory or in practice how large sunk costs have to be, in dollar terms or as a percentage of entry costs, to be troublesome [to potential entrants]. A conclusion that sunk costs are so small in some cases that they can be neglected reflects purely the exercise of judgement...
>
> [Second] it is important to stress that, despite the implicit assumptions in some of the contestability literature, even if sunk costs are clearly not important in some particular case, that does not mean that entry is easy. Sunk costs and entry barriers are not the same.

Taking tallies of the history of actual entry might seem like a logical way out. Indeed, such may be helpful. But tallies can also be misleading. Many entries of small firms that never grow up to challenge the market leaders do not add up to easy entry in any way meaningful to competition. Indeed, numerous industries experience considerable turnover of small fringe firms, with those entering displacing those leaving without ever threatening the position of dominant firms (Shapiro and Khemani, 1987).

Going beyond problems of definition and measurement, we encounter even more fundamental sources of failure for attempts to incorporate

considerations of entry into policy. Since merger deliberations have so far been the most heavily afflicted with notions of contestability, I shall limit my remarks to merger policy.

The most subtle of possibilities is actually occuring now in New Zealand. The authorities wish to introduce sophistication into their competition analysis. They proclaim boldly that numbers of firms, market shares, and concentration ratios can be (are) misleading indicators of competitive condition, so these traditionally important structural measures will be used only for initial filters of what will be studied further. Entry conditions enter that further analysis, and given the difficulties noted above, the existence of imperfect contestability is difficult to disprove. A favourable aura then emerges for almost all mergers grounded on a faith that imperfect contestability will usually correct market power abuses that may arise from the added concentration. It seems that in this way crude rules of thumb keyed to market shares and firm numbers have been avoided. But not so. They now come in the back door from the top end of the scale. Policy evolves to a position of permitting all mergers as long as there are at least two viable firms left in the market (duopoly). And where imperfect contestability can be elevated into something more than a hopeful presumption by the threat of imports (even with tariffs of 10%), then only one firm left in the market after merger will be enough to win approval for the proposed union. Why are 2 and 1+ such magic numbers? Why especially are they superior to 3,4, or 5? The answer is not clear. It is evident, however, that numbers are in the end necessary even as they are shunned in the beginning. And it can be contended that these very low ending numbers leave much to be desired in light of the vast empirical evidence reviewed earlier on the crucial significance of dispersed internal structures. Later I will refer to this as the "numbers problem".

Second, there is the "mobility effect". Extensive survey evidence recently compiled by Smiley (1988) indicates that surprisingly few US firms are "concerned about new entrants from other countries, or from their suppliers or buyers", or from "entirely unrelated firms". According to respondents the single most important source of feared potential entry was "existing rivals who do not have similar products". This would correspond

to entry across the mobility barriers discussed earlier. Smiley's conclusion, though based on US data, is pertinent to New Zealand:

> If policymakers want to encourage entry and the healthy competitive effects of a vigorous set of potential entrants, these results suggest that the major focus should not be directed toward international trade barriers. To the contrary, maintaining a large set of vigorous rivals through a restrictive policy toward horizontal mergers would better encourage the stimulative effects of entry (Smiley, 1988, p.176).

My third and final point here emphasises that conditions of entry are not determined solely by exogenous elements like economies of scale or market growth. Firms create substantial barriers through strategic behaviour, such as building excess capacity to fend off entry, engaging in exclusive dealing, proliferating brands, hording scarce inputs to raise rival's cost, granting loyalty rebates to customers, using pre-emptive patenting, and so on. (For surveys see Jacquemin, 1987; Vickers, 1985; Dixit, 1982; Krattenmaker and Salop, 1986; Smiley, 1988). These strategic behaviours become more effective as concentration and firm market share rise (and they in turn foster the high concentration and large market shares). Hence, a merger policy that liberally allows hefty increases in concentration and market shares on the presumption (or even solid proof) of imperfect contestability may be putting firms in a position to negate that partial contestability. The contestability may vanish after the merging that is permitted by the contestability. A merger policy built on perceived contestability is therefore one that can be misguided and self-defeating. This could be called the "Frankenstein effect", or, more aptly, "Frankentestability".

Empirically, cross-section econometric research discloses a significant negative association between observed rates of entry and concentration after accounting for technical barriers (Khemani and Shapiro, 1986; Shapiro and Khemani, 1987). More specifically, Gribbon and Utton (1986) analysed 50 detailed industry reports by Britain's Monopolies and Restrictive Practices Commission. They identified 108 barriers to entry for the 50 industries. Of these barriers, two thirds were behavioural, such as loyalty discounts in pricing, exclusive dealing, rental only sales policies, and intensive advertising. Gribbon and Utton found that greater monopoly power was associated with a greater incidence of these behavioural barriers to

entry. Dividing the fifty industries into three classes - "dominant firm", "concentrated oligopoly", and "loose oligopoly" - they calculated an average of 1.8 behavioural barriers per industry in the dominant firm group, compared with 1.4 and 1.1 for the concentrated and loose oligopoly groups, respectively. When behavioural barriers are represented as a percentage of all barriers, including technical and legal barriers, their proportions were 51, 45, and 40 percent for the three descending classes of monopoly power respectively.

In sum, insurmountable problems arise when contestability is allowed a large role in competition policy. Its influence should be minimised.

VI HAS CONTESTABILITY THEORY GREATLY INFLUENCED COMPETITION POLICY?

Notwithstanding its inconsistencies, implausibilities, non-robustness, empirical immateriality, and impracticality of application, contestability theory has had a significant impact on competition policy in both the US and NZ. Case selection and judicial interpretation in merger policy have been most greatly affected, while statute law and other areas of antitrust have remained relatively untouched.

In the US, several recent cases challenging mergers among firms with very large market shares have ended in favour of the defendants because barriers to entry were deemed so low that extremely high market shares became meaningless as indicators of market power. In *US v. Waste Management, Inc* (1984) the merging firms competed in providing trash collection services in Dallas, Texas. Their combined share of the relevant market was 48.8 percent, enough for a *prima facie* case of illegality under US law. The defendants argued successfully that ease of entry into the trash hauling market negated the *prima facie* case. Similar facts and results occurred in *US v Calmar, Inc (1985)*.

In *Echlin Manufacturing Co. (1985)*, a Federal Trade Commission case, the carburettor kit businesses of two firms were to be joined, resulting in a post-merger market share of about 50 percent. Urged on by the testimony of contestability theorists Baumol and Willig, the Commission found the merger legal, explicitly citing contestability theory and other writings on potential competition.

Even more important perhaps than trial decisions, the case selection process has been affected. Ease of entry is among the "other factors", besides concentration and market shares, that the Guidelines specify as being considered before a challenge is launched. A Washington, D.C. lawyer very close to the internal decision making processes at the DoJ and the FTC had this to say in late 1987 (Briggs, 1987):

> ... the concept that a market, however concentrated, is readily susceptible to new entry is a notion of overwhelming importance to decision-makers at both agencies. There have been literally dozens of unreported and unpublicised transactions that have gone forward, each involving markets that were highly concentrated and involving firms with high market shares. If it can be plausibly demonstrated that even a monopolist in a market could not raise price significantly without triggering effective new entry, then mergers otherwise condemnable may be permitted to go forward without governmental intervention.

The story in New Zealand has been much the same. Shortly after *Waste Management and Calmar* were decided in America, John Collinge (November 1985), Chairman of the NZ Commerce Commission wrote the following:

> The emphasis in contestability theory is away from ensuring a number of independent sellers in the relevant market and whether there is a history of competition between them. It is upon whether, notwithstanding that there may be a monopoly or oligopoly in the relevant market, potential entrants could reasonably enter the market. *Contestability theory has the important practical consequence* that, in the absence of independent sellers in the market [ie. monopoly], *there need be no concern* if there is reasonably costless entry and exit for potential competitors. (emphasis added)

This has, in effect, become the policy of the Commerce Commission. It would not be inaccurate to summarise NZ merger policy by saying that virtually all mergers are approved except those that leave a monopoly protected by high barriers to entry (and even then the monopoly creating merger may be approved if the Commission believes the claimed public benefits will outweight the deteriments,as it did in *NZ Co-operative Dairy*, Decision No. 216, 1988).

In *New Plymouth Star*, (Decision No. 176, 1986) NZ News was allowed to make an acquisition that gave it both daily newspapers and all community and advertising newspapers in the relevant market. Although existing

competition was eliminated by the move, the Commission believed entry to be easy.

In *Fletcher Building Products/UEB Industries Ltd* (Decision No. 177, 1986), Fletchers, a very prominent manufacturer of hollow core doors, was allowed to acquire the exclusive supplier of an important component for these doors, namely Dufaylite cores. As van Roy (1987) notes:

> There was no other substitute core material or alternative technology available on the market which could produce cores competitive with the Dufaylite process... [However, the] Commission considered Fletchers would not be acquiring a dominant position in the market because it would be constrained... by the threat of competition from imports of door cores, the availability of door core manufacturing equipment from offshore, and the capability of local firms to commence manufacturing core material for supply to door manufacturers in New Zealand.

Given our earlier discussion, it is not surprising that the Commission has had problems in its attempt to judge entry conditions. After an extensive survey of the Commission's opinions (which display no consistency on such matters as barrier definition or measurement), Bollard (1987) gives this summary:

> To date the Commerce Commission has relied heavily on arguments and anecdotal evidence from the proponents of merger cases that entry is possible. It is not usually in the interests of other potential entrants themselves to give such evidence and the Commission has not made much use of them. The arguments about potential competition have sometimes appeared rather thin, relying as they frequently do on new events such as deregulation of entry requirements or the removal of frontier protection. It is particularly unusal to be able to point to examples of actual entry in the past.

The results of this rather chaotic condition may be seen in the Commission's strained effort to find easy entry into beer, a duopoly industry in NZ that could not be considered even remotely contestable:

> ... references to potential competition are certainly based on the presumption that third party competition will serve as a further discipline on the existing players, notwithstanding the investment required by a third party in establishing a branded product which may not be seen initially as a good substitute for the products of either Lion or DB. However, access to customers is possible - both through free (or free-er) trade and a willingness to invest in supplying those customers - it is difficult to see how existing players could disregard a determined third party, even if that party did not have a sizeable presence in New Zealand in the first instance. (*Magnum Corp / Dominion Breweries Ltd. Decision 182 p. 34*)

Aside from difficulties of definition and measurement, this quote from *Magnum/DB* illustrates the "numbers problem". In its repeated reference to a "third party" potential entrant, the Commission implicity assumes that, if the incumbent duopolists begin to act like a monopolist the addition of only one more firm to the market would be sufficient to restore competition. This assumption is not well founded empirically (Mueller and Greer, 1984). Among third parties the Commission probably had in mind one of the two Australian beer companies. But recent news media reference to Magnum/DB's possible acquisition by one of the Australian firms raises issues of "Frankentestability" (Gottliebsen, 1988).

Interestingly, as regards "Frankentestability" the Commission has recognised the problem at least implicitly. This occurred in *Dunlop/Goodyear* (Decision No 204, 1987). When discussing potential entrants the Commission said that "While Dunlop/Goodyear could be expected to take an aggressive stance in the market place [toward potential entrants], this is not a sufficient basis to argue that the merged concern could disregard the actions or reactions of its existing and expected competition."

All of this is not to say that the commission sees a strong potential entrant behind every tree for every industry. For example, it denied a merger that would have created 92% control of the New Zealand ice cream market on grounds that entry, even of imports, was quite difficult (*Wattie Industries/Taylor Freezer*, Decision No 127, 1985). However, even this case is telling. Despite convincing evidence of barriers, Chairman Collinge (December 1985) writes that the Commission found this to be "one of the most difficult of such decisions."

VII WHY HAS CONTESTABILITY TAKEN HOLD?

Given its inconsistencies, implausibilities, nonrobustness, empirical immateriality, and impracticality of application, why has contestability been this influential? I am uncertain, especially about New Zealand, but it seems to me that ideology and ignorance are the main explanations.

Antitrust policy in the US swings cyclically with shifts of ideology. Looking back into the last century and over simplifying, we find two main ideologies governing antitrust policy formation and enforcement. They can be called the "Populist" and "Plutocratic" ideologies. Although most

proponents of the later would prefer to be known as defenders of "efficiency" or "consumer welfare" than defenders of big business, the Plutocratic label alliterates well with Populism and is reasonably accurate (Baker and Blumenthal, 1986). For example, periods of ascendant Populism include 1887-1890, when the first federal statutes of regulation and antitrust were passed; 1910-1914, when the "Progressive" era was capped by passage of the Clayton and FTC Acts; the late 1930s, when the Great Depression revived Populism; and the 1960s, when merger enforcement reached especially strict standards as illustrated by *US v Von's Grocery* (1966). On the other hand, periods of Plutocratic ideology include 1891-1902, when a major merger wave struck the US; 1920-1930, when the US Steel (1920) case launched a period of antitrust leniency; and 1980 to the present, when the Reagan administration poured immense energies into getting government off the backs of business, especially big business, in every area of official activity from environmental protection, to equal employment opportunity, to false advertising, to antitrust.

During the 1950s and 1960s the traditional structure-conduct-performance (S-C-P) paradigm developed from the research of people like Edward Mason, Joe Bain, Corwin Edwards, and J M Clark. Research confirming the basic validity of this paradigm continues to the present day, as suggested by our earlier empirical survey. Its main findings support the "desirability" and "necessity" presumptions of a vigorous antitrust policy. Hence its findings are consistent with much of the Populist ideology (though not that part of Populist ideology which strongly favours the preservation of small firms, as embodied in the *per se* provisions of the Robinson-Patman Act or such exemptions as the Miller-Tydings Act).

In contrast, the major source of ideas for the Plutocratic tilt to the Reagan administration's competition policy has been the Chicago School, archrival to the S-C-P paradigm. Unlike the S-C-P view, the Chicago view holds that antitrust policy is neither desirable nor necessary. It is not desirable because mergers, concentration, vertical restraints of trade, and other such targets of traditional antitrust policy are reflections of economic efficiency (McGee, 1971; Brozen, 1982). It is not necessary because, aside from government interventions, entry is quite easy and cartels are readily subject to collapse (Bork 1979; Reder 1982). As noted earlier,

contestability theory erodes the necessity assumption, so it was useful to those put in power by Reagan's election who were advancing Chicagoan views. In other words, contestability quickly won influence in the US not on its merits. Rather, it rode on the coattails of compatible Chicago views embraced by Reagan's political and judicial appointees.

To stress ideology is a bit awkward for me because I am an economist, not a political scientist or sociologist. Still, I think it is inescapable for it explains the rather severe exercises of selectivity by those in government who have heartily adopted contestability theory.

First, there has been selectivity in theory. At the same time contestability theory was being conceived and nurtured, theories of strategic behaviour, much in the S-C-P tradition, were likewise proliferating. Dixit's (1982) survey of "Recent Developments in Oligopoly Theory" devotes three-quarters of its space to strategic behaviour and only one-quarter to contestability. Vicker's (1985) survey of "Some Recent Developments in the Economics of Industry" gives contestability only two pages out of twenty-two, and those two pages are highly critical. Even more lopsided surveys are those of Jacquemin (1987) and Scherer (1986). The extreme and hasty favouritism shown to a theory as poorly grounded as contestability could not be based on rational objectivity alone.

Second, there has been selectivity in the interpretation of the available evidence. As we have seen, empiricism has smothered contestability to death. Ideology seems the best explanation for the delay in its burial.

Third, there has been selectivity in application. Contestability theory has not been used by Chicagoans to motivate an attack on privately imposed barriers to entry, such as those Gribbon and Utton (1986), among others, have shown to be associated with the maintenance of monopoly power. US antitrust authorities under Reagan have dropped the monopolisation case against IBM (which had used strategic practices very similar to those of convicted monopoliser United Shoe Machinery Corp.), and have initiated virtually no cases whatever in such areas as exclusive dealing, tying, and predatory pricing. At about the same time, the US Supreme Court was deciding a private antitrust case in favour of the plaintiff who claimed to have been injured by strategic exclusionary behaviour, (*Aspen Skiing Co v Aspen Highlands Skiing Corp.* 105 S.Ct. 2847 (1985)), and in

Europe the Common Market authorities were finding violations for loyalty rebates, quantity discounts, and predatory pricing that had serious exclusionary consequences (Hoffman-La Roche, 1979; Michelin, 1983; and AKZO, 1983).

How can Martin Baily write in 1987, "that while the weaknesses of the contestability doctrine may have been evident to some early on, the doctrine remains very influential in Washington"? The answer lies in his word "doctrine".

Regarding explanations for New Zealand's adoption of contestability doctrine, my notions are pure speculation. The only certainty amid this speculation is this: Contestability doctrine could not have been accepted on its merits.

VIII CONCLUSION: WHAT DOES THE FUTURE HOLD?

Contestability theory is inconsistent, implausible, non robust, empirically immaterial, and impractical and misleading for competition policy application. These conclusions are not mine alone. Yet, at this point in their consideration of contestability, other analysts seem compelled to say something nice about it, such as it "is a timely reminder that the threat of new entry can be a potent force that shapes market structure and conduct of existing firms." (Vickers, 1985)

I feel no such compulsion. As clearly illustrated by the example of airlines in the United States, contestability theory has had an inordinate and unfortunate influence on competition policy. Very big mistakes have been perpetrated in the name of contestability. Hence the theory should not have been allowed to replace traditional competition policy to the degree it apparently has.

The concept could be used as a policy supplement, but I would argue against that status. Traditional theories and evidence of entry barriers have all that is needed for any modification to merger analysis or other areas of policy. Contestability theory's greatest supplemental contribution would logically be its demonstration that potential entry can almost never be controlling on incumbents. The conditions for contestability's realisation are simply too unrealistic and too flimsy to ever be relied upon.

My argument that contestability should be regarded as an impediment to policy rather than a replacement or supplement is not an argument in favour of completely ignoring entry conditions in competitive analyses. I do not advocate a return to the strict days of *US v Von's Grocery* (1966). However, I urge two crucial caveats. First, evidence concerning the condition of entry ought to be used with extreme care because it is inherently unreliable. Second, arguments for ease of entry should carry a very heavy burden of proof, especially where they are used to justify a merger contributing substantially to concentration. This latter position is based on substantial concerns. The "numbers problem", "mobility effect" and "Frankentestability" are fundamental difficulties for any policy that places faith in potential competitors to the neglect of actual competitors. Especially in New Zealand, where in most markets they are few, incumbents and their independence should be deeply cherished.

