Intellectual Property Rights and Innovation Policies: The Impact on Income Distribution in New Zealand

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Abstract:

New Zealand's Fifth Labour Government was elected to government in 1999, and has recently been reelected for a third term. At least initially, the Government has associated itself with the international emergence of a 'Third Way', paving a middle road between the social democratic Keynesian influences that presided over policy making until the mid 1970s, and more recently the neo-liberal agenda that has prevailed since 1984.

As part of this approach, in February 2002, New Zealand's Fifth Labour Government launched it's “Growth and Innovation Framework” (GIF), which is considered to be a broad economic and social framework designed to stimulate innovation and subsequently, increase per capita economic growth. The key features of this programme include a renewed commitment to the monetarist macro and microeconomic fundamentals that were put in place since 1984, some reference to minor improvements in the provision of welfare, and a number of supply-side initiatives designed to improve the ability of business to commercialise innovation, including improving the links between industry and the education sector at all levels. According to the key policy document “Growing an Innovative New Zealand”, this framework will improve the material standard of living of all New Zealanders.

The main objective of this paper is to report the results of an empirical investigation into this claim. Intellectual property rights are the primary mechanism through which the profits of innovation are appropriated. Intellectual property rights as they exist in contemporary capitalist societies are considered by many authors to be inappropriate and inadequate for protecting the cultural and intellectual property of indigenous peoples. In addition, from a Marxist perspective, the employment relationship is seen as exploitative, and the appropriation of intellectual property rights from workers to employers, or labour to capital, can be seen as an extension of this exploitation.
The GIF has clear neoclassical underpinnings. In the case of New Zealand, the implementation of neoclassical economic and social policy since 1984 has lead to a widening of the gap between rich and poor, and there is little evidence to suggest that the outcomes of this policy framework will be substantially different. In other words, it seems highly unlikely that this promise of improved living standards of all New Zealanders will be realised. The impact of the GIF on the distribution of income between employers and employees, and Maori and non-Maori will be considered in order to assess this expectation. In this paper, I use a Marxist perspective to critically analyse the GIF focusing on the economic and social outcomes of the implementation of this policy framework.

1 Introduction

Between 1984 and 1999, New Zealand was subjected to the extensive and comprehensive implementation of neo-liberalism. This consisted not only of the radical restructuring of the economy, but also the redefinition of the welfare state and the slashing of social spending. The first section of this paper highlights the fact that New Zealand's economic experiment resulted in a significant increase in income inequality, as well as the erosion of incomes of the poorest 70 percent of the population. When the Fifth Labour Government replaced National in 1999, there was some hope amongst social commentators that perhaps changes would be made, and that the Government might take steps to restore the living standards lost by many New Zealanders between 1984 and 1999. The narrow reelection of Labour in 2005 has confirmed the need to continue to investigate the impact of this overall economic strategy on the citizenry. Section Three primarily seeks to identify the macro and microeconomic underpinnings of the Growth and Innovation Framework, which links together a number of policy priorities designed to increase the level of per capita economic growth. In turn, it is suggested that if economic growth is delivered, the living standards of all New Zealanders will be lifted by the framework. The position taken in this paper is that the GIF is essentially a continuation of the neo-liberal economic agenda, and is subsequently largely concerned with the operation of markets on the supply side. Given the track record of successive New Zealand governments in failing to improve the material standards of living of all New Zealanders through neo-liberal restructuring since 1984, the GIF needs to be treated with some skepticism in this regard.

In the fourth section, it is suggested that the main benefactors of the GIF will be the interests of business, as they own and control the majority of intellectual property rights. This in turn has implications for employees and Maori, as in each case there are limits to the extent to which both groups retain control and ownership over their own ideas, knowledge, and creative expression. Intellectual property rights are the primary means of ensuring due return for creative and intellectual labour in a capitalist society. For workers, this occurs within the context of employment law and the negotiation of an employment contract. Similarly, there are concerns about the adequacy of the intellectual property rights system for ensuring due compensation to Maori for the use of their cultural and intellectual property. In the context of a policy framework designed to stimulate innovation, without the formulation of adequate redistribution measures, the prospects of the GIF leading to improved living standards for all New Zealanders are limited. It is argued that these limitations are enhanced by the current distribution of intellectual property rights. Finally, in Section Five, some initial indications of the persistence of income inequality in New Zealand will be presented. Supplementary measures are still being compiled, and will be made available when this paper is delivered at the Conference.

2 Historical Background

Between 1984 and 1999, successive New Zealand governments gained international attention as a consequence of the economic fundamentalism that has permeated policy making. There are two reasons for this: the speedy implementation of the new policy agenda (the *Economist* described New Zealand as a "trailblazer of economic reform"[1]), and the fact that the neo-liberal model of economic management was applied in almost every sense imaginable to almost every sphere of policy-making possible. Economists from all over the world have applauded the efforts, citing New Zealand as both a leading example of not just how to liberalise an economy, but how to take it to the utmost extreme, "…out-Thatchering Mrs Thatcher".[2] On the other hand, social commentators have lamented the fact that the reforms have not been without cost. New Zealand's social fabric has transformed significantly since the initiation of the reforms. Whether or not the reforms have worked in terms of putting New Zealand

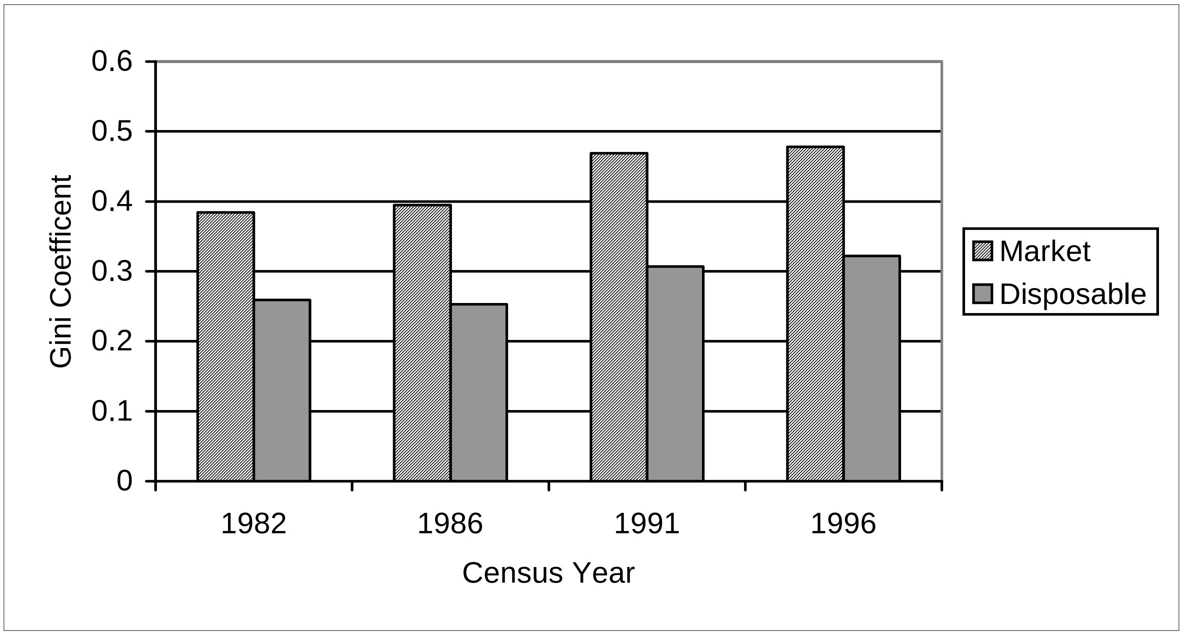
[1] *Economist*, 23 November 1993, cited in Kelsey, J., 1995, *The New Zealand Experiment: A Model for World Structural Adjustment*, Auckland University Press, Wellington, p 8.

[2] *Economist*, 15 June 1991, cited in Kelsey, J., 1995, *The New Zealand Experiment: A Model for World Structural Adjustment*, Auckland University Press, Wellington, p 8.

back on the path to prosperity, the reality is any positive results have not been felt by the majority of New Zealanders.

The neo-liberal policy agenda has clearly led to an increase in income inequality, as demonstrated by estimations of the Gini coefficient over the period.

