New Zealand's Energy Policy from the World-System Perspective

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Abstract

The World-System Theory of Immanuel Wallerstein is a grand-scale theory that is useful as a framework to understand how New Zealand's path of development has been affected by the country's energy policy. The theory is appropriate in application to energy issues because its macro-level of analysis puts emphasis on both exogenous and endogenous factors. Its special emphasis on historical background and context also adds to an understanding of the New Zealand position. The World-System perspective offers three major concepts directly applicable to the case of New Zealand energy policy, namely, the interplay between politics and economics with a particular interest in the role of multinational corporations (MNCs) and the state, the notion of semiperiphery, and the cyclical nature of the world economy.

During the period of the 1970s economic downturn marked by two oil crises, New Zealand as well as most other countries and the MNCs suffered a severe setback. However, while most core states, as well as some successful non-core states and the oil majors, could react appropriately to the crises and retain their potential for growth, the semiperipheral New Zealand could not. The country possessed few options because of her intermediate level of industrialisation and less competent state apparatus compared to the MNCs involved. Lacking the intention to promote local industrial capitalists, the New Zealand state chose wrong strategies, first Think Big and then disinvestment, which together have undermined the bargaining position of local entrepreneurs, over-committed the national hydrocarbon resource and disproportionately promoted the interest of the foreign oil corporations. The overall outcome of the energy policy is therefore detrimental to the country's development.

Preface

This thesis evaluates the context and the outcome of New Zealand's energy policy during 1970s - 1990s. Immanuel Wallerstein's World-System theory is used as the theoretical framework for analysis. The thesis content is therefore divided into two major sections: theoretical framework and New Zealand's energy policy.

Chapter one is the introductory part. Chapter two and three deal with theoretical matters. Chapter two elaborates the overview of the theory and chapter three discusses relevant theoretical aspects. Chapter four will turn the attention of the readers to economic and political settings, both at the global and internal level, during the policy shifts. Chapter six will examine the policy decisions and chapter five will evaluate them. Finally, chapter seven, the conclusion, will synthesize both theoretical and New Zealand's policy sections.

Acknowledgement

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I. Introduction

While problems of inequality and injustice still prevail, applying grand scale theory to understand the root causes and to guide the way towards the tackling of the problems is less appealing in the eyes of contemporary development scholars. Recently, the development studies sphere has witnessed the withering away of generic functionalism which gave way to inductive research on a limited scope. Also less emphasised as a prime strategy for improvement is focusing problems at the state level.

Yet denying grand scale theory has some shortcomings. Firstly, small empirical research work may, if not usually, confirms or relates to a theory and 'adds plausibility to a metatheory that the researcher has never thought about'.[1] Fumbling through random phenomena without conscious use of systematic deduction guided by theoretical framework thus may only be a tortuous route leading to a conclusion not very much different from what has already been suggested by a theorist.

Secondly, states do share some common characteristics and sometimes repeat others' mistakes; therefore, conceptualisation of changes and continuity on the international scale and generalisation of social issues contributes more towards comparative studies than examining the uniqueness of a society. Here, grand scale

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[1] See Leslie Sklair, "Transcending the Impasse: Metatheory, Theory and Empirical research in the Sociology of Development and Underdevelopment" in World Development 16, 6(1988) p.698.

theory can act as a storehouse of past wisdom, restored in the form of logical networks, some of which may prove valuable for many other societies.

And, thirdly, human global society is so complex that one has to either comprehend the entire social mechanism in some forms of reductionism or comprehend only a tiny part of it and neglect all the rest. Denial of grand scale theory falls in the latter category which, while escapes the trap of overreduction and superficiality, may face problems when the case-study involves powerful extragenous causal factors. For these reasons, developmental problems that grand scale theories like Parsonian modernisation or dependency have failed to eliminate still outpoint the issue-tackling developmentalists.

Seeing the virtue of grand scale theory in apprehending complexities of human society, I still disbelieve the end of its era. As Daniel Garst comments,

> The reception of novel ideas in social and political theory has usually been marked by two phrases: at first there is an initial burst of enthusiasm in which the idea in question is seen as providing answer to long-standing anomalies and opening up the way for new interesting path of research; this acclaim, however, that is then normally followed by a period of disillusionment in which the idea in question comes to be seen as a theoretical dead-end with the re-search being taken within its framework viewed as counterproductive[1]

it is just that such kind of theory is trapped in the cycle of hope and disillusionment. In social sciences it is not the case that a theory, or an operational research without a guidance of a theory, is totally relevant or irrelevant to a contemporary issue, but the

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[1] Daniel Garst, "Wallerstein and His Critics", Theory and Society 14, 4 (July, 1985) p. 469.

point is to employ a right tool to a right job. In addressing complicate problems that require interdisciplinary apparatus, it is still possible that grand scale theory may render a very useful perspective. National development, for example, involves historical limitations, economic impediments and political constraints, domestically and internationally. With the help of a grand scale theory, the path of national development can be logically comprehended and the contribution of the government policy towards the progress can be likewise assessed, both within an international context.

Apart from getting benefit from theory, the theory itself can also be benefitted. Applying a grand scale theory framework to contemporary issues also means another empirical test for the idea. Since every theoretical proposition has room for improvements, trial over time will contribute to its refinement. It will be a pity for a theory if it attracts no more critics or has to be kept in a sacred place, for such situations signal immobilism.

For the above-mentioned reasons, I decide to employ a grand scale theory, namely the World-System proposed by Immanuel Wallerstein, to analyze a case in national development, that is New Zealand's energy policy, with primary emphases on oil and gas sectors. The theory and the case constitute an interesting combination. The World-System Theory underlines the importance of a global perspective in understanding the relative level of development of countries. It emphasises the linkage between the economic and political factors. External influences and states' reactions are issues of prime significance according to the perspective. Energy issue can be best investigated under this perspective because of its transnational characteristics and the involvements of the state and the multinationals. Moreover, the theory's unique

positioning of New Zealand in an intermediate level of development (semiperiphery) fits in the country's pattern of energy investment and of import-export as well as the comparative GNP data.[1]

The World-System Theory nowadays may not be at the heart of the debate. Since Wallerstein "discovered" the World-System in 1974,[2] his basic propositions, appeared in the book and his following publications, have been endorsed, criticized and scrutinized incessantly. Those with empirical doubts question either his accuracy or his interpretation of given facts. The comments are usually well-based and Wallerstein undeniably continues to produce the lapse but, due to the limit scope of each remark, the critics never proved to be serious detrimental to Wallerstein's thesis. Wallerstein regards them as constructive critics because they force him to make a more precise analysis.[3]

As for the theoretical critics, Wallerstein either shows his indifference or sometime contempt. According to him,

> [a]ddressing them deductively would be pointless however as it would not lead to a rational debate, but merely to a clash of opposing

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[1] This point is to be discussed in Chapter Three.

[2] Ragin and Chirot discuss "the discovery" of a World System which they regard as a process first towards methodological conclusion and then finally towards the completion of Wallerstein' notion that 'modern social change could be studied only in the context of a historically conceived world system,'. The publication of the first volume of The Modern World-System in 1974 marked the completion of the process. See Charles Ragin and Daniel Chirot, "The World System of Immanuel Wallerstein: Sociology and Politics as History", in Theda Skocpol ed., Vision and Method in Historical Sociology. (New York: Cambridge University Press, 1984) pp. 279-284.

[3] Wallerstein, *ibid.* p.469.

> faiths. We shall, therefore, address them heuristically, arguing that our deductive classification is more useful than alternative ones, because it comprehends more easily and elegantly what we collectively know at present about historical reality, and because it affords us an interpretation of this reality which enables us to act more efficaciously on the present.[1]
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> Such critiques, almost by their nature, tend to fall by rebound into the sin opposite to the one they are attacking.[2]

As I understand it, this category includes those who argue against single macro-unit of analysis and may propose class or three-world analysis instead, or who criticise the Modern World-System as too economic oriented or relying too much on historical approach.

The "clash of opposing faiths" is not yet settled but the point seem to be left open. In this paper the 'clash' is born in mind but will not be revived. Only when the part of the theory in use has some challenges either empirically or theoretically, remarks will be given. After all, controversial as it was, the World-System Theory offers several useful insights as will be discussed in forthcoming chapters.

Turning to the energy issue in New Zealand, this paper will devote its attention to the oil and gas sectors, though electricity industry may sometimes be mentioned. The country's adaptation during the 1970s and 1980s to the changing international environment is of particular interest. Then the global economy witnessed a big recession and a revival. The external shocks in 1970s, caused mainly by the 1973

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[1] *Ibid.* p. 20.

[2] *Ibid.* p. 8.

and 1979 oil crises, affected the country severely and the reaction to the shocks, as manifested in the energy policy, also left a profound impact on the New Zealand's economy. In this regard, the government's decisions on the alleviation of the country's burden of importing oil and on the natural gas reserves played a key role in the economic performance of the country.

What is interesting in the case of New Zealand when compared to most other OECD countries is that the New Zealand state had a structural constraint that resulted in poor performances in the energy sector. The key failure that is attributed to the past energy policies is the country's low productivity relative to the energy consumed. To be more precise, New Zealand's energy intensity, as measured by the TPER/GDP ratio[1] increased by 31 % between 1973 and 1987 and was on the rising trend in the following years. Only two other members of the OECD International Energy Agency (IEA) experienced increases in energy intensity over that period: Portugal 19% and Greece 11%. In contrast, the energy intensity of the IEA countries was falling and the IEA average fell by 23% between 1973 and 1987.[2]

While increasing energy consumption as well as energy intensity are points of national concerns, Energy Minister John Luxton asserts a positive aspect -the

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[1] OECD criterion: total production of energy required in comparison with gross domestic products.

[2] International Energy Agency (IEA), Energy Policies and Progress of IEA Countries, 1989 Review. (OECD, Paris, 1980) p. 183. See also Ministry of Commerce, Energy Data File. (Wellington, 1991) pp.50-51 and Geoff Bertram, "New Zealand's Rising Energy Intensity", Victoria Economic Commentaries. (Victoria University of Wellington, March 1991), and also, Bertram, The Rising Energy Intensity of the New Zealand Economy. (Victoria University of Wellington, 1991) pp. 4 - 8.

country's liquid fuels self-sufficiency is now around 50%[1]. He also attributes the energy intensity to low population and housing density, thus high transport and heating costs per capita, and to the country's "comparative advantage with cheap energy" 2 which enables energy intensive industries.[2] Like that of the World-System Theory, controversy over the success/failure of New Zealand's energy policy, based on interpretation of available data, is still far from settled.

From a broader point of view, however, studying energy policy has so far contributed to a circular arguments along the line of the disagreement between two economic perspectives: Keynesianism and monetarism. The arguments on deregulation and price efficiency or security of supply appear to be rather repetitive though informative in substance. Here there appears another 'clash' in which the involvement of the government is viewed as either desirable or detrimental regardless of the country's level of development. When incorporated into a wider aspect of national development and reconsidered through an interdisciplinary perspective, energy policy may carry with it another meaning.

Although both the World-System Theory and the case of New Zealand's energy policy have passed their era of colourful debates and insightful investigations, applying the World-System perspective to New Zealand's energy policy is promising as well as challenging. The mixed optimism is attributed to following reasons:

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[1] John Luxton, "Opening Address", Energy Sector Reform. Addresses of Speaker at the Seminar Organised and Presented by the New Zealand National Committee World Energy Council, 18 March 1992, P. 6.

[2] *Ibid.* p. 14.

1. The World-System Theory was originated from an attempt to understand root cause of problems facing national development. It was formulated to discuss the mechanism of the system that enables or impedes progress "by the analogy with astronomy which purports to explain the law governing the universe"[1] and hence making the births and the paths of stars comprehensible. Emphasising exogenous factors and the interplay of politics and economics within a historical context, the world-system is a suitable framework to analyze the role of state in national development meaningfully.

2. Breakthroughs in economic theory formulation may derive from incorporating perspectives from other branches of sciences.[2] Energy policy is an economic issue that has a potential to be cross-bred with interdisciplinary perspectives. In this regard I see the World-System Theory as one 'macro-sociology' theory that can shed a new light on the study of the energy issue.

3. The world-system perspective has been applied to explain ethnic tensions[3] a European peripheral society,[4] Japan and China developments,[5] modern

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[1] Wallerstein, The Modern World-System. (New York: Academic Press, 1974) p. 7.

[2] Georgescu-Roegen's theory of irreversibility of material inputs which earned him the Nobel Prize is an example of incorporating the second law of thermodynamics into resource economics.

[3] Michael Hechter, International Colonialism: The Celtic Fringe in British National Development, 1536-1966. (London: Routhledge & Kegan Paul, 1975).

[4] Daniel Chirot, Social Change in a Peripheral Society: The Creation of a Balkan Colony. (New York: Academic Press, 1986).

banking and financial system[1] and etc., but, to my knowledge, none directly concerns energy policy. Since energy policy constitutes a crucial part of state strategy in enhancing its position in the world dynamic hierarchy, it will be another worthwhile test that can broaden the sphere of the study of the world system.

4. Development is a process of relative enhancement and not a static condition which can be reached once and for all. Countries in the intermediate status in the world system are therefore subject to struggling both against recession and towards a better position at the same time. This group of countries, however, has not been the major focus of most studies in the development field. In this light, New Zealand, an OECD country which experienced a unique trend of energy resource development compared to other OECD members,[2] can be a good case study that testifies the dynamic and extensive nature of development process.