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Chapter Three

FROM REAGANOMICS TO ROGERNOMICS

Brian Easton[1]

Rogernomics is primarily a response to the economics of the Muldoon era, but like so much of New Zealand life it was heavily influenced by overseas factors. This paper is a part of a series describing the origins of Rogernomics (Easton, 1985, 1987b, 1988d, also Oliver 1987). It examines one influence: the impact of American economic thinking on the group of economists, and a set of their published papers, who were instrumental in converting the approach of Roger Douglas into a policy framework.

It would be easy to describe this group as "The Treasury". For two reasons I am unwilling to do this. First the present Treasury may not want to be associated with the views in the papers. Some are official Treasury publications, but the Treasury may have changed its views. Other papers were written by officials, but the papers may not reflect Treasury views[2]. The remainder are associated with ex Treasury officials writing in a private capacity. In addition, we know that within Treasury there was vigorous debate, with some voices different from this group being strongly

1. This paper was funded by the Economic and Social Trust On New Zealand.

2. Note however, Treasury (1985) indicates that Cameron and Duignan (1984) and Cameron and Begg (1984) had more official standing than was apparent at the time of publication.

pragmatic and empirical, although insufficient material has been published (or leaked) to document this thoroughly.[3]

Second is the problem of personalities and institutions. My interest is to examine a body of ideas, to identify patterns and consistencies, strengths and weaknesses. It is what the academic process is about. The papers with which I am concerned were written by the same group of people, who were colleagues in Treasury, and moved out into the private sector, often to work together. This is not surprising, and I am not really interested in those personal events except where they shed light on the intellectual story.

Unfortunately it is difficult to criticise or praise a paper without it reflecting on the writer(s) and, as indicated by the reaction to the critique by the (now defunct) Victoria School of the Treasury and the Reserve Bank 1984 postelection briefings[4], it is easy for those whose work is criticised to take umbrage. An honest critique cannot avoid this possibility, which is compounded by the academic convention which identifies papers by the name of their writer(s). Nevertheless, and I repeat, my interest in this review is the content of the papers.

Do the papers make up a school? There is sufficient consistency to see them as the coherent output of an emerging school. For convenience I shall call them the "Group" while acknowledging others may want to call them the "Rogernomics Group". For the record, and at risk of introducing a personality dimension, the non Treasury papers marked in the bibliography as Group publications are associated with the following names; K.P.Barwood, S.J. Begg, R.L.Cameron, P.J.Duignan, Jarden & Co Ltd, S.Jennings, R.L.Kerr, B.Wilkinson. With the exception of the company, for which some of them work or have worked, they were all Treasury officials in 1984.[5]

3. An example of this different style is in Economic Summit Conference (1984).
4. Treasury (1984), Reserve Bank (1984). The critique is Zannetti et al (1984, 1985a), with response from Treasury (1985), Nicholl (1985), and a reply Zannetti (1985). See also Easton (1985) and Read (1986).
5. If the focus were wider than microeconomics, other names would be added, including some economists working outside the Treasury in 1984.

I THE SCOPE OF THE PAPER

Space limitation and two further factors means the paper only gives a cursory attention to macroeconomic issues. First, American macroeconomics is severely limited in relation to the New Zealand economy. Its economy can be characterised as a large closed one, in contrast to New Zealand which is a small and open.[6]

Second, a major external influence on the Rogernomics policy makers was through the OECD, perhaps partly because they are more concerned with small open economies. The OECD is influenced by American economics, but it would be widening the scope of this seminar to trace this influence.

So the focus of the paper is on microeconomics and the policy implications, particulary such issues as competition policy (the American term is 'antitrust'), corporatisation and privatisation, research and development policy, securities law, labour markets, and the allocative microeconomics of taxation, industry policy, and protection. This confines the scope to the issues prominent in the 1984 to 1987 period, but omits the public policy framework more evident in the 1987 Treasury post-election briefing.[7]

It seems hardly necessary to argue that in all these microeconomic areas American economics had a major impact on the policy makers, and that it was largely economics of a "neo-liberal", as Blyth (1988, p14) calls it, kind. What, however, were the channels of that impact?

II THE CHANNELS OF INFLUENCE

The labels of the numerous Robertsonian boxes needed to describe the channels by which American economics came to New Zealand include short term and long term visitors, general and learned publications, and

6. It is not unusual for American economics textbooks to be three quarters of the way through before the external sector begins to play a prominent role in the presentation. Even then they rarely capture the reality of a small open economy. Their relevance is not unlike using a model designed to discuss the biology of invertebrates to discuss mammals.

7. The one substantive omission is the debate over the discount rate, a matter to which I intend to devote an entire paper one day. But see Read (1986) for a useful critique.

New Zealanders visiting the United States. Some boxes are grouped in the University section, some in the government section, and some in the non-government section. But how important are the contents of each box? Surprisingly there appears to be little in the New Zealand University boxes. Three tests support this perception. Even today there is little teaching of the underlying microeconomics of Rogernomics and its critiques, and it seems possible for a student to graduate with no formal training in the area at all. In contrast, it is easy to identify a number of university courses which were teaching the relevant macroeconomics – rational expectations theory – well before 1984. Second, a review of "New Zealand Economic Papers" and the university department discussion paper series shows few papers in the general area. In contrast the NZIER in the nongovernment sector has produced considerably more relevant research. The third test is that while the four macroeconomics chapters in "Economic Liberalisation in New Zealand" (Bollard and Buckle 1988) were all written in universities, only three and a half out of the nine microeconomic papers were. (The one social economics paper was also written by a University teacher.) Perhaps the one significant claim the universities could make is the American economist visitors they hosted and who also visited government agencies.

The most significant independent nongovernment contribution came from the NZIER. Its impact on government policy, if any, was less on the Group and more upon non-Treasury arms of government. Their relation with Treasury has yet to be explored, so there is little progress to be made here. Later than the main period of interest, New Right institutions such as the Centre for Independent Studies became prominent. Private business also had a role but since the main articulants were in Treasury in 1984, they are dealt with as a part of the Group framework.

Thus it can be taken that the American influence upon the Group, and hence upon Rogernomics, was direct. An important component of this influence was American visitors and a number of key members of the Group who spent time in the United States, typically, on scholarships. There is nothing peculiar or clandestine about this. The United States of America is the most important centre of economic thinking in the world. What has to be explored is the extent the resulting analysis reflected the broad mainstream of American economic thinking, and what extent it

reflected a particular component, in this case the Chicago school of economic thinking.

III THE CHICAGO SCHOOL

The expression the "Chicago School of Economics" is often used as a term of abuse. This is not the intention here. Rather the interest is what does it stand for in intellectual terms. Reder (1982), himself a University of Chicago professor, distinguishes Chicago economics from others by the notion of the "Tight Prior Equilibrium" or TP. Tight Prior Equilibrium theory "is rooted in the hypothesis that decision makers so allocate the resources under their control that there is no alternative allocation such that any one decision maker could have his (sic) expected utility increased without a reduction occurring in the expected utility of at least one other decision maker. For Chicago and non-Chicago economists alike, this is a definition of Pareto optimality .... " p11. The Chicago style economist does not believe the world is in exact equilibrium but, and I paraphrase Reder, it is near enough for all practical purposes.

Reder describes the normative Chicago view as "antistatist" (p31). A fuller but brief definition is Paque's "dogmatic liberalism" (1985) whose policy advice:

> is strongly biased towards preserving or establishing (i) a maximum (negative) freedom of choice and action for consumers,producers and entrepreneurs, (ii) a minimum tax-, welfare-, and interventionist state, and (iii) a stable rule bound institutional framework including the monetary regime. (p413)

Reder points out Chicagoans see their normative stance closely related to TP.

To complete this brief summary of the Chicago stance a robust summary by J.S.Bain is:

> there is a group of economists identified as 'Chicago School' – mostly with Chicago Ph.Ds and some of the Chicago faculty – who have a sort of religious dedication to the proposition that, some regulated industries aside, all U.S. industries either are in or are inevitably approaching the secular nirvana of a market performance at least closely similar to that attributed to pure competition. (1985)

Bain goes too far. It is true that many Chicago School members have Chicago University connections. But this is not a necessary criterion.

Adherence to the positive and normative positions described above is sufficient, and as Reder indicates there is some diversity within the school on less central issues. Other American institutions including Universities of Rochester, UCLA, Virginia, and Washington at Seattle can be associated with Chicago.

As Reder indicates, Chicagoans are not adverse to using the work of other economists to develop their approach. Sometimes they have interpreted the notion in a way which has been rejected by the originator. Baumol and Willig's angry rejection of the misuse by Chicago type economists, of the contestability theory they developed, is a well known case (1986).[8]

IV THE GROUP AND CHICAGO

Does the Group hold Chicago views, at least in microeconomics? Visiting American scholars have had little difficulty in concluding yes. An NBR interchange between Kerr and Greer, a visiting US antitrust academic, documents an instance (Kerr 1988a, 1988b; Greer 1988a, 1988b; Ovenden 1988).

Kerr's account of American antitrust economics refers to 'contemporary economic analysis', calling into question the traditional intellectual foundations of antitrust and competition approaches. He says with regard to phenomena which appeared to neoclassical economists as anticompetitive:

> The modern presumption is that, if such practices are observed in competitive markets where other forms of contracting and commercial organisation are available, their survival indicates that they are serving consumer needs efficiently.

Greer described this as "Chicago school economics". Reder would no doubt have agreed:

8. In a section entitled "contestability and libertarian ideology" they state: ("Specifically, we will deny emphatically that it (ie. contestability theory) offers a carte blanche to mindless deregulation and the dismantling of antitrust safeguards. ...Contestability theory does not, and was not intended to, lend support to those who believe (or almost seem to believe) that the unrestrained market automatically solves all economic problems and that virtually all regulation and antitrust activity constitutes a pointless and costly source of economic inefficiency".

> .... the TP view is that what most of what appears to be monopoly is ephemeral, being eliminated by free entry. (p15).

At issue however is not simply whether this is a Chicago view, but whether it is the mainstream of contemporary economic analysis. Despite Kerr's claim, Greer cites evidence from surveys of the profession which indicate that the above view of monopolies is in a minority. When a random sample of US economists were asked whether "antitrust laws should be used vigorously to reduce monopoly power from its current level", 82.9 percent agreed "generally" or "provisionally", while 14.7 percent indicated general disagreement (Frey 1984). A poll of 200 industrial economists had 68.3 percent opposed to the Reagan administration's proposed amendments favoured by the Chicago School (Boyle & Piette 1986).[9]

When denying that his views are the preserve of the Chicago school Kerr claimed that "the consensus has become widely disseminated" citing Posner(1979). He recalled that when a similar claim was made in a Commerce Commission case about some expert evidence by Jardens (1986a, 1986b)[10], it was replied that of the 21 economists cited in the primary evidence, none taught at Chicago at the time the associated articles were published (Jardens 1986c).

As it happens I made the original claim (Easton 1986b). It has not been possible to get complete biographical details but of the 22 Americans cited by Jardens[11] at least 7 (of the identifiable 18) had been students or teachers at the University of Chicago.[12] This under represents their importance. Of the 20 cited American articles at least 11 had one or more Chicago linked

9. For orthodox American view in a New Zealand context see Miller (1986) and the contribution of Greer and Miller in this volume.

10. The author(s) was not named, but at that time Jardens included at least three ex-Treasury officials of the 1984 period.

11. Jardens refer to only 19 American residents, but they did not classify as "academic economists" F. Easterbrook (in the University of Chicago Law School but the most quoted author by Jardens, presumably for his economics), J.M. Ferguson (in a US government agency), and A. Okun (presumably Jardens did not classify the Brookings Institute a scholarly institution!).

12. S. Cheung (ex-teacher), Coase (teacher), Demsetz (ex-teacher) Easterbrook (teacher), J.M. Fergusson (PhD), Jensen (PhD), and B. Klein (PhD)

authors (1 was unidentifiable). And of the 19 excerpted quotations 12 are from the Chicago linked authors.

What exactly constitutes the Treasury position is difficult to document, since no paper has been published.[13] However in early 1986 Treasury official K.P.Barwood presented a paper "Implementation of a Competition Policy", whose views "do not necessarily reflect those of the New Zealand Treasury". Its views, which must reflect others in the Treasury, would readily be classified as Chicago School (Jardens 1986c). Moreover in 1988 Treasury commissioned exTreasury officials S.Jennings and S. Begg, now at Jardens, to review the Commerce Act. The resulting paper (1988) is Chicago aligned.[14]

Kerr and the Jardens' economists seemed to be insensitive to the existence of clashing paradigms in the United States. While this could be attributed to an excess of enthusiasm for the theory and/or an ideological commitment, it may also have been a misinterpretation of American political culture. During Reagan's administration both the antitrust and a number of judicial appointments were of Chicago supporters. Bain points out that while the Chicago School of industrial economics has been around for at least 40 years:

> The thing that is different today is that since 1980 the country has a distinctly reactionary federal administration (also populated by idealogues) which warmly welcomed the old-fashioned reactionary microeconomics of the Chicago school – the developing result of which is the impact of Chicago school economics on many things, including antitrust and other policies towards "competition and monopoly", simplistic market-model approaches to the retention or disposition of federal lands and resources, market-model solutions of the size of the federal subsidies to higher education, and so on ad infinitum. In this sense only is the Chicago school in the ascendant .... (1985)

The point is that the adoption of a policy by a government does not demonstrate that the underlying theory is true in some scientific sense, or

13. I have been told that the proposed Treasury submission to the select committee considering the 1985 Commerce Act was considered so extreme by cabinet that the submission was not presented.

14. The two consultants also prepared reports in 1988 for the Business Roundtable on privatisation and the reform of the Commerce Act.

even that a majority of the practitioners hold the theory as true. It is important to separate out scientific validity with practical application.

It would be tedious to repeat this review of each of the Group's papers and demonstrate its Chicago alignment. Instead this paper looks at some other characteristic features of the Group's thinking.

V THE GROUP AND EMPIRICAL RESEARCH

Reder emphasises the research orientation of the Chicago school (1982, p2). The Group has primarily been involved with policy and so its approach has been an extreme version of Chicago's.

The Group can be extraordinarily neglectful of relevant experience. An extreme example is its discussions on state owned enterprises. In the first publicly available paper (Cameron and Duignan, 1984) 23 of the 29 overseas references are American, despite the administration of state owned enterprises being an area where Americans have little experience, let alone the overwhelming absolute advantage the paper's imbalance implies. The curious selection is, no doubt, one of the main reasons why the government advisers were ineluctably drawn to supporting privatisation, since the American experience hardly provides any other model.[15]

The oddity continues with the emphasis on the use of agency theory or "principle agent" analysis. This is a relatively new development within the profession described as:

> The theory of agency is not well enough developed to be of much scientific interest; there is little in the way of operationally meaningful hypotheses. (MacDonald, 1984).

If the evidence does not have a sound empirical basis, then how can it be used to underpin policy? An insight is given by Cameron (1988). After reviewing the evidence (to which we shall return) he writes:

> .... the evidence provides a strong prima facie case that private ownership is more efficient than public ownership. The question is why. The answer lies in the economic analysis of property rights, the incentive they create and their relationship to capital and goods markets.

15. See Cameron and Duignan (1986) and Read (1986a, 1986b) for earlier contributions to the debate.

What is being said here is that theory dominates the evidence, which is only being asked to support the analysis. It is an approach closely related to Friedman's "Positive Economic" (1953). In Reder's view it arises out of the tight prior;

> Chicago economists tend strongly to appraise their own research standard and that of others by a standard which requires (inter alia) that the findings of empirical research be consistent with the implications of standard price theory.... Any apparent inconsistency of empirical findings with the theory, or report of behaviour not implied by the theory , is interpreted as a anomalous ..... (1982, p13).

Reder then outlines the research strategies that are pursued towards such anomalies in positive Chicago. The tight prior is treated as a theory almost invulnerable to empirical evidence. It is more a matter of adding auxiliary hypotheses to the core to protect it from the anomalies (Lakatos 1970).[16]

However in the normative area of policy making, by a Group which was not doing any empirical research, it is easier to ignore anomalies, and even to misinterpret the data. Reder describes this as "dogmatic priors" where "dogmatism (is) holding excessively tight priors" (1982, p21).

An example of this oversight is Jennings and Cameron(1988) claim that:

> With the exception of heavily regulated private sector firms, the empirical studies are almost unanimous in finding evidence for superior efficiency by private sector firms (p 144).

It is not quite clear how to interpret the expression "almost unanimous"; it would be remarkable if at last there was one area of economic investigation where the profession was so unified. The conclusions from the surveys offer no such prospect, caution being a more characteristic tempo.

After surveying a variety of studies, Millward "finds, overall, no broad support for private enterprise superiority .... there seems to be no general grounds for believing managerial efficiency is less in public firms" (1982, 83).

16. Methodologically one would contrast this approach with that of Popper (1972).

The Borcherding *et al* survey of studies covering five countries finds eight in which public provision is as, or more, efficient and 40 cases where private supply is unequivocally more efficient. The section concludes:

> The literature seems to indicate that (a) private production is cheaper than production in publicly owned and managed firms, and (b) given sufficient competition between public and private producers (and no discriminative regulations and subsidies), the difference in unit cost turns out to be insignificant. From this we conclude that it is not so much the difference in the transferability of ownership but the lack of competition which leads to the often observed less efficient production in public firms (1982, 136).

They go on to consider the sources of public enterprise 'waste' and suggest that this is the consequence of different objectives, rather than fundamental inefficiency. If a public enterprise were to focus upon efficiency, which is what the corporatisation reform is about, presumably it would preform as well as the private sector equivalent, particularly if there were competition.

Anglo-Australians Domberger and Piggot conclude that "Privatisation through asset sale can in some circumstances be worthwhile, yielding a reduction in resource waste in the overall economy" (1986, 159). Exceptions are where there is a monopoly, a regulatory environment, or competition.