Table 1: Gini Coefficients for Market and Disposable Income 1982-1996[3]



In Figure 1, it is evident that the distribution of income has become increasingly unequal over time. With respect to market income, the Gini coefficient increased from 0.384 in 1982 to 0.478 in 1996. There are two sets of mechanisms generating inequality: outcomes of the market, and the redistribution of market outcomes by the state. Whatever the outcomes of the market, the state can still have significant effects in redistributing those outcomes, which would ultimately be reflected in disposable income. Crucially, although obviously transfer payments are designed to offset the more extreme outcomes of the market, disposable incomes also became more unequally distributed over the period, reflected in the increase in the Gini coefficient from 0.259 in 1982 to 0.322 in 1996.[4]

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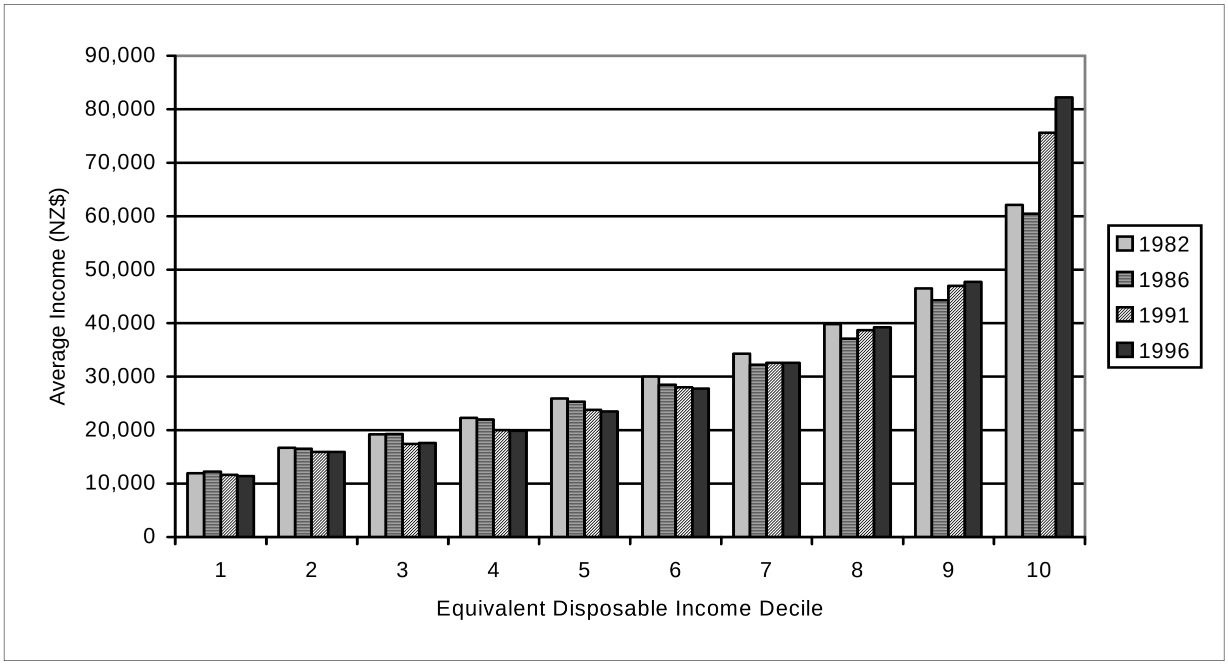
3 Statistics New Zealand, 1998 edition, *New Zealand Now: Incomes, Wellington*, p 69. The original source is the Household Economic Surveys.

4 Importantly, the full impact of the reforms on income distribution is not fully illustrated in the deviance from full equality of Lorenz curves. One complicating factor when trying to measure the effect of specific policies is that they often affect different groups in different ways. The classic example of this is the introduction of the Goods and Services Tax (or GST) to New Zealand in 1986. Because it is a tax on consumption, the incidence of GST falls more heavily to those on lower incomes, because an individual on a lower income is out of necessity more likely to have a higher proportion of their income committed to consumption (rather than saving or investment), hence, a higher proportion of their income is indirectly taxed. It therefore follows that the incidence of a consumption tax is likely to be much higher on the lower income earner than the higher income earner. Because it is a tax on consumption, the rise in GST made by the Fourth Labour Government had a significant effect on disposable incomes, which were felt mainly by lower income earners, while to the higher income earners, the change would have been relatively unnoticed.

Figure 3: Average Household Equivalent Disposable Income by Household Equivalent Income Decile 1982 to 1996[5]



The erosion of real incomes is made most clear by reference to Figure 3. All deciles apart from the top two experienced a decline in the average disposable income. While the decline was relatively small for deciles one and eight, fifty percent of the population (that is, for deciles three, four, five, six and seven) experienced an average decline in their annual disposable income of $2,340 over the period. The most extreme case is that of decile four, whose incomes were cut by $3,400 on average. This might not sound like much over a period of fourteen years, but particularly for those on lower incomes, the burden has been significant. On the other hand, the ten percent of the population with the highest disposable incomes received an increase of almost $20,000 on average.

This reduction in real incomes was primarily caused by a combination of major changes to the personal income tax scale and slashing of welfare benefits. In October 1986, the top tax rate was dropped from 66 percent to 48 percent, and this was further reduced in 1988 with the introduction of a two-step tax scale: income under $30,875 was taxed at 24 percent, and income over that level was taxed at 33 percent. This was coupled with a reduction in the company tax rate. Although changes were made to welfare during the term of the Fourth Labour Government between 1984 and 1990, the Fourth National Government pushed through the most substantial cuts to social spending during their first term, demonstrated most effectively by a reading of Ruth Richardson's' Mother of All Budgets in 1991.[6]

What does this have to do with evaluating policy under the current Government? The election of the Fifth Labour Government was greeted with relief by many who hoped that their return to power might mean the reversal of the decline in real incomes for low and middle income earners that has occurred over the last fifteen years. In reality, since Labour have been in office they have retained the essence of the neo-liberal reforms and only made small steps in terms of social policy. The Growth and Innovation Framework essentially sets the direction for economic policy, with its principle objective being the acceleration of economic growth. Specifically, through the GIF the Fifth Labour Government aims to

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[5] Statistics New Zealand, 1998 edition, *New Zealand Now: Incomes, Wellington*, p 70. The original source is the Household Economic Surveys.

[6] Roper, B. S., 2005, *Prosperity for All? Economic, Social and Political Change in New Zealand Since 1935, Thompson / Dunmore Press*, Australia, see chapters 9 & 10.

increase per capita Gross Domestic Product to a level which places New Zealand back in the ranks of the top half of the OECD countries by 2011.[7]

At the same time, the GIF is considered by its proponents to be a comprehensive framework aimed at streamlining policy throughout all government departments and agencies, ensuring consistency of the vision. The Government stresses that the objective of achieving higher economic growth is important because:

> *…not only will it enable New Zealanders to enjoy standards of living comparable to the best in the world, but also because, without higher growth rates, New Zealand's ability to finance the provision of public goods in the way that other first world countries do will be compromised.*[8]

This seems reminiscent of the argument put forward during the late eighties and nineties: that the reforms were necessary, and that the positive outcomes that were guaranteed by their implementation would eventually (and automatically) trickle down to those at the bottom. Clearly this didn't happen from 1982 to 1996. In the Foreword to *Growing an Innovative New Zealand*, Helen Clark specifically suggests that economic success will deliver "…*for all New Zealanders* the standards of living to which we aspire" (emphasis added).[9] To this end, the GIF does contain reference to social policy, but is primarily concerned with setting the economic agenda, which largely constitutes a commitment to neoliberalism, as detailed in the next section. Quite apart from being linked to a broader philosophical framework that also prescribes a role for social policy, the economic framework can place significant constraints on social policy, for example, by defining appropriate spending levels. Economic and social policy are inextricably linked. This has important implications for income distribution that will be explored in the third section.

2 The Neoclassical Underpinnings of the GIF

The GIF is set out in a document entitled "Growing an Innovative New Zealand", published in February 2002 by the Department of the Prime Minister and Cabinet. The policy rationale of the GIF is set out in Chapter Two of the document and is divided into two sections: 'Strengthening the Foundations' and 'Building Effective Innovation'.

Strengthening the Foundations

This section of the GIF essentially signals the political climate in New Zealand under the Fifth Labour Government as characterised by a basic commitment to the free market ideal, tempered by small scale social reforms in order to alleviate the worst effects of fifteen years of neo-liberal attacks. There are five elements to this foundation detailed in five subsections: a stable macroeconomic framework, an open, competitive micro-economy, a modern cohesive society, a healthy population and sound environmental management.

The subsection on providing 'a stable macroeconomic framework' establishes that the Fifth Labour Government remains committed to the fundamentally neoliberal macroeconomic strategy that was achieved between 1984 and 1999. Centrally, this involves the retention of the monetarist agenda encapsulated in the Reserve Bank Act 1989 in conjunction with the Policy Targets Agreement, which

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7 *Growing An Innovative New Zealand*, The Office of the Prime Minister, Wellington, 2002, p 14.
8 Ibid., p 12.
9 Ibid., p 5.

not only ensures price stability through minimising inflation, but also prevents the government from having direct control over the implementation of monetary policy. Coupled with the Fiscal Responsibility Act 1994 and the Public Finance Act of 1989, this limits the capacity of the government to deviate significantly from the neo-liberal agenda (by, for example, re-committing itself to full employment or engaging in high levels of public spending). In addition, it is explicitly stated that the Government welcomes foreign investment and will pursue "fair and open free trade".[10] The main objective of the entrenchment of this monetary policy framework is to ensure a level of business confidence that is conducive to investment.

The sub-section on ensuring 'an open, competitive micro-economy' sets out an objective of removing barriers to trade in both domestic markets and internationally. It identifies key areas where the Fifth Labour Government has made changes at a microeconomic level in the general interests of clearing markets and ensuring the effective operation of the price mechanism. These fit into two general categories. Firstly, the modification of regulatory regimes within New Zealand markets such as electricity and telecommunications and the reduction of compliance costs for small and medium businesses generally, for example with respect to taxation, have aimed to create greater competition and increase efficiency. Likewise, efforts to free up markets domestically, as in the case of primary products and internationally, and in aligning New Zealand's competition laws with Australia through amendments to the Commerce Act, have been informed by a similar objective. At the time the document was written, the Government also counted among its achievements the pursuit of closer economic relations with both Singapore and Australia, and its contribution to the increasing liberalisation of world trade in agriculture through the Doha meeting of the World Trade Organisation.