A study of one country's policy is not an end in itself, but it should help to formulate theoretical guidelines for further understanding of social phenomena. Assessing New Zealand's energy policy along the line of the world-system perspective can contribute to development studies in this regard. New Zealand represents countries affected by global economic cycle especially the contraction of the early 1970s, while

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[5] Frances Moulder, Japan, China and the Modern World Economy: Toward a Reinterpretation of East Asian Developments ca. 1600 to ca. 1918. (Cambridge, UK & NY: Cambridge University Press, 1977).

[1] Fred Bloch, The Origins of International Economic Disorder. (Berkeley: University of California Press, 1977).

[2] New Zealand's position as a semi-peripheral country will be discussed in forthcoming chapters.

the energy issue reflects adaptations of economic strategic of the actors involved, states and private sectors alike. According to Wallerstein, countries' relative position in the world system usually shifts during the contraction period of economic cycles resulted from the overall situations in relation to the strategies they take. Lessons can accordingly be drawn from assessing the international setting and the consequences of New Zealand's policy shift concerning energy prices and productions.

Since the matter under consideration concerns two major aspects, the World-System Theory as theoretical framework and New Zealand's energy policy, this paper is likewise divided into two main sections. Chapter two and three deal with theoretical matters. Chapter two aims to make the reader familiar with systematic propositions of the World-System Theory; therefore, it will elaborate the overview of the theory. It will also review the intellectual context in which the approach was developed and will analyze Wallerstein's epistemology and methodology. Then chapter three will discuss relevant theoretical aspects including capitalist system and its cycles, the notion of semi-periphery states, and transnational owner-producer (or multinational corporations).

From the theoretical aspect of world capitalist system, chapter four will turn to a more concrete level of economic and political settings during the policy shifts. It will raise the issues of international oil market and New Zealand's perception of the international context. Domestic aspects will be addressed in the fifth chapter which will examine each policy decision which was made in particular situations. The examination will be based primarily on the interplay between political and economic

factors. In the sixth chapter, impacts of the energy policy will be assessed. The chapter will also discuss some constructive comments and recommendations. Finally, the last chapter will synthesize both theoretical and New Zealand's policy sections. This conclusion part will offer an evaluation of to what extent a country's policy, New Zealand's in this case, can be explained by a tri-modal World System Theory.

II. World-System Theory of Immanuel Wallerstein

The World-System perspective became a distinctive theory with the publication of Immanuel Wallerstein's **The Modern World-System**[1] in 1974. It shares common viewpoints and explanations with various theories but retains a uniqueness in the power of its synthesis of approaches and emphasis on linkages of factors under one global system. In the field of development theories, the perspective inherits several arguments from its predecessors in the "leftist" tradition - that is, Imperialism and Dependency Theories. As for its historical approach, the perspective is much influenced by the French *Annales* school.[2] It is also interesting to note that Wallerstein's writings borrow some arguments from "Smithian" economics, Chicago School of Economics and Keynesianism. Therefore, Wallerstein's ability to integrate the three branches of knowledge to form a new interdisciplinary perspective places his World-System Theory a high privilege in the field of social study.

Since the 1970s, the theory has gained its acceptance as a mild-Marxian alternative that academically outshone the modernisation theory and offered an explanation that included both foreign and domestic aspects based on concrete historical knowledge.

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[1] Later, this book and the others in the series may be called **MWS.**

[2] Charles Ragin and Daniel Chirot, "The World System of Immanuel Wallerstein..." p. 288.

World-System Theory: Overview and Background

In the 1970s, the dependency school emerged as a major challenge to the dominance of the modernisation school of development theory. The latter views backwardness as a result of cultural hindrance and inadequacy of social infrastructure. It offers guidelines to overcome underdevelopment which many countries have followed. But this school is known for its fatal flaw as ahistorical, a characteristic which signals its weak explanatory power. Moreover, the growing gap between the developed and the 'developing' countries, observable since late 1960s, revealed the predictive failures of the approach. That made way for the emergence of radical dependency whose core/periphery dichotomy is based firmly in historical development of the colonial era and economic interpretation of underdevelopment. Dependency school represented by Andre Gunder Frank and Samir Amin offers a sound explanation of underdevelopment that the modernisation school lacks. However, dependency itself cannot be a viable option for policy makers because it falls short of rendering practical strategies. The clash between the two theoretical poles without a clear winner left the 1970s an ideological vacuum to be filled by contending theories.

At that time, Wallerstein inclined more towards the dependency than the conventional sociological approaches by which his early writings were influenced. Wallerstein followed the dependency theorists' standpoint that the backwardness of the periphery was caused by exploitation by the core powers.[1] He agrees with Frank

[1] Tony Spyby, Social Change, Development & Dependency. (Cambridge, MA: Polity Press, 1992) p.28; and Immanuel Wallerstein, Historical Capitalism. (London: Verso, 1983) pp.30-55.

that economic development and underdevelopment are the two sides of the same coin.[1] In fact he identifies the World-System perspective with the 'Marxist' trend of the 'Latin American structuralists'[2] as oppose to the 'liberal' or the modernisation school. But while the dependentistas occupy themselves with the analysis of the underdevelopment of the periphery, Wallerstein goes a bit further to understand the law of the system that governs the pattern of exploitation. The relationship between the two approaches is therefore, as Robert Brenner put it, that "[i]t has been left for Immanuel Wallerstein to carry to its logical conclusion the system outlined by Frank".[3]

Though, dependency influence may not be found in any of his work before the remarkable Modern World Systems (MWSs). Sociologist by training, Wallerstein still used conventional literature in sociology in his early academical writings.[4] In the 1960s his focus was on African politics. Later, Wallerstein was frustrated by the fact that political development in Africa was impossible under the existing interstate structure, a problem that conventional sociological theories failed to

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[1] Wallerstein, The Modern World-System *(MWS)*. p. 99.

[2] Wallerstein, "The Present State of the Debate on World Inequality" in The Capitalist World-Economy: Essays by Immanuel Wallerstein. (Cambridge: Cambridge University Press, 1979) p.53.

[3] Robert Brenner, "The Origins of Capitalist Development: A Critique of Neo-Smithian Marxism", in Hamza Alavi and Teodor Shanin (eds), Introduction to the Sociology of "Developing Societies". (London: Macmillan, 1982) p. 56. Saying this he means Frank underestimates the progressive force of capitalist development in the core by placing too much emphasis on the surplus appropriation from the periphery as determining capitalist development. The logic of capitalist evolution demonstrated by Frank is thus incomplete. It is Wallerstein who conceptualises the logic of the whole system where relationship between the core and the periphery is integrated.

[4] Ragin and Chirot p. 280.

address, let alone to answer. Then he redirected his focus to the heart of the problem and developed a first step of what may be called Wallerstein's worldview:

> The field of action of the movement toward African Unity was not Africa but the world, for its objective was not simply to transform Africa, but *to transform Africa by transforming the world.* Its enemies were internal to be sure; but the internal enemies were seen as agents of foreign powers - the essence of the concept of "neocolonialism". *We must accordingly analyze the emergence of the movement for African Unity in terms of the world system*, for it was the changing state of this system that made it impossible for the movement to gain and then lose its freedom to manoeuvre.[1]

Wallerstein's determination to pursue his examination of the world-system that originates the Third World sufferings leads him away from the positivistic sociology towards the opposite paradigm. He borrows concepts and explanatory mechanism from Lenin and other scholars on imperialism.[2] Generally, this current of thought rejects the notion that states are independent actors but views the peripheral areas as subject to the demand for raw materials from the centre. In Wallerstein's Modern World-System trilogy (1974, 1980, 1989) and Historical Capitalism (1983) much effort has been made to describe how development and underdevelopment evolve around the 'networks of material exchanges'. At the heart of capitalism lies the logic of 'capital accumulation' where wealth is accumulated through profits from commodity exchanges.[3] The global inequality is characterised by the 'centripetal' in form of

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[1] Ragin and Chirot p. 282 (italics mine). Later he expands the idea and comes to a conclusion that "[t]he states do not develop and cannot be understood except within the context of development of the world-system". (Wallerstein, **MWS**, p. 67).

[2] See Ragin and Chirot p. 289, and Chritopher Chase-Dunn, Global Formation: Structures of the World-Economy. (Oxford: Basil Blackwell, 1989) p. 3.

[3] Wallerstein, Historical Capitalism pp. 13-17.

commodity exchange. "That is to say, [commodity chains] have tended to move from peripheries of the capitalist world-economy to the centers or cores".[1] Thus far, Wallerstein's point resembles that of the Imperialism and Dependency theorists. In addition, Wallerstein's underlying of the conflict of interests and crisis in capitalism caused by rivalries in the core is completely in agreement with Marxism.[2]

Unlike Lenin and the dependentistas, Wallerstein does not appear antagonistic to the powerful core because his focus is on the system mechanism. Exploitation is a natural phenomena of the capitalist world-system in which those who do not appropriate surplus to reinvest will be punished by the system. It is the system that creates inequality. "Hence some areas 'progress' and other 'regress'. ... The key factor to note is that within a capitalist world-economy, all states cannot 'develop' simultaneously by definition. Since the system functions by virtue of unequal core and peripheral regions".[3] With this argument, he proposes the world-system as the unit of analysis[4] and the transformation of the world-economy as the only answer to global inequalities.

Wallerstein stands firm against the advocacy of "stages" of capitalism. For him, it is the single past-present (and future) time span of the life of the global

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[1] Wallerstein, *ibid*, p. 30.

[2] Ragin and Chirot, p. 295.

[3] Wallerstein, "The present state of the debate..." p. 61.

[4] *Ibid.*

system.[1] Wallerstein's periodization of the modern world-system into the origins of the European world-economy (MWS), mercantilism and the consolidation of the European world-economy (MWS II) and the second era of great expansion of the capitalist world-economy (MWS III) is merely a confirmation of a similar patterns of the rises and falls of core countries in various cycles in history. Some variables may change, for example, textiles might represent an advanced industry in the sixteenth century but may no longer be so, yet the logic behind the state struggling for better positions in the world hierarchy still holds true. In other words, history is not unilinear, rather, it is a circle of capitalism that governs every movement in the world-economy.

Addressing problems at the level of 'totality' so that all possible influences can be identified is one of Wallerstein's strength[2]; however, it poses him, and social scientists after him, big challenges. It eliminates any possibility for conducting a research by comparing the world-system to another. It further encumbers the researcher with the multiplicity of data that go beyond one's ability to master. Wallerstein transcends the first obstacle by turning to history and avoids the second by relying on secondary sources mostly from one school of history that shares a broad worldview. He traces the history of capitalism in the framework of Marxist historiography and acts as 'a user rather than a creator of historical work'[3] in the sense that he bases his argument on other people's finished research products. As earlier mentioned, the historical work of the like-minded school that he relies on is

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[1] Wallerstein, **MWS**, p. 7.

[2] Ragin and Chirot, "The World System of Immanuel Wallerstein..." p. 307.

[3] Ragin and Chirot, p. 288.

French *Annales* school of Fernand Braudel.[1] The use of concrete historical knowledge to explain social structures pioneered in the United States by Wallerstein made his work very appealing to young American social scientists who no longer revered functionalist positivism.[2] It should be noted, however, that Wallerstein's interpretation of historical facts is occasionally criticised as inaccurate or one-sided.[3]

"Wallerstein's approach emphasizes the interaction between the historicity of socio-economic systems and their deep structural or essential elements".[4] As a social scientist, he uses deductive method to turn diversified historical facts into a comprehensible model. This is where Wallerstein's work differs from that of historians. In his **MWS** trilogy, Wallerstein discusses the historical development of the world capitalism centred in Europe since the 16th century showing his inclination towards generalisation and apprehension of 'regular macrosociological laws'. "Wallerstein diverges profoundly from the *Annales* school in his choice of explanatory concepts. His central problem, to explain the origin and persistence of global inequality, dictates the use of explanatory concepts that are comparably global in scope".[5] Fernand Braudel himself regards Wallerstein as "a little too systematic".[6]

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[1] Ragin and Chirot p. 288; and Chase-Dunn, Global Formation, p. 2.

[2] Ragin and Chirot, p. 278.

[3] See, for example, Book Reviews by Ted N. Margadant and by Joel Mokyr under the same heading, "Wallerstein, The Modern World System III, 1989" Theory and Society, 20: 6, (The Netherlands: Kluwer Academic Publishers, 1991) pp. 891-895 and 895-899 respectively; and Ragin and Chirot, p. 292.

[4] Chase-Dunn p. 300.

[5] Ragin and Chirot p. 288.

[6] See Chase-Dunn, Global Formation, p. 14.

Although the Marxist influence and *Annales* historical school are usually mentioned in most studies of Wallerstein's World-System perspective, his non-Marxian economic concept is not as profoundly analyzed.