The overall impression of the studies is that it is not ownership which determines the degree of efficiency but the market environment in which the firms strive, coupled with the objectives and purposes to which the public enterprises are directed.

Not only that Jennings and Cameron give no indication that perhaps their perceived (almost) unanimity is optimistic, but the paper even cites the Millward study where it agrees with it, without indicating that he comes to very different fundamental conclusions. What seems to be happening is that the writers views are so dominated by their theory that they tend to ignore contradicting evidence.

This is not the only example of oversight of contradicting evidence leading to misleading conclusions. Further examples include:-

(1) The Jardens' paper to the Commerce Commission (1986a) quotes Baumol and Ordover (1985), but omits sentences which give the impression that the two American economists do not reject the Chicago

position – a view that Jardens were promoting in their submission. The mutilated paragraph with the omitted sentences italicised is

> "The runners-up, the firms that despair of succeeding through superior efficiency or more attractive products, use different instruments in seeking protection from rivals. *The reason that antitrust laws may be used this way is clear. The borderline between measures that are legitimate competitive moves and those that are destructive instruments of monopolisation is often difficult to define even in principle (witness, for example, the intricacies of the concept of predatory innovation). Moreover, whatever the criteria adopted, in practice they rarely lend themselves to clear-cut evidence and unambiguous conclusions.* The runner-up firm then finds itself with the opportunity to claim that almost any successful program by a rival is "anticompetitive" and that it constitutes a monopolization. Antitrust, whose objective is the preservation of competition, by its very nature lends itself to use as a means to undermine effective competition. This is not merely ironic. It is very dangerous for the workings of our economy." (1985, 252)

(2) The Treasury provided the Royal Commission on Broadcasting and Related Activities with an article by Fowler and Brenner (1982) (the former was a Reagan appointment to the chairmanship of the F.C.C.) They appear to have made no attempt to seek out, review, or provide to the Commission the subsequent – and numerous – criticisms of Fowler's views.[17]

(3) At a competition seminar I recently attended, various participants circulated background papers including "The Limits of Antitrust", by F.H.Easterbrook, a Chicago Law Professor (1984), also cited in Jardens (1986 a,b). The article in the Texas Law Review is followed by "The Limits to Simplifying Antitrust: A reply to Professor Easterbrook", by R.S.Markovits. Only the Easterbrook article was circulated. The normal academic procedure would be to have also circulated the Markovits reply, perhaps to show just how difficult it was to respond to Easterbrook.[18]

17. See Easton (1986a) for a review of the Treasury evidence based upon the American criticisms of Fowler.

18. Incidently the Easterbrook paper opens with the following extraordinary sentence; "The goal of antitrust is to perfect (sic) the operation of competitive markets". The contrast with milder claims by practitioners such as Baumol and Ordover (1985) that the antitrust's objective is to preserve competition emphasises how Chicago School adherents often see issues as extreme.

The science policy debates raises further interesting issues.[19] A Treasury official wrote:

> One leading United States researcher in this field (Mansfield 1981) has estimated that of the total cost of product innovation in United States industry, 40% on average is incurred for tooling and in design and construction of manufacturing facilities and 15% for manufacturing and marketing start up. In some industries only a small percentage of significant advances is estimated to be a direct outgrowth of corporate R&D (17% in the railroad industry and 17% in housing). Because R&D is part of the investment package which achieves change, attention should therefore be primarily focused on conditions in the economy which will achieve efficient decisions on investment rather than R&D alone. (Kerr 1985)

The last sentence seriously misrepresents Mansfield, whose policy position is almost the opposite. Indeed Penny describes it as "an elementary form of deceit, using a quote from a recognised authority and then appending a different conclusion without indicating the end of the quote" (1986). It is more likely to be poor presentation, a common weakness of the Group's writings, which sometime attain the turgid. Perhaps the intention was that the last sentence was meant to be unconnected to the rest of the paragraph, and express the writer's own view. Even so, one is left with the unease that the colleagues to which the article was circulated did not identify clumsiness in a situation where authoritative overseas views conflicted with their position.

Penny (1986) raises an issue which at first seems to contradict the general thrust of this paper. The Treasury position is strongly influenced by M.F.G.Scott (1981), a British authority, and is neglectful -in Penny's view – of Americans E.F.Dennison (1979) and E.Mansfield (1981). He comments

> The combined number of citations for 1983 and 1984 are Dennison 152, Mansfield 277, and Scott 16. .... What (this) does show is that New Zealand is basing its R&D policy on a minority view, and neglecting the conclusions of the established workers in the field.

The problem that is posed is why the Treasury went to a British source in favour of an American one. The most likely explanation is they could not find one with a view consistent with Chicago. While Chicagoans have

19. See Penny (1986a, 1986b) and Treasury (1984) for further contributions to the debate.

made some contributions in the area, I have been unable to find a major work which tackles the issues that Scott and Mansfield were concerned about.[20] The most obvious reason why Chicagoans have not pursued R&D policy with any fervour is it may suggest their own research program as an anomaly in TP terms.

This inconsistency can be observed by considering the pile of articles supplied to the Beattie Working Party on Science and Technology by the Treasury. It included a number of learned American articles whose author(s) noted had been made possible by funding from the American National Science Foundation, or a similar funding body. This is not surprising for American government monies are used extensively to promote public interest economic and other research. Without them, American economics would be the poorer and less interesting.

However, given that the Treasury was arguing to the Beattie Committee, and elsewhere, that there should be virtually no publicly funded economic and other research in New Zealand, one was left with the puzzle as to what was their attitude to the United States government funding public interest research.

There is, of course, no inconsistency for a government committed to the public interest funding research whose results may be interpreted as being opposed to such public funding. Nor, I imagine, does the Treasury feel guilty about free riding.

However using a Kantian test of behaving according to what one expects of others, if the New Zealand Treasury had been the US Treasury it would have refused to have funded the research which underpinned the policies towards research which it advocated. A solution to the paradox is that the Group does not need the research to reach conclusions; the research merely provided convenient support for the predestined conclusion of the *tight prior*.

There is another uncomfortable issue which the debate between the Beattie Committee (1986) and the Treasury raises. This could be attributed to the different paradigms (or perhaps jargon?) being used. The Treasury spoke of "property rights" while the scientific community still uses the more traditional "market failure" approach. However the two paradigms

20. See Bollard and Harper (1987) for a relevant bibliography.

are not wholly irreconcilable. Indeed for most purposes they give similar policy recommendations. Why then was there so little meeting of minds?

One explanation is the Treasury interpreted its paradigm in an extremist way, perhaps generating a similar extremist by opposite reaction from the science community in general, and the Beattie Committee in particular. In such circumstances there could be no compromise. Yet, one could argue that where there is paradigm conflict, it is incumbent upon policy advisers to be aware of both paradigms and to seek policy recommendations which involved consistency with each.[21] As Read says:

> In such circumstances it is a requirement of professionalism that ... economic advice related to practical decisions should not stray far from the middle ground of ... economic science and should, where appropriate, pay due regard to alternative theoretical interpretations of the facts."[22] (1986)

It is hard not to conclude that the Group has been rather casual with serious empirical investigation, probably because it has had little experience given its focus on policy.

Two further examples will suffice.

(1) Treasury's econometric standards appear to be appalling. In the appendix of their submission on securities law (1984b) a study examines a data set of 18 years which it splits into two periods of 3 and 15 years and tests for structural change, reflecting different regulatory regimes. It concludes "the results indicate clearly that factors not operating in period 1 were operating in period 2." This clarity is unfortunately muddied by the data set being constructed from different sources, with the first 2 observations coming from one source, the next from a second and the remainder from a third. Occam's razor would suggest that any observed structural change reflected the different data sources.

21. For instance Dalziel (1988) argues that the Reserve Bank monetary policy is consistent with a number of macroeconomic paradigms.

22. The statement is actually referring to macroeconomics, and Read excludes microeconomics because he says it has a well defined mainstream in contrast to Monetarist and Keynesian disagreements. However, the trust of Read's microeconomic concerns are cost-benefit analysis, and there can be no doubt that the quotation captures his perception where a paradigm conflict occurs in microeconomics.

(2) Cameron and Begg (1984) report:

> Part of an investigation recently undertaken by Treasury into venture capital included a survey of financial arrangements involving risk or venture capital in the capital market. The survey included a number of interviews and telephone conversations with market participants and elicited numerous written responses to a request for information.

They then provide anecdotes from these unstructured interviews, to an apparently casual sample, for 3 pages. There is no evidence in the paper of any systematic analysis of the survey which, with the exception of one paragraph reporting work on New Zealand sharemarket beta coefficients, is the only reference to local realities.

VI THE INSTITUTIONAL CONTEXT

Associated with this weak empirical analysis has been an unawareness of the institutional context. The Treasury submissions on securities legislation reform (1984b) illustrates the difficulties the Group has with empirical evidence, and also with institutional context. The submission relies heavily on the "efficient market hypothesis", itself closely related to agency theory, as well as being the microeconomic parallel of macroeconomics rational expectations theory. Sometimes the approach is referred to as the "Chicago-Rochester" school.

The theory is used by Treasury to justify the minimum of regulation of company takeovers, it being argued that "the active market for takeovers has a subtle but pervasive role in promoting efficiency throughout the corporate sector and creating value generally" (p26). However, although the theory is attractive, it is fashionable rather than thoroughly tested, except perhaps in the Chicago sense described by Reder above.

It happens to be subject to a major empirical anomaly. The theory says that takeovers are promoted by managers in the interests of their shareholders, in terms of adding to their "value" (of their shareholdings). However a wide range of studies, including in New Zealand, indicate that a successful takeover typically depresses the value of the bidder's shares.It is true that the hike in the target company's shareholders "value" often outweighs the loss to the bidder's shareholdings. Nevertheless it is difficult to provide a convincing explanation of the phenomena in Chicago-Rochester

terms.[23] Again we ask how can one justify placing so much weight upon a contentious theory for policy purposes, given the empirical evidence for it is far from compelling?

Securities law is sensitive to institutional and cultural structures. When Harvard academic J.Pound[24] discussed securities law reform for New Zealand he made a number of proposals based on American institutions; fiduciary obligations on major shareholders and class actions by minority shareholders. But as Law Commissioner, J.Hodder, argued the proposals involved importing the culture of the American litigation system into New Zealand (Easton 1988a).

Pound offers an illustration of the policy consequences of the significance of institutional structures when he remarked, admittedly with respect to the United States but surely with New Zealand experience in mind,

> One mistake that has been made was not anticipating properly that if you deregulate and expand the number of transactions made in the economy by leaps and bounds you have to have strict enforcement to go with it because if you don't then you are inviting fraud. (NBR May 27 1988)

Thus a lack of attention to institutional issues led to an inappropriate sequencing of securities law and market reform.

The same applies to labour markets. There is some very exciting work in American economics on the microeconomics of labour market behaviour, although the policy conclusions are not necessarily acceptable to the Chicago school. In particular the work shows that labour markets suffer from an inherent inflexibility, which does not exist in the better studied auction markets (Easton 1988c).

The American labour market is fundamentally different from the New Zealand labour market because of its size. Even so there has been an attempt to import the perceived policy prescriptions from the America, as captured in the expression "deregulation of the labour market". The

23. See Roll (1986) for a 'Hubris Hypothesis' explanation.

24. Pound was brought to New Zealand to assist a Securities Commission enquiry by Fay Richwhite Ltd which has at least two members of the Group on its staff, while in 1986 Jardens submitted a letter co-authored by him in support to a Commerce Commission enquiry (Jarrel & Pound 1986, Pound & Zeckhauser 1988).

geographical, institutional, and cultural differences between the two countries are such that the American labour market model has little relevance to New Zealand although we can learn, and have learned, from the rich American theorisation.

The use of some of the Group of the term "contestability" in labour market analysis illustrates another odd development. The term was applied to the issue of union coverage, even though it could not have the same meaning as the rigorous analytic concept developed by Baumol *et al.*[25] The relationship between a union an its members is an ongoing one, not the hit and run one which is fundamental to the notion of contestability. In almost every case of the Group's abuse of the term, it could be replaced by the traditional expression "competition". The introduction of a new piece of jargon may well have had the effect of distancing the analysis from the mainstream as well misleading as to the intent.

VII ALLOCATION AND WELFARE

One of the great contributions of American economics has been the development of the (normative) theory of allocative economics as a part of the neo-neo-classical paradigm (Harcourt and Laing 1971). Among the outstanding contributors of an outstanding field are K.J.Arrow. G.Debreu[26], and P.A.Samuelson. Inevitably such work has had a major influence upon New Zealand economics including, but not only, the Group[27]. The thrust to lower (border and domestic) protection, to increase neutrality of intervention, and to broaden the tax base may all be in part attributed to this.

However, the pure static model seems to have been abandoned in part for policy as early as 1979, in favour of a model which placed much greater emphasis upon the behavioural consequences of erratic intervention. Surveys of the allocative loss from border protection showed the changes were

25. Other examples of the misuse of the term will be found in Treasury (1987), eg. p.89.

26. Although born in France, Debreu has done most of his creative work in the U.S.A.

27. This is one area where the university box is full; particularly the Economics Department at the University of Canterbury with its Erskine visiting fellowships involving many outstanding American academics in the 1970s.

in the direction predicted by theory, but that the magnitudes were very small (Easton 1980)[28]. The focus turned to "X-efficiency" and, paralleling the OECD macroeconomic analysis, the notion of the detrimental effects of accommodating policies, of which perhaps import controls was the best exemplar. This set the scene for the adoption of the agency theory for the Group, and the public policy framework (outside the scope of this paper) of recent developments within Treasury.

Treasury's 1984 Post-Election Briefing is in many ways a supply side approach to economic management, focusing on microeconomic reform coupled with a monetarist (or similar) macroeconomic policy. Perhaps it should be added that the Group never went to the excesses of the Laffer curve analysis. Indeed the Treasury taxation policies have been significantly different from the right wing American analysis, where they have been consciously improving the capacity of the government to raise taxation, as with the introduction of GST, and hence improving the possibility of increased government expenditure.

What the Group may not have been aware of is that there are tensions within the Chicago paradigm between various branches of application (Reder, 1982). Kerr (1988a) illustrates the problem when he argued that the allocative losses of monopolies are small, going on to the (Chicago style) policy conclusion that the detrimental effects of a monopoly, which is not the result of government intervention, may be ignored. Presumably it would be equally logical to argue that since the allocative losses of protection are also small they may also be ignored. Yet while a Treasury officer Kerr played a major role in the move toward reduced protection. When Greer (1988a) challenged him, Kerr offered no defence (1988b).

The Group's welfare position is true Chicagoan. Implicitly and explicitly (Jennings & Begg 1988, Kerr 1988, Wilkinson 1986) they use an objective of efficiency or aggregate wealth maximisation, which they treat as value free (Easton 1988b). Efficiency only looks at whether the policy change increases GDP, irrespective of its consequences on the income distribution and social wellbeing. In fact quite small allocative gains can

28. I am told this paper parallelled work in Treasury which was the basis for the 1979 Budget changes in the external regime and, no doubt, for much stronger Treasury recommendations than were adopted.

be associated with massive changes in the income distribution (Easton 1980, 1987a, 1988b, Pickford 1986).

The impression is that the policy options the Group advocated or failed to advocate[29], and the sequence in which they were proposed tended to favour the same part of the community; the beneficiaries being business executives – particularly those in the financial sector or in very large businesses, large investors, and the "yuppy" social class. This is not value free economics, the question is whether the tacit values and beneficiaries were intended. Perhaps the implicit values correspond somewhat more closely to American values than to traditional New Zealand ones.

VIII THE AMERICAN CONNECTION

The American influence upon the Group, and hence Rogernomics, was not from its mainstream but from a particular section; Chicago and its satellites. Even then it was a particularly normative approach, not subject to Chicago's high standards of empirical research. Since the same thing did not happen in Australia, it seems likely that the phenomenon reflects peculiarities here rather than some universal imperialism.

It is true that in Australia there are vigorous Chicago supporters, but they have not been as nearly as influential on policy. Chance may have been important here, but four structural features may have had a role.

First is the paucity of North American trained economists in New Zealand. While there are numerous visitors from North America, few stay long enough to gain sufficient local experience to offer locally based contributions about the New Zealand economy. Few university economists are from North America, in contrast to larger numbers from Britain. And while since the mid sixties many young New Zealand economists went to North America for postgraduate training, few have come back. The result is that there is not a lot of experienced economists here who could readily challenge the position of the Group with the experience of US economics underpinning them.

Second was the size of the New Zealand economic community – smaller than its America equivalent even measured as a proportion of the

29. For example the failure to give priority to reform for financial sector taxation, companies and securities law, and a (real) capital gains tax.

population. Extreme events are more likely to occur in small populations. In addition New Zealand lacks the diversity of political structure which enables dissident groups to flourish and challenge. While the US federal government may have been dominated by Reaganomics, those who were unacceptable to its analysis could retreat to sympathetic states or diversely funded institutions which supported their work. A similar situation exists in Australia, in that states tend to assume any economist being clobbered by Canberra must be worthy of support. No such option exists in New Zealand.

Third is the dynamics within the Treasury. This outsider can only conjecture, but what is certain is that when the Group were forming their views between 1981 and 1984, they were not in dialogue with academics, and thus not subject to the rigours of scrutiny of outsiders. "Economic Management" was a surprise – hence the Victoria School reaction – while the two harbingers (Cameron and Begg 1984, Cameron and Duignan 1984) were poorly presented and not taken seriously.

Fourth but by no means least was the Muldoon experience. Muldoon, the arch pragmatist dependent upon defunct economists, was most easily challenged in intellectual terms from a comprehensive framework such as offered by the Chicago school. Indeed once a tight prior equilibrium theory had been adopted Muldoon's policies, particularly those of the freeze period, could be immediately dismissed out of hand. Policy pragmatists, even with a strong theoretical underpinning, had to make some concessions to Muldoon. The Group need not make any. As the politics of Rogernomics was a reaction to Muldoon, so was the economics. I concluded one article:

> In the interim a rule of thumb can be offered. Labour's economic strategy was to do exactly the opposite to what Muldoon would have done. The experience of Muldoon freeze dominated the thinking of Labour's strategists, and their response was contrawise. From one extreme economic policy lurched to another. (Easton 1987b pp149-150)

Nothing thus far written says that the Group's analysis is wrong. It may well be that at some time in the future the Chicago- Rochester school will dominate American and world economics, and the Group will be seen as farsighted.