This agenda relies heavily on neoclassical assumptions about the operation of markets. It could be argued that in some cases the Government may have been politically motivated to improve conditions for consumers in for example, the increased competition in the telecommunications industry, which in theory could have led to price decreases over time. However, the overwhelming emphasis in this section of the policy document (and in the relevant section of the Briefing to the Incoming Government 2002) is an articulated concern with improving the environment in which businesses operate, and expanding markets by increasing access and alignment to overseas markets:

> *Entrepreneurs require clear market signals so they can identify profitable opportunities. Market signals provide the information necessary for entrepreneurs to identify and take up profitable opportunities, and these signals should reflect underlying realities rather than regulatory distortions. In turn, this requires access to domestic and international markets, and prices that are not unduly distorted by taxation, inflation or subsidies.*[11]

In other words, neoclassical growth theory prescribes exactly this kind of supply side intervention at the micro level, following the rationale that sustained economic growth will follow if the conditions are right, one of which is that the market is exposed to the rigors of open competition.

Not surprisingly, the subsection on "a modern cohesive society" lists various policy initiatives that fall broadly into the realm of social policy. In the opening paragraph, reference is made to New Zealand leading the world in welfare reform, the principles of which are:

> *…as relevant today as they ever were – security of income for those in need, the primacy of sustainable paid employment, access to high quality and affordable health care, and*

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10 Ibid., p 27.

11 Treasury, 2002, *Briefing to the Incoming Governmen*t, p 27.

dignity for older New Zealanders through a guaranteed retirement income.[12]

This sounds encouraging, especially coming from a Labour Government. It is true that since their election in 1999, the Fifth Labour Government have made some small but significant changes in the broad category of social policy and welfare provision. The overall ideological position is indicated in the second paragraph:

> *Economic and social development go hand in hand. A growing economy is the best guarantee of social security, and encouraging sustainable employment is one of the best contributions that government can make. That is why the government has move to refocus social welfare as an active and enabling force in people's lives.*[13]

The neoclassical school assumes that an increase in per capita income will automatically benefit everyone by 'trickling down' to reach those on lower incomes as well as those on higher incomes. As one of the key assumptions of the GIF, this assertion is contestable in the absence of sufficient redistribution mechanisms. While the limitations of this assumption are acknowledged, neoclassical economists still prescribe a very limited role for the welfare state, in order to prevent distortions and the removal of incentives to work.

The policies listed in the Growth and Innovation Framework reflect that the Fifth Labour Government retains a basic commitment to these principles. The abandonment of full employment is retained, while the emphasis is still on the individual in terms of encouraging labour force participation. Elements of the punitive welfare state consolidated by the Fourth National Government remain. Treasury reveals the underlying assumptions more clearly than they are articulated in the GIF:

> *Income transfers are important for the well-being of people in temporary difficulty, and those who will always find it difficult to earn adequate income in the labour market. However, the evidence suggests that it is better for economic growth that those who can, support themselves through paid work. Social assistance reforms should therefore place a high weight on getting beneficiaries into a job. Policies to support this include job search assistance, clearly signaled job search expectations, and "making work pay" policies, such as in-work tax credits.*[14]

The policy initiatives listed in this subsection of the document fall into three broad categories: those aimed at improving service delivery (at community and central government levels); those comprising an intervention of some description in the community (a subgroup of which are focussed on access to information and communication technologies), and those specifically directed at income levels or living costs.

In the first category, policy initiatives designed to improve service delivery have remained focused on the delivery process itself rather than the service being delivered. In other words, rather than extra funding being directed towards social service organisations for operational costs, the emphasis has been on organisational change and collaboration, in the interests of both providing better access to existing services and increasing the efficiency with which social services are delivered. For example, the establishment of Heartland Service Centres in rural and provincial areas has to some extent restored more direct access to government agencies than was possible in the late 1980s and 1990s as a result of the restructuring and rationalising of the public sector. As Steve Maharey, then Minister of Social Services and Employment acknowledged, the impact of the closure of services from rural areas has

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12 *Growing An Innovative New Zealand* , p 28.

13 Ibid., p 28.

14 *Briefing to the Incoming Government 2002*, p 26.

been felt particularly strongly by those on lower incomes.[15]

Other policy initiatives in this category are similarly focused on building relationships between government agencies and social service organisations, at both national and local levels. For example, the GIF includes a government commitment to improving its relationship with community, voluntary and iwi / Maori organisations, as articulated in the *Statement of Government Intentions for an Improved Community – Government Relationship*, which lists among other commitments an improvement in government culture with respect to diverse values and a "whole of government approach".[16] Similar sentiments are echoed with respect to building sector relationships and the establishment of the Community and Voluntary Sector Working Party, which was established to give voice to the sector, and help rebuild trust between the sector and the Government.[17] The rationale for this supply-side emphasis is clear: to ensure efficiency within participating organisations, an added bonus of which might be better service provision:

> *According to New Zealand and international literature, there is little or no research evidence proving that collaboration in itself improves outcomes for individuals or for their families / whanau... However, there is some evidence that collaboration can enhance the quality of services and benefit participating organisations. These benefits include better processes, improved relationships, a greater capacity to respond to local needs, and a more efficient use of resources.*[18]

In other words, the primary emphasis is on improving the context in which social services are delivered, rather than the social services themselves.

In terms of community based or local initiatives, those listed in *Growing an Innovative New Zealand* share an overall emphasis on 'capacity' building, an approach that signals the move towards a social development approach to social service provision. Table 1 summarises the difference between this approach and the traditional system, as seen by the Government in June 2001:

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15 See Maharey, S., "Putting the Heart Back Into Rural New Zealand", comments at the launch of the Dargaville Heartland Services Centre, 10 May 2001.

16 *Statement of Government Intentions fir an Improved Community – Government Relationship*, December 2001. Interestingly, the document also commits the Government to "undertake a programme of work to address concerns about funding arrangements, effectiveness, compliance costs and related matters". Any increase in funding is not directly referred to in the Growth and Innovation Framework.

17 *He Waka Kotuia: Joining Together on a Shared Journey, Report of the Community – Government Relationship Steering Group*, August 2002, Ministry of Social Development, Wellington, p 11.

18 *Mosaics: Key Findings and Good Practice Guide for Regional Co-ordination and Intergrated Service Delivery*, Ministry of Social Development, 2003, p 2.

Table 1: Summary of Key Characteristics of 'Traditional Welfare' and 'Social Development'[19]

	Traditional Welfare	Social Development
Objectives	Income assistance; little focus on lack of skills or other problems	Helping and supporting people while they lift their skills
Focus	The individual	The individual within their family or community (strengthening both)
Delivery	Centralised, impersonal	Local partnerships and individually tailored assistance
Aims	Income support to alleviate poverty	Poverty alleviated while participation skills are developed
Success Measures	Fast and efficient delivery of income support	People into sustainable work; others supported to participate; fast, efficient and responsive delivery of income support

The overall emphasis is still on the individual, but the range of possible policy options has expanded to include a range of initiatives designed to address issues that are perceived to be preventing individuals from participating fully in the labour market, for example, low levels of skills or educational attainment, medical condition or disability, or hardship. In other words, in addition to proving a basic level of income through social transfers such as benefits, other policy initiatives have been designed to address barriers to participation:

> *It is in all our interests to build a better, fairer and more productive society with opportunity for all. A system that provides security, encourages people to realise their potential and assists them to make the difficult transition to work is a cornerstone of social development.*[20]

While the focus is primarily on individuals, there have also been examples of the Government offering funding or support to community and iwi organisations to either provide services or programmes at a local level, or provide funds for grants to be offered on a competitive basis to community based groups or projects. For example, the Community Organisation Grants Scheme (COGS) is described as a "community-driven government-funded scheme – an example of the community and government working together to build strong, sustainable communities, and to provide strong social services."[21] While centrally funded, funding allocations are made at the local level by volunteers forming Local Distribution Committees. It should be noted that this is not a new scheme: rather COGs is celebrating its twentieth anniversary in 2006, after its inception during the Fourth Labour Government. The GIF simply indicates that the application process has been made available online.

Although speaking specifically about Closing the Duncan suggests that the main focus of capacity building is to address the deficiencies of the system of contracting out the provision of social services. While it is not preferable for the state to intervene, the contracting out of social services can be problematic if groups don't have the organisational and administrative capacity to deliver social services successfully, and capacity building refers to the process of facilitating its success.[22] Probably the most important point to make so far is that the focus is still on the supply side of service provision, rather than significant new funding for social service provision. In so far as policy is focussed on the demand side (for income support and social service delivery) it is about recognising the links between elements of social development, and subsequently administering limited resources on the supply side

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19 Table reproduced from *Pathways to Opportunity: Nga ara whai oranga: From Social Welfare to Social Development*, Government Statement, June 2001, p 2.

20 Ibid., p 22.

21 See the description on the Department of Internal Affairs website at http://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Services-Community-Funding-What-is-COGS?OpenDocument (accessed 31st May 2006).

22 Duncan, G., 2004, *Society and Politics: New Zealand Social Policy*, Pearson Education, Auckland, p 229.

accordingly. This will be explored more in section 6,4.

Finally, only two of these initiatives are directly concerned with income levels and basic living costs: that is, the restoration of income related rents and linking superannuation payments to average wages. In Budget 2000, the Fifth Labour Government fulfilled one of their key election promises to restore income related rents to low income state tenants, resulting in the reduction of rents to no more than 25 percent of the tenant's net income.[23] This was projected in Budget 2000 to benefit some 40,000 by an average saving of $40 a week on their housing costs.[24] The rationale for this policy is clearly political, but also links well with the social development approach, encouraging participation:

> *Education, housing, health and dignity in retirement are the core challenges of any civilised democracy. These programmes improve the participation of all New Zealanders in the full range of opportunities that a productive economy makes possible. The problem that we face as a society is that for too long participation has been a privilege, not a right.*
>
> *This Budget begins to redress the balance. There is something in this Budget for everyone, but because capacity to engage in social life is uneven, improving that capacity will require more to be spent on those who have been excluded.*[25]

The restoration of income related rents is one area in which the government has softened the neoliberal approach. There is a new emphasis on the role of the state in a particular market, although it should also be noted that this is not inconsistent with the neoclassical approach. Essentially, there is a renewed commitment in the Fifth Labour Government's housing policy to the idea that market failure exists in the sector, justifying state intervention, whereas the Fourth National Government didn't believe that the market for housing was failing. In addition, the focus remains on the supply side.