Among the few who do, Robert Brenner labels Wallerstein as "neo-Smithian", an accusation that might be shared by anyone who stands further left. For critics, Wallerstein's "view of economic development is *quantitative*, revolving around : (1) the growth in size of the system itself through expansion; (2) the rearrangement of the factors of production through regional specialization to achieve greater efficiency; (3) the transfer of surplus".[1] Unlike Marxism, Wallerstein's concept of capitalist economic development places "production for profit in the market " in the central assertion. Brenner also correctly argues that Wallerstein shares the same belief with Adam Smith who views the level of wealth as generated by the degree of development of trade[2] and that "...Wallerstein, implicitly or explicitly equates capitalism with a trade-based division of labor".[3]

Not mentioned by Brenner, however, is that when compared to economic writings of Milton Friedman of the Chicago School of Economics, Wallerstein's work appears to borrow some interpretations from monetarism. He explains the wage drops

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[1] Robert Brenner, "The Origins of Capitalist Development..." p. 58.

[2] Brenner, p. 60.

[3] Not all aspects of Brenner's criticism are still hold undisputedly true (See Chase-Dunn, pp. 17-18 and Daniel Garst, p. 469), but I agree with Brenner in this point.

in England in the 16th century[1] in a familiar monetarist argument, if not term. It sounds like 'the oversupply of money caused inflation that reduced real wages which were fixed (by custom, contract, or statute)'. At the same time, in the declining northern Italy, wages were still set relatively high even while the rate of surplus accumulation was decreasing[2], in other words there was a time lag for economic reality to reach the stage of recognition, the taking of action and the lag in effect of policy. This 'time lag' is also the argument of Friedman on the inappropriateness of government interventionist policy. From time to time, readers might come across Wallerstein's mentioning of mobility of capital, wages reduced by inflation[3] and the danger of huge government budget directed towards non-profitable activities.[4] Though his main point is to attack inequalities created by the world-capitalism, many of his concluding statements are derived from his contemporary 'liberal' ways of interpreting economic relations.

But Wallerstein cannot be too monetarist. He believes inflation has a positive function in capitalism development. "It was nonetheless a method of taxing the politically weakest sectors to provide a capital accumulation fund which could then be invested by someone. ...[I]nflation encouraged [savings and] investment".[5] Like

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[1] **MWS**, p. 81.

[2] *Ibid.*

[3] Wallerstein. "America and the World: Today, Yesterday, and Tomorrow" Theory and Society. 21: 1, February 1992, p. 12.

[4] **MWS**, p. 196.

[5] **MWS** : 83.

Keynes, he attributes growths mainly to investments, and also like Keynes, he proposes governmental active roles in fighting recession and in economic expansion.

Wallerstein's inclination towards the making use of history and economic concepts almost makes people forget the fact that he is actually a sociologist. Wallerstein has shown his departure from the mainstream sociologists before him since 1974 and strongly attacks the modern social scientists whose aim is to "achieve quantification of research findings".[1] Still, he toes the line of modern social sciences that there are regular laws that apply over all time and across societies and not that each situation is explainable only by its unique history.[2] What distinguishes Wallerstein as a prominent modern sociologist is the strengthening of his generalisation with historical interpretations As seen by Chase-Dunn, another World-System theorist, "Wallerstein's work is consciously located... at a midpoint which is more historical..., and yet which is more generalizing than that of most historians.[3]

By synthesizing polarised ideas from various disciplines, Wallerstein discovers the structure of the whole system. The whole that does not mean just the assembled parts.[4]

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[1] **MWS**, p. 8.

[2] Ragin and Chirot, p. 284.

[3] Chase-Dunn, pp. 13-14.

[4] **MWS**, p. 8.

Key Assertions

The main point of his assertions is that societies are linked to one another in the context of a larger network of material exchanges and that the network of interdependent subunits is constituted in a systemic way. World capitalist economy developed as the global commodity trade centred in Europe prospered since 16th century, and repetitive patterns of significant historical phenomena have been extracted to formulate the general law of the unique era. Wallerstein observes the aggravated inequality where the world subsystems divided into the prosper and the loser caused by the general law of capital accumulation through trade and through profits generated from investments. The absence of supranational authority to harness the market forces serves to "reinforce the existing system of stratification".[1] Here, weak states are so vulnerable to external forces, but the governments that are clever enough to act in accordance with the capitalist mechanism can improve their positions and increase their room to manoeuvre at the others' expenses.[2]

Capitalism is not the only world-system he mentions but the only one he profoundly associates himself with.[3] It is the system that replaces the world empire - a system in which strong centres dominate unitary political entities and materials were less commodified. In the capitalist world-economy, there is no single encompassing

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[1] Wallerstein, "Dependence in an Interdependent World- The Limited Possibilities of Transformation within the Capitalist World-Economy" in The Capitalist World-Economy: Essays by Immanuel Wallerstein. (Cambridge: Cambridge University Press, 1979) p. 66; and **MWS**, pp. 127, 134.

[2] **MWS II**, p. 179.

[3] Ragin and Chirot, p. 285.

state apparatus but there are multiple societies, multiple states and a single economic division of labour.[1] The reproduction of the division of labor depends on the 'unequal exchange' between the core, producing high-waged products, and the periphery, producing low-waged products. The unequal exchange within the division of labour is necessary for profit accumulation in the core.[2] "[C]apitalism is the ***only*** mode of production in which ***maximization*** of surplus is rewarded ***per se***.[3] Because profit can become capital, it is used "to accumulate more of the same"[4].

> "Capitalism involves in addition structures and institutions which reward primarily that subsequent of the owners and controllers who use the surplus value... for further investment. The structure of the market ensures that those who do not accumulate capital (but merely consume surplus value) lose out economically over time to those who do accumulate capital".[5]

The more he discovers the logic of capitalism, the more he dislikes the system. That is because "far from being a 'natural' system, historical capitalism is a potently absurd one. One accumulates capital in order to accumulate more capital. Capitalists are like white mice on a treadmill, running ever faster in order to run still faster."[6] But undesirable as it may seem, capitalist world-economy now really exists; and, as long as it continues to exist, national development is still a zero-sum game

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[1] Chase-Dunn. p. 2.

[2] Wallerstein, "Dependence in an Interdependent World...", p. 71.

[3] Wallerstein, "Class Conflict in the Capitalist World-Economy" in The Capitalist World-Economy, p.285.

[4] Wallerstein, Historical Capitalism, p. 14.

[5] Wallerstein, *ibid.*

[6] Wallerstein, Historical Capitalism, p. 40.

understandably only through the examination of the interaction between the state policies and systemic trends.

Since 1974, Wallerstein devotes his academic life for the construction of a theory about the capitalist world-economy, which, he says, has come into being since the 16th century and now dominated the relationships between states as well as non-state actors. As earlier mentioned,[1] Wallerstein's MWS trilogy depicts the characteristics of the development of the capitalism in three major periods in history. That does not mean he omits to address the capitalistic nature of the contemporary world. Wallerstein chooses to implement his grand scheme through various essays and speeches.[2] It appears that he tries to build the foundation for his theory by proving it "heuristically" with his research on historical world-system, and then to emphasize the versatility of the theory by applying to various political and economic issues in the postwar era. Together, his MWS trilogy and collections of essays confirm three salient feathers that are inherent to a world-system and the capitalist world-economy, namely, the interplay between politics and economics, perpetual structural hierarchy, and economic cycles.

For Wallerstein, the only *raison d'etat* is the interstate system. As the nature of the world capitalism requires a single division of labour, states in the system

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[1] Pages 15 - 17.

[2] For examples, those collected in The Capitalist World-Economy. 1979, and The Politics of the World-Economy. 1984.

are accordingly an "organization" that is created to facilitate this division of labour.[1] "The fundamental role of the state as an institution in the capitalist world-economy is to ... *reduce* the 'freedom' of the market".[2] State system "encrusts, enforces and exaggerates" the pattern of specialisation which may be initiated by market conditions.[3] Within its boundary, a state regulates the market pattern and transform wealth from one group to another through tax and subsidy measures; beyond its jurisdiction, a state always try to impose its will on other states.[4]

Not only the state can affect economic accumulation, the level of economic success of a state can determine the strength of the state machinery. The tax revenue enables the state to have a larger and a more efficient civil bureaucracy and army which in turn leads to greater tax revenue - a process that continues in spiral form."[5] In a country where capital is concentrated, there are "both the fiscal base and the political motivation to create relatively strong state- machineries", among whose many capacities is that of ensuring that the state machineries of other countries remain relatively weaker and unable to reject the trade and production patterns imposed upon by strong states.[6] "Ultimately, of course, political and economic measures are linked

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[1] See Wallerstein, "Household Structures and Labour-Force Formation in the Capitalist World-Economy" in Etienne Balibar and Immanuel Wallerstein, Race, Nation, Class: Ambiguous Identities. (London: Verso, 1991) p. 122.

[2] *Ibid.*

[3] *Ibid.*

[4] *Ibid.*

[5] **MWS**, p. 356.

[6] Wallerstein, Historical Capitalism, p. 32.

reciprocally because productive efficiency makes possible the strengthening of the state and the strengthening of the state further reinforces efficiency through extramarket means.[1]

Accordingly the global community always comprises strong and weak states. A strong state with an efficient bureaucracy usually can intervene the domestic market to maximize the production efficiency and create a favourable international climate for its external trade to increase profit, and thus capital accumulation, for its own entrepreneurs. On the contrary, a weak state may be destined to produce primary or less sophisticated products to serve the demand of domineering states, and at the same time forced to open its market for finished products from those countries. It is therefore impossible for every state machinery to be equally strong because that would undermine the power of transnational economic entities and the world division of labour would be impeded. Neither can all state be equally weak "[f]or in such a case the capitalist strata would have no mechanisms to protect their interests, guaranteeing their property tights, assuring monopolies, spreading losses among the larger population, etc."[2] The system can only reproduce itself in this inequality.

The realisation of the disparity of state power leads to another crucial aspect of the World-System Theory, that is the perpetual hierarchy in the interstate system. Roughly, the countries where capital accumulation is relatively high and whose state machineries are strong enough to exert their influence beyond their

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[1] **MWS II**, p. 113.

[2] **MWS**, p. 355.

jurisdictions constitute the "core" zone, and the countries with the opposite characteristics the "periphery". The two categories are only slightly different from the classic dependency dichotomization. What is Wallerstein's initiation is the concept of semiperiphery.[1] He emphasizes the indispensability of the semiperiphery due to its political function of stabilising the otherwise extreme bi-polar world-system. "The existence of the third category means precisely that the upper stratum is not faced with the **unified** opposition of all the others because the **middle** stratum is both exploited and exploiter."[2] The capitalist world-system has always comprised and will always comprise the three strata. Shifts in rank order are normal but the hierarchical system remains unchanged.

This hierarchy and the shifts within the hierarchy is understandable within the context of economic cycles. A cycle includes a period of expansion and then a period of downturn. "Periods of expansion of the world-economy are relatively easy to summarize. Production is expanding overall and in most places. Employment is extensive. Population is growing. Prosperity is the sign of the time."[3] It is a period when virtually most states can enjoy a positive rate of economic development. On the contrary, the period of contraction is much more complicated and meaningful.[4] To say

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[1] The semiperiphery is a unique and interesting concept which is worth elaborating. The notion will be reviewed in depth in chapter 3.

[2] Wallerstein, "The Rise and Future Demise of the World Capitalist System: Concepts for Comparative Analysis", in The Capitalist World-Economy. p. 23.

[3] **MWS II**, p. 129.

[4] The concept of world economic contraction deserves further investigation in the next chapter because of its complexity as well as its direct relevancy to the case study.

simply, "a downturn is a slowdown of activities, not a stoppage. It represents, ..., a set of obstacles in the search for profit... ."[1] Usually at this moment occur major shifts in interstate hierarchy. Because, in tough time, those who are less competitive can be easily "weeded out", and at the same time, "[t]he strong not only survive; they frequently thrive".[2] In this contraction period, a few states that pursue 'intelligent state policies'' can outperform the rest and improve their positions in the world-system, and the states that pursue unwise policies may shrink.[3]

The period from 1600 to 1750 was an example of a 'relative stagnation'.[4] The diminishing effective demand was unfavourable to the high-waged core and thus the core producers were forced by the circumstance to exploit their subordinates more directly and severely. In such a condition, the majority of peripheral .areas such as Poland were the ones who most suffered while only Sweden and Prussia could step up from peripheral areas to join the semiperipheral states. Also at that time the semiperipheral England and France could challenge the Dutch hegemony and became core countries themselves. These reshuffles were all attributed to each state's strategies conducted within a specific setting of global economic downturn.

These changes emphasize the key role of states in the world hierarchy and the single division of labour. Wallerstein contends that "the state was an essential

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[1] *Ibid.*

[2] *Ibid.*

[3] See **MWS II**, p. 179.

[4] **MWS II**, p. 241.

instrument used by the Dutch bourgeoisie to consolidate an economic hegemony that they had won originally in the sphere of production and had then extended to the commerce and finance. The state of competing core and semiperipheral powers would be equally essential instruments in the process of destroying this hegemony".[1]

At a lower level, Sweden in the 17th century represented another success of strong state machinery and its policies. The country was in hapless conditions which included small population thus small financial base for its state machinery and the lack of vast resources 'to sustain its position in the long run'.[2] However, Sweden could maximize its limited resources for national development, first by continuously strengthening the state machinery[3] and then by choosing to build up industries based on its natural resources.[4] Swedish state consciously developed the country's specialisation in production and export of 3 main resources: copper, iron and tar, when there were demands from the core and other semiperipheries in Europe without strong competitors. At first, the businesses seemed to be under 'foreign domination' but the government also succeeded in "nationalizing" the industries "by ennobling the entrepreneurs".[5] The state used its three quasimonopolies to create a strong bargaining position, without which the political-military expansion would have been unattainable.