In my judgement this is unlikely. There are major developments under way in microeconomic theory in the United States (de Jong & Shepard 1986, particularly Scherer 1986). The school is a part of this, albeit on the margin and with a distinctive policy agenda. Some of its ideas will be incorporated into the mainstream, either as new insights or reaffirmations of old ones, some will be rejected as wrong, much must be considered fashionable still waiting investigations to fill the Robertsonian box.

To what extent should policymakers wholeheartedly adopt a new theory or approach, particularly one for which there is little empirical verification? An obvious answer is that it all depends, but practically the need is to balance caution with recklessness. Undoubtedly a robust debate supported by vigorous empirical research is vital – the sort of debate which characterises American economics and, indeed, American society. New Zealand is a smaller society without the same degree of diversity, nor has it the checks and balances. We may have to conduct our economics affairs in a different manner to America. But we can learn from American economics – all of it. We would be foolish to do otherwise.

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Chapter 4

PUBLIC UTILITY REGULATION IN NEW ZEALAND AND THE USA

Lewis Evans[1]

I INTRODUCTION

The organisation and control of what are termed "natural monopoly" firms has been quite different in New Zealand and the USA.[2] While there have been exceptions, New Zealand has opted for state ownership of these firms[3] whereas they are regulated public corporations in the USA. On the surface these two institutions are similar. However, it is argued in this paper that they are quite different in concept and operation, and that their performance in the two economies must have been very different.

The origins of the institutional arrangements for natural monopolies differ between the two countries. In the USA the regulated firm evolved at

1. The author acknowledges helpful comments of Paul Tompkinson and Neil Quigley on an earlier draft.

2. Public utilities will be equated with "natural monopolies". The latter term is defined below.

3. New Zealand state ownership of enterprises has extended well beyond natural monopoly firms. Examples include: the Government Life Insurance Department (established in 1870), Public Trust Office (established 1873) and State Coal Mines Department (established 1901). Condliffe (1930, ch.X) reports that in the 19th and early 20th centuries the ownership of these firms was not stimulated by any philosophical view of state ownership, but reflected a perceived need to generate competition in the marketplace.

the opening of the twentieth century. At that time many of the public utilities were already in place,[4] so that regulatory commissions were established to control existing firms.[5] The use of regulatory commissions must also be seen in the general context of the introduction of legislation designed to prohibit monopoly pricing; the best known being the Sherman Antitrust Act of 1890 and the Clayton Antitrust act of 1914. Regulatory commissions represented an early concern about natural monopolies and an acceptance that, if these markets were to be organised as monopolies, antitrust legislation would be an inappropriate way to control them. Anderson (1980, 4) reports that there was a variety of reasons advanced for this regulatory institution, in which barriers are raised to entry in return for regulated prices.[6]

In some cases regulatory commissions were established to counter perceived inefficiencies associated with competition.[7] In many of these cases, and others, the impetus for regulation came from managers of the utilities.[8] It became widely argued that unfettered competition should be replaced by some form of institutional control, and the choice between

4. At this time many were operating under franchise agreements. Some natural monopolies – for example, cable TV – are currently organised in this way in the USA.
5. The terms "regulator" and "regulatory commission" will be used interchangably. In fact, there are usually several commissioners, and the commission may be charged with regulating more that one firm. The costs of the commissions are generally paid by the firms they regulate.
6. Regulation by the commissions generally extends beyond prices to other aspects – for example, the nature and quality – of the goods and services provided. Formal regulatory theories typically do not consider this issue.
7. Anderson (1980) records that this was the prime rationale for the formation of the first regulatory commission in 1907; the electric utility regulatory commission of New York city. Its introduction was accompanied by a significant reduction in rates. Also, in 1907 Wisconsin formed this state's Railroad Commission.
8. See Anderson (1980, 5-10) who points out that natural monopoly firms competed in the provision of goods and services as well as via the party political process.

control by direct municipal ownership and control by means of regulatory commissions was the subject of considerable debate.[9]

The concept of regulatory commissions was favoured because the firms' operations would be much more open to public scrutiny than they would be if they were owned by the municipality.[10] At the outset there seemed to be a desire to separate the operation of public utilities from party political influence, and this may have been most acceptable to politicians. Indeed, Gormley (1983, 93) argues that this remains the view of party politicians in the USA; because of the complexity of the issues, and the zero-sum nature of political benefits which coalitions of agents would generate in response to partisan involvement in regulatory decisions.

In New Zealand the state played a significant direct role in public utilities from their inception.[11] A prime argument was that the capital market of the day was such that only a government guarantee could ensure that investment in public utilities would progress as quickly as thought desirable. Also, it was considered that there was more than usual uncertainty associated with some of the investments. In the case of railways, for example, the market was not well developed and the New Zealand terrain meant that the lines would be expensive to construct and that they would require innovative engineering.[12] This is an "infant industry" argument for

9. Even to the point where the National Civic Federation engineered a study of the issue by a committee of 21 persons, including John R. Commons, the well-known institutional economist of the University of Wisconsin. Following a two-year study, which included visits to Europe, 19 members of the committee concluded that there was no role for competition and that regulatory commissions would be superior to municipal ownership.

10. There were various reasons for the choice. Utility executives did not relish the idea of being employed by municipalities. The National Civic Federation committee considered that municipal ownership would perpetuate the power of urban political groups, and leave utilities vulnerable to management for direct party political advantage.

11. This point is developed by Condliffe (1930, ch.X).

12. Leitch (1972, chs.2 and 3) points out that although railways had been started by provincial councils – especially in the South Island – many of them were in financial difficulty when they were taken over by the railways department. The development of the state ownership of electricity generation and transmission is described by Decker (1966, chs. II and III).

government ownership.[13] It does not explain why public utilities have continued in state ownership to the present day.

It is timely to scrutinise public utilities because their organisation and operating environment are undergoing significant changes. New Zealand public utilities have been re-organised into state-owned corporations and there is every prospect that many of them will be sold to public companies. The form which monitoring of any natural monopoly should take an important issue regardless of ownership. If they are to be public companies, the USA experience provides a useful example of one monitoring regime.

In both countries technical change is having a pervasive influence on production possibilities and demand, which is altering the environment within which public utilities operate. Economy-wide de-regulation is occurring at a rapid pace in New Zealand, and the USA is experiencing the effects of past de-regulation decisions in particular sectors. Economic and monitoring performances under alternative regulatory and ownership structures are of current importance in both countries.

There has been some formal analysis of public utility institutional structures published in New Zealand.[14] However, most of the theoretical developments have originated in the USA, and other countries.[15] This paper considers theoretical developments and some empirical studies of public utilities which have emerged from the USA. It interprets them to provide a framework for an evaluation of their applicability in New Zealand.

Natural Monopoly

In 1968 there was good justification for the view of Demsetz (1968) that the theory of natural monopoly was both very short and very obscure.

13. This argument is advanced as a general proposition by Nelson (1975, 59). Hawke (1985, 106) argues that a prime motivation for government ownership was the New Zealand government's desire to control the development and operation of the railway directly.

14. In an early example, Valentine (1934) studies the state of New Zealand railways.

15. British and French economic literatures have made a significant contribution to the modern theory of natural monopoly, and empirical findings concerning the outcomes of different institutional arrangements.

The situation has now changed: the theory is very much longer, but it is still somewhat obscure. It draws on the vast literature concerning theories of industrial organisation and optimal taxation, and it is considered here most selectively.

Technology

Baumol, Bailey and Willig (1977) define a natural monopoly to be an industry in which no combination of several firms can produce an industry list of outputs as cheaply as it can be provided by a single supplier. The term for this characteristic of the cost function is "subadditive". It means that

$$c(\Sigma_i q_i) < \Sigma_i c(q_i); \qquad i = 1,2,..,k;\ k > 2$$

for all relevant[16] vectors of outputs, q_i, produced by firm i, and where c is the cost function. In the general case of more than one output, subadditivity places stringent conditions on the nature of production possibilities. Baumol, Bailey and Willig (ibid.) provide two sets of sufficient conditions for subadditivity. One set is economies of scope combined with decreasing average incremental costs of each product. For the case of two outputs, economies of scope is

$$c(q_1,q_2) < c(q_1,0) + c(0,q_2),$$

which can be viewed as economies of joint production. The combined cost of producing the two goods together is less than the sum of the costs of producing them separately. This is likely to arise in the case of shared equipment.[17] The average incremental cost for good 1 is defined to be

$$aic_1(q) = \frac{c(q_1,q_2) - c(0,q_2)}{q_1}.$$

The presence of subadditivity, and hence natural monopoly, depends upon the nature of the technology and the level of market demand. In multiproduct industries economies of scale have to be defined more

16. The outputs which are those combinations of outputs which sum to meet industry demand. In the context of a single output, subadditivity does not rule out natural monopoly in the presence of rising average costs, and the the level of demand may affect whether or not a natural monopoly is present.

17. For example, economies of scope may arise in railways between passenger and freight transport because they use the same line.

carefully than in the single product case, and even then they are typically not sufficient for subadditivity because the effects of the interaction of outputs on costs – via economies of scope, for example – have to be considered. While subadditivity is a useful theoretical construct, the information required to assess its presence is very considerable and this information is often awkward to process in a systematic way. Conceptually, it requires estimation of a cost function which, if technology is changing rapidly, is especially difficult.

Sustainability

The following diagram depicts a natural monopoly at the given level of industry demand, even though the firm is producing at the point where costs are rising.[18]

At p the firm is pricing at average cost and it is making zero profits. The position is said to be sustainable if no firm can enter the market to supply some product at a price below p. If a firm can (partially) enter in this way then the natural monopoly is not sustainable.[19] There may be a range of demand for which the monopoly is sustainable.

Shepherd's (1984) critique of the generality of perfect contestability notes that there are two separate strands in the literature. In one, barriers to entry of various sorts typically confer advantages on the incumbent firm. In another, the literature on sustainability implicitly assumes perfect contestability in which neither established nor potential entrant firms have any market power. These issues are central to the question of the desirability of regulating natural monopoly firms.[20]

The link between sustainability and socially optimal pricing is impor-

18. A concrete example of this structure, where the cost functions are quadratic, is provided by Waterson (1987, 61-62).

19. In the diagram, the monopoly is sustainable when demand intersects with the average cost curve at or to the left of the minimum point on this curve.

20. The conditions for perfect contestability are quite stringent. Those proposed by Dixit (1982) are: 1) all producers have access to the same technology, 2) technology may have scale economies arising from fixed, but not sunk, costs, 3) incumbent firms can only change prices with a non-zero time lag, 4) consumers respond to price difference with a shorter time lag. These may be somewhat more strict than need be but they indicate the formal

tant for an assessment of regulation. In the early economic literature marginal cost pricing was asserted to be the optimal pricing rule.[21] More recently Ramsey prices – which maximise consumers' willingness-to-pay minus resource costs subject to the requirement that the enterprise break even – have been regarded as optimal.[22] Baumol, Panzar and Willig (1982, 209) show that under a set of conditions – which include those which imply subadditivity – Ramsey prices will ensure sustainability. If, in addition, the market is perfectly contestable the natural monopoly will produce at these optimal prices and there will be no incentive for exit or entry. Private operation of the firm without regulation will yield a socially optimal outcome.

The relevance of this for public policy towards utilities hinges on the extent to which markets are perfectly contestable, and the firm has the characteristics required for sustainability.[23] If the monopoly is not sustainable the final market outcome will depend upon the exact nature of demand and technology, and on the strategic behaviour of the (potential) market participants.[24] Unregulated market performance must be balanced with the costs and efficacy of controls, be they implemented under direct ownership or by means of regulation.[25]

Control by means of regulation is now considered in more depth.

requirements for perfect contestability. Fixed and sunk costs are distinguished by the requirement that sunk costs must be incurred even when production ceases. The matter is controversial. Weitzman (1983) argues that costs must be sunk for economies of scale to occur.

21. For a discussion of early controversies about public utility pricing see Henderson (1947). In some instances non-linear declining price schedules are optimal; see Einhorn (1987) for a recent application of these.
22. If demands for the different products are independent Ramsey pricing sets the price of each product equal to marginal cost plus an amount which is larger the lower is the elasticity of demand of that product.
23. In their recent assessment of the generality of contestability Baumol and Willig (1986) point out the importance of strategic behaviour in the determination of contestability.
24. The natural monopoly may not be sustainable at Ramsey prices.
25. Important issues in this evaluation are discussed in the New Zealand Business Roundtable report "Telecommunications in New Zealand" (1987)

II OBJECTIVES OF THE REGULATOR

There are two broad directions in the economic literature on public policy towards utilities. Traditionally, economists have adopted a normative approach in which controls have been evaluated under the presumption that it is the regulator's objective to improve some measure of social welfare. More recently public administrators' and regulators' private goals have been emphasised, and these, and the institutional incentive structures, ought to be taken into consideration in evaluating ownership and control. Social welfare remains relevant in appraising the outcomes of the various institutional arrangements, and to the extent that participants in the regulatory process include social welfare as one of their goals. These goals are expressed in various ways, and it may be that while the economist's notion of social welfare may not appear as an explicit objective, there may be surrogate instruments for it.[26] Studies of the regulatory process typically reveal direct concerns of the regulator which are at variance with economists' definition(s) of social welfare. Positive theories of regulation and ownership seem necessary if the different institutions are to be adequately explained.[27]

USA

The behaviour of public utility regulators in the USA has been widely studied by direct observation, by observation of the regulatory process and outcomes, and by direct question of the regulators themselves. It depends upon a variety of institutional, political and economic factors. In order to specify the objectives with respect to economic outcomes it is necessary to consider the regulator's various desires. A regulator operates in a political environment, and thus the regulator's welfare will depend upon the behaviour of other participants in the regulatory process. These agents' behaviour

which presents the case for de-regulation of what has, in the past, been regarded as a natural monopoly.

26. For example, implementing a concept such as universal service in telephone services – see Noll (1986) – may be construed by regulators as improving social welfare.

27. This approach was proposed by Coase (1950), and it has been stressed in the writings of University of Chicago and George Mason University economists.

will be affected by economic outcomes, which, at a minimum, consist of the firm's profits, the rate of return that the firm earns and relative prices of the goods and services produced by the firm.

Each of these economic outcomes is of concern to coalitions of agents who have incentives to apply pressure to the regulator. The economics and political science literatures suggest that four types of agents should be considered. These are

1. the managers and stockholders of the regulated firm,
2. advocates for the buyers of all goods and services produced,
3. advocates for the buyers of a subset of the goods and services, and
4. the courts (to which regulatory decisions can be appealed).

The managers and stockholders of the regulated firm are assumed to desire higher profits, and this concern will lead them to pressure the regulator. Furthermore, Stigler's (1971) "capture theory" provides direct motivation for the regulator's concern about profits.[28] The regulator may be concerned about future employment opportunities with the regulated firm, or industry, or with law firms representing the industry's interests. Also, this group may provide re-election financial assistance and may affect employment possibilities in "public interest" law firms.

Advocates of low prices across the range of goods and services include "consumer advocates", commission staff, the state governor and other politicians. Drawing on a survey, Gormley (1983) provides an insightful description of the political dimensions of public utility regulation and the roles of the various buyers' advocates. It seems reasonable to suppose that this coalition of agents' interest in the general level of prices becomes manifest in their concern about the rate of return on capital. This concern reflects the process of regulation.[29] Regulated prices are generally determined as follows.[30] The firm's capital stock is valued to set the "rate base", and an "allowed rate of return" is chosen. The rate base and the rate of

28. This issue has been studied empirically by Eckert (1973. 1981).

29. The regulatory process itself can be viewed as the outcome of political and economic presures on the resolution of the competing views of the various interested parties.

30. See, for example, Joskow (1972a, ch. II) and Breyer (1982).

return are combined to calculate the revenue believed to be necessary to cover operating expenses, while meeting the chosen return to capital.[31] Firms then have some latitude in proposing a rate structure which produces the required revenues. In this regulatory process the group of agents which is most concerned about the price level of all goods and services focus on the valuation of the base and the required rate of return. The determination of the rate base is controversial and requires detailed knowledge of the company's operation, plans and accounting procedures.[32] The emphasis on the rate of return reflects the fact that it is a single statistic which summarises the financial health of the firm and which, conceptually, can be compared to rates earned on other investments. The presence of a group of consumer advocates who desire low prices in general means that the rate of return is of direct concern to the regulator.[33]

A third group is most concerned with the prices of a subset of the goods and services produced by the firm. They are the buyers, or their advocates. Posner (1971) argues that regulated rate structures take into account the pursuit of redistributive goals through the regulation process, and he provides many examples. In the case of telephone services, representatives of low-income households apply considerable political pressure to keep down the price of local calls. This has been done by cross-subsidising local calls by toll calls.[34] Thus, the regulator has strong incentives to engender rate structures which favour lower prices for some of the goods and services the firm produces.

31. A legal constraint bears on this calculation. Joskow (1974, p.297)) records that the Hope Natural Gas decision directed that allowed rates of return must "enable the company to operate successfully, to maintain its financial integrity, to attract capital and to compensate its investors for the risks assumed...".

32. The extent to which investment in new capital goods should be incorporated in the rate base is often most controversial.

33. The importance of the rate of return in the regulatory process has led to much theoretical and empirical work. Averch and Johnson (1962) used it to formulate their theory of the constrained firm, and there have been a number of econometric studies – see Cowing (1978) for example.

34. Noll (1986) links this cross-subsidisation to regulator objectives.

The regulator's welfare function can be derived from these sources of political pressure, and income opportunities. It will be increasing in profits, and decreasing in the rate of return and decreasing in the favoured prices.[35] Thus, the regulator is a political agent who weighs up the various possible economic outcomes with the view of balancing the interests of the different political groups. In the opinion of Wilson (1980, p.361) the regulator seeks an outcome for which the different participants are "optimally disgruntled".