The linking of superannuation rates to 65 percent of the average ordinary time net wage was also an important policy change, but didn't signal such a strong rejection of a previous policy focus as that shown in response to housing. It has, as Cullen claimed in the 2000 Budget Speech, constituted an important step in safeguarding the relative living standards of superannuitants. [26]

Building Effective Innovation

Because “a solid foundation is not enough”, the Growth and Innovation Framework contains four specific strategies for building innovation. These include enhancing the innovation framework, developing skills and talent, increasing 'global connectedness' and focusing government resources. In the context of a broadly neoclassical macro and microeconomic strategy, they contain a number of policy initiatives that require explanation with reference to the economic literature on innovation and growth detailed in the first section of this paper.

The sub-section entitled “Enhancing the innovation framework” (pp 33-36) presents a number of initiatives designed to assist in the commercialisation of research activities. Broadly speaking, these initiatives fall into two categories: those which provide for increases in the funding directed towards innovation, and those which in some way endeavor to create an environment that is generally more

[23] This calculation is based on the income of the tenant and their partner, but also takes into account the composition of households. See DTZ New Zealand, 2004, *Changes in the Structure of the New Zealand Housing Market*, Centre for Housing Research Aotearoa New Zealand, Wellington, p 57.

[24] Budget Speech, 2000, p 12.

[25] Ibid., p 13.

[26] Ibid., p 12.

conducive to innovation.

The provision of increased funding for research and development activities could be interpreted as an example of an interventionist role for the state. This seems at first glance to contradict the suggestion that the Fifth Labour Government has so far maintained a strong basic commitment to the principles of the free market. In reality, neoclassical economic theory does incorporate scope for government intervention, which is informed at a technical level by reference to a degree of 'market failure'. It is widely acknowledged in the literature that markets are prone to failure in the delivery of research and development activities, because of their high start up costs and delayed profitability.[27] Within the neoclassical economic tradition, there is a theoretically identifiable point at which the state should intervene to ensure the provision of a "socially optimum" level of R & D, which is informed by marginalist economic principals.

These funding increases have all been directed at addressing specific overall deficiencies in the funding of research and development activities. Rather than being based on Keynesian principles of state investment to address deficient demand through specific microeconomic interventions, they have taken the form of general increases in spending (via specific funds), likely to lead towards innovative activity. While this seems somewhat contradictory: the point is that once particular areas have been identified in which the market has failed to provide adequate funding for research and development, any funding increases are injected in a general way. For example, rather than the government selecting which private sector research and development activities to support, or which basic research should be funded, the GIF document instead cites examples where they have simply injected more funding (in these cases, to the Marsden Fund and New Economy Research Fund, and by doubling private sector R&D grants). This general approach reflects clear neoclassical underpinnings, with its emphasis on the supply side. The preference is for market forces rather than the state to decide what projects should be funded on a commercial basis rather than for political reasons.

In some cases, policies related to funding have been clearly tailored if not in scope but in form to better meet the needs of innovating businesses, either established or in the earlier stages. For example, a reported deficiency in seed investment lead to the establishment of the Venture Investment Fund in 2001, designed to "...accelerate the development of the venture capital market in New Zealand".[28] Essentially, this again represents an effort to improve the overall functioning of a microeconomic unit – the equity market. Noticeably, there has been no corresponding call for an increase in general saving (other than the reconsideration of the compulsory superannuation fund), as in contemporary neoclassical terms, this is considered effective only in the short run.

More crucial than the existence of small but general increases in funding is the creation of an environment that is more conducive to innovation. A central part of this objective is the formation and encouragement of links between research and business interests. Examples are the development of programs and strategies to support and mentor entrepreneurs and innovators, and increase collaboration between and 'connect' researchers, innovators and entrepreneurs. These include the adoption of consortia funding to improve links between business and researchers, and the support of the development in partnerships that result in schemes such as business incubators. Importantly, the Government considers itself somewhat of a role model in taking on the challenge of applying this commercial rigor to its own activities, through becoming an "effective, efficient and innovative" public sector. Treasury implies the ongoing rationalisation of the public sector that was predominant through

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[27] This is generally accepted in the economics literature. See for example Mankiw, N. G., 1997, *Macroeconomics*, Worth Publishers, New York, pp 110-111; Coombs, R. et. al., 1987, *Economics and Technological Change,* MacMillan, London, pp 199-222.

[28] *Growing and Innovative New Zealand*, p 34.

the late 1980s and early 1990s.[29]

A number of other measures are listed in the GIF document with the objective of improving the operation of the market for innovation, including further reforms to New Zealand's intellectual property regime, the continued review of the operation of New Zealand's capital markets, and the linking of researchers, innovators and entrepreneurs to each other domestically and internationally, through e-strategies and other programs. Again the approach is general and facilitative. Finally, tertiary education has seen some changes in the establishment of the Tertiary Education Commission, (partly intended to better coordinate tertiary education provision with other interests such as business) and "encouraging and incentivising" universities and Crown Research Institutes to innovate and commercialise their research activities.[30]

The subsection on "Developing Skills and Talent" (pp 37-43) is concerned with ensuring an adequate supply of quality "human capital", in other words, ensuring the skill needs of an economy based on knowledge are met. According to this perspective, in order for the economy to grow, it is important for New Zealand's labour force to be not only productive on the job, but also capable of innovation:

> *…to make the jump to a successful high growth economy, we need not only to ensure that all New Zealanders have the education skills they need to be productive members of society, but also we must develop, attract and maintain a solid core of the exceptionally talented, who can lead the way in the innovation stakes*.[31]

There are three suggested strategies in this regard: growing more talent, attracting overseas talent to live and work in New Zealand, and harnessing the talent of New Zealanders living overseas for New Zealand businesses. The most significant policy prescriptions in terms of scale fall into the first category, and are chiefly concerned with raising participation in, and the level of, the New Zealand education system. These include curriculum changes as in the case of the National Certificate of Educational Achievement (NCEA), programmes designed to improve performance of specific sectors of the education system, and development of sector strategies. Again, it also includes improving links between employers and the tertiary sector, to improve the responsiveness of the education system to the changing needs of business and industry. Industry training in particular has been a target for specific review and reform. To the extent that this is successful, this may improve the 'life chances' of individuals, for example, in the case of the Modern Apprenticeships Scheme, which have provided for some people a pathway into employment, or into a new field. However, the extent to which the Fifth Labour Government has contributed to industry training in a positive way has primarily been motivated by a concern to address the needs of the supply side, which is evidenced in the emphasis on industry needs, rather than on the needs of individuals.

Interestingly, the 2003 OECD Economic Survey on New Zealand commends the Government for so far taking a very general approach again, as they have refrained from explicitly planning for what they call "manpower" needs.[32] This is because government intervention in the form of state planning to meet the needs of markets (in this case, the labour market) is frowned upon from a neoclassical perspective, because the market is considered to be more responsive to changing needs. However, clearly there is a role for the state in providing the institutional framework and funding base required to meet the economy's basic human capital needs, or labour force requirements. While in many cases the state

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29 B*riefing to the Incoming Government 2002*, pp 45-57.

30 *Growing An Innovative New Zealand*, p 35. The introduction of the controversial "Performance Based Research Funding" (PBRF) is a first step in this regard.

31 Ibid., p 37.

32 OECD Economic Surveys: New Zealand, V. 2003, Supplement 3 (January 2004), p 75.

retains primary responsibility for the provision of education, for example via the early childhood, primary and secondary curriculum requirements, there is a general call from business interest groups for closer links between the two, for this very reason. The following table summarises the funding initiatives for industry training and contains brief comment on their practical implementation:

Table 2: Industry Training Funding Initiatives and Method of Implementation

GIF Reference	Fund	Employer / State Defined?	Implementation
6.16	Modern Apprenticeships	Employer	State provides infrastructure in form of administration, support and qualification framework
6.18	Industry Training Fund	Employer	Funded jointly by industry and state
6.19	Technology in Industry Fellowships	Employer	State funded, administered by applicant business, student and tertiary provider
6.20	New Technology Fund	Employer	Part of Industry Training Fund
6.21	Gateway	Employer	State funded and administered via schools and NCEA
6.22	Workplace Literacy Fund	Employer	State funded, contracted out

All of these programmes are determined by the willingness of employers to participate, and in most cases require initiation by employers. In other words, while there may be positive outcomes for the students and employees involved in these programmes, their introduction and implementation has primarily been motivated by the need to address the skill needs of employers, and subsequently the programmes are focussed on supporting employers to provide industry training.

This is matched in the case of attracting overseas talent to New Zealand. Immigration controls have been modified to ensure skilled migrants are a priority, and to make it easier for business to recruit specialist talent from overseas. This ignores the more fundamental problem of the erosion of real wages, which has been endemic for some time, and is widely documented in a range of industries as a primary cause of recruitment difficulties. Finally, the strategy of utilizing overseas New Zealanders seems to be linked to the idea of “increasing global connectedness”, and contains some smaller scale initiatives for networking talent internationally. Importantly, the emphasis is on harnessing this talent for New Zealand firms.