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[1] **MWS II**, p. 65.

[2] **MWS II**, p. 217.

[3] Strong state machinery in this sense means strong vis-a-vis any social group within the state enough to pursue its determined policies as well as the state's military or political power *vis-a-vis* other states. See **MWS**, p. 355.

[4] **MWS II**, p. 217.

[5] **MWS II**, p. 210.

The political-military expansion in turn made it possible to develop the transformation industries".[1] In short, what Sweden at the time did proves that an intelligent weak state with an efficient state machinery can make the most use of foreign investors, grasp the opportunity of the market open to it by the rich core and then increase its wealth by exploiting weaker neighbours.[2]

Conclusion

Wallerstein can raise endless examples to show that his theoretical premises are sound and the world-system framework renders a useful systematic interpretation of current affairs.[3] "Once these are accepted, a series of assertions about the contemporary world can be made. A large number of situations, from Stalin's excesses to the Cambodian tragedy and the rise of Solidarity in Poland, can be explained by the exploitative nature of the capitalist world system and its contradictions".[4] Many of his analogies are beyond the scope of this study, for example, the socialist movements, the road to hegemony, the class-formations, and etc. Still, the logic of argument and the three main points: the interplay between politics and economics, the perpetual structural hierarchy, and economic cycles, can be directly analyzed within the context of New Zealand's energy policy.

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[1] **MWS II**, p. 211.

[2] Prussia was another interesting case of a country that could upgrade itself in the world hierarchy but the scenario was difficult and may be less relevant to the topic to be discussed later in this thesis. The details of Prussian rise are mentioned in **MWS II**, pp. 225-36.

[3] See Ragin and Chirot, p. 305.

[4] Ragin and Chirot, p. 305.

Whether Wallerstein's conclusion about the undesirability of capitalism and the need to transform it is acceptable or not, his vision of social sciences certainly earns him the reputation. The World-System perspective suggests that one should not let disciplinary boundaries hinder one's investigation and that any problems should be addressed in 'totality' and in historical context.[1] In the broader context of the world-economy, states, firms and political groups are dynamically playing their roles. In the light of such perspective, the discussion in the following chapter will elaborate the interplay between politics and economics by highlighting the roles of states and multinational corporations, the concept of semiperiphery and its relevance to the status of New Zealand, and the features of economic downturn that affects the world in general and New Zealand in particular. The broad overview of the World-System perspective already mentioned in this chapter and three core concepts to be discussed in the next chapter will serve as the conceptual framework for the analysis of New Zealand's energy policy in the latter part of this study.

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[1] Ragin and Chirot, p. 307.

III. Semiperipheral States and Multinational Corporations in Cyclical Economic Trends

The three core concepts from the world-system perspective mentioned in the previous chapter constitute the basic explanation of the direction of New Zealand's energy resource development during the 1970s and 80s as well as the structural constraints in implementing economic policy. The first concept, the interplay between politics and economics is the most crucial foundation for further arguments. Within the system of single division of labour, market forces and the logic of capital accumulation govern any decision in economic activities. At the same time, those economic activities must be carried out within the jurisdiction of one state or another whose policies can shape the pattern of surplus-value extraction of any capitalist enterprise. This mutual effect between the state and non-state actors is most dramatic in the realm of the semiperiphery where the state plays the central role in the national development. The other two concepts, the semiperiphery and economic downturns, emphasize the interrelated role of the state and economic actors. Together they compose a picture of New Zealand as a semiperipheral country moving on waves of economic cycles. That is the first step of analyzing the country's rationale for policy making.

The purpose of this chapter is to elaborate the significance of the role of the state and the multinationals in shaping the path of a country's development. In doing so, it is necessary to prove that New Zealand is and has always been in the semiperiphery, where experience of national capital accumulation can be explained by global economic cycles.

States and MNCs: the Interplay between Politics and Economics

That the capitalist economy occupies the entire globe and penetrates all national boundaries does not imply that it expands unassisted nor unhampered by political forces within the existing multistate system. In the capitalist world-system, the producers cannot rely solely on their ability to produce efficiently to extract a huge amount of surplus-value. Success in the system "is based on a combination of effective state power and competitive advantage in production".[1] In the first place, firms depend on the interstate system to provide a relatively stable world order conducive to profit-making activities.[2] Then firms also require state guarantee of internal order and property rights. Moreover, owner-producers usually wish the state to perform two key functions. One is that they want the state to intervene to expand or to limit the "freedom" of the market, whichever one will most increase profits. The other is that they wish the state to act, actively or passively, "to help them extract a larger percentage of the surplus than they would do otherwise,..."[3] The state is therefore, in the world-system perspective, a political institution that is indispensable for capital accumulation within the world-economy.

States usually perform the function that the system requires and that the firms expect them to. There can be two explanations as to why states act in accordance with the need of local or transnational enterprises motivated by profit-seeking. Either they pursue their courses of conduct deliberately or they are forced to do so. A state

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[1] Chase-Dunn, Global Formation, p. 140.

[2] *Ibid*, p. 75.

[3] **MWS II, p.** 113.

may eagerly become an "aggressive capitalist state" by not merely waiting "for the entrepreneurs to succeed so that it can tax them" but also "create opportunity to entrepreneurs and sometimes it takes on the entrepreneurial role itself".[1] These kinds of policies should result from a realisation of the necessity to compete in the dynamic interstate system. A state that wishes to enhance its position within the world hierarchy should deliberately assist the local firms to maximize their profits in the world market. And if the state depends on overseas capital, it has to make the most use of that capital and prevent massive outflows of money in terms of profit repatriation. "Neither local entrepreneurs nor the state begrudge the multinationals the right to earn profits. High profits are fine as long as they are reinvested in local accumulation".[2] Recently Japanese and Brazilian governments represent this type of capitalist states.[3] In the past, British interventionism in the world market and the British government's indirect role in the so-called Industrial Revolution reflected another successful story of a state pursuit of profit maximization.[4]

It should be noted, however, that the willingness of state to promote local accumulation does not guarantee its success. A state with less competent apparatus or with limited resources may try to create beneficial atmosphere for its entrepreneurs but may lose against powerful MNCs.

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[1] Chase-Dunn, p. 120.

[2] Peter Evans, Dependent Development: The Alliance of Multinational, State, and Local Capital in Brazil. (New Jersey: Princeton University Press, 1979) p. 195.

[3] See Evans, *ibid*, p. 79, and Chase-Dunn, Global Formation, p. 120.

[4] **MWS III.**

There have been some states that choose to neglect the logic of capital accumulation and profit maximization at the global level, but because the world capitalist economy prevails, most states cannot resist the trend. Some states, such as China and the Soviet Union in the past, have tried to "cut themselves off from the larger world-system and to create a closed internal economy'[1] and some, such as Chile, Mexico, and the Philippines, during the 1970s, may have tried to mobilise overwhelming resources to serve short-term political purposes irrespective of the requirements of the economy. For most of those countries, after certain years of perseverance they are brought into the world capitalist line either by domestic upheaval or the World Bank/IMF conditions or both. Because resisting the capitalistic current did not produce prosperity (though joining the tide might not either) many socialist, nationalist and fascist states have made a sharp turn towards the fashionable capitalism, however unwillingly.

It is also possible that a state's political system is just too obsolete. The state political formation then may be forced to transform by global economic necessities to catch up with the latter. In this category too, examples can be found throughout history of capitalist development. As cited by Wallerstein, the transition of French state from feudalism to capitalism marked by the French Revolution was one of the examples of forces unleashed to generate the political institution that observes the rules of the game.[2] Japan can be regarded as another example that indicates the

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[1] Chase-Dunn, Global Formation, p. 119. Many of these states are credited as 'antisystemic' by Wallerstein.

[2] **MWS III.**

transformation of a feudalist imperialist to a capitalist empire. The Japan reform process is usually labelled the "Meiji Restoration", the political process which covered most of the latter half of the 19th century. Within the process, the first decades witnessed the dismantling of the power of the feudal lords and the 1880s was the decade of judicial reform. The restoration paved the way for more efficient accumulation for the Japanese state by giving judicial endorsement for landowners to appropriate high levels of surplus from farmers. The landowners were, through the reform, liberated from the repression of the feudal oligarchs and therefore could keep most of the profits for further reinvestment.[1] Here, too, the adjustment of political system into a more progressive form serves the need of global capitalism.

Since states are to be a political machinery to facilitate surplus-value extraction, the point is whether they can perform the task well enough to preserve or enhance their position in the world-system or so unsuccessfully that they fall victim of external exploitation. The answer lies in the state's "strength". A strong state can protect its capitalists from the risks or uncertainties in the world market.[2] In the non-core areas, where the local bourgeoisie are too weak to manipulate the economic situation, a strong state with a highly centralized and extensive state apparatus is needed.[3]

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[1] For details see Jon Halliday, A Political History of Japanese Capitalism. (New York: Pantheon Books, 1975) pp. 3-61.

[2] Chase-Dunn, p. 239.

[3] See Daniel Garst, "Wallerstein and His Critics", p. 481; Wallerstein, (1979) "Dependence in an Interdependent World...", p.72; and Chase-Dunn, pp. 140-41.

"Strong" state does not mean an authoritarian one. According to Wallerstein, the strength of state is determined by 5 factors. First is its ability to help its owner-producers compete in the world market. Second is its influence over other states. Third is the ability to perform the above-mentioned first and second tasks, namely to compete with and influence over others, at least cost. Fourth is an effective bureaucracy. And the last element which is the key to the others is its ability to articulate a balance of interests among owner-producers so that its dominant class "forms the stable underpinning of such a state".[1]

According to these guidelines, states with different status must be assessed differently. In core economies where the owner-producers are competent, a compact but effective bureaucracy that imposes lower tax burden together with a government that can exert influence to create a favourable atmosphere for their owner-producers represent a strong state. But while a core state can save the country's resources for use in private sectors and help its producers gain an advantage, quite the opposite is true for a non-core state.[2] In the semiperiphery, the owner-producers are not in a position to compete with transnational actors without "extra-market" assistance from the state. However, for both cases, it can be said that "[a] state is stronger than another state to the extent that it can maximize the condition for profit making by its entrepreneurs... within the world economy."[3]

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[1] **MWS II**, p.113.

[2] Garst, p. 481.

[3] Wallerstein, "World Networks and the Politics of the World-Economy" in Wallerstein, The Politics of the World-Economy: The States , the Movements and the Civilizations. (Cambridge: Cambridge University Press, 1984), p. 5.

If Sweden and Germany in the 17th century reflected the success of peripheral areas that acquired those five elements and then became semiperipheral,[1] a showcase for the 20th century can be Brazil, whose ascending to the intermediate level of development is analyzed by Peter Evans.[2] Evans extracts six components constituting the bargaining power for a semiperipheral state against MNCs:

- valuable natural resources
- extensive local market
- exploitable labor force
- capacity of state apparatus
- technical expertise and
- control over relevant information.[3]

Brazil undoubtedly possesses all six components and has a potential to manipulate foreign investments for her own development. In the same manner as Sweden in the 17th century, Brazil state utilises her potential for national accumulation. The country promotes an 'export-oriented growth' policy and attracts multinational capital for its industrialisation. Dependent on foreign capital as she is, Brazil maximizes her economic development by creating the 'triple alliance' of MNC, the government

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[1] See page 28-29 in the previous chapter.

[2] See footnote 2 page 34.

[3] Evans, p. 44.

and local bourgeoisie as the fundamental force for local accumulation of capital.[1] The government's active role in harnessing foreign forces and transferring control and know-how to national capitalists is very significant in this regard. This work of Peter Evans confirms Wallerstein's assertion of the key role of the state in enhancing the status of non-core areas.

The relation of semiperipheral state and MNC is twofold. On the one hand they help each other to realize a mutual benefit; on the other hand they have conflicting interests. Multinational corporations need the location in which they can make a profit. As long as the host state "does not undertake any *efficacious* measures to reduce its *world-wide* profit", the MNC can act in harmony with the country's development strategy.[2] For instance, when Saudi Arabia raised its oil price in 1973 hurting many importers, Exxon did not feel threatened and could get along with the country's new stance.[3] But sometimes corporation profit contradicts local interests. Some projects that are not profitable in themselves but create a base for subsequent projects or sustainable resource management may be good from a national point of view but absurd from the multinational perspective.[4] Because various states compete for overseas capital, normally (especially in the period of economic expansion) MNCs

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[1] *Ibid*, p. 32.

[2] Wallerstein, "Semiperipheral Countries and the Contemporary World Crisis", p. 103.

[3] *Ibid.*

[4] Evans, p. 195.

"make great profits from their ability to play off states against one another. States compete to offer the best deals to attract the capital investments of the transnational".[1] States with less competence may have to sacrifice some long-term benefits for the sake of immediate capital.

Both the state and MNCs played the central roles in New Zealand's energy development in recent decades. This particularly held true in 1970s-80s when the involvement of MNCs in the country's large development projects posed serious challenges. The argument so far, which is extracted from Wallerstein and other world-system theorists, may help to understand the interaction between the two actors and the forthcoming discussion will assess the interaction through the analysis of the political status of the two actors and their historical backgrounds.