The foregoing is a theory of interest group pressures which have been revealed by the study of the process of regulation. There are also hierarchical theories of regulation. In these the regulator is viewed as an agent of the elected body which makes the regulatory appointments, or the principal whose task it is to manage a regulatory commission. Two directions about this line of enquiry include the approach of Sah and Stiglitz (1985) in which there are differences in the organisation between information gatherers, ways of communicating information, how decisions are made and who is chosen for tasks. A second approach regards hierarchies from the point of view of overlapping incentive relationships.[36] These approaches themselves should overlap in a comprehensive organisational theory. Building on the hierarchical approach, Baron (1987) tranlates the preferences of the elected organisation which appoint the regulatory commissioners, into the objectives of the regulator.

These hierarchical theories view the regulatory commissions as adding at least one more layer to the organisation delivering the end products. Advancement of these theories may lead to a more systematic appraisal of state-owned and other firms, as well as the process of regulation by commission.

35. Profits and the rate of return are not monotonically related, and hence there are some implications of their separate consideration.

36. See Williamson (1967), for example.

New Zealand

Many of the New Zealand utilities have been in public ownership since their inception, and for very long periods have been organised in the form of government departments.[37] At first glance it might be considered that New Zealand trading departments can be viewed as analogous to the USA institution, with the addition that the regulator has complete control over the firm. Coalitions of economic agents will have similar economic concerns, and provide many of the same sorts of political pressures as would their counterparts in the USA. The department would have to balance the concerns of different groups in the decisions it makes.

In fact, the situation has been very different. The departments have faced a quite different set of incentives in managing these firms. The political pressures of the New Zealand system have not had nearly the sharp focus of those of the USA system. The political agenda of those setting utility pricing and investment policies has been much broader than the USA pressure groups listed above. The accountability of government departments to the elected government of the day has meant that they have been tools in government re-election attempts.[38] In addition, there has been little information about the economic position of utilities. The information revealed to the public in USA regulatory hearings is quite substantial and is subject to public scrutiny. In New Zealand there has been little publicly available accounting information on which assessment of policies or options could be made. Indeed, it could be argued that the information flows within the public utilities were quite inadequate for effective monitoring and decision making.[39]

37. Others – for example, retail electricity firms – have been firms owned by municipalities.

38. Leitch (1972, ch.6) points out railway pricing and investment decisions which can only be explained by the re-election process. Decker (1966, 192-193) reports that political interference in the operation of the electricity department led officials of that department to favour changing the organisation to control by means of a regulatory commission, and that, in the past, governments had resisted relinquishing direct control.

39. Mascarenhas (1982, VII) describes the organisational and control structure of trading departments. These and managerial objectives and constraints are appraised by Jennings and Cameron (1987).

Conflicting management objectives are exemplified by situations in which the departmental utilities have had the responsibility for administering their authorising Act of Parliament; and thus have been producers and regulators. There also exist incentives for the firm to facilitate enforcement of barriers to entry under the USA system.

New Zealand government ownership has rendered redundant one group of monitors which are active in the USA. Scrutiny of the utilities' performances by shareholders and financial analysts mean that utilities are evaluated by a group which can allocate accolades and penalties for performance continuously. Their absence in New Zealand will have affected the performance of New Zealand public utilities.

Given that the New Zealand system of utility management faces all the political pressures of the USA system, and that these pressures are resolved into decisions via a process which has a political agenda which extends beyond pressures for utility performance on any criteria, it would seem likely that the New Zealand institution's economic performance would suffer in comparison with that of the USA.

The performance of the USA institution is now considered.

III PERFORMANCE OF THE REGULATOR

The size of the USA, its many jurisdictions, and relatively high quality data sets make it a rich laboratory for empirical work on public utility regulation. There are, however, two major impediments to obtaining clear-cut conclusions from such work. The first concerns the fact that regulated firms have different objectives from those which operate in competitive markets. The argument of Posner (ibid.) that these firms have been used to redistribute income by means of their rate structure is uncontroversial. This in itself will affect the cost structure of regulated industries, even if the regulated firms have every incentive to be technically efficient.[40] Thus, evidence concerning relative efficiency should be based on cost functions, and estimation of these must recognise the potential allocative inefficiencies associated with regulation. There is no argument, for example, for estimating a cost function for regulated firms which assumes that there are

40. Therefore, assuming competitive input markets, assessment of least cost efficiency requires that the cost function be fully identified.

no inefficiencies associated with the use of capital.[41] Ideally, the cost function for an industry should admit the possibility of subadditivity over a relevant range of outputs. Because demand as well as technology determine the conditions for natural monopoly, the cost function may not be globally subadditive. A second difficulty concerns the fact that comparisons of ownership require that the firms operate in the same environment.[42] Comparing government-owned with public unregulated utilities is typically fraught with both difficulties. The USA work is particularly useful in sorting out the effect of regulation on the operation of utilities. In what follows, theoretical implications are emphasised. Some empirical work is alluded to in the context of the discussion.[43]

Interest Group Regulator

In a formal representation of the interest-group regulator's objectives, outlined above, Evans and Garber (1988a) conclude that all points which lie in the core – these points depict equilibria where the welfare of the regulator (utility) cannot be improved without making the utility (regulator) worse off – between the regulator and the utility are characterised by over capitalisation.[44] This extends the well-known Averch-Johnson over-capitalisation effect of regulation to a more general framework. It is characteristic of certainty and, in a wide variety of cases, also holds in models incorporating uncertainty about cost and demand conditions.[45] As rate-of-

41. The possibility of allocative inefficiency is often ignored in empirical work – see Stevenson (1980), for an example.
42. In New Zealand the operating environment for government trading departments has been quite different from that of private enterprises. Johnston and von Tunzelmann (1982) report that these departments have not paid taxes, have faced external interlocking control mechanisms and they have had to meet particular social obligations.
43. Jennings and Cameron (1987, Appendix III) review comparative studies of state and privately owned firms. Baumol and Willig (1986) discuss mixed evidence about contestability, and several assessments of USA de-regulation are contained in Bailey (1987, part II).
44. Empirical support for this proposition is provided by Cowing (1978).
45. An interesting, potential, exception arises when the source of the uncertainty is the firm's cost of capital. Excess use of capital is costly in this situation because the larger the capital stock the larger the variance of profits.

return regulation also involves choosing a rate structure which favours particular prices the allocative effects of the structure should be evaluated. Evans and Garber (1988b) point out that as the rate of return constraint is lowered the favoured price may not fall.[46] Thus, conceptually it is possible, but unlikely, that the favoured price may not be lower under regulation than it would be under unfettered monopoly.[47] In practice, cost and demand functions are not known, and regulatory commissions have set prices according to certain rules, in which the allocation of fixed costs is arbitrary. This makes identification of cross-subsidisation difficult[48] and it has been argued that these rules have significant implications for the actual economic effects of rate-of-return regulation.[49] Incomplete information, and differential holdings of information have been the foundation of more recent lines of enquiry.

IV INCOMPLETE AND ASYMMETRIC INFORMATION

It is reasonable to assume that the firm has more information than the regulator about its costs and, to a much smaller extent, demand conditions.[50] There have been a series of papers examining regulation in the presence of asymmetric information. Many of these models are examples

46. Sufficient conditions for the price to fall include a condition which implies subadditivity. The model yielding this result has demand curves with zero cross-price elasticities. The conclusion recognises that as the rate of return constraint is lowered the lower rate of return may be achieved by increasing capital rather than by lowering prices. This effect has led to ambiguity in the consumer welfare implications of rate-of-return regulation.

47. Greene and Smiley (1984) estimate that regulation lowered residential-sector prices in the electricity firms they studied. Their work supported the assessment of Joskow (1974) that there have been periods when regulatory constraints have not been binding (during the 1960's) and periods when they have been constricting (during the less-price-stable late 1960's and early 1970's) the firms' activities.

48. For firms as well as the regulator.

49. See, for example, Braeutigam (1980) and Sweeney (1982). The latter work considers that in partially regulated markets the rules permit costs to be shifted from the de-regulated to regulated markets.

50. Lewis and Sappington (1987) consider regulator pricing rules in the case where the firm knows more about demand than does the regulator.

of principal-agent models with asymmetric information,[51] in which the firm (agent) has some private exogenous information, and the regulator (principal) has the ability to make a transfer to the firm on the basis of some observable variables. In a standard approach the regulator acts as a von Stackleberg leader by proposing a rate structure (contract) to the firm based on the variables which are able to be observed by both players. The contract is binding when signed. The regulator acts as a Bayesian statistician in computing the optimal contract. These analyses rely on the revelation principle[52] which prescribes that the regulator has nothing to lose by restricting attention to contracts in which the firm has every incentive to reveal the truth about its private information, usually its costs. Analysis then enquires into the optimal contracts and their resource allocation consequences.[53]

Typically, in this approach the regulator behaves altruistically and seeks to maximise some weighted sum of (expected) consumers' and producer's surplus.[54] Also, the regulator can draw up rate structure contracts which include subsidies or taxes on the firm.[55] In one of the earlier studies Baron and Myerson (1982) concluded that the optimal arrangement for a single product monopolist was one in which price exceeded marginal cost and the firm almost surely makes (excess) profits.[56] In this model actual costs are never observed by the regulator. The optimal pricing rule, and hence economic efficiency, is a function of the regulator's beliefs about costs, which are the firm's private information.

Baron and Besanko (1984) extend the analysis by considering a model in which the firm's production cost can be observed ex post at some level of audit cost. Ex ante the regulator has to set the price,[57] and rules which

51. These are reviewed by Arrow (1985).

52. The revelation principle is analysed by Myerson (1979).

53. An excellent survey of firm regulation under asymmetric information is provided by Caillaud, Guesnerie, Rey, and Tirole (1988).

54. The weights reflect the relative importance of consumers' and producer's surplus to the regulator or costs associated with the tax/subsidy system.

55. In effect, the regulator has available a two-part tariff pricing system.

56. The firm has no incentive to indulge in wasteful expenditures.

57. In common with other studies, the price is a two-part tariff.

fix the probability of audit and the level of any penalty. Costs have an element of uncertainty to both the firm and the regulator. The firm is audited if costs are surprisingly large, and this may occur even if the firm has been truthful. Laffont and Tirole (1986) adopt a similar framework to that of Baron and Besanko (ibid.), with the addition that production costs are affected by endogenously determined managerial effort.[58] They conclude that effort will be optimally supplied if costs are not audited, but that the weighted sum of the expected value of consumers' and producer's surpluses would be improved if auditing is admitted. Effort is no longer optimally supplied but any reduction in welfare resulting from this is offset by the improved pricing of output, resulting from the larger price choice set open to the regulator when ex post auditing is possible.

Sappington and Sibley (1985),[59] allow the regulator to costlessly observe costs after the rate structure is set. This structure is static for a fixed number of periods, and the firm prices according to marginal cost in all periods but the last, the firm has lower profits and has no incentive to spend more than the minimum operating costs in any period. In short, when the auditing is costless and common knowledge of the firm and regulator includes all variables except a cost parameter the firm can be induced to implement marginal cost pricing. They go on to develop the concept of "anonymous" regulatory mechanisms in which the preferences or beliefs of the regulator have no role to play. Again monitoring costs are zero, and the firm manager gets no utility from any inefficiencies which yield cost excesses. The firm is rewarded with a tax/subsidy arrangement which induces it to price at marginal cost in each period, except the first, even if the cost function is unknown to the regulator.

58. In consequence, x-efficiency is determined endogenously. Laffont and Tirole (1986) consider the provision of a public good, but, as they point out, their analysis is applicable to monopoly provision of a private good.

59. Both authors have been employed by Bell Communications and Research. Much of the economic analysis of utilities has been carried out at this institution and its fore-runner under AT&T. A lot of this work has appeared in the "Bell Journal of Economics and Management Science" – now the "Rand Journal of Economics" – which was established in 1970 by AT&T.

Whilst these studies postulate the objective of efficiency[60] they can be interpreted as having an equity goal. The presence of asymmetric information reduces the regulator's options for regulation because the firm's co-operation must be elicited. The two-part tariff pricing option of these studies is used to make the firm interested in the sum of producer's and consumers' surpluses rather than profits only. If the firm had available the two-part tariff pricing system then it could, without any coercion, do better than the regulator on efficiency grounds. Conceptually, the firm could elicit all consumers' surplus in which case it would have every incentive to base decisions on the true cost function, to supply the efficient level of managerial effort and to price at marginal cost. To opt for regulatory control is to consider that either there are reasons why – the rather extreme use of – the two-part tariff[61] is not possible, or that the distribution of the rents from this market is unacceptable according to some equity criterion. The latter reason appears to be the argument of Loeb and Magat (1979) who advocate awarding a monopoly franchise in which the regulator subsidises the firm according to the level of consumers' surplus. The firm's rents are to be taxed away by means of competitive bidding for the franchise.

V DISCUSSION

The models considered above are all partial equilibrium in nature. They are restricted to the markets of the utilities. Because of the nature of their technologies and their size, utility investment decisions are often subject to various regulatory jurisdictions. There is usually much broader public scrutiny of large investment decisions than there is of other utility activity, in both the USA and New Zealand. Since current and expected demand affects the investment decision, the rate structure of utilities will usually be examined by a broader array of interested parties than their controlling body at the time large investments are evaluated.

An important New Zealand policy issue concerns the sort of regulatory body which would best serve to regulate a public-company natural

60. The term efficiency is based upon the criterion of a weighted sum of (expected) consumers' and producer's surplus.

61. Or perfect price discrimination.

monopoly. Under asymmetric information the credibility of the regulator's precommitment to contracts is crucial for the implementation of the regulatory schemes. This is particularly the case for schemes which contain multi-period agreements. Furthermore, in multiperiod regulation the regulator can learn almost all of the firm's private information.[62] Inability to precommit will generally raise the costs of inducing the firm to improve social welfare. The agreements and their processes – for example, audit procedure – must be implemented consistently if they are to achieve their desired outcomes. Thus, if a natural monopoly is to be regulated, there are benefits to be gained by allocating that task to a particular organisation which retains this responsibility through time. Such benefits would have to be weighed against costs, such as the tendency for persons in such an organisation being captured by the firm.

The argument that regulators will learn over time the firm's private information, and thus be better able to regulate effectively, comes from consideration of static models. In periods of significant technical change and fluctuating prices the regulator, the firm and potential entrants have to learn about the changing environment as well as the others' reaction to it. It is likely that regulation and state-ownership – with their concomitant barriers to entry – will be at their most ineffective, and perhaps inefficient, in periods of significant technical change. Historically, it may be that monopoly regulation has been strengthened in industries with established technologies and which have been assessed to be natural monopolies, and that de-regulation comes about when significant technical change emerges to challenge the existing industry structure. This would provide a rationale for the broad coincidence in timing of public utility institutional development and de-regulation in New Zealand and the USA.

When there are complete or symmetric holdings of information the various forms of ownership and regulatory control are equivalent. Evans and Garber (1988a) is as applicable to a state-owned monopoly as it is to a regulated private firm. Political pressure from interest groups will

62. Sappington and Stiglitz (1987, 27-29) provide additional examples – to those referred to in the text – of such models. These models generally entail learning in a static environment. In a rapidly changing environment the speed of learning of the firm and the regulator will matter.

generate the various outcomes under both institutions. When the firm has more information than the regulator the balance shifts in the firm's favour. It will usually make more profit and it may exhibit moral hazard in its delivery of effort. The literatures dealing with informational difficulties and positive regulator behaviour have yet to meet. Both of these phenomena are sources of inefficiencies, and institutions should be designed to take account of them. Excepting direct political connections, state ownership will have difficulties with incomplete and asymmetric information which are similar to those of the private regulated firm. Both firms are concerned with similar management and employee monitoring issues.

The organisational structure of the newly established New Zealand state-owned enterprises suggests that they will be less directly affected by party political considerations than they were as departments. For those which are privatised the need for regulation will presumably be assessed on a case-by-case basis. The USA system of separate regulatory commissions offers a method of regulation which preserves some separation between partisan politics and the performance of the industry. The USA evidence that party politicians like this separation of function may mean that the general direction of reforms now taking place in New Zealand may persist into the future.

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Chapter 5

US THEORIES OF MONETARY AND FISCAL POLICY

Ewen McCann[1]

I INTRODUCTION

The idea of aggregate demand management as a method of regulating fluctuations in real variables was an outcome of Keynesian theory. Until the 1970s the smoothing of aggregate demand replaced the price level as the objective of monetary and fiscal policy. The serious inflations that occurred since then altered the perspective on demand management. Unemployment became less of a political liability than inflation in many countries. Price level uncertainty was seen by some as contributing to the flunctuations in real variables. The efficacy of both price level and demand management policies remains the subject of debate.

The survey of recent US theories of monetary and fiscal policy to be presented below forced the adoption of selection criteria not only because of the constraint on the length of this paper but also in the interests of coherence. Among the approaches to the topic which were considered were:

(1) macroeconomic policies in an open economy

(2) macro policies in portfolio models

1. I am indebted to my colleagues P. Dorian Owen and Alan Woodfield for constructive criticism. Acknowledgement is also made to Alan Bollard, Robert Buckle and to Bryce Wilkinson for their comments.

(3) the econometrics of macroeconomic policies

(4) macroeconomic policies with rational expectations

They were all rejected largely because of the model dependent nature of their results. The favoured choice was to examine recent US monetary and fiscal policy theories using the vehicle of the government's budget constraint.

The justifications for this choice are that; the government's budget deficit is an issue of practical importance; the government budget constraint should be common to the four rejected criteria – even if in reality it is not – so conclusions from it will hopefully be less than sensitive to the choice of model; finally, some interesting policy implications arise from consideration of the government's budget constraint.

The government's budget constraint will be found in any macroeconomic policy model which is competently constructed. Writers of different persuasions use it. Since 1975 new US results on monetary and fiscal policy have, however, stemmed from neo-classical writers in the main. Current US work inside the Keynesian paradigm seems directed at the micro foundations of that model than to developing new monetary and fiscal policy implications from it. A survey of that work will be found in Blinder[2] (1988) who sets out some "beliefs" (his term) of Keynesian writers.