From a Marxist perspective, the effect of the policy initiatives listed in this section of the GIF also reflect the relationship of the state to the class structure in contemporary New Zealand. While some of the policies certainly have positive spin-offs for employees in terms of access to education and even improving social outcomes, as discussed earlier in this section, the emphasis is still essentially on the needs of general capital, rather than on the needs of individual employees or potential employees. Interestingly, the advancement in the provision of services that have a direct benefit to the working class (for example, improving their educational opportunities) is to an extent entirely reconcilable with the state's structural need to work in the general interests of capital (in this case, by providing capital with an adequately skilled labour force. The Talent Visa is a more extreme example of the class character of the state apparatus, granting accredited businesses the capacity to directly recruit specialised labour internationally, effectively granting businesses a right previously reserved only for government departments. Again, while this policy has the potential to directly benefit the employees involved, it does place capital in a privileged position to control the movement of elements of the labour force.

The essence of the argument put forward in the sub-section focussed on “Increasing Global Connectedness” (pp 44-48) is that economic integration with the rest of the world is critical if New Zealand is to increase the potential size of its market. This is to be achieved through three objectives clearly informed by neoclassical economic theory: the attraction of foreign direct investment, the increasingly aggressive promotion of exports, and the development and advancement of a New Zealand ‘brand’. All three of these objectives are expected to have relatively direct outcomes in terms of increasing economic growth, compared to some of the other measures outlined in the GIF.

The task of attracting foreign direct investment is approached in a general manner, and the GIF specifically rules out the provision of large financial inducements at the micro level, a clear sign of its neoclassical underpinnings.[33] The Government has been quick to point out that they have a clear preference for attracting investment on the basis of market strengths that already exist, or by firms that already have a competitive advantage, rather than 'picking winners' or subsidising and supporting firms and markets directly, and this is consistent with what we saw earlier in the case of investment on research and development within New Zealand. For example, funding has been directed towards the two agencies which now make up New Zealand Trade and Enterprise (that is, Trade New Zealand and Industry New Zealand), including the establishment of the Strategic Investment Fund (initially the Major Investment Fund).[34] The SIF is administered by Investment New Zealand, a business unit of New Zealand Trade and Enterprise dedicated to promoting investment, and is independently administered. Here, as well as elsewhere, the role of the state has largely been one of facilitation rather than direct involvement.

This applies also in the case of aggressive export promotion, which has so far largely been the domain of what is now New Zealand Trade and Enterprise. While there is some reference towards support at the enterprise and cluster level, most policy priorities identified here are again general and facilitative. The establishment of programmes designed to help businesses to grow include the Business Grow programme, the Beachheads programme providing a marketing base to new exporters and an incubator programme to small and medium sized businesses, a Fast Forward programme to help businesses grow and export quickly as well as support business cluster development, and credit assistance for at-risk exporters.[35] Importantly, even when programmes are fully funded by the Government to assist businesses (particularly small and medium sized businesses) they are contracted out to the private sector. This is not at all surprising given the recent trend in the public service for accountability and relevance, and in this case, again reflects the preference for the state to intervene with the sole aim of removing obstacles to businesses trying to grow and export, rather than providing direct assistance. In almost all cases, these programmes are promoted as helping businesses to overcome a particular hurdle rather than simply provide training and support.

The GIF also lists the development and promotion of a New Zealand brand as "…a great place to invest in, live in and visit" as a key policy priority.[36] This has not been limited to the devotion of considerable resources to events and projects (for example the America's Cup yacht races in 2000 and 2003 and The Lord of the Rings film trilogy). Rather, it is argued that it is crucial to present a consistent brand image across all sectors, to be utilised by government, industry and business.[37] To this end, New Zealand Trade and Enterprise and Tourism New Zealand have created 'Brand NZ', centred around the theme: "New Zealand: New Thinking", the key purpose of which is to impress upon the international markets the sense that New Zealand businesses are creative and innovative.[38]

Three main types of policy intervention are employed here to promote foreign domestic investment and trade: the funding of support programmes, active Government promotion, and the establishment of additional infrastructure (including legislative) to facilitate the processes of export and investment. These are grouped accordingly in Table 5.4:

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33 *Growing An Innovative New Zealand*, p 45
34 Ibid., p 45.
35 Ibid., p 48.
36 Ibid., p 48.
37 Ibid., p 48.
38 Details of the 'Brand New Zealand' project can be viewed at: http://www.nzte.govt.nz/section/11772.aspx (accessed 30th April 2006).

Table 3: Summary of Initiatives to Increase Global Connectedness

GIF Reference	Policy Description
Funding of support programmes	
8.1	Increase funding to Investment NZ
8.3	Major Investment Fund (now Strategic Investment Fund)
8.9	Increase funding to Trade NZ
8.10	Capital expenditure for Trade NZ
8.11	Business Grow programme
8.12	Fast Forward programme
8.17	Beach head programme
Active Government promotion of trade and investment	
8.2	Establish offshore investment team in New York
8.4	Proactive encouragement / facilitation of FDI by Ministers
8.7	Promote FDI in 3 areas of GIF focus
8.15	Ministerial / diplomatic effort in new market development
8.19	Consider increasing government support for overseas trade delegations / missions
8.20	Brand New Zealand
Development of infrastructure to facilitate trade and investment	
8.5	Coordinate activities of Investment NZ and Major Investment service
8.6	Seek advice regarding the structural configuration for FDI
8.8	Review business migration policies
8.13	Establish Export Credit Office
8.14	Pursue open trade agreements
8.16	Monitor existing programmes
8.18	Coordinate FORST, Industry NZ and Trade NZ activities

Table 3 highlights the fact that although a number of programmes have been funded to support businesses in specifically overcoming hurdles to growth, the majority of the policies listed in this sub-section of the GIF are concerned with promoting interest in the New Zealand economy from international markets, and providing the institutional framework to support the productive and trading activities of businesses operating in New Zealand.

Finally, in the sub-section on the topic of "focusing government resources", three sectors are identified for particular emphasis in the implementation of the Growth and Innovation Framework: biotechnology, information and communication technologies (ICTs) and the creative industries. It is argued that a disproportionate effort in these areas will encourage the adoption of innovation throughout the economy, because these areas are so pervasive.[39] The three sectors identified are considered to fall into the category of "general purpose technologies", that is, they permeate the entire economy to such an extent that they can potentially transform the social and economic fabric. Because they are identified as having "horizontal impact", that is, they have clear linkages to many other parts of the economy, this in turn means that if they are capable of material growth, this will be compounded throughout the economy.[40] According to the Boston Consulting Group, because of the increasing pressures of globalisation, businesses are having to compete in international markets rather than being safeguarded by state boundaries, and it follows that to achieve long term growth, it is necessary for governments to "...create an environment that drives the production of globally competitive products

39 *Growing An Innovative New Zealand*, p 49.
40 Ibid., p 51.

and services."[41] Given the resource base required, in smaller countries this requires targeted government support.

While some variants on growth theory suggest that general purpose technologies have a more uneven effect on the growth rate over time, within the discussion in *Growing an Innovative New Zealand* and in the relevant Treasury references, there is no mention of this dimension. They are simply considered to be 'enabling,' or likely to stimulate economic growth in a way that may be uneven over the economy, but nonetheless is pervasive and significant. Importantly, the Government suggests that the criteria for choosing these sectors included not only this growth potential, but had to be areas in which New Zealand had a competitive advantage, and had to be "consistent with the vision", that is, they are said to "...contribute to the vision of a global, innovative New Zealand economy and be consistent with the New Zealand brand."[42]

The theory surrounding general purpose technologies is a new field and not yet well-developed, and has received more attention in the field of endogenous growth theory because of the impact on the dynamics of economic growth they attribute to the transformative nature of GPTs. However, it seems safe to assume that the neoclassical model could simply subsume GPTs into the realm of exogenous technical change and still assume a long run tendency towards equilibrium. The question of how the government has implemented this targeted assistance is of vital importance in understanding the economic underpinnings of the focus on the sectors.

The four sector task forces produced reports outlining strategies for growth in their respective sectors in 2003. In the 2003 Budget, the Government allocated funds over the next four years to implement policies initiated in response to the Taskforce reports. A useful summary of the policies implemented as a result of the recommendations of the taskforces can be found in the Ministry of Economic Development's Progress Report of June 2005. They are summarised in Table 4:

[41] *Building the Future: Using Foreign Direct Investment to Help Fuel New Zealand's Economic Prosperity*, Boston Consulting Group, 2001, p 53.