At the crossroads, the strength of the New Zealand state according to her international position should be considered. In Wallerstein's classification, New Zealand belongs to the category of "Old white Commonwealth" with Canada, Australia and South Africa, which forms a part of the semiperiphery.[2] New Zealand's development as a 'semi-colonial country' is discussed specifically by David Bedggood and Warwick Armstrong. Both underline the dependence of New Zealand on imperialist countries as the main impediment for real development.[3] The same basic

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[1] Chase-Dunn, p.75.

[2] Wallerstein, "Semiperipheral..." , p.100.

[3] David Bedggood, "New Zealand's Semi-Colonial Development: A Marxist View", pp. 285-89; and Warwick Armstrong, "New Zealand: Imperialism, Class and Uneven Development", pp. 297-303. Both are articles in The Australia & New Zealand

idea is shared by non-Marxist Bruce Jesson who regards New Zealand as a "satellite society - an appendage of Britain and still dependent on the major industrial powers".[1] There is virtually a consensus that New Zealand's colonial background determines the structural imbalance of the country in the late 20th century.

Founded as a colony to serve economic needs of Britain, New Zealand's early development was made possible by the state and "borrowed money". In this regard, the New Zealand state can be said to be 'created' in order to facilitate international accumulation. In most of the 19th century, New Zealand economy depended upon wool growing and scavenger industry (gold, timber, whaling, sealing).[2] Land acquisition was funded by foreign loans.[3] Both economic facets of the settlement enable accumulation in the home country by reducing wage within the British Isles and by accumulating interests from loans.[4] These reproductions of capital required a colonial 'state' to maintain law and order and to "guarantee a secure return" of investments from abroad.[5]

In New Zealand's early history, funds for economic development were channelled through the state because "from the point of view of the British investors

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Journal of Sociology. 14:3 (part two) October 1978 (Place of publication not stated).

[1] Bruce Jesson, Behind the Mirror Glass. (Auckland: Penguin, 1985) p. 30.

[2] Jesson, Behind the Mirror Glass, p. 19.

[3] Armstrong" New Zealand :Imperialism,... ", p. 299.

[4] Bedggood, "New Zealand's Semi-Colonial Development ...", pp. 287-88.

[5] See Bedggood, *ibid*, p. 289.

the state was a better risk than local businessmen".[1] The growth of New Zealand economy amidst the international division of labour came "largely through the benign intervention of the state which often played the role of financier in nineteenth-century New Zealand. The state bought and sold land, constructed railways, settled farmers and financed immigration."[2] Therefore, in the absence of the industrial capitalist class, "it could be said that the state pioneered New Zealand capitalism".[3]

Both the extensive role of the state as well as the lack of its industrial capitalist class in the colonial economy are addressed by most authors; it is , however, the interpretation that differs among various authors. Jesson simply attributes the lack to the unavailability of time for evolution and to the tradition of the private sectors of leaning on the pioneering role of the government.[4] But Armstrong believes the New Zealand capitalist class had evolved but could not get a chance to develop. He confirms the existence of an industrial base for New Zealand in the 19th century as "[t]here was emerging an industrial sector, capable of producing and exporting a wide range of goods - from textiles to farm machinery and dredges - of supplying New Zealand rail network with locally-made locomotives and of shipping its goods in locally based ships."[5] But the emergence was later blocked by the country's incorporation

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[1] Jesson, p.30.

[2] Jesson, p. 101.

[3] *Ibid.*

[4] See Jesson, *ibid.*

[5] Armstrong, 1988, p. 299.

into the British-dominated international economy. New Zealand then became a colony specialised in temperate foodstuffs for the European market.[1] As a result instead of having "an independent, autocentric industrial capitalist" and an industrial capitalist class as its impetus, New Zealand pursued the path of "dependent, uneven developm-ent"[2] which was intensified by the consolidation of the 'comprador class'.[3] Therefore, for Armstrong, the symptoms are closely linked to the country's status in the semiperiphery, and the consequence is the reproduction of "monocultural extroverted specialisation in the production of primary raw material for the "mother country" [4] which would affect the country severely later on.[5]

To support his assertion, Armstrong maintains that neither industrialisation nor independent development of the country occurred even when local capital was available during the prosperous years of 1896-1914.

> The combination of British imperial dominance and a collaborative mercantile- financial-landed ruling group in New Zealand, many of whom were local managers for British banks and finance houses, guaranteed the colony's full insertion into the world-system of the 19th - and 20th - centuries as a specialist staple producer and exporter in return for the import of British capital, labour and manufactures. In such a scheme there was

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[1] *Ibid.*

[2] *Ibid*, p. 302.

[3] *Ibid*, p. 300.

[4] *Ibid.*

[5] *Ibid*, p. 302.

> little place for an emergent industrial capitalism, nor for an autocentric pattern of development. Instead the colony and later the neo-colony readily assumed its role in the international division of labour as an imperial farm."[1]

The pattern remained for almost a century. Even though the Depression of the 30s and the hardship experienced during the Second World War pressured New Zealand to develop and protect its own manufacturing industry,[2] the country's dependence on a few agricultural exports was not altered. That was because "[t]he new industries produced for the local market and consumed overseas funds without earning any. This magnified the country's dependence on farming exports... ."[3] And that has left New Zealand to become a fragile economy. Even nowadays New Zealand national income and the country's living standards still depend heavily on export earnings which make up around 30% of GDP,[4] and the country is still largely dependent on exports of commodities.[5]

Armstrong clearly asserts that the "transmitted prosperity" experienced by New Zealand in some periods through the dependence on monocultural export to the imperial centres is far from the real meaning of development. For one thing, New

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[1] Armstrong, p. 301.

[2] Jesson, p. 38 and pp. 104-5.

[3] Jesson, p. 39.

[4] Pat Colgate and Joselyn Stroombergen, A Promise to Pay: New Zealand's Overseas Debt and Country Risk. Research Monograph 58 (Wellington: NZ Institute for Economic Research, 1993) p. 9.

[5] *Ibid*, p. 63.

Zealand is, "like the international capitalist peripheries, much more comprehensively affected by [global cyclical] downswings by the very nature of their wholehearted commitment to, and dependence on, external influence".[1] He implies industrialisation as the key to become a developed capitalist nation.[2] The idea is in complete agreement with that of Wallerstein who portrays the world division of labour as being sustained by the "unequal exchange" between the core which sells high-wage products and the periphery which depends on low-wage product.[3]

Apart from acting as a facilitator of the integration of New Zealand into the British-led international division of labour, the New Zealand state was prone to domestic pressure for it did not possess enough strength *vis-a-vis* the local dominant class. This relative internal weakness reaffirmed New Zealand's destiny as a dependent economy. According to the class structure of New Zealand, the dominant class was that of the comprador who played a "mediating role between the local producers of 'staple' for metropolitan markets, and foreign industrial capitalists and investors"[4] This class depended on merchant capital or circulatory capital. It was a vital interest for the class to make rapid turnovers and not long-term investments.[5] This dominant class still prevails after the Second World War. From then on, "New Zealand has been ruled

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[1] Armstrong, p. 302.

[2] See Armstrong, pp. 209-300.

[3] Wallerstein, "Dependence...", p. 71.

[4] See Armstrong, p. 300. Armstrong borrows the concept of "the comprador class" from Paul Baran.

[5] *Ibid.*

by the *comprador* mercantile-financial and farming groups which have exercised continuing influence over state power and policies".[1] This is the reason why the diversification and the strengthening of the private industrial sectors always fall short of the apparent potential. Had the state decided to pursue policies which differed from those demanded by the imperial market, it could not have done so because the powerful domestic bloc would not permit. Therefore, "as long as the society remains under the direction of the groups whose class interests are best rewarded by acting as intermediaries for the trading and financing of staples-exports in exchange for imported manufactured goods and investment capital, there will be no real move toward the achievement of greater independence".[2]

Showing a relative weakness against both the external influences and domestic bloc, the New Zealand state has resolutely led the country into the international division of labour, but passively. This causes mixed results over different periods of time. And the country's performance during these periods should be assessed within the framework of the "semiperipheral" concept.

Semiperiphery

The concept of semiperiphery introduced by Wallerstein is now widely accepted in the field of sociology of development but the real meaning of the term is

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[1] Armstrong, p.301.

[2] *Ibid*, p. 302.

still problematic.[1] Wallerstein is quite clear on the necessity of the world system to be tri-modal and quite decisive in specifying some states as being semiperipheries. However, he proposes no precise rules of classification and that poses a problem for quantitative sociologists who demand empirical tests. To have a clearer idea about the definition and classification of semiperipheral countries, one has to take several related arguments into account.

The concept of semiperiphery is initiated by Wallerstein to explain why self-contradicting world capitalism is not torn apart. This group of states depolarizes the system and makes a capitalist world-system run smoothly.[2] This middle sector also exploits the periphery and thus diverts the peripheral antagonism from being directed solely towards the core.[3] At the same time it plays a role of peripheral zone in serving the interests of the MNCs from the core. By providing a location for the core capitalists to shift some investments outside the national boundaries to seek comparative advantage,[4] it facilitate the reproduction of capitalism at the global scale. In this light, Wallersteinian semiperiphery is by nature a functional concept.

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[1] See Chase-Dunn, p. 210.

[2] Chase-Dunn, pp. 211, 243; and Wallerstein, "Semiperipheral", p. 21.

[3] **MWS**, p.350.

[4] See Wallerstein, "Semiperipheral...", p. 97.

The lack of accurate classification of the concept has been criticised by Chirot.[1] And attempts have been made to clarify the notion. Snyder and Kick[2] apply blockmodel analysis - "an empirically grounded theory of social structure" to the world stratification pattern. They analyze empirical data on four types of international networks: tradeflow, military interventions, diplomatic relations and conjoint treaty memberships of 118 nations from 1955-1970 and find that the regression analyses of the effects of network model "provides strong evidence for a core-semiperiphery-periphery structure".[3] Steiber[4] also tries to test the existence of semiperiphery empirically by using import-export data of four commodity classes of 15 groups of nations, and the result follows the same line as that of Snyder and Kick.

The two studies offer a good guideline for further analysis. However, when applied specifically to the case of New Zealand they both cause a certain problem - in what category stands New Zealand? Interestingly, Snyder & Kick locate New Zealand within the "periphery" which is probably because the pattern of trade of New Zealand resembles that of the peripheral countries which "are integrated into the world

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[1] Daniel Chirot, Social Changes in the Twentieth Century. (New York: Harcourt Bruce Janovich, 1977) quoted in David Snyder and Edward L. Kick, "Structural Position in the World System and Economic Growth, 1955-1970: A Multiple-Network Analysis of Transnational Interactions" in American Journal of Sociology. 84: 5 (1979) p. 1101.

[2] *Ibid*, see footnote 4 of this page, pp.1907-1126.

[3] *Ibid*, p. 1096.

[4] Steven R. Steiber, "The World System and World Trade: An Empirical Exploration of Conceptual Conflicts" in The Sociological Quarterly 20: 1, Winter 1979.

economy only through their trade with the core block... ."[1] On the contrary Steiber applies a Frankian criterion that regards the socialist bloc as the semiperiphery and the OECD countries including New Zealand as the core. However, examining Seiber's work may contribute to an argument against placing New Zealand into such stratum. Grouping Australia and New Zealand together, Steiber finds that the two countries together represent an exceptional case of the core states, but he does not go further to investigate the reasons behind the exception. According to the normal pattern, core countries are supposed to export secondary goods to and import primary goods from non-core countries. Instead, the group of Australia and New Zealand, in 1973, exported primary goods to and imported secondary goods from the semiperiphery. It is also possible that if the author examined only the data of New Zealand alone, without grouping with Australia, the figure would more strongly confirm New Zealand's position in the semiperiphery, judging from the pattern of trade.

A clearer and simpler way has been suggested by Peter Evans (1979). He realizes the imprecision of the theoretical concept of the semiperiphery[2] and proposes to circumvent the problem by having a crude classification of the international strata based on GNP figures as appears in table 3.1.[3]

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[1] Snyder & Kick, p. 1114. They admit the arbitrarily determination of block classification and deny the location of countries in blocks as definitive nor precise.

[2] Evans, p. 291.

[3] *Ibid*, p. 292.

Table 3.1 Crude Classification of the International System Circa 1970

	Per Capita GNP Greater than $900	Per Capita GNP Lesser than $900
GNP greater than US $ 100 billion	(1) U.S. U.S.S.R. Japan Germany (Fed.Rep.) France United Kingdom	(2) China
GNP between $30 billion and $ 100 billion	(3) Italy Canada Germany (Dem.Rep.) Poland Spain Sweden Czechoslovakia Australia	(4) India Brazil Mexico
GNP between $ 5 billion and $ 30 billion	(5) Belgium Switzerland Denmark Romania Finland Norway Netherlands Hungary Greece Austria **New Zealand** Venezuela Argentina Israel etc.	(6) South Africa Yugoslavia Pakistan Iran Turkey Indonesia Korea Philippines Chile Colombia Egypt Nigeria Peru Bulgaria Thailand Taiwan
GNP less than $ 5 billion	(7) Ireland Iceland Luxembourg Hongkong Kuwait etc.	(8) Roughly 120 Third World countries.

Based on IBRD. 1973.

He classifies boxes 1 and 2 as core zones, box 8 as periphery and boxes 3-6 as semiperiphery.[1] From the criterion, New Zealand is clearly situated in the semiperiphery.