II MACRO-MICRO CONSISTENCY

More than almost anything else the leading macro-theorists have been debating the principle that the macro and micro branches of the subject should be consistent. This approach has resolved, or at least brought into view, many macro problems that had been concealed. It has also set the subject in a new direction and opened up new routes to the solutions of old problems. The subject is still policy oriented; the new investigations are into the hard areas of the behaviour of the price level, interest rates, employment, official debt and exchange rates. Old problems neither die nor fade away, nor are they permanently solved, it seems.

2. P. Dorian Owen provided me with a copy of Blinder's paper a week or so after it was delivered.

The macro-micro consistency requirement has had its first impact through the explicit introduction of the constrained optimisation approach to work, consumption, investment and goods supply. Its second and perhaps more significant impact has been to recognise that, like other sectors, the government has a budget constraint. The government's budget constraint is the connecting theme in the sections of this paper.

Another and relatively minor effect of the consistency objective is in recognising the effects of net investment in increasing the capital stock and output where they have been avoided in the old models. Allowing the stock of investment to change between dates or continuously, forces one away from static models. But that is not the main point of consistency.

The main point is that even in a model where there are no capital goods (ie. no real investment) considerations of the government budget constraint force a dynamic or time-dependent structure on the model. We now show why.

III GOVERNMENT'S BUDGET CONSTRAINT

A standard version of the LM-IS closed economy model is;

Goods market equilibrium (IS)

$$y = C[(1-u)y, \text{wealth}, r] + I(r,K) + G \qquad (1)$$

Money market equilibrium (LM)

$$\frac{M_0}{P} = L(y,i) \qquad (2)$$

where

y is real national income
C is real consumption
u is the average tax rate
r is the real interest rate
I is real investment demand, possibly zero
K is the real capital stock
G is the real government demand for goods
M_0 is the parameterised money stock
P is the price level, possibly constant
i is the nominal rate of interest

The model above is demand determined because there is no equation defining output (a production function defines the technology not output). The three unknowns are r = i, y, P. Because there are two equations the appalling fixed price level assumption maybe introduced. Failing that additional equations may be appended and/or further rigidities imposed. The mis-named "aggregate demand – aggregate supply" variant may then be obtained. The extra equations, possibly with further rigidities, can convert the demand determined model into one with supply constraints.

The equations mentioned are at best heuristically explained and were generally not derived from constrained optimization procedures. Their solution did not require the introduction of time and the model was interpreted as a static system. Comparative statics provided the effects of policy changes.

This approach is now seen to be wrong. The model is not static and the comparative static results obtained from it are incorrect. The reason for these erroneous conclusions is that the government sector must finance its activities. It has a budget constraint:[3]

$$A_{t-1} + H_t - H_{t-1} + B_t - B_{t-1} = P_t G_t + iB_{t-1} - u\,(P_t y_t + iB_{t-1}) + A_t \quad (3)$$

where

t indicates a time period

A_t is the nominal value of official assets

H_t is base money

B_t is official bonds outstanding in nominal terms.

Transfer payments, other than interest, are netted out in the tax rate, u. Several things will be immediately apparent from the government's budget constraint (3), they are:

Dynamics

Two time periods are involved so that the model is inherently dynamic (Turnovsky, 1977, p.68). The mere recognition of the government's financial constraint in any model requires use of dynamic analysis.

3. Any agent has two budget constraints – one for stocks and one for flows – if time is continuous. In period analysis, since there is no dimensionality problem, there is one budget constraint. Ott and Ott (1965) first introduced the government budget constraint.

Omitted Equation

It is invalid to omit the government's budget constraint from a policy oriented model. This is because a change in any policy parameter in equation (3) necessarily involves a change in another term, whose consequent effects should be internalised in the model.

Policy coordination.

There is no such thing as pure "monetary policy" or pure "fiscal policy". This follows from the previous point. Changing the money stock, say, necessarily changes something else in the budget constraint (3).

Taxation

The government cannot set its tax revenue, all it can do with taxes is alter the tax rate, u, in constraint (3). The private sector's response with y also affects tax revenue. Endogenous taxation is a feature of older models too.

Reserve Bank-Treasury Tension

Traditional conflicts between the monetary and the fiscal departments of the government can be reviewed through equation (3) (Sargent, 1986, pp.34-35). Rewrite it as

$$\Delta H_t + \Delta B_t = P_t G_t + iB_{t-1} - u(P_t y_t + iB_{t-1}) + \Delta A_t \qquad (3)$$

and suppose that asset sales are zero, $\Delta A_t = 0$. A dominant Treasury would set G_t,u and thus the budget deficit for constant y_t since official interest payments are historically determined. The Reserve Bank in that case is merely a debt manager. It must finance the deficit by the issue of interest or non-interest bearing paper. The Treasury fixes the time path of paper. All the Bank can do is make small annual variations in the ratio of base money to bonds. These variations will be small because the annual budget deficit will be a small fraction of all official debt. The Reserve Bank's debt policy does have a small effect on the future budget deficit by affecting next period's interest payments. Levels of official interest payments are an important theoretical and practical issue which is examined in Section 6.1.

An institutional framework in which the Reserve Bank dominates the Treasury allow the Bank to fix $\Delta H_t + \Delta B_t$. The time path of the deficit is then fixed by the Bank because for fixed y_t the Treasury has to adjust G_t and/or u. Treasury simply runs out of money if it does not.

Regardless of which Department is the stronger, the issue which is of current importance in the practice and theory of macroeconomic policy is the time path of official interest bearing debt. This matter is discussed in Section 6.

Interest Rate Policy

Direct intervention apart, the government's budget constraint clearly shows that the interest rate is not a policy parameter. It may be a chosen target, in a full system, over which a government has a partial influence. A government may have policies on at most four of stocks of base money, bonds and assets, expenditures and tax rates. An open market operation requires that base money and bond stock changes are offsetting in the government's budget constraint. If base money pays interest at the same rate as government stock the two would be perfect substitutes in a competitive market, open market operations would have no effect and an interest rate target would be a pointless objective of monetary policy. Alternatively, the degree of substitutability between base money and bonds restricts the impact of monetary policy on interest rates.

After that review of the algebraic properties of the government's budget constraint (3) we turn to the consequences its introduction has had for the study of monetary and fiscal policy.

IV MULTIPLIER ANALYSIS

A celebrated result by Christ (1968) illustrates the dramatic nature of the effects of appending the government's budget constraint (3) to equations (1), (2). Avoiding the proper technicalities by which Christ's result is obtained, a short cut method of obtaining it might jolt the senses. Rearrange the government budget constraint (3) so that

$$y_t = \frac{G_t}{u} + \frac{u}{P_t}[iB_{t-1} + \Delta At - \Delta Ht - \Delta Bt] - \frac{iB_t}{P_t}$$

Then the long run government expenditure multiplier is

$$\left.\frac{\partial y}{\partial G}\right|_{\bar{B}} = \frac{1}{u} \qquad (4)$$

The interpretation of this result is that when a change in government expenditure is financed entirely by base money creation i.e. $B_t = \overline{B}$ the shifts in the LM and IS curves imply a multiplier of 1/u. Thus the government expenditure multiplier is a policy parameter, in that it is the reciprocal of the tax rate, when there is money creation. The marginal propensity to consume does not enter equation (4).

It will be recalled that the old model consisting just of equations (1), (2) yields the result that money financed government expenditure is more expansionary than bond financed government expenditure. This is because with money finance both the IS and LM curvey shift right. With bond financing only the IS curve shifts. The relative expansiveness of the two policies is a result which is reversed when the government's budget constraint (3) is allowed.

Blinder and Solow (1973) make equations (1), (2), (3) consistent with an expanding capital stock due to net investment by introducing the requirement that

$$dk/dt = I(r,K_t) \qquad (5)$$

In their model they retain the money financed multiplier result, 1/u. The bond-financed, i.e. $H = \overline{H}$, government expenditure multiplier which Blinder and Solow obtain is

$$\left.\frac{\partial y}{\partial G}\right|_{\overline{H}} = \frac{1}{u} + \frac{1-u}{u}\frac{\partial B}{\partial G} \qquad (6)$$

With bond financing $\partial B/\partial G > 0$ and $0 < u < 1$ so

$$\left.\frac{\partial y}{\partial G}\right|_{\overline{H}} > \left.\frac{\partial y}{\partial G}\right|_{\overline{B}} \qquad (7)$$

So bond financed government expenditure changes are more expansionary than money financed expenditure changes; something which reverses the IS-LM result and which policy makers who are battered by high interest rates, allegedly caused by bond financing, may be pleased to learn.

V EXPECTATIONS

A final point should be made concerning the implications that expectations have for the static versus dynamic nature of a model. (Sargent, 1979, p.32). Comparative statics require exogenous expectations. If they are made endogenous in a way which uses all information in the model, they would be accurately formed using the forecasts of future values of the variables. Any solution would then be dependent on future values of variables and the model is not static.

VI PUBLIC DEBT

The burden of the debt is an old issue which has been rejuvenated in new forms by the introduction of the government's budget constraint (3) to macroeconomics. That issue is whether or not bond financed deficits lower the time path of the capital stock compared to the balanced budget time path of capital. A few years ago the issue resurfaced in the "crowding out" debate, though the history of thought connotations were lost.

Instability

Blinder and Solow's (1973) work with budget constraint (3) provided a fresh insight into the public debt problem. Heuristically, the following quite possible sequence may be the result of partially bond financed deficits. A bond issue in the first period raises interest payments causing the deficit to increase in the second period. Further partial or full bond funding is required which adds to the problem in the third period. The system may quite possibly be unstable. Money financed deficits on the other hand are stable. The Blinder-Solow model is a fixed price level system, but variable price level models have been explored (Turnovsky, 1977) with the same broad conclusions.

The New Zealand government's interest bill has risen to about one-fifth of its expenditure. The system need not be unstable for serious funding problems to emerge as a result of interest payments. The funding problems bring in train the issue of whether or not interest rates are affected by debt policy.

Exactly these questions have been answered by Barro (1987) and by Sargent and Wallace (1986), see Sections 6.2 and 7.

Deficits and Inflation

The title of the Sargent and Wallace (1986) paper is ambiguous. "Some Unpleasant Monetarist Arithmetic", means that the results are unpleasant for those who have taught and thought that the course of the price level is determined by the course of base money, under appropriate assumptions.

They choose a version of the quantity theory of money to ram home their point that the quantity theory results do not hold even though the quantity theory is embedded in the model. They require a constant income velocity of demand for base money, so

$$H/P = ky \qquad (8)$$

would do. In addition, a steady state rate of growth in real income and population at rate n is required, as is a constant real rate of return on government securities, $r > n$. The sequence of real budget deficits is D_t which is financed by paper issue of either sort:

$$D_t = G_t - u(y_t + iB'_t)$$

$$= \frac{H_t - H_{t-1}}{P_t} + B'_t - B'_{t-1}(1+r_{t-1}) \qquad (9)$$

where $B'_{t-1} = B_{t-1}/P_t$. Under the above assumptions simple manipulations yield

$$1 - \left[\frac{1}{1+n}\right] \frac{P_{t-1}}{Pt} = \left[\frac{D_t}{Nt} + \left[\frac{r_{t-1}-n}{1+n}\right] b_\theta(t)\right] \frac{1}{h} \qquad (10)$$

where N_t is population at time t, h is a positive constant coming from (8) and b_θ (T) is the steady state real per capital bond stock i.e. for $t > T$ and T is the arbitrary date by which it is assumed that the desired level of per capita bond holdings is constant

$$b_\theta(T) = \frac{B'_t}{N_t} \qquad \text{for all } t > T \qquad (11)$$

The right side of equation (10) is positive so the left side is between zero and 1. Then, the greater is b_θ (T) or D_t the greater is the left side of (10). The left side increases only if P_{t-1}/P_t diminishes i.e. if the current price level rises in relation to its previous value. The time path of base money is set as a sequence $H_1, H_2, \ldots, H_{T-1}$ which may be constant, rising or falling. The

price level and rate of inflation depend on the level of the budget deficit and the eventually desired constant per capita bond stock. That is the message from equation (10).

Base money theorists have usually argued that bond financed deficits are non inflationary. Sargent and Wallace show that they are inflationary. Salt is rubbed into the wound when they show that a tighter base money policy now will cut the rate of inflation. However, tighter money now necessarily means higher inflation rates at a later date in the model., The monetary policy $H_1, H_2, ..., H_t$ is tighter than the policy $H_1, H_2, ..., H_T$ if $H_i < H_i$ for all $i \leq T$. We return to this problem in Section 6.3.

As a contribution to the burden of debt literature Sargent and Wallace raise the possibility of private sector portfolios which become saturated with government bonds. They appear to allow interest rate flexibility provided $r > n$.

Their principal contribution is to the theory of the price level. This is determined by the expected path of the government deficit in a growing economy. Theirs is a dominant Treasury model. The interpretation is that with bond financing the public expects future budgetary interest costs to expand. This resonates with Blinder-Solow instability. The public does not believe that the government will bite the bullet and finance increasing interest inclusive deficits by tax or expenditure changes. To avoid ever-mounting interest costs a government is predicted to eventually resort to inflationary finance. That policy change occurs when portfolios will absorb no further increases in real bond holdings per head. Because monetization will eventually occur the per-head version of Equation (8) ensures that the future price level will rise. An expected increase in the future price level raises the present price level.

The Sargent and Wallace deficit-inflation link is not peculiar to their model. In a demand determined model with a Phillips curve and capital accumulation incorporated into an LM-IS model a similar result applies i.e.

> Bond financing may quite plausibly be the more inflationary policy. Turnovsky (1977, p.153).

Turnovsky's result does not require a saturated bond market or the quantity theory of money. The link from the budget deficit to the inflation rate appears robust.

The Sargent-Wallace-Turnovsky result is a generalisation of the theorem that the price level depends on the stock of money, i.e. non-interest bearing debt. Their extension is that P depends on the level of non-interest bearing plus interest bearing debt.

Sargent (1986, Ch.3) has informally reviewed four hyperinflations. He shows that in them the nominal money stocks continued to grow after price levels and exchange rates had stabilized. Nominal prices and exchange rates stabilized once the public became convinced that the government would close off the budget deficit by altering taxes and expenditure.

Monetary Aggregates

There is another interpretation of the budget deficit's link to inflation. The deficits are financed by the issue of interest and no-interest debt, asset sales apart. Suppose the private sector holds interest bearing assets, e.g. loans to financial institutions, which it regards as "money" but which it also regards as close substitutes for some government stock. Some government stock may then be viewed as interest bearing money. The Divisia Index approach to the measurement of the money stock makes this point very clear (McCann & Giles, 1987).

The distinction between interest bearing and non-interest bearing money is properly resolved by constructing a user-cost weighted monetary aggregate. Including government stock in the aggregate, it turns out, results in including exactly the portion of government stock which is viewed as money and it excludes from the aggregate the portion which is held for investment purposes.

Such a definition of the aggregate money stock displays the link between bonds issued to finance the deficit and the monetary aggregate. This is important. A bond financed deficit does not result in a constant money stock. Bond financing increases the index of the money stock.

This puts a different complexion on the Sargent and Wallace result. Bond funded deficits increase the monetary aggregate so the price level rises, ceteris paribus.

VII RICARDIAN EQUIVALENCE

Essential to the formal Sargent and Wallace theorem are the ideas that there is a fixed sequence of future deficits and that the government refuses to raise taxes in the future. The government prefers the inflation tax to future legislated tax increased.

Relax the fixed tax rate assumption and suppose that future taxes are variable. Allow the public to think that at an indefinite date taxes will be increased to repay principal and interest on official debt. With fully funded deficits, $H_t - H_{t-1} = 0$, and assuming no asset sales the government's budget constraint (3) can be written (Sargent, 1987, p.8)

$$B_t = G_t - T_t + (1+i)B_{t-1}$$

where

$$T_t = u(P_t y_t + iB_{t-1}), \text{ is tax revenue}$$

Back substitution yields the solution for B_t,

$$B_t = \sum_{j=0}^{\infty} \left[\frac{T_{t+j+1} - G_{t+j+1}}{(1+r)^j}\right]$$

i.e. the value of the bond stock is the present value of future budget surpluses. Those surpluses are used to repay the bonds. Therefore any bonds issued now to finance a deficit imply an increase in future taxes whose present value equals the current budget deficit (assuming constant G_t). For this reason bond financed and tax financed government expenditure are equivalent. Households' discounted net worth is unaffected by the decision made to finance government expenditure through current taxes or a bond financed deficit. Government goods are no free lunch, the issue is one of taxes now or taxes later and the present values of the tax alternatives are the same (Barro, 1987, pp.391-5). When cast in this light one sees how government expenditure is a measure of taxation.

Since tax financed and bond financed increases in government expenditure have the same effects on households' wealth, deficit financing is not more expansionary than tax financing. Similarly, a bond financed cut in taxation is not expansionary (Barro, 1987, pp.391-5).

The equivalence between tax funding and bond funding bears on the effects of bond financed deficits upon the interest rate. Bond financed

deficits do not increase interest rates. Households' net worth is the same for bond finance as it is for tax finance so the method of finance leaves the position of the aggregate demand curve unchanged. Interest rates are unaffected by the issue of new bonds. The distorting effects of variable tax rates have been ignored in the discussion. Strictly, lump sum taxes are required.

Bequests

Among the assumptions necessary to obtain these Ricardian results is the common micro-economic assumption of an infinite time horizon for households' budget constraints. There is no transfer of tax obligations, through bond finance, to future generations in that circumstance. As generations replace each other the interest income which a generation inherits is exactly sufficient to meet any tax obligations coming home to roost from the government deficits of the preceding generations. It is apparent that a government which attempts to pass the burden of taxation on to future generations fails in its objective.

An infinitely long planning horizon suggests the existence of a bequest motive. Bonds are not destroyed by death. This bequest motive appears to limit value of bonds which could be issued and constrains the government's financing actions. Take a life cycle model in which the bequest motive is zero. The old will not be buying many bonds. So a bond financed tax cut will result in bond purchases by the young who save harder because of possible future tax liabilities when interest is paid. However the aged spend all the proceeds of the tax cut because they do not wish to bequeath wealth. Thus an across-the-board tax cut has effects which depend at least in part upon the bequest motive. This analysis of fiscal policy is far removed from the LM-IS analysis.