[42] *Growing An Innovative New Zealand*, p 51

Table 4: Summary of GIF Sector Taskforce Policy Initiatives to June 2005[43]

Policy initiative	Nature of Policy Intervention
Biotechnology[44]	
Establishment of the industry body NZ Bio	Infrastructural, providing for coordination
NZ inclusion in Australian-New Zealand Biotechnology Alliance	Infrastructural, recognises importance of international alignment
IP development and management manual for life sciences	Infrastructural, facilitative, enabling
Framework for measuring growth of the sector	Monitoring / review
New private capital investment via the NZVIF	Addressing equity market failure, but not sector specific.
Removal of tax barriers to access international venture capital	Infrastructural reform to remove barriers
Tax legislation to improve treatment of special partnerships	Infrastructural reform to address sector needs
Improved operation of HSNO Act	Regulatory
Support for expanded funding instruments to meet needs of biotechnology sector.	Infrastructural reform to facilitate funding
Information and communication technologies (ICTs)[45]	
Establishment of Hi-Growth	Infrastructure to facilitate coordination of sector
Establishment of ICT New Zealand organisation	Infrastructure to facilitate coordination of sector
NZTE Beachhead programme	Support for new entrant companies in overseas markets
Industry consortium formed - ICTX	Infrastructure to facilitate coordination of sector and government
Industry grouping - O2NZ	Infrastructure to facilitate coordination of sector
Leadership / executive development programme – 321 Go Global	Address skill deficiency
Facilitation of links between sector and education system	Address skill deficiencies, improve coordination
Coordination with immigration	Improving infrastructure to address skill deficiency in labour market
Futureintech career awareness programme	Infrastructure to address skill deficiency in labour market
Regulatory and infrastructural reform listed elsewhere	Infrastructural, facilitative, enabling
Improve government ICT procurement processes	Infrastructural, regulatory
Statistical surveys developed for ICT industry	Monitoring / review
Screen production[46]	
Establishment of the New Zealand Screen	Policy advice, monitoring, advocacy – facilitative and

43 The Growth and Innovation Framework Sector Taskforces: Progress with Implementation, Ministry of Economic Development, Wellington, June 2005.
44 Ibid., p 8.
45 Ibid., pp 16-8.
46 Ibid., pp 11-2.

Policy initiative	Nature of Policy Intervention
Council	enabling
Alignment of government funding bodies for industry	Infrastructural, facilitative, enabling
Sector engagement via the Creative Industries Working Group	Infrastructural, facilitative, enabling
Development of Screen Statistics survey (to measure its effect on the economy)	Monitoring / review
Large Budget Screen Production Grant (LBSPG)	Addressing market failure
Infrastructure reform (e.g. tax) to encourage private investment	Infrastructural, facilitative, enabling
Major Regional Initiatives (soundstages in Wellington and Auckland)	Infrastructural, facilitative, enabling
Review of overlap between Investment NZ and Film NZ re screen activities	Infrastructural, facilitative, enabling
Screen Council established Education and Training Working Group	Infrastructural, facilitative, enabling
Design	
Better by Design programme and website	Infrastructural, facilitative, enabling
Better by Design Conference (March 2005)	Infrastructural, facilitative, enabling
Release of Design Resource Directory	Infrastructural, facilitative, enabling
Develop education initiatives (e.g. professional development for design educators)	Address market failure
Design audit / mentoring programme	Infrastructural, facilitative, enabling
Design funding	Not yet in place, but idea is to subsidise business to fund initial original design work
Create an international design cluster to help win international contracts	Infrastructural, facilitative, enabling
Greater business component in design education	Infrastructural, facilitative, enabling
Advocating professional accreditation of tertiary design qualifications	Infrastructural, facilitative, enabling
Industry internships for new designers / students	Infrastructural, facilitative, enabling
Development of design management courses for senior managers	Infrastructural, facilitative, enabling

Overall, almost all of the policy initiatives actioned or proposed by the sector task forces are informed by similar principles to the rest of the document. They are largely concerned with reducing infrastructural barriers to the sectors, and are predominantly focused on the supply side. According to Cabinet:

High-level sector engagement should not normally result in any substantial shift in resource allocations to favour specific sectors. As a general principle, interventions that aim to improve the implementation of existing policies and programmes, or improve the quality of regulation, should be favoured over interventions involving sector-specific direct assistance. Exceptions should only be made where there are compelling and overriding reasons, such as identifiable market failure or spillover that is specific to a particular sector.[47]

[47] *Framework for Sector Engagement*, Cabinet Paper, Office for the Minister for Economic Development.

This clearly refutes the possible interpretation of the strategy of sector targetting as a series of micro-level interventions applied in an ad-hoc and situation dependent manner. This is further evidenced by the relatively low levels of funding directed towards these sector initiatives, as summarised in Table 5:

Table 5: GIF Contingency Budget Summary Appropriation ($m)[48]

	2003/04	2004/05	2005/06	2006/07	2007/08 & Outyears
Contingency Agreed in 2003 Budget Package					
	15.000	30.000	30.000	35.000	35.000
Less: Allocated to Specific Policy Initiatives					
Cross-Sector	6.793	10.036	11.516	14.866	2.116
Biotechnology	1.926	3.953	3.860	5.860	5.860
Screen Production	0.864	0.867	0.325	0.325	0.325
Design	3.200	3.300	3.750	2.250	2.200
ICT	2.184	4.108	2.973	2.873	2.873
	14.967	22.264	22.424	26.174	13.374
Other Initiatives Identified					
Tax and other initiatives including Horizontal Enabling Initiatives	-	7.500	7.500	8.750	8.750
	-	7.500	7.500	8.750	8.750
Total Allocated or Identified					
	14.967	29.764	29.924	34.924	22.124
Unallocated					
	0.033	0.236	0.076	0.076	12.876

While it may be true that the Government has been subjected to political pressure resulting in the selection of these four sectors, it should be remembered that the scope of this targeting is very small in the context of the entire GIF, particularly as it includes the broader policy prescriptions contained in the first section “strengthening the foundations”.

4 Intellectual Property Rights, Maori and the Working Class

So far, attention has been directed solely towards the role of innovation policies in stimulating economic growth. In the developed countries in particular, governments are directing considerable resources into prioritising policies which are intended to make it easier for innovation to occur, in order to increase living standards (traditionally measured by GDP per capita). Before we consider some of the outcomes of this policy framework for New Zealanders, a preliminary comment about the role of intellectual property rights is necessary, along with some explanation of their role in encouraging innovative activity by ensuring its profitability. In addition, the point needs to be made that intellectual

[48] Growth and Innovation Framework Sector Taskforces: Progress with Implementation, p 20.

property rights exist as an institutional structure not in isolation from but central to the advancement of the capitalist mode of production. They are not exclusive to capitalism, but within capitalism the function they perform (and the subsequent form they take) is intrinsically linked to the relations of production predominant within capitalist societies, and plays a significant part in their reproduction.

One of the most celebrated characteristics of capitalism by its proponents is its unprecedented capacity to make technological advancements and to constantly reinvent itself, which leads to an increased material standard of living over time. Innovation is the key to winning the profit making game: the goal for a capitalist is to seek competitive advantage, or monopolistic conditions over other competitors in their industry. In production, this results in the constant battle against workers to increase productivity without increasing wages. Technological improvements play an important role in this process, as the mechanisation of production meets this end, hence, research into improved production methods is an important step in the process of wrestling for profits, and high on the list of investment priorities of firms. Innovation in product design has a similar role in securing a monopolistic position in the market. Mainstream economists describe this as the first stage in the 'product lifecycle'. In the early stages of a product's life as a commodity, it will command 'premium earning capacity', that is, market conditions are experienced which are highly favourable to the seller, including a high degree of price setting ability, hence profitability is enhanced. For both innovation in production methods and product innovation, the early stages of an innovation's commercial application are its most profitable, but they are also the stages at which costs are highest. This is where intellectual property works to protect the efforts of the creator. Intellectual property (patents, trademark and design registration, and copyright) provide a period of guaranteed monopoly to the innovator, ensuring that the early stages of an innovation’s commercial application are made less risky, by virtue of protection against the commercial loss caused by someone copying and distributing the product and undermining the producer’s competitive edge. In this sense, intellectual property has a crucial function in stimulating inventive activity by ensuring its profitability.

How does this work, exactly? Mainstream economics provides us with some useful tools to conceptualise this, one of which is the theoretical distinction between private and public goods.[49] The key point is that private goods are rival in consumption (that is, there is a limit to how many people can consume and benefit from the good), and excludable (that is, it is possible to prevent specific parties from consuming the good). In contrast, public goods are non-rival in consumption and (at least partially) non-excludable, the classic example used in economics textbooks: spending on defence. If the population is 4 million, spending on defence provides a certain level of “security”. If the population is 4.1 million, the level of security does not change, that is, it is not used up more quickly by the increase in population. Likewise, it would be impossible to exclude specific parties (for example, those whose taxes were overdue) from consuming the outcome of defence spending, or enjoying whatever benefits accrue to them.

Knowledge (and creative works) generally fit into this category of a public good. They are non-rival in consumption in that no one groups’ utilisation of knowledge “uses it up” so it can’t be used by others. Likewise, if knowledge is truly in the public domain, it is there for anyone to access and use, and it is difficult to put restrictions over who can access it. This is not to negate the reality that there are important socioeconomic barriers to accessing knowledge and education existing within capitalist societies. Rather the point is that in general, knowledge has inherent within it the properties of a public

[49] It is important not to confuse the source of funding or ownership of a good with its theoretical status here as a private or public good as in the more usual use of these terms. An example of this is immunisation against infectious disease – there are obvious benefits to the wider community in terms of the prevention of the spread of disease, that are non-rival in consumption and non-excludable, but they exist whether or not an immunisation program is funded by the state or privately by individuals.

good, which make it difficult to benefit commercially from knowledge and creative works, unless there is some way of providing mechanisms to harness this potential, through the creation of an artificial monopoly.

The mechanism through which this achieved is through application for the relevant intellectual property rights to the Intellectual Property Office. Once granted, these restrict not the actual possession or consumption of the knowledge or creative work in and of itself, but the right to reproduce and distribute the product of intellectual or creative effort. The right to reproduce and distribute essentially equates to the right to be the sole trader in the product of intellectual or creative effort, and is central to its existence as a commodity. This is because once the product is in the public domain, it is easy and inexpensive to copy or adopt the technology or idea, and without legal restriction, this erodes the exchange value or price, and hence profits.50

In effect, it could be argued that this privatises the knowledge or creative idea, but in reality, what is privatised are the economic benefits from controlling its reproduction and distribution, by making it rival in consumption and excludable. This is important because it highlights the extent to which the system of IPRs is focussed on commercial interests. The specific details of intellectual property legislation reflect this: by definition, there have to be commercial interests at stake for an application for IPRs to be successful. IPRs only exist for limited duration, because it is expected that the period where competitive edge and risk are most significant, or when the risk is highest, is short-lived. In the case of trademarks, for example, renewal is possible every fourteen years after the initial seven year term, but only if there is still demonstrable commercial benefit.