Wallerstein himself specifies New Zealand as a semiperiphery, not because of any statistical data but because of the country's structural relation to the core and peripheral countries. As already mentioned, New Zealand's dependence on core states is apparent. But does the unbalanced pattern of trade push New Zealand into the periphery category? Here the country's relation with peripheral areas, many of which are Pacific islands, points to another direction.

Quite consistent to the role of intermediary suggested by Wallerstein, New Zealand acted as an agent for distribution of manufactured products into the Pacific island region. "New Zealand's reexport trade increased after the [First World W]ar and reached the large total of £ 1.2 million in 1921.[2] Moreover, the country started importing raw material from peripheral zones to serve its own industrial activities since the late 19th century. "In 1884 an important new industry - sugar refining - was begun in Auckland. Sugar made from cane grown in Fiji replaced imports [of refined sugar] from Mauritius.[3]

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[1] *Ibid*, pp. 292-96.

[2] M.F. Lloyd Prichard, An Economic History of New Zealand to 1939. (Auckland: Collins Bros.&. Co., 1970), p. 295.

[3] *Ibid*, p. 149.

Up to now, the trade between New Zealand and Pacific island countries has been small in amount yet reflects an unbalanced pattern. The Pacific island countries export only a few commodities to New Zealand market, to which most of the exports are primary products. Processed goods comprise only 7% of all Commonwealth Pacific Islands exports to New Zealand.[1] New Zealand became the major source of export earnings for the Cook Islands, Niue and Tokelaus, and in 1960s New Zealand took over 40% of Samoan export.[2] The relationship between New Zealand and these Pacific Island countries has been characterised by the latter's dependence on the former.

Apart from trade, New Zealand import of migrant labour from the Pacific to support the country's postwar production was obviously another example of exploitation.

Normally, in an economy where increasing production induces demands for more labour, migrant workers can be a source of cheap labour which will "obviate the need for employers to increase wages to [other workers already available in the labour market but become relatively more scarce]".[3] Migrant labourers work for wages as long as the economy demands and become unemployed when there is a shift in the form of industrial production or a cyclical downturn. But employed or not, they

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[1] Michael Bellam, A Question of Balance: New Zealand Trade in the South Pacific. (Wellington: New Zealand Coalition for Trade and Development, 1980), p. 7.

[2] *Ibid*, p. 14.

[3] Robert Miles, Capitalism and Unfree Labour: Anomaly or Necessity?. (New York: Tavistock Publications, 1987), p. 146.

are usually deprived of legal status as a citizen, they are excluded from political relations and then become alienated in the society where they come to sell their labour and where the social structure is more complicated than they were brought up in.[1] In such cases, the inferior status of migrant workers shows that they are exploited to serve the benefit of the host economy.

The case of New Zealand's import of Polynesian labour force reaffirms this typical trend in the capitalist mode of production. The story can be traced back as far as late 18th century and remains until recently. Polynesian labourers were attracted to the production of salted pork in New Zealand (and Tahiti), one of the earliest industries in the Pacific, to supply settlements in Australia in 1788.[2] In the postwar period, another wave of labour migration to New Zealand began. The Polynesian ethnic groups were attracted to the assembly lines and fill semi and unskilled jobs because of the needs of the Fordist mass production system.[3] From 1950s on Pacific Islanders, at first Cook Islanders and Fijians and some years later many other countries, have been integrated into the New Zealand working class according to the periodic demands in industry. They work in the industrial areas or in some service sectors, i.e., hospital kitchens and laundries, and live in working class

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[1] Miles, *ibid*, pp. 146-47.

[2] Jacqueline Lecki, "An Overview of the Pacific Labour Reserve" in Clive Moor, Jacqueline Lecki and Doug Munro (eds.)Labour in the South Pacific. (Townsville: James Cook University of Northern Queensland, 1990), p. xxx.

[3] Paul Spoonley, "Economic Transformation and the Racialisation of Labour". 1992, unpublished paper, pp. 16-18.

residential area.[1] The number of migrants from Polynesian countries during 1971-86 is given in table 3.2 which reveals a net inflow of migrants from these countries to New Zealand.

Table 3.2 Net Migration Gains and Losses to New Zealand of Polynesian-Born People, by Migrant Category, 1971-1986.

Total Polynesian in period of	Permanent	Long-term		Short-term		Total
		NZ residents	non residents	NZ residents	non residents	
1971 - 76	4,973	-343	1,525	-1,200	18,667	23,662
1976 - 81	2,118	-1,873	1,070	-1,133	6,766	6,948
1981 - 86	5,343	-340	261	45	9,517	14,856
1971 - 86	**12,434**	**-2,526**	**2,856**	**-2,278**	**34,950**	**45,426**

Source: Paul Spoonley, "Polynesian Immigrant Workers in New Zealand", in Moor, p. 156.

Imports of labour from Pacific Islands enabled postwar industrialisation in New Zealand and the decisions and process concerning migration was left to private hands. "The state did little to oversee the migration and it was left to voluntary agencies and church organisations to look after the welfare of the migrants",[2] welfare which would have been the responsibility of the state to provide to the labour if they were recruited within New Zealand. And when the recession came, these workers were targeted to be a scapegoat. Since 1974, the government has become very strict about the "overstayer" as well as restricting immigration from Pacific Islands. Some workers

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[1] Paul Spoonley, "Polynesian Immigrant workers in New Zealand" in Moor, Lecki and Munro, Labour in the South Pacific, p. 157.

[2] *Ibid.*

were repatriated and the remainders have suffered either lay-offs or racial discrimination or both.[1]

Put together, trade and migration patterns articulate the disparity in relationship between New Zealand and South Pacific countries. Although New Zealand has not played a political imperialist role in the region, the available data indicate that the appropriation of surplus-value from the Pacific countries contributes to a certain level of capitalist development in New Zealand. This relationship is clearly that of the semiperiphery and the periphery.

The arguments thus far have proved the position of New Zealand as a semiperipheral state and not a core country as many may regard. This proof is crucial for this thesis because it is a key factor in analyzing the New Zealand state role in relation with the MNCs.

New Zealand has hitherto never shifted her position within the world hierarchy, which only a few states have. However, incremental changes occur over time in each stratum. To have a rough idea about what has become of New Zealand over the last two decades, I try to construct a table similar to that of Evans to point out the direction of the development. According to table 3.3, Australia and Korea show impressive progress compared with the countries' ranks in 1970. After 20 years, New Zealand remains in the same range - GNP between US$ 5 billion and $30 billion with

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[1] Details of marginalisation of specific ethnic groups' labour force through economic transformation in New Zealand , see Spoonley, 1992.

per capita GNP greater than $1,000. But because many countries in this semiperipheral area have shown a marked improvement statistically, it can be said that New Zealand's relative position *vis-a-vis* other semiperipheral states has declined.

Table 3.3 Crude Classification of the International System circa 1990

	Per Capita GNP Greater than $1,000	Per Capita GNP Lesser than $1,000
GNP greater than US $ 400 billion	(1) U.S. Japan F.R.Germany France Australia	(2)
GNP between $100 billion and $ 400 billion	(3) Italy United Kingdom Canada Spain Switzerland Netherlands Korea Sweden Belgium Mexico	(4) China India
GNP between $ 30 billion and $ 100 billion	(5) Austria Finland Denmark South Africa Greece	(6) Brazil Indonesia Turkey Thailand Poland
GNP between $ 5 billion and $ 30 billion	(7) Israel **New Zealand** Hungary	(8) Egypt Pakistan Philippines Colombia Romania Czechoslovakia Chile Argentina Peru

Based on IMF, International Financial Statistics Yearbook, 1992.

New Zealand's descending status in the international economy is confirmed by the rating from the Standard and Poor's Corporation. Once the country got the top rate of AAA but since May 1983 New Zealand has been rated AA minus.. "When New Zealand was last downgraded in March 1991, Standard and Poor's rationale was the continued vulnerability to adverse international developments, the level and maturity of external debt, and the uncertain timing and extent of the benefits from current reform programmes".[1] This decline in relative status after the 1970s implies structural problems overshadowing New Zealand economic strategy.

Since New Zealand enjoyed a high living standard in the past, and that resulted from exporting commodities to Britain, dependence on the British market actually induced growth in New Zealand's economy. Likewise, 17th century Switzerland's dependence on the French market helped develop her export industry and brought the country up to the semiperipheral status.[2] But what decides the sustainability of economic development of both New Zealand and Switzerland is not only the profit margin that the production for export generated but also whether and how the profit is reinvested in the economy. And here, New Zealand's experience explains her relative downfall. Merely windfall profits cannot sustain continuous development.

New Zealand's class structure and relatively weak state *vis-a-vis* external and internal pressures account for the inability of the country to pursue an autocentric development. As earlier mentioned, the period of downturn of 1930s-40s boosted New

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[1] Colgate and Stroombergen, A Promise to Pay..., p. 5.

[2] **MWS II**, p. 200.

Zealand manufacturing industries, but because of the need for overseas funds, that only magnified the country's dependence of farming export. It also served the need for "British manufactures seeking to retain their New Zealand markets, and provided a market for British [capital goods sector, e.g.] technology, heavy industry and capital".[1] The postwar attempts never brought about a class of industrialist bourgeoisie in the country. What was left, after sporadic endeavours to diversify and industrialise the New Zealand economy, was the vulnerability of being too dependent on foreign markets and investments.

Because a semiperipheral country is usually seen as being taken advantage by core agents, Wallerstein concludes that "it is often in the interest of a semiperipheral country to *reduce* external trade, even if balanced, since one of the major ways in which the aggregate profit margin can be increased is to capture an increasingly large percentage of its *home* market for its *home* products.[2] But this conclusion may not be relevant to New Zealand case because her domestic market is so small that it will be inadequate as an impetus for growth. In this case, the Brazilian model of development suggested by Evans offers a more sound strategy. Dependent development implies a large import of capital goods which must be offset by increasing export earnings. "One way of expanding manufactured export is to take over markets in the periphery now supplied by exports from center countries (the "subimperial" strategy)."[3]

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[1] Jesson, p. 39.

[2] Wallerstein, "Dependence...", pp. 71-72.

[3] Evans, p. 318.

One way for New Zealand to improve her status within the world economy is therefore to increase her exports to less developed countries at the expense of the core producers. The peripheral and New Zealand domestic markets together should form a strong base for new Zealand industrialisation.

The strategy could have been implemented given the availability of local capital during 1896-1914[1], and the high rate of profit generated during the long boom of 1950s and 60s provided a sound opportunity.[2] What has been the case, however, is that the country remained dependent on capital from, and on markets in, the core and on cheap products from the periphery to help sustain the relatively low cost of living, and hence low wages. Where have all the available funds gone, then? Of course a good part of it has been reinvested in the country. "[R]elative to the OECD average, New Zealand has spent a high proportion of its current income on gross fixed capital. This suggests that it is the quality of the investment activity [that causes the poor economic performance]."[3] "With around 80% of total market sector investment coming from the non-tradable goods sector, this suggests that a significant proportion of New Zealand's overseas borrowing has been used to finance infrastructure and low productivity activities such as commercial buildings. It is also known that overseas borrowing has financed enterprises like the energy projects, which have so far produced lacklustre results".[4]

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[1] Bedggood, p. 301.

[2] Brian S. Roper, "From the Welfare State to the Free Market: Explaining the Transition, partII: Crisis, Class, Ideology and the State." in New Zealand SOCIOLOGY. 6: 2, November 1991, pp. 144-45.

[3] Colgate and Stroombergen, p. 21.

[4] *Ibid*, p. 22.

The evidence thus far indicates that the absence of a resolute state and strong industrialist bourgeoisie paved the way for unproductive investments that eventually caused the relative decline in New Zealand's economic status within the semiperipheral bloc.

Cycles and Economic Downturns

Qualitative changes in the status of countries usually occur during the period of stagnation.[1] That is because even the less competitive producers may obtain positive returns from the expanding market "whereas in moments of contraction even those who are most highly rewarded are threatened with *absolute* decline, in which case one way to maintain any evenness in absolute reward is to seek an increase in *relative* reward."[2] During the downturn period, weak economies lose their windfall profits while the most competitive states and their owner-producers can overcome the crisis, retaining a full potential for growth when the new cycle begins. The economic cycle therefore acts as a mechanism of the capitalist system to rejuvenate itself by weeding out incompetent cells.

Among the three strata, the semiperiphery is the one where most benefit can be got from the contraction. The periphery will be the first to be affected by the squeeze[3] while the high-waged core are threatened with the loss of markets. In the contraction periods, there tend to be more protectionist barriers for international trade,

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[1] **MWS**, p. 179.

[2] Wallerstein, "Dependency...", p. 73.

[3] *Ibid*, p. 88.

which is the situation that favours the semiperiphery with the strongest technological base to leap forward, benefitting from import substitution.[1] But not many semiperipheral states can enjoy the privilege because "only a few succeed in significantly transforming the rank of their state in the world division of labor. This is because the very success of one eliminates opportunities and alternatives for others".[2]

In fact some semiperipheral states may decline and only a few may ascend.[3] The key factor behind the opportunity for a few semiperipheral countries is the difficulties facing the core. " For one thing, the world squeeze on profit intensifies competition among the core powers and weakens their hold on given semiperipheral states, who are freer to play among the rivals and erect new quasi-monopolistic constraints"[4] In times of expansion of the world-economy, semiperipheral states usually find themselves competing with each other to attract attention and windfall profits from the core. On the contrary, in the course of the periods of stagnation, firms in the core area are the ones who compete for the acceptance of the semiperipheral states. " The 'old' dominant enterprises (and the state in which they are located) find their costs steadily rising, because of the costs of amortizing "older" capital investment, combined with rising labor costs resulting from the growing strength

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[1] *Ibid*, p. 89.