VIII GOVERNMENT EXPENDITURE

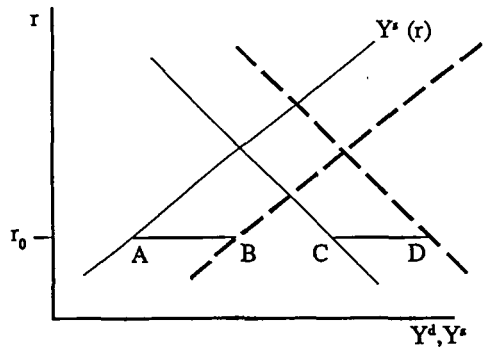
In the LM-IS model, because it is demand determined, an increase in government expenditure has no impact other than the immediate effect on the IS curve of the government acquiring goods. The acquired goods disappear. Barro (1987, Ch.12) asks "What happens to those goods?" They are distributed to households and to firms. Thus government purchases affect both aggregate demand and aggregate supply.

Certain government goods distributed without charge to households will be substitutes for goods which households would otherwise have purchased from the private sector. Health and education would be among these. So if a government spends \$1m on goods and distributes them to households, households will reduce their demands by \$αm. Aggregate demand changes by \$(1 – α)m.

The provision of inputs to firms raises firms' output by \$β per \$1 of government expenditure. Suppose that the \$1m of government expenditure is money financed in a dichotomized model. Then the excess demand for goods at the initial interest rate is

$$\$(1 - \alpha - \beta)m.$$

which is assumed to be positive. Real interest rates rise i.e.



At r_0, $1 - \alpha = CD$ and $\beta = AB$. This is a very different mechanism for the expansionary effects of government expenditure. Barro refines the analysis to include permanent and temporary changes in government expenditure.

This view of the government's expenditure is a departure from the old approach which will surely be replaced. It is absurd to assume that the government shifts the aggregate demand curve by increasing its purchases of goods which it stockpiles for ever (at zero opportunity cost). Those goods do get used and the effects of their use should be a part of the model (Aschauer, 1988).

IX TAX RATE CHANGES

The household sector's inter-temporal real budget constraint with tax rate T, real wages and profits W, π_t, real consumption, C_t, and work effort, L_t, is

$$(1-T)\sum_i \frac{WL_i+\pi_i}{[1+(1-T)r_i]^{i-1}} = \sum_i \frac{c_i}{[1+(1-T)r_i]^{i-1}}$$

when real balances are ignored and bond stocks net to zero in the closed economy without capital goods.

Inter-temporal utility maximization yields L_t and C_t for all t which are seen to be functions of the real interest rate, and permanent income (which effectively takes care of W, π_i.) as well as the tax rate T.

Thus the analysis of a tax change proceeds along micro-economic lines, allowing for the government's budget constraint and assuming dominant substitution effects (Barro, 1987, Ch. 13). A reduction in tax rates increases income, the capital stock and the after-tax interest rate i.e. aggregate demand shifts by more than aggregate supply. This is because consumption demand and aggregate supply shift by the same amount through the operation of the permanent income hypothesis. In addition, investment is stimulated by the tax rate cut.

X MINIMALIST CONCLUSIONS

The drive for consistency between micro and macroeconomics has brought light to the government's budget constraint. This has revitalized the burden of the debt issue. The method by which a budget deficit is financed is not a problem to the extent that the world is Ricardian. Budget deficits then have little effect on private net worth and private expenditure or interest rates. To the extent that the economy is non-Ricardian the problems arise of mushrooming official interest payments. In a non-Ricardian world the full or partial bond financing of budget deficits is inflationary and the government expenditure multipliers have new forms which can be independent of the marginal propensity to consume. The government's purchases of goods are distributed in kind to firms and households. The private demands and supplies of goods are thus modified in previously neglected ways which open new transmission routes for fiscal policy.

There is despair over the possibility of stabilization policy. The theoreticians have rejuvenated macro-economics by imposing the micro-economic consistency requirement upon it. Practicing policymakers unaware of the details of their work, summarized here, should not be practising policy. The transmission mechanism for fiscal policy is sensitive and subtle and its pathways are essentially unknown. Lucas (1976) has shown that the behavioural parameters of the system are policy dependent, a fact which complicates the transmission mechanism and destroys conventional techniques of predicting the effects of policy changes.

The money to income ratio has departed from its long run trend in the 1980's in the U.S. This has been attributed to financial de-regulation though enough time has elapsed for those effects to have settled. Central Banks have abandoned monetary growth targets on the excuse that the money demand function is unknown. This obfuscation allows them to switch between targets, injecting more instability into the system. They are now accused of tracking interest rate targets (Friedman, 1988). That policy leaves an indeterminate price level (Friedman, 1988) and probably revives inflationary expectations.

All of this has contributed to a minimalist view of government policy. Since fiscal and monetary mechanisms are poorly understood, and since their effects are unpredictable, the view arises that the government should intervene minimally in the goods and financial markets. The optimal level of G is a micro economic issue since the concept of an economic optimum implies constrained maximisation.

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Chapter Six

LABOUR MARKETS AND SOCIAL POLICY: REVERSING THE ROLES

Suzanne Snively

I came to New Zealand to study economics in early 1972 because I was interested to see how a country with a high standard of living apparently managed a fairly even distribution of income with little poverty and nearly full employment. Since I have been here, New Zealand's standard of living has fallen, its unemployment has risen and the distribution of income (and most probably wealth) has shifted markedly.

These changes have been significant. This paper makes a case that because of these changes, there must be a reversal in the roles of the labour market and social policy. In the early 1970s when there was full employment, the labour market was the foundation of social policy. Social policy did not need to focus on income distribution but instead could focus on the provision of benefits to the needy including invalids, orphans, the sick and the elderly. Now in the late 1980s, when New Zealand faces the continuing prospect of rising unemployment, a social policy premised on the concept of full employment just cannot work. The role of social policy, as I discuss in this paper, must become one of supporting the labour market if the social policy goals of providing benefits to the needy and maintaining a fairly even distribution of income are to be met.

I THE EXISTENCE OF POVERTY IN THE LAND OF PLENTY

For my undergraduate training, I attended a small liberal arts university called Reed College in Portland, Oregon. I began as a maths major, but changed to political science, finally ending up with a major in economics. I started studying economics after reading Michael Harrington's *The Other America: Poverty in the United States* (1962). I followed up my reading with a tour of the slums of Chicago (which border the University of Chicago) where the young unemployed males spend most of their days on the streets. Shortly after that I began working for President Lyndon Johnson's War on Poverty as part of congresswomen Edith Green's Office of Economic Opportunity (OEO) program in Multnomah County, Oregon. I was impressed with Daniel Patrick Moynihan's (1969) approach to solving the problems of poverty by assisting the poor to acquire political power, but it was my view in general that political scientists did not have the tools to solve the problems. The OEO program provided good salaries for student-employees like me, from upper middle class backgrounds, but the poor seemed reluctant to make themselves available for our services.

The discipline of political science was an improvement over mathematics, however. Mathematicians did not seem to know what poverty was (in fact, some of my math-major classmates were so pre-occupied with equations, they appeared not to need any of the normal necessities of life and they appeared unconcerned with the lives of other people).

Economics was a compromise major. The economist's rigour seemed to allow more precision than political science in describing problems and so I thought it could also be a better tool for solving them. But then I discovered after reading the second edition of Lipsey and Steiner (1969) that economics seemed more focussed on providing rationales, explaining why I saw so many unemployed black youths in Chicago and Portland, rather than providing solutions as to how to get them into jobs

In the United States in the 1960s, Full-employment was NOT Half-way through their introductory text, Lipsey and Steiner ask rhetorically: "Does full employment means (sic) what it says: zero unemployment?" And then they quickly answer: "The answer to this question is an emphatic No!"

According to Lipsey and Steiner, various causes of unemployment follow unavoidably from the functioning of a market system. "...because

people move from job to job and because the structures of demand and costs are constantly changing – some minimum level of unemployment must always occur in an economy. Full employment is usually said to occur when this minimum level is achieved."

Since this was an introductory text, the authors did not go into a lot of detail about the market mechanism but asserted that in the United States, full employment was thought to occur when unemployment was about 3% of the labour force. I had no difficulty accepting this assertion in aggregate. However, my political science training caused me to wonder why it was that economic conditions seemed to cause very little unemployment amongst my well-to-do neighbours in Carefree, Arizona or amongst my university-student peers but led to unemployment rates in excess of 10% in the black neighbourhoods of Portland and Chicago.

Still, in my student ignorance, I probably would have been content to accept the Lipsey/Steiner definition of full employment had they not included a comparison with other countries. In a little wincy footnote they told me that "...unemployment in the United States has been significantly greater than in Britain and many other countries."

In common with many introductory economics texts, Lipsey and Steiner tended to treat a core of economic theory as though it was factual – describing what they thought to be the significant relationships through assertion and without reference to original sources. This may tell us something about the understanding that policy makers have of economics, since it seems likely that few study economics beyond the introductory level.

Having said this, Lipsey and Steiner do devote nearly three pages to a discussion of the Phillips-curve relation between changes in the price level and the volume of employment.[1] Phillip's work on the inflation/unemployment relationship, of course, was not new in 1969 having been published some ten years earlier (actually in 1958).

1. When reading this text in Portland Oregon in 1969, I did not realize that Phillips was a New Zealander. The footnote told me that Professor A W Phillips was at the London School of Economics. Not that he was not an economist when he lived in New Zealand – he started out as an electrical technician.

Richard Lipsey, a Canadian, had worked on the Phillips curve when he was obtaining some of his economics education in Britain. Nevertheless, his original textbook, Positive Economics, was considerably rewritten to cover North American topics with Peter Steiner's assistance and did not give significance to the "natural rate hypothesis".

It is not clear whether Lipsey and Steiner's 1969 text was up to date with the latest developments of the natural rate hypothesis. According to David Gordon (1987), Milton Friedman and Edmund Phelps are generally given joint credit for the idea of a natural rate of unemployment, "an apparently serendipitous occasion of independent discovery." Because of Friedman's well known views, his name is more often associated with the concept than Phelps.

Two famous articles which were required reading as an undergraduate in the United States on the natural rate were: Milton Friedman's "The Role of Monetary Policy" published in the *American Economic Review* in 1969 and Edmund Phelps "Phillips Curves, Expectations of Inflation, and Optimal Unemployment Over Time," published in *Economica* in August 1967. Each had taken the standard Phillips curve, which relates unemployment to wage changes (or more typically in the American case, to price changes) and augmented it with expectations of price changes. What they showed is that under certain assumptions, the relationship between unemployment and price changes would disappear in the long run, because individuals would adapt their inflationary expectations to the actual rate of inflation. If the Phelps/Friedman assumptions were correct, in the long run there would be a natural rate of unemployment that is a rate of unemployment that economy would settle to, irrespective of government fiscal and monetary management and the rate of inflation.

Friedman's conclusion was that "there is always a temporary trade-off between inflation and unemployment; there is no permanent trade-off".

The significance of these arguments has become clearer with the passage of time. The Phillips curve has emerged as a key equation in many Keynesians' accounts of the economy, for it offers a link between the real economy of production and prices and the price level. By changing its standing in the long run, Friedman revived the analysis of the Swedish

economist Knut Wicksell, as well as attacking a crucial component of many Keynesian's analysis. This crucial component is the nonexistence of a permanent trade off.

The long-run-natural-rate- of-unemployment enabled Friedman to affirm his theory that inflation was a monetary phenomenon, particularly in the long run. The natural rate analysis eventually led to the rational expectations approach which became popular among some economists in the United States in the 1970s and in New Zealand in the 1980s.

Initially, however, the Friedman/Phelps analysis was used in America for the more mundane task of explaining what was seen as the deteriorating tradeoff between inflation and unemployment. In other words, the mainstream economists in the United States were still convinced that there was some sort of Phillips curve trade off, but were faced with the evidence of unemployment rising despite rising inflation.

One feature which was acknowledged at the time was "structural unemployment". "Structural unemployment" referred to those unemployed who lacked the skills and the experience to get jobs even when the economy was expanding It is this sort of analysis which leads to strategies focussed on active labour market policies. I was always unhappy about the rather cavalier treatment of unemployment by economists of the day. A natural rate of up to 6% was acceptable as an abstraction in text books or when you were trying to balance an equation, but it failed to meet with the reality of the disappointed unemployed youths who used to attend my OEO community action meetings.

II NEW ZEALAND BETWEEN 1935 & 1975: FULL-EMPLOYMENT MEANT IT

And then I discovered New Zealand.

The only reference to New Zealand in Lipsey and Steiner was on page 732 (there are 821 pages in the book) which noted in a section headed *Quantitative controls can be imposed in the foreign-exchange market* that "New Zealand citizens travelling abroad are prevented from obtaining foreign exchange for many purposes."

Sounds to me like the authors met some complaining Kiwis on OE in London. But what this also shows is that generally the economic ideas of

the 1960s and 1970s were from overseas to New Zealand, not from New Zealand to overseas.

So it was not until later, when reading Australian and British articles about income distribution that I came across references to New Zealand (I recall that I found very few references to New Zealand by US economists) and I learned about New Zealand's relatively equal income distribution. I followed this reference with other journal articles which described New Zealand's mixed economy.

But I also had the good fortune to meet up with a returning Fulbright student when he applied for work helping us at the OEO Community Action Program to fight poverty in Multnomah County, Oregon. Jerry Rose was a Southerner who had spent time studying and teaching in the Political Science Department at Victoria University in the late 1960s.

As well as telling some colourful stories about Kiwi-male behaviour at six o'clock pub closing time, he also told me that in New Zealand there was full employment, a fairly even distribution of income and while New Zealanders lacked many of the material things we in the States took for granted (his wife missed central heating and the lack of a clothes drier in wet Wellington), there was apparently very little poverty.

During most of the 1960s and into the mid-1970s, those officially registered as unemployed in New Zealand equalled less than half a percent of the labour force. The average number unemployed in 1966 was 463 people – a number low enough to support Cabinet Minister Tom Shand's remark that in New Zealand it was possible to know all the unemployed by name. (In 1950, there were only 12 people registered as unemployed.)

Writing in the mid-1970s, Wolfgang Rosenberg put it like this:

> There are some definitions of 'full-employment' which accept unemployment of 3, 4 or even 5 percent of the labour force. Such definitions seem to be an abuse of language. New Zealand has demonstrated during the last three decades that it is possible to have only a few hundred unemployed even when there are rapid increases in the number of persons available for work... (Rosenberg, 1977, p. 45)

So, when I came to New Zealand in 1972, the unemployment rate here was 0.5% and falling. In contrast, the unemployment rate in the United States was 5.6% and rising.

Of course, there are definitional differences, so the rates are not exactly comparable. In addition, the concept of employment is patriarchal in that it refers to paid work which men tend to take up in greater proportion than women. Putting those two issues to one side, the point remains that the mainstream view in the United States was that unemployment was a consequence of economic growth while in New Zealand labour shortages were seen as a consequence of economic growth.

At the beginning of the 1970s, the United States economy was heading into a recession while strengthening world commodity prices were leading New Zealand into one of its brief periods of strong economic growth.

Now, in 1988, the US economy is growing rapidly while the New Zealand economy is in recession. Unemployment in the United States has fallen from rates of around 10 percent experienced earlier in the decade to 5.6 percent. In contrast, the rate of unemployment in New Zealand is over 6 percent and rising (this is based on surveyed unemployment – taking registered unemployed as a proportion of the labour force, the unemployment rate is on the way up to over 10 percent).

This all raises a number of questions about the possible influence of American economics in the field of employment and social policy in New Zealand. The economics departments at New Zealand Universities in the 1970s reflected the typical lack of confidence of an insular group. With some exceptions, the lecturers and professors looked to the overseas economic journals for their affirmation. The mark of success was to write an article which could be published overseas in a "learned journal".

I came to New Zealand enthusiastic about its economic successes, especially in relation to its labour market and its egalitarian social policy. I met a rather cool reception from academics who found these areas of economics soft minded. The trouble is, the American economic journal articles that they tended to respect were written from the perspective of the American economy which has very little history of innovative social policy.

Some New Zealand social economists were miles ahead and could have told the Americans a thing or two. Despite this talent, the mainstream economics profession here was rather more interested in imitating their overseas counterparts and adopting universal prescriptions than in

analysing ways of maintaining the pleasant social conditions that prevailed when I arrived.

Clearly there had been a strong tradition of full-employment in New Zealand between the mid-1930s and the late 1970s.

- Did this full-employment come about as an accident of economic events (was it the natural rate for New Zealand) or had governments successfully managed economic activity in order to achieve full-employment?
- If the latter is the case, according to Friedman's natural rate of unemployment hypothesis, the standard of living in New Zealand may have been lower than it would have been if unemployment had been higher. Does this mean that New Zealanders were willing to accept a lower standard of living as a necessary cost of full employment?
- What relationship, if any, is there between New Zealand social policy survival and full-employment?
- How do American economists deal with the social policy implications of a natural rate of unemployment and what are the implications for New Zealand?

In this paper, I focus especially on question number three, can New Zealand social policy survive without full-employment?

III SOCIAL POLICY AND FULL-EMPLOYMENT IN NEW ZEALAND

When The Royal Commission on Social Security sat between 1969 and 1972, New Zealand was essentially a full-employment economy after a slight scare in mid-1969 when the unemployment rate rose to nearly one percent of the labour force.

In its Report, The Royal Commission states:

> Even if 'full-employment' is an imprecise concept, it is unlikely that any New Zealand Government will be able to escape from public insistence that it must so manage the economy that there is a market for the services of all who are able and willing to work. The provision of income support through social security, or, for that matter, the creation of jobs at times and places where circumstances warrant it, are only secondary protections.

And the Report itself was consistent with this view – the Royal Commission so took it for granted that unemployment *would not* become a problem for New Zealand that it only devoted 13 pages out of 390 to a discussion of unemployment benefits and nothing else about the unemployed.

There is no indication that the Commission read beyond the introductory texts such as those by Lipsey and Steiner which simply asserted the definition of full-employment without developing the economic arguments behind the definition. I would be surprised if they had read the most recent economic journals of the time (which in any case offered little in the area of US social policy).