Like property rights that protect physical goods, IPRs can be central to individualising title and providing the legal framework for the separation of producers (in the sense of the working class) from the means of production, and play an essential role in reproducing class relations. Simultaneously, the IPR system allows for products of intellectual or creative effort to be in the public domain without detriment to commercial interests. We could be forgiven for thinking this was in the general interest in terms of retaining knowledge as a public good as much as possible, but in fact it also assists capital by reducing unnecessary research and development costs by virtue of what Romer described as "increasing returns". In New Zealand, the website of the Intellectual Property Office of New Zealand holds a public database which shows, for example, full specifications for patented inventions.

The stated primary objective of intellectual property rights is to protect the interests of the creator against the economies of scale that give big business an advantage over the individual. For example, it provides the lone inventor with some protection against the competitiveness of industry. If the inventor isn't in a position to produce a new product on a mass scale, they can sell the patent rights to a company who can. Alternatively it can provide market protection for a set term to aid in the setting up of production. This implies it can work to protect the interests of individuals as well as business.

In most cases, employment law stipulates that in the absence of a contract which states otherwise, the intellectual property rights of an employee belong to their employer. There are a number of arguments put forward to support this view, the most common being that without the resources provided by the workplace, and the presentation of a problem which leads a worker to a creative solution, the idea, or innovation, is unlikely to have occurred. For traditional Marxist class theory, this presents an interesting conundrum, as it could be argued that it represents a blurring of the line between labour and capital. The worker is supposed to retain control of their labour power within capitalist relations of production, but in contemporary New Zealand society, this doesn't necessarily happen with the intellectual or creative dimension of labour power.

Some might suggest that a new form of capital is emerging, that is, intellectual capital, and as has

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[50] This is easier to conceive when we consider the increasingly fashionable term "value-added" commodities. The added value comes from intellectual effort, but there is also a small component of the value which can be attributed to physical inputs. If the value added by virtue of creative and intellectual effort isn't protected by IPRs, the price is eroded but not to zero, because there are still minor, relatively fixed production costs.

always been the case, capital is retained by the owners of the means of production. On the other hand, it could be argued that this represents a further commodification of labour power, in that increasingly, different dimensions of labour power can be sold at their market rate. From a Marxist perspective of the rate of exploitation, this wouldn't be so bad if workers could guarantee that they would either retain all rights to their intellectual property, or at the very least, negotiate with their employers to share the benefits. While this happens in some industries and in relation to specific occupations, the practice is not widespread. Generally speaking, in the advanced capitalist economies, around 90 percent of patents are owned by firms, with the remaining 10 percent being retained by individuals.

However it is conceptualised, it seems logical that if innovation policies succeed in stimulating innovative activity, which is largely carried out by firms as it is driven by profit, the main beneficiaries of the Growth and Innovation Framework are likely to be employers rather than employees. The thesis eventually aims to empirically test this over time. If innovation rates are increasing, and intellectual property rights are and continue to be owned largely by business, businesses, not innovative individuals, may be the winners, unless they take it upon themselves to compensate innovating employees with higher wages.

The utility of the existing framework of IPRs to protect the knowledge, traditional and creative works, and generally the 'cultural and intellectual property' of indigenous peoples has emerged as an issue in global political economy. In New Zealand, the evidence suggests that the current legislative framework is not adequate or appropriate to protect the interests of Maori. Limited attempts to reform intellectual property legislation have been made, but so far they have only succeeded in dealing with the issue of appropriate use, and no specific provisions have been made to ensure that Maori receive equitable returns from the use and appropriation of their cultural and intellectual property. Given the interpretation of intellectual property rights (as above) as protecting interests other than just those of business, it seems remarkable that not much has been said on the issue of ensuring that at least a share of the returns generated by appropriating Maori cultural and intellectual property is actually returned to Maori. It has been identified as an issue:

> *There are also pecuniary considerations of the intellectual property contributions made by indigenous people. Indigenous peoples living in biologically diverse regions of the world possess a knowledge of potentially high economic value…Protection and compensation for the present day contributions of indigenous people in a fair and effective manner is long over due…* [51]

It could be argued that this compensation should not be limited to the contributions of indigenous people in the present day, but rather that colonising governments have retrospective obligations, as in the New Zealand case of the Crown under the Treaty of Waitangi. At any rate, the task is complex, and the current system of intellectual property rights is not sufficiently broad enough, nor is it transhistorical. In any case, a legislative framework that does not provide adequately for the equitable return to Maori of benefits from using cultural and intellectual property is likely to see a continuation of socioeconomic disparities between Maori and non-Maori that is characteristic of New Zealand society. In the context of an innovation policy like that of the Growth and Innovation Framework, and the absence of redistributive measures, it is only likely to increase. We now examine some preliminary data with respect to this idea.

5 Income Distribution in New Zealand Since 1999

The impact of the neo-liberal reforms in terms of income distribution is obvious, but it does call for a normative response to the question of whether inequality is inherently a negative outcome. Perhaps more substantially in terms of the evaluation of public policy is whether it makes specific individuals worse off than they were before. The promise of neo-liberalism in particular is found in the idea that

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[51] Goodlet, D. M., 1993, *The Protection of Indigenous People's Intellectual Property*, LLM Research Paper, Law Faculty, Victoria University of Wellington, Wellington, p 4.

the benefits will eventually "trickle down" to those at the bottom, and it has even been suggested that the standards of living of different groups might converge over time. In this context, it is important to recognise that not only did New Zealand's neo-liberal experiment lead to an increase in income inequality, it also lead to different outcomes for rich and poor:

Figure 3: Distribution of Personal Disposable Income Across Personal Disposable Income Deciles 1982 to 2004[52]

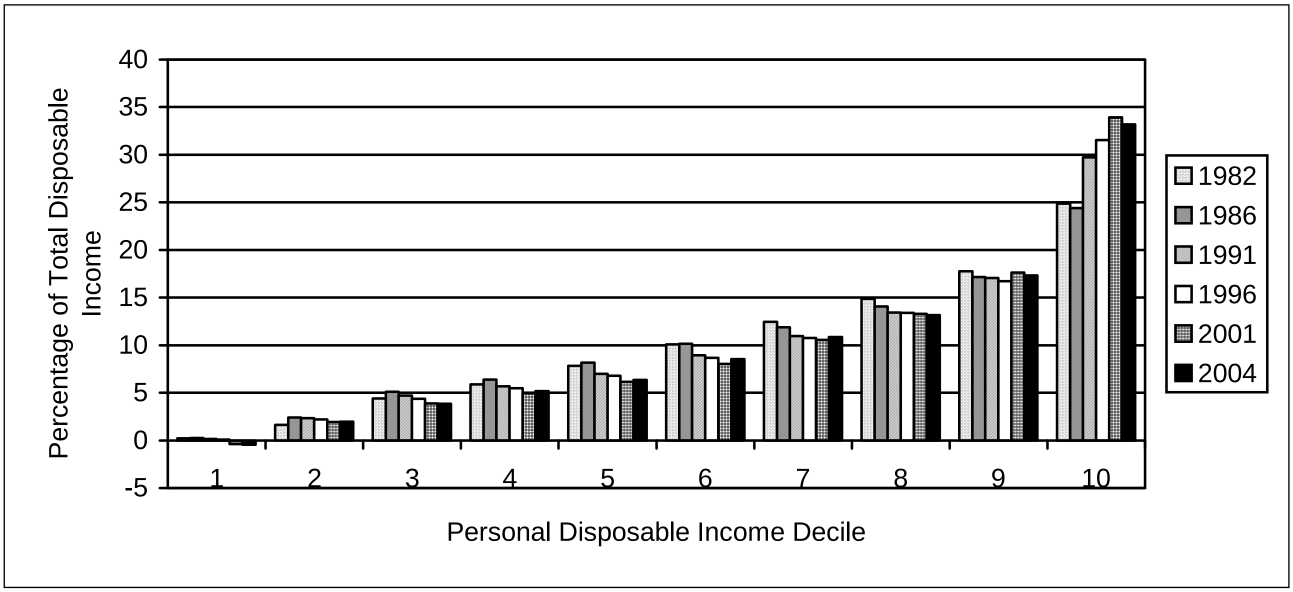

Figure 3 demonstrates the relative impact of the neo-liberal reforms on incomes. While the bottom two deciles experienced no change in the percentage of total disposable income, only the highest decile (the 10 percent of the population with the highest disposable income) experienced an increase, from 25 to 32 percent of the total disposable income available by 1996. On the other hand, sixty percent of the population (all those between the fourth and ninth deciles) experienced small but definite decreases in their relative share of the total disposable income to 1996. For those in the bottom three deciles, they experienced no change overall between 1982 and 1996.