[2] **MWS**, p. 179.

[3] *Ibid.*

[4] Wallerstein, "World Networks and the Politics of the World- Economy" in Immanuel Wallerstein, The Politics of the World-Economy: The States, the Movements and the Civilizations. (Cambridge: Cambridge University Press, 1984), p. 7.

of worker's organization".[1] The MNCs thus try their best to keep at least a status-quo in the diminishing and quasi-monopolistic world markets. Relatively better-off semiperipheral states are the places where MNCs hope to find most profit opportunities and the MNCs will be ready to make many concessions.[2] In such periods, the owner-producers in the semiperipheral countries have an opportunity to compete with the high-waged core and at the same time state agencies in the semiperipheral countries has more chance to support the local bourgeoisie at the expense of the MNCs.

In the case of New Zealand, industrialisation was obviously the fruit of an economic downturn during the Depression of the 30s and the Second World War. The policy of the Labour Government in 1939 to develop manufacturing would not have been possible without capital investment and protectionist barriers. The government then got the loan it needed from Britain with the pledge not to protect local industries against British entrepreneurs. The condition could have adverse effects on the investments in manufacturing had the period of downturn failed to rescue New Zealand. Fortunately, "[t]he Second World War gave New Zealand industry a far more effective protection than the Labour Government even envisaged. This was the take-off period for manufacturing, when Fletchers, for instance, moved extensively into the manufacturing of building supplies."[3]

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[1] *Ibid*, pp. 6-7.

[2] Wallerstein, "Semiperipheral...", p. 118.

[3] Jesson, p. 38.

However, a favourable situation alone cannot guarantee prosperity. "Intelligent state policies have much to do with what happens".[1] It should be added that the intelligent policies will only yield fruitful products when the state, which plays the key role in the development of the semiperiphery, possesses enough strength to implement the policies successfully.

Wallerstein specifies the 1970s decade as a period of downturn.[2] The assertion should undoubtedly be supported when taking into consideration the two oil shocks, worldwide sluggish growth and dramatic shifts in the international political arena. As for the adapted role of the MNCs, some evidence confirms the diminishing bargaining position of the corporations. For examples, major oil companies no longer dominated world oil production but became net buyers of crude oil.[3] And Shell in particular "decoupled" - delegated authority and increased subsidiary autonomy.[4] This in turn let its affiliate subsidiaries in each market take a freer hand to negotiate with the host country. The key decision were then not made in the giant mother company but in the negotiation process between the host government and the company front line management. The world contraction of the 70s thus clearly laid before New Zealand an opportunity for comparative economic development. The only problem was, given

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[1] **MWS II**, p. 79.

[2] Wallerstein, "Semiperipheral...", p. 96.

[3] Edwin A. Deagle, "The International Community and International Oil" in The International Oil Industry. Judith Rees and Peter Odell (eds.) (London: Macmillan, 1987) p. 17.

[4] T. Ross, "The Status and Strategies of the International Oil Companies" in Rees and Odell, *ibid*, p. 72.

the relative weakness of the state, could New Zealand pursue an "intelligent state policy" to maximize the situation in favour of its internal accumulation? The answer may be found in the development of energy projects in the "Think Big" schemes and subsequent projects.

IV. International Political Economic Climate and Its Impacts on New Zealand

The 1970s was the major contraction period in the latter half of this century. The 1973 and 1979 oil shocks shook the entire globe though their impacts were felt by each political entity differently. The increases of oil prices spurred an inflationary pressure which posed serious strains to industrialising economies. A handful of oil producing countries, Saudi Arabia and Iran for example, could in this period grasp the chance to ascend from the periphery to join the intermediate stratum, the semiperiphery. However, in general, the world recession was manifested in the form of tighter money supply, rising costs of production and slow growth in most regions.

The crises of the period affected New Zealand severely. Serious deficits in the country's current account balances in 1974, for example, resulted from its high dependence on imported oil at the time.[1] Rising prices of imports also caused a major setback for the country's development. At the same time, New Zealand's terms of trade were aggravated by diminishing accesses to traditional markets for its farm exports particularly with the joining of the United Kingdom into the European Economic Community, and the emerging protectionist trend in most industrialized economies.[2] The prosperity that accompanied the country's semi-colonial status during the post-war long-boom clearly approached its end.

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[1] See R.S. Deane, P.W.E. Nicholl and M.J. Walsh, External Economic Structures and Policy: An Analysis of New Zealand's Balance of Payments. (Wellington: Reserve Bank of New Zealand, 1987), p. 59.

[2] Restrictions were then prevalent in major markets such as the United States and Japan. See Deane, *ibid*, p. 18.

This chapter will portray the general setting that underlay the formulation of New Zealand's energy policies in the 1970s and 80s. Amidst the downturn and its aftermath, external factors and the policy makers' perception played a crucial part in policy shifts. The country's status in the semiperiphery also determined the pattern in which the crises affected her internal economy. At the crossroads - at the two crises - a perception of the country's strengths and weaknesses offers a sound explanation for New Zealand's energy policy, which was, with hindsight, can be seen to be mis-conceived policy.

The Oil Shocks and Their Aftermaths

The end of the postwar expansion period on the global scale was first signalled in the early 1970s by a series of adjustments of international fiscal arrangements. But the highlight of the 1970s crises is manifested by the two oil shocks that triggered world recessions and other related problems.

The first oil shock was closely related to the OPEC's oil embargo in the late 1973 which resulted in a 5 per cent reduction of non-communist oil production.[1] The oil price which had stayed under $2 per barrel until 1970 then rose to $3.29 per barrel in 1973 and $11.58 per barrel in 1974.[2]

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[1] Louis Turner, Oil Companies in The International System.(3rd ed.) (London: George Allen & Unwin, 1983) p. 130.

[2] A.M. El-Mokadem, D. Hawdon, C. Robinson and P.J. Stevens, OPEC and The World Oil Market 1973-1983. (London: Eastlords Publishing, 1984) p. 10.

Some oil economists, led by M. A. Adelman, regard the OPEC's embargo as not only "related to" but "caused" or "was the cause of" the dramatic price hike. Adelman has advocated since 1972 that the oil price is subject to a strong downward pressure due to the equilibrium price caused by demand and supply in a competitive market.[1] When the price trend contradicted his projection, Adelman blamed the OPEC cartel as the cause.[2] At the other extreme, resource depletion economists like Solow, following the tradition of Harold Hotelling, saw scarcity rent and not political groupings as the reason for an ever-rising price trend of an exhaustible natural resource. The theory states that the resource "must appreciate over time at a rate equal to the rate of interest".[3] And, as the theory implies, the OPEC's power in determining the structure of oil prices is negligible, since the prices are market determined.[4]

Between the two poles lies a spectrum of thoughts and there is still no consensus on what constitutes the oil crisis in 1973. The explanations of the incident can be categorized as follows:

1. Oligopolistic nature of the oil industry enables cartels in both upstream and downstream productions and allows deliberate cuts in productions. In theory, oligopoly in oil sector is generated by technological barriers as well as a high

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[1] See Alessandro Roncaglia, The International Oil Market: A Case of Trilateral Oligopoly (edited by J.A.Kregel). (Hampshire: The Macmillan Press, 1985) p. 31.

[2] M.A.Adelman, "The Economics of The International Oil Industry" in Rees and Odell, The International Oil Industry, p. 30.

[3] Roncaglia, The International Oil Market, p. 26.

[4] El-Mokadem et.al., OPEC and The World Oil Market..., p. 8.

ratio between fixed and variable costs related to the development of the product.[1] Combined with low short-term demand elasticity, oligopoly[2] in oil sector implies a tendency for the price of oil to exceed the theoretical minimum corresponding to a state of generalised free competition.

2. Temporary imbalance between demand and supply caused by disproportionate rising in demand for oil consumption coincided with a somewhat diminishing production. On the demand side, the increasing trend was attributed to the close connection between economic growth and energy consumption and to the expanding role of oil and gas within the energy sector.[3]

The peculiar tendency of industrialised economies (especially Western Europe and Japan) to depend deeply on oil imports from the Middle East can be explained by the post-war reconstruction, when the supply of low-cost Middle East oil was in abundance. The reconstruction itself naturally increased energy demand. In addition to that, the western European reconstruction under the auspice of the Marshall Plan adopted American technology primarily oriented towards petroleum as its basic energy source. Simultaneously, major oil companies, facing the US's strict quota

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[1] Roncaglia, pp. 34-5.

[2] Actually, if one put OPEC as the seller on one side and the majors as the buyers on the other, the situation may be that of "oligopsony", that is, one seller and few buyers. See also, P.L. Read, To Plan or not to Plan: Reflections on Commercialisation in the Energy Sector. (Wellington: New Zealand Association of Economists, 1986) p. 23.

[3] This connection only existed before the first oil shock. Now, industrialised economies have "decoupled" the close link between growth and energy.

imposed upon Middle East oil import[1] felt the urge to dump their gigantic surplus onto other large potential markets[2]. The US export of technology under the Marshall Plan thus served the need of the majors to drain excess Middle East oil.[3]

On the supply side, the oligopolistic nature of the oil industry, already mentioned, offers the possibility of a producer cartel. When triggered by crucial political events, the possibility could turn into an actual cut in oil production. 1973 was the year when the industrial world demand for oil reached its peak and when those political events coincided.

3. Prevailing view concerning the rising price path of exhaustible resource then suggested inevitable depletion and price rises. This Hotelling notion was reconfirmed by the publication of the Club of Rome's The Limit to Growth in 1972 restating the idea that the world was running out of critical raw materials including oil. Perceived as inevitable, the oil price rises were further boosted by the panic of the buyers. The notion also implied that, for the owners of petroleum resources, the value of the crude left underground would appreciate over time.

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[1] US adopted Middle East oil imported quotas in April 1959

[2] In addition to that, the traditional type of refineries in Europe then contributed to large imports of crude oil in order to produce the needed gasoline for increasing numbers of transport vehicles. With a hi-tech "hydrocracker" type of refineries, less crude will be needed to produce the same amount of transport fuels.

[3] See Roncaglia, pp. 95-96.

4. The consolidation of OPEC in early 1970s was made possible by "the transition of the oil market from a "consumer's market" to a "producer's market". This transition was mainly connected to the abolition, on 18 April 1973, of the US programme of oil imported quotas and to subsequent rapid and large increases in US crude oil imports".[1] At the same time, Arab producing countries became radical in demanding more control of their resources. The demand was directly channelled to the companies who, in the situation of supply shortfalls and of lacking political supports from their own governments,[2] had no alternatives but to concede to the host governments' demand. By the end of 1973, the growing capability of oil exporting countries to appropriate control of their oil industry was evident. The circumstances set the stage for the OPEC to play a central role in the 1973 oil embargo.

After spending most of the time in 1960s ironing out internal differences of view, OPEC gained more strength in early 1970s. On top of economic forces conducive to a producer's cartel, there were other factors that triggered the embargo e.g. OPEC's growing confidence and desire to lead the Third World against exploitation, and the 1976 Arab-Israeli War.[3]

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[1] Roncaglia, p. 84.

[2] As Turner (1983, p. 166) stated : "In the light of such circumstances, it would have needed extraordinary diplomacy to withstand OPEC demands for revision. But, in fact, Western governments never succeeded in developing in 1973 even the kind of concerted diplomacy which was vaguely seen in 1971. The most crucial actor, the US government, retreated and became more remote from the industry, leaving the companies to bear the brunt of OPEC demands at a time when the situation demanded more, not less, parent government involvement".

[3] El-Mokadem, p. 8.

5. Lack of information and preparedness on the side of consumer countries also accounted for the shock. The industrialised world was used to the situation of overproduction in 1960s and never doubted the oil majors' capability of forecasting or supplying cheap crude.[1] As the full control of the majors over the oil market was eroded by the proliferation of independent oil companies and escalating pressures from host governments, their prediction in petroleum market lost its precision.[2] The majors also underestimated worldwide demand for oil, since world economic growth was faster than they had assumed, and unanticipated decline in coal production put further pressure on oil demand.[3]

"Since the importing governments generally did not have any units charged with (or capable of) double-checking industry forecasts",[4] they were drawn into the crisis, blindly and with a panic.

Having considered the combination of those five factors, we know that neither of both extreme explanations earlier mentioned containing the whole truth. OPEC alone could not manipulate the oil market as its members wished but neither did resource depletion determine price rises because the menacing shortage was not generated by diminishing "stock" but by the temporary cut in the "flow" of the resource.

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[1] Turner, p. 149.

[2] See Roncaglia, p. 41.

[3] Turner, p. 150.

[4] Turner, p. 151.

The aftermaths of the first oil shock could be felt among the industrialised world, the oil companies and the OPEC countries themselves. The perceptions and consequential strategies of the three, said by Roncaglia to constitute trilateral oligopoly in the international oil market, led to a change in the structure of the market. The restructuring created a new situation in which the second oil shock took place. It was the adaptation of each actor during the period between the two shocks that marked the new era of the industry.