When I came to New Zealand in 1972, all the overseas economic journals arrived by seamail and could sometimes be as much as nine months out-of-date when they arrived. Given that they contained articles based on papers that were probably prepared well over a year before that, even the most diligent New Zealand economist of the day was likely to be at least 18 months behind if reliance was placed on what was read in overseas journals (although this need not necessarily be a disadvantage...).

The point I wish to make here is that the Commission may not have been aware that the prevailing view amongst the "established" American market economists was that Governments could not manage the economy so that there is a market for the services of all who are able and willing to work and still maximize economic output.

Yet the implication of the 1972 New Zealand Royal Commission on Social Security report was that Governments could manage in this way and that it was a legitimate role for the Government.

One New Zealand economist who identified the importance of the relationship between economic and social policy was Canterbury economist, Wolfgang Rosenberg. He described the importance of full employment to social policy in the following way:

> ...full employment is perceived as the fulcrum of social welfare. A fulcrum is defined, in a mechanical sense, as a point against which a lever is placed to get support. In this sense full employment is the means without which government policies cannot effectively attain the positive objectives of improved social well-being, economic progress and human development. Without full employment, a substantial proportion of the energy and

> resources expended in various policies (for example, health, education, law and order and racial integration) would be dissipated and hence broad objectives of social and economic improvement could probably not be attained. (Rosenberg 1977, p. 45)

My own work on income distribution in New Zealand also shows the importance of full employment. When income distribution was analysed by household income, it became evident how important having employed members is to a household's relative income. Those households which had the highest income also had the propensity to have the largest number of members employed. In the early 1970s, the labour force participation of women was low and the average number of people employed per household was close to 1. Those receiving benefits were the poor of New Zealand according to the conventional definitions of relative poverty (Jack, 1973). By the mid-1980s, the labour force participation of women had risen markedly. Those households with two or more incomes (even if the secondary earners received relatively low incomes) were among the higher income households. (Snively, 1987; New Zealand Planning Council, 1988).

These ideas are frequently discussed by New Zealand economist Brian Easton in his many writings on social policy. In his early work on income distribution, Easton pointed out that contrary to myths of equality, there was poverty in New Zealand and this poverty was not confined to those without jobs. Writing in *Wages and the Poor* in 1986, Easton attempted to explain the characteristics of poverty in New Zealand in a book written for the intelligent lay reader. In a Listener review, Ian Shirley (1987) said: [Easton's] "policy prescriptions required a more penetrating social analysis than the discipline of economics was capable of providing."

Certainly I have to agree that Shirley's is a fair criticism of economists in general – it is the sort of criticism that I am making in this paper. But it is an unfair criticism of Easton who, even when it was unfashionable, tried harder than many economists to include a social analysis. Further, what Ian Shirley fails to recognize is that the debate is not just with the policy-makers who might be part of the system of power, privilege and profit, it is also with economists who sincerely believe themselves to be on the correct path by promoting a particular economic paradigm.

IV THE NZ TREASURY'S ECONOMIC MANAGEMENT OF UNEMPLOYMENT

By 1984, Treasury economists had a unified public approach to the labour market theories developed in the United States including the natural rate hypothesis, its rational expectations successor, and the market advantages of flexible labour markets.

Economic Management (1984) argues:

> ...the high levels of unemployment experienced in recent years are a symptom of the more general difficulties the economy has faced. It shows how increased employment opportunities and a better employment performance are closely related to policies designed to improve economic performance in general and the flexibility of the labour market in particular. It is also possible to improve the way in which assistance is provided for those people who are disadvantaged in the labour market and who remain unemployed for long periods...(p.235)
>
> The present unemployment problem can most usefully be considered in the context of a labour market adjusting to underlying changes in demand and supply conditions...(p.235)
>
> To the extent that the economy is not able to generate new employment opportunities rapidly enough and there is inadequate labour market flexibility, queues [of unemployed] will lengthen and people will move more slowly through them. The economy is then likely to face relatively high levels of unemployment for a prolonged period. (p.236)

So between 1972 and 1984, the relationship between governments and the labour force was changed as The Treasury saw things. According to the Royal Commission on Social Security reporting in 1972, the role of government was to manage the economy so there were jobs (or in other words, to manage the labour market), only providing assistance to people disadvantaged in the labour market as a last resort. By 1984, Treasury recommended that the Government distance itself from the managing the labour market but there was an indicated willingness to "improve the way in which assistance is provided for those people who are disadvantaged by the labour market."

Over this same period there was also a transformation in the views of mainstream American neo-classical economists. Introductory text books support this point since these seem the best weather-vanes of what is considered to be accepted mainstream analysis of the time.

The 8th edition of Paul Samuelson's *Economics* defined "full employment as a condition where 96.5 percent of the labour force are employed, rather than where only 94 or 95 percent are employed" (1970, p. 801). The 12th edition written with William Nordhaus reports: "Modern mainstream macro says that there is a natural rate of unemployment – today around 6 percent – below which the economy cannot go without running the straits of inflation" (1985, p. 766). Support for the natural rate hypothesis was buttressed by econometric research based on the presumption of instantaneous adjustment in product and labour markets.

In 1984, The Treasury advised the Government to create an environment conducive to sustained economic growth. Treasury said that this was "more likely to lead to improved employment performance...In terms of actual initiatives, this translates in to a policy package which includes fiscal restraint, regaining monetary control, freeing up interest rates, and a more market determined exchange rate." (Economic Management, p. 238)

According to The Treasury:

> In the present circumstances [in 1984], it is clear that the unemployment problem cannot be addressed by engineering an expansion of demand. This is prohibited by the balance of payments situation at present but, more importantly, past experience has shown that the employment gains arising from such expansions are both uncertain and shortlived wage restraint is essential in the short run if unemployment is to be substantially reduced. (pp.241-2, Economic Management)

Meantime, things have come full circle. There is evidence that a more pragmatic economic approach may be gaining prominence in the United States. During a recent visit to New Zealand, American economist Lester Thurow commented on New Zealand Government policy as he saw it.

> This policy holds [among other things] that it is going to stop inflation by having high unemployment...They [the unemployed] are being used as unpaid inflation fighters for New Zealand. By being unemployed, they're also forcing other people to moderate their wage demands. If you're not moderate, you'll join the dole queue. (*Listener*, Sept 17 -23, 1988, p. 30).

There is also a growing literature which questions the natural rate hypothesis. Research summarized by American economist David Gordon of the New School for Social Research casts doubt on the econometric foundations of studies alleging to support the natural rate hypothesis. When unemployment rose in a pattern which could not be explained simply by the

fall in inflation, these studies refined this concept to the 'non-accelerating-inflation rate of unemployment' or NAIRU. (Gordon, 1988). This is perhaps what Samuelson and Nordhaus are really referring to above.

But then, and I am sure that this point also comes through from the papers of my colleagues at today's seminar, there has never been only one school of thought in the United States. Our economics training at Reed (after Lipsey and Steiner) included a considerable literature outside of pure market theory as taught at the University of Chicago.

One of my classmates at Reed was Milton Friedman's son, so Milton Friedman was a frequent visitor to the campus. In fairness, I should point out that despite great preparation on our part, he always managed to win most of the arguments. With hindsight, it was not just that he was quicker than us undergraduates, it was also because he immediately channelled the discussion to logical theories which could sometimes treat "meaningless noise" (in Joan Robinson's terminology), missing some of the more important issues.

Perhaps The Treasury views in Economic Management reflect a development of a separate school of thought in New Zealand about the labour market. This would be a healthy and exciting development if Treasury's role was simply that of adviser to governments. Unfortunately, in the absence of economic debate and a New Zealand version of introductory economic texts, they have also become the perpetrators of what is supposedly mainstream economic thought in New Zealand.

Perhaps the oddest feature of this adoption of an American perspective is the fundamental difference between the two countries of the role of trade. If you are in Carefree, Arizona or Chicago, the world outside America seems trivial. From my study at home or from my office at work in Wellington, I can see the sea, and am physically aware of the impact of the outside world on me and on New Zealand trade.

I did not notice at the time I first read it, but reviewing the employment theory literature after arriving in New Zealand, I soon discovered that a major inadequacy was that it is premised on a closed economy. In contrast, New Zealand-based economists have focused on the central role of the external sector in employment determination. This must be a better approach than simply adopting the American model of a closed economy and

adding on the external sector like those fiddly things in post modern architecture. This is clearly an example of why New Zealand economists should take care when applying economic theories developed overseas – they may not all be appropriate to the local situation.

V THE 1988 ROYAL COMMISSION: ONLY FULFILLED HALF ITS TASKS

The 1988 Royal Commission on Social Policy, after much national consultation, seems to have maintained the same perspective on full employment as the 1972 Royal Commission.

> In the interests of a fair and just society... full employment must rank alongside, and at least equal, low inflation and economic growth as one of the key objectives of all policy. Within the framework of economic policies which have full employment as a primary objective there will still be a need for a range of active labour market policies. However, unless there is an appropriate economic framework, no amount of change to the labour market will provide sustainable employment growth. (April Report, Vol 11, p. 523).

The Royal Commission report sees macro-economic policy on its own as insufficient to attain full employment. Also required is an active labour market policy.

In his research for the Royal Commission, New Zealand economist Geoff Bertram (1988a) conducted an extensive literature survey looking at the costs of unemployment, fiscal clawback, labour-market structure and hysteresis. Although his references covered many nationalities, a considerable number were references to US economists. This is in contrast to the 1972 Royal Commission on Social Security which tended to look almost entirely to the United Kingdom and Europe for its insights.

Bertram notes in a follow-up article (1988b) that American economist Arthur Carnevale (1985) has diagnosed the reasons for mass unemployment in the US in the 1980s. He attributes it to a combination of two interrelated trends: a rise in the NAIRU and the impact of anti-inflationary policies.

American economists Oliver Blanchard and Larry Summers (1986) introduced a similar hysteresis concept which highlights the sensitive dependence of unemployment on current and past events. This stands in contrast to standard neo-classical theories which suggest small shocks have

small symmetrical effects, and the system always returns to a natural rate. Carnevale has developed this view, arguing that unemployment created originally by deflationary policy becomes progressively built-in to the NAIRU and cannot be expected to react sensitively to subsequent reflation of the economy.

In other words, even if macroeconomic policy management were adopted, it would not be enough. An active labour market policy would also be required. The wheel is turning towards a full circle. The Americans are coming around to where New Zealand was when I got here.

Bertram (1988b) felt that much labour market research takes too little account both of the complexity of real-world labour markets and of the importance of fitting individual policy elements together into a mutually-supporting and consistent package. He felt that active labour-market policy in New Zealand has been imitative and piecemeal. The need is for more thorough and rigorous research into local conditions plus a commitment to an integrated strategic package of measures aiming to return the economy to full employment without inflation.

Lack of time meant that Bertram was unable to further develop his ideas for the Royal Commission. But what comes out of his conclusions is the confidence that there can be a unique New Zealand perspective on these issues. And this confidence is not borne out of isolation, it reflects the self-confidence of a New Zealander who has studied and published overseas.

There are a number of other important articles amongst the Royal Commission's report which point out the significance of work and the links between economic and social policy. But there is little attempt to synthesize this material and link it into the recommendations.

The gap between the recommendations of the 1988 Royal Commission and the Treasury is considerable. To date this difference has been treated in at least two unproductive ways. One is to, in effect, label those in Treasury as 'pure economist' and those working with the Royal Commission as 'non-economists'. The differences, then, arise because Treasury has a realistic understanding of the limitations of what the economy can deliver while the Royal Commission has a realistic understanding of what it is that the public of New Zealand wants from social policy. Both sides have been

heard to call the other side ignorant because of their poor understanding of the other side.

Another is to treat the differences as ideological. The Treasury view is identified as individualistic and materialistic in its origins and the political outcome is achievable because the groups disadvantaged by the policies are not politically powerful. The Royal Commission approach is utilitarian – trying to at all times promote the greatest good for the greatest numbers, even if this means a lower standard of living for all.

Labeling different schools of thought is almost always silly because it fails to recognize the complexities that the approaches are grappling with. But identifying the different schools and providing an accurate account of the underlying premises is important to knowing how the expected outcomes can be achieved.

This is where the 1988 Royal Commission on Social Policy failed. It used modern consultative techniques, including preference surveys, to discover the outcomes that New Zealanders want. Full employment is identified as a high priority. The Royal Commission then recommended that this must be done through economic management but it failed to tell us how the economy must be managed for this to be achieved.

True, we were told that macroeconomic management was not enough and that an active labour market policy was also required. But there was no attempt to meet the arguments that there would always be some unemployment in an economy managed to produce maximum output or that the prospect of sustainable economic growth in the future justified more unemployment in the short term. In short, we were not provided with an alternative way of managing the economy to that proposed by The Treasury.

With the unemployment rate heading up, there are increasing strains in the systems developed to provide the social security which New Zealanders have become accustomed to and which they told the 1988 Royal Commission they wished to be provided by the State.

We are now on a collision path. On the one hand, the Government has taken measures to cut back the fiscal deficit and promises more cutbacks in the coming year. On the other hand, with unemployment growing, the costs of social welfare must rise – not only through more unemployment

benefits but also because other people who are eligible for benefits such as those over 60, the sick and solo parents are going to be inclined to take benefits rather than walk the streets for the little work that is available to them. These people, with more time on their hands, also tend to use health care and education services more, leading to greater government expenditure in these areas.

The American economists, after watching generations of the unemployed, have not come up with any simple answers. But at least some such as Carnevale, Gordon and Thurow have finally started to focus on the relevant labour market, social and economic issues. We see from recent experience that the high US fiscal deficit has contributed to reducing unemployment in the United States.

A more convincing case that unemployment is only an accidental outcome could be made if there were some genuine attempts by New Zealand and United States economists to focus on the development of techniques to maintain full employment – not in the far distant future, but now. Not only is this is a basic requirement of a democratic society, but it is a basic requirement to the social contract that has been agreed between the peoples of New Zealand.

In the last few years in New Zealand is has been very difficult to get to the bottom of the real issues. Perhaps it was a necessary part of the process of argument for the various factions to polarize around their perspectives. There has also been unnecessary personalization, which may be inevitable in a small society. But this has got us absolutely nowhere – the factions may be further apart now than they were four years ago.

This paper has pointed out some of the limitations of conducting the arguments about economic and social policy separately. It creates a kind of intellectual apartheid when the real solutions lie with identifying the differences and trying to resolve them. The outcome of this separation has been rising unemployment, more social costs (including rising government spending) and low economic growth. The prospect is these trends will continue, as long as the battle that is pursued is one setting economic and social policies against each other instead of a battle against any ineffectual policies.

I am not talking here of seeking some platitudinous consensus. Rather, there is a need for conducting an enquiry from several perspectives, but with the aim of developing testable, and refutable, hypotheses. Otherwise, the debate will revert to the economic textbook analysis of the early 1970s, swinging from one fashionable economic theory to another.

In ten years time, the Fulbright Foundation will be celebrating its 50th anniversary. If we can get the New Zealand debate right, we may well find a role reversal, and New Zealand ideas about the working relationship between economic and social policy leading to policy innovation in the United States, as occurred in the early part of the century with the impact of the liberal policies on thinking in the United States.

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Session I

Chair: Mr Paul Cleveland, US Ambassador to New Zealand
Speaker: Professor Richard Miller, Wesleyan University
1986 and 1988 Fulbright Fellow at NZIER
Discussant: Dr Bryce Wilkinson, Jarden Morgan
1977-78 Harkness Fellow at Harvard

Session II

Chair: Dr Graham Scott, Treasury. 1966-69 James B Duke Fellowship at Duke University. 1969-73 Worked in US.
1985 Harvard Business School.
Speaker: Professor Douglas Greer, San Jose State University.
1988 Fulbright Fellow at NZIER.
Discussant: Kerrin Vautier, Commerce Commissioner
1984 International Visitors Programme to US.

Session III

Chair: Professor Fraser Jackson, Victoria University of Wellington
1965 Harkness Fellow.
Speaker: Brian Easton, Economic Consultant,
1983 International Visitors Programme to US.
Discussant: Bernard Galvin, Economic Development Commission
1960 Harkness Fellow at Harvard University

Lunch

Chair: Dr Alan Bollard, NZIER, 1976 Student Visiting Fellow to US, 1986 International Visitors Programme to US.

Speaker: Hon David Caygill, Deputy Minister of Finance, Minister of Health. 1966 American Field Scholar

Session IV

Chair: Professor Frank Holmes, Institute of Policy Studies
1963-64 Fulbright and Carnegie Fellowships at Brookings Institution

Speaker: Professor Lewis Evans, Victoria University of Wellington
1972-76 University of Carnegie Mellon, Pittsburgh

Discussant: Dr John Fountain, University of Canterbury
1969-74 Stanford University

Session V

Chair: Professor David Sheppard, Victoria University of Wellington
1956-58 Harvard on Harvard Scholarship. 1972 Harvard University. 1985-6 Wharton School, University of Pennsylvania.

Speaker: Ewen McCann, University of Canterbury
1963 University of Michigan. 1964-69 University of Chicago on Ford Foundation and Rockefeller grants.

Discussant: Grant Spencer, Reserve Bank of New Zealand
1981-84 International Monetary Fund, Washington, DC.

Session VI

Chair: Dr Claudia Scott, Victoria University of Wellington
1969 Duke University
1973 – University of Auckland and Victoria University of Wgton

Speaker: Suzanne Snively, Economic Consultant
1972 US Fulbright Scholarship to New Zealand

Discussant: David Preston, Department of Social Welfare
1967-70 International Monetary Fund, Washington DC

In recent years New Zealand has been through radical economic changes. Many of the new policies have originated from advances in US economic thinking. How important have US-inspired policies been? How appropriate are they for New Zealand? Have they been satisfactorily filtered and adapted? What can be learned from New Zealand's experiences?

The papers in this volume answer these questions. They systematically analyse the effects of US economic developments on New Zealand thinking and policy in the areas of competition and efficiency, regulation, monetary and fiscal policy, labour markets and social policy.

The authors/commentators are all New Zealand or American economists with research experience in the other country. The Fulbright Economic Seminar was organised for the New Zealand–United States Educational Foundation by the NZ Institute of Economic Research.