Since the election of the Fifth Labour Government in 1999, the situation has not changed dramatically. While the share of total disposable income received by deciles four to seven has increased between 2001 and 2004, it had again declined between 1996 and 2001 and in all four deciles, has not since increased to the higher percentage shares received in 1982. More significantly, in the cases of deciles one, two, three and eight, the percentage share of total disposable income has continued to decline. In the case of decile one, the percentage share has become negative. On the other hand, the increase in the percentage share of total disposable income received by the top ten percent of the population over the age of fifteen increased further in 2001 to reach 33.9 percent in 2001, decreasing only slightly in 2004 to 33.2 percent. In other words, in relative terms, the increase in income inequality has continued since the election of the Labour Government, despite six years of making incremental improvements to social policy.
So, what has happened with respect to ethnicity? Figure 4 demonstrates the effect on the distribution of

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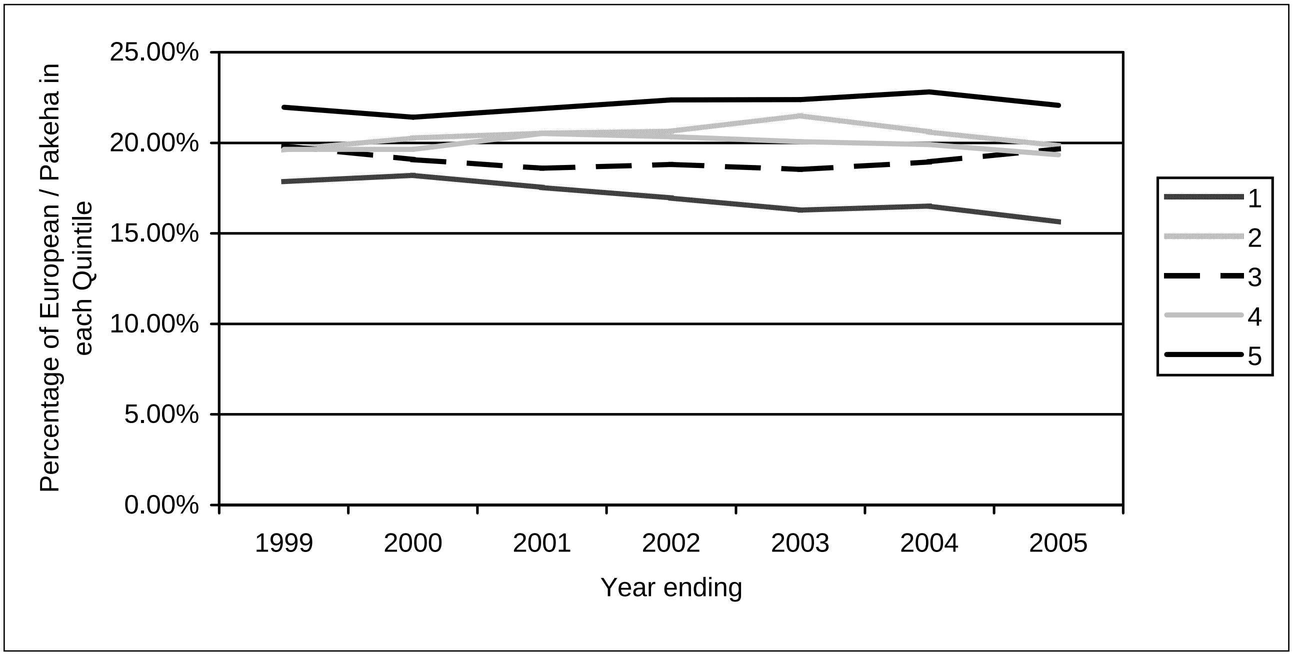
52 Statistics New Zealand, 1998 edition, *New Zealand Now: Incomes, Wellington*, p 49. The original data source is the Household Economic Surveys, and this has been continued for 2001 and 2004.

income for the European / Pakeha population:

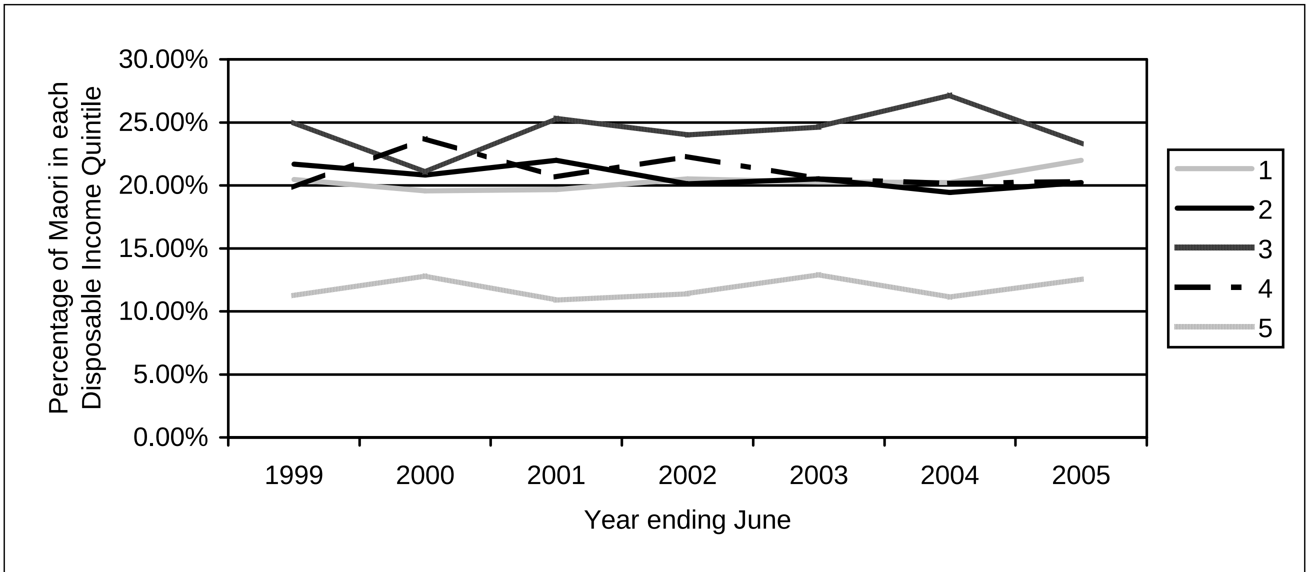
Figure 4: Percentage of European Population in each Disposable Income Decile 1999 to 2005[53]



Overall, the percentage of the European / Pakeha population in each disposable income quintile remained relatively stable, with the four upper quintiles experiencing some movement but returning to their original levels by 2005. In the case of quintile five, the percentage ranged from 21.4 percent in 1999 to 22.8 percent in 2004. The first quintile, representing the twenty percent of the population receiving the lowest incomes demonstrates two important points. Firstly, that overall European / Pakeha are under-represented in the first and third quintiles (the corollary of which of course is that they are over-represented in quintile 5). Secondly, since the Fifth Labour Government have been in office, the representation of European / Pakeha in the lowest quintile has declined, from 18.2 percent in 2000 to 15.6 percent in 2005. This of course tells us nothing about real incomes over time, but does tell us that policies under Labour have benefited the relative position of some of the lowest-earning of the European / Pakeha population.

53 New Zealand Income Survey, Table 8 (various years).

Figure 5: Percentage of Maori Population in each Disposable Income Decile



1999 to 2005[54]

If European / Pakeha are under-represented in the lowest income quintile, Maori are much more severly under-represented in the uppermost quintile. In 1999, 11.24 percent of the Maori population were in the fifth quintile, although this number expanded somewhat during the Labour government's first two terms to reach 12.56 percent in 2005. Interestingly, while the percentage in the lowest two quintiles are relatively proportionate between 19.6 and 22 percent, a great percentage of Maori are concentrated in the third quintile. In three years our of seven the percentage of Maori in the middle quintile exceeds 25 percent, and in 2004 it reached 27.2 percent.

This is a starting point in demonstrating that income inequality in New Zealand has not disappeared in the wake of the election of a Labour government. Clearly, considerably more work is necessary to investigate the proposition put forward in Section Four. Because this study is addressing current policy trends in New Zealand and its effects on income distribution the progress of the work continues, as further data becomes available. More of this information will be available at the time of the conference.

6 Conclusion

The Fifth Labour Government's Growth and Innovative Framework is ultimately informed by neo-classical economics, and constitutes a continuation of the neo-liberal policy agenda that was implemented between 1984 and 1999. While the Government suggests that the GIF will deliver an improvement in the living standards of all New Zealanders, this is unlikely given its macro and microeconomic underpinnings. In order to halt the trend towards increasing inequality that began with the process of neoliberal restructuring since 1984, fundamental changes need to be made, particularly with respect to taxation and the provision of welfare. In particular, more progressive taxation and less punitive benefit provision would help to restore the real incomes of the majority of New Zealanders.

While the Fifth Labour Government makes little headway into this task, there is cause for concern that any economic growth generated as a result of the GIF will not be shared amongst the population. It is

54 New Zealand Income Survey, Table 8 (various years).

more likely that the supply side focus on business concerns will see any positive outcomes remain concentrated in the top two deciles. In addition this paper identifies two further areas for concern that are centred around intellectual property rights, as they operate to distribute the profitable outcomes of innovation as private property. In terms of the employer / employee relationship, employers seem to enjoy more control over the distribution of an increase in profitability generated by an employees creative and intellectual effort, which introduces a new aspect to the Marxist class relationship between capital and labour that requires further examination. with respect to the cultural and intellectual property rights of Maori, the system of IPR legislation has proved insufficient to meet the needs of Maori, and this is of particular concern given the 'obligations of the Crown under the Treaty of Waitangi. In both cases, the GIF makes no mention of how to address these concerns, and the influence of the continuation of the neo-liberal policy agenda on income distribution and the real incomes of New Zealanders are likely to be accentuated along these lines. In the light of the narrow re-election of Labour to government in 2005, further investigation of these issues is essential in the ongoing critique of public policy.