An obvious and prompt reaction within the industrialised world to the 1973 oil crisis was the formation of a "united front" initiated by the US to counter the producer countries' cartel. Kissinger's initiation became in November 1974 the International Energy Agency, an offshoot of the OECD.[1] The creation of the IEA signified consumer-governments' assertive role "in the realm of wider energy-policy making, an arena previously left relatively willingly to the hands of private companies".[2]

As a precautionary measure against future oil shortages, the IEA also formulated, in 1976, an emergency allocation scheme whose essence was the intention to share a stockpile of marginal oil reserves in time of crisis.[3]

Another consumer governments' reaction which was intensified as a result of crisis was the shift of energy security to a high priority in national public

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[1] Turner, p. 181.

[2] *Ibid.*

[3] See Roncaglia. p. 109.

policies. On the one hand, governments played a more active role in regulating and monitoring internal energy markets. On the other hand, there emerged a clear nationalistic trend in petroleum production. Canada, for example, created Petro-Canada in 1975 to perform exploration, development and other functions.[1] Likewise, the UK established the British National Oil Corporation in 1976, France and Norway also set up their own national oil companies, while Germany subsidised joint operation of its 8 private companies in oil exploration activities under the name of Dominex.[2] Except for the United States which still advocated competitive market environments in energy sector, the overall trend in the OECD was the creation of new state companies or consolidation of private national companies.[3]

Consumer governments' moves had double impacts on the position of the major oil companies. On the negative side, governments' active involvement undermined the majors' role in their markets. However, on the positive side, the IEA's schemes not only guaranteed a minimum price of oil ($7 per barrel) but also indirectly strengthened the companies' bargaining position *vis-a-vis* OPEC producer countries through joint exploration activities and stockpiles.[4] The floor-price of oil guaranteed by the IEA helped to reduce the risk for companies in developing costly alternative sources of energy which would otherwise be rejected as carrying too high a risk. In all, the major's loss in market control was compensated by a closer co-operation with the industrialised nations against the OPEC cartel.

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[1] Turner, p. 197.

[2] Turner, pp. 195-6.

[3] Turner, *ibid.*

[4] See Turner, pp. 183-84 and p. 200.

When the major companies found their dominance being threatened they generally divested themselves from less profitable activities, sought security of supplies and expanded downstream activities. The companies' geographical diversification was aiming at "the acquisition of new reserves of crude oil in politically "reliable" countries".[1] Moreover, companies put effort into modernising the refining plants to accommodate the shift in demand for the final product.[2] They also invested heavily in the chemical industry which can be based on oil and gas products.[3] All of the said aspects of the companies' structural adjustment served to consolidate their vertical integration within a changing environment.

It should be noted that the companies were not the ones who really suffered from price-rises. As the OPEC countries increased their revenues from raising the price of crude, the companies' overall profits rose.[4] The Chase Manhattan's group of oil companies' profits had stagnated from 1967 to mid 1972 [5] and clearly rose after the price hikes in 1973-74 and 79. The rate of return for leading oil companies worldwide was 10.4% in 1970, but jumped to 15.5% in 1973, 19.2% in 1974 and 24% in 1979 (See Table 4.1)[6]

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[1] Roncaglia, p. 66.

[2] Roncaglia, p. 66, and Turner, p. 132.

[3] Turner, p. 242.

[4] Turner, p. 141.

[5] *Ibid.*

[6] Turner, p. 219.

Table 4.1 : Leading Oil Companies (The Chase Manhattan Group) Average Return on Invested Capital

	Worldwide	USA	Rest of the World
1968	11.7	12.3	11.0
1969	11.0	10.9	12.2
1970	10.4	9.9	11.0
1971	10.7	9.3	12.5
1972	9.7	9.6	9.9
1973	15.5	10.5	20.9
1974	19.2	14.6	23.9
1975	12.8	12.9	12.7
1976	13.8	15.2	12.3
1977	13.8	14.2	13.4
1978	13.2	13.8	12.5
1979	24.0	18.2	30.8
1980	22.4[a]	18.1[b]	27.7[b]

Source : Chase Manhattan, 1980, pp.22-3, cited in Turner, p. 219.
Notes a : return on average shareholder equity.
b : return on average net assets.

As for the relation between the majors and the OPEC countries, the delicate balance of conflict and cooperation after the first oil shock remained. OPEC created fortune for the companies but took the right to make strategic decisions at the upstream level.[1] Within this relationship, the strength of the majors lay in their vertical integration. The OPEC governments still depended on the network of the majors in the marketing area. The majors are "the only people who can move the oil from the producing countries regularly in massive quantities and are able to pay for it".[2] Therefore, having recovered from bewilderment, the majors could collect their self-confidence in the winter of 1975-6 and "were able to show that they could once again influence, if not control, the prices of which they purchased oil from host

[1] Turner, pp. 126-7.

[2] El-Mokadem, p. 61.

states",[1] Which of the two actors, the OPEC or the majors, can have a slight edge over the other depends on the circumstances.

Nationalisation of petroleum industries in OPEC countries expanded throughout the 1970s and by 1979 the producer government ownership of oil production within the OPEC world went up to 70-80%. When control of production fell under government jurisdiction, the OPEC governments held back from lifting their crude in anticipation of future value.[2] Even though the belief in rising prices according to resource depletion was not the only reason for OPEC's oil embargo, the increasing public control over upstream production in the Middle East enabled the OPEC to slow down the depletion rate to serve long-term purposes.

As earlier mentioned, from 1974 onwards, demand for OPEC oil declined due to conservation measures and substitution of other sources of energy. The majors could, therefore, meet their market needs yet selectively buy crude only from the governments that offered attractive conditions.[3] In consequence, more producing countries encountered problems in selling their product on long-term contracts at official prices, and tried to overcome the problems by disposing of it through spot markets.[4] Not later than 1976, large quantities of oil transferred through spot markets made market mechanism function, quickly becoming a crucial element in the structure of the industry.

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[1] Turner, p. 131.

[2] El-Mokadem, pp. 7-8.

[3] Turner, p. 132.

[4] Roncaglia, p. 16.

For industrialised consumer countries, a drop in demand for imported oil was related to their level of success in maintaining economic growth by less energy intensive production. In 1973 OECD countries need .29 metric tons of oil to produce US$1,000 of GDP, and European OECD countries required as much as .31 tons of oil to produce that level of growth. In 1979, however, both the average OECD countries and European OECD countries required only .26 tons of oil, to produce the same economic result. The share of oil in total energy demand also dropped from 55.3 % for average OECD countries and 62.1 % for OECD Europe in 1973 to 52.4 % and 56.2 % respectively in 1979.[1] The trend has been confirmed and restated by the seven industrialised nations in their Summit Meeting in Venice, in 1980, when the leaders pledged themselves to "break the existing link between economic growth and consumption of oil" and proposed specific measures to achieve the goal.[2]

It could be clearly seen that from mid 1970 to early 1979, oil prices were subjected to market mechanisms which put downward pressure on them ; however, political dimensions added a major constraint to the mechanism. In 1978, OPEC tried to boost the oil prices by pro-rationing measures and cut the daily products down 5 per cent. Just as this agreement was reached, there was a 3- week strike against the Shah in Iran and OPEC was "quite coincidentally achieving the goal of the pro-rationing deal by taking 5.5 million b/d off world markets".[3] The fall of the Shah

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[1] International Energy Agency (IEA), Energy Policies of IEA Countries : 1990 Review. (Paris : OECD,1991), pp. 112-3.

[2] Turner, pp. 208-9.

[3] Turner, pp. 200-1.

in January 1979 then triggered the second oil crisis which involved Iranian expropriation of foreign oil companies, among which BP was the hardest hit, and the Iran-Iraq war, started in October 1980. The oil price was driven from US$ 12.70 per barrel in 1978 to $ 17.76 in 1979, $ 20.67 in 1980 and 32.50 in 1981 (See Table 4.2).

Table 4.2 : Annual Average FOB Export Price of 34 API Arabian Light Crude Oil. Persian Gulf ($ per barrel)

Year	Posted or Official Price*	Posted or Official Price in 1981 Dollars+
1950	1.71	6.90
1955	1.93	6.90
1960	1.86	6.10
1965	1.80	5.50
1970	1.80	5.0
1971	2.20	5.80
1972	2.48	6.0
1973	3.29	6.80
1974	11.58	19.50
1975	10.72	16.10
1976	11.51	17.30
1977	12.40	17.10
1978	12.70	15.20
1979	17.76	18.10
1980	28.67	27.20
1981	32.50	32.50

Source : El-Mokadem, p. 10.
Note : * Posted price from 1950 to 1974, official selling price from 1975 onwards.
+ Deflated by US dollar index of unit values of world exports of manufacturers

Apart from being triggered by political factors, another special characteristic of the second oil shock was that it was a price crisis and not a supply crisis. Non-communist available supplies were reduced by only 2.4 million b/d in 1980 during which oil companies in consumer countries had commercial oil stocks far above the normal level.[1] As for the majors, BP, because of its necessity caused by the loss

[1] Turner, pp. 206-7.

of 40 % oil supply from Iran, and the others, because of precaution, cut their obligation in supply oil to third parties.[1] Therefore, they had less pressure to bid for the then scarce supply, and thus panicked less than what they felt during the first shock. Neither did the industrialised consumer governments panic. In late 1978, the IEA reactivated monthly reporting on supplies and stocks positions of the member governments and 30 leading refining companies. In time of crisis, the policy-makers of the IEA countries had access to a statistical breakdown of what was happening and were thus well-equipped to take action.[2] The major problem was that marginal actors like Third World countries and independent refining companies could no longer feel secure in finding uninterrupted supplies. Their small demands put them in a bad bargaining position and pushed them to reliance on spot markets or to approaching producer governments directly, willing to accept any conditions or prices.[3] Rushing into the international market together, these companies and the Third World countries drove up oil prices.

Political crises could spur price hikes but could not sustain them within the prevailing situation. In the broadest context, a decline in demand for oil was apparent (See Table 4.3) while many producer governments were expanding supply over their given quota. In addition, at that time the OPEC became only a marginal supplier in the world oil market[4] and was, therefore, not in a position to manipulate

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[1] *Ibid.*

[2] Turner, p. 211.

[3] Turner, p. 205.

[4] Turner, p. 206.

the market. On the industrialised consumer countries side, they were well-coordinated. And for the oil majors, they reacted promptly and wisely during the crisis. For these reasons, the second oil crisis could only keep the oil prices at a high level for a while but when the political crises were over, the prices began to drop until they reaching their nadir in mid-1980s.

Table 4.3 : World Energy Consumption : Million Tons Oil Equivalent (MTOE)

	1965		1973		1981		Average annual compound rate of increase	
	MTOE	% of total	MTOE	% of total	MTOE	% of total	1965-73	1973-81
Oil	1529	38.7	2798	47.3	2902	42.4	7.8	0.5
Solid Fuels	1525*	38.6	1668	28.2	2007	29.3	1.1	2.3
Natural Gas	647	16.4	1076	18.2	1332	19.4	6.6	2.7
Nuclear	6*	0.2	49	0.8	191	2.8	30.0	18.5
Hydro	242*	6.1	329	5.5	417	6.1	3.9	3.0
Total	3949	100.0	5920	100.0	6849	100.0	5.2	1.8

Source : BP Statistical Reviews of The World Oil Industry (Annual) and BP Statistical Review of World Energy 1981.[1]

* partly estimated

What the two oil shocks have revealed is that the two price hikes were never the result of exhaustion of resource "stock". Even reducing resource "flow" alone could not cause the crises. They were also attributed to prevailing market structure, political situations and the capabilities of each of the major actors. As the two oil crises passed, all parties that were badly affected from the shocks became more experienced and more collaborative. The 1980s returned once more to the era of

[1] in El-Mokadem, p. 11.

buyer-markets.

A major difference between the industry in 1980s and earlier periods involved financing oil activities. In the 1970s, exploration and downstream activities were extensively supported by expanded equity; in other words, investors viewed petroleum investments as very attractive.[1] Oil companies' profits started to decline in 1981 and oil price weaknesses from then on reduced the attractiveness of investments in this field. "The key financial trend,..., had been the replacement of equity with debt by the oil companies".[2] Neither did the banks lend their money to fund oil-related activities eagerly in the period of the price slump. They scrutinized every bit of the proposal and of the performance of the oil companies and used conservative criteria to evaluate oil and gas loans. The oil business was also viewed as high-risk and, therefore, must prove to have an equally high rate of return to attract capital.[3] These constraints on financial aspect of the industry forced restructuring in oil companies and a few changes on energy project investment.

The 1980s was, in short, the period when revenues from petroleum products fell and funding was scarce. Companies' cash flow, and not reserves nor assets, was considered as the determinant of their capacity to meet financial obligations. Investing in oil-related projects during this period, companies were under pressure to make high tangible profits as a condition for uninterrupted funding. This situation was in contrast to that of the 1970s and required different strategies. Major companies

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[1] Krishan Ahmad Malik, Economic and Financial Restructuring of The Petroleum Industry : Strategies for The Future. PhD. Thesis, (Texas : The University of Texas at Austin, 1987), p. 200.

[2] Malik, Economic and Financial Restructuring... , p. 200.

[3] Malik, p. 212.

seemed to adapt themselves well to the situation. Thus they enjoyed high profits during the 1970s and, thanks to their restructuring, got sailed through the 1980s without carrying high-risk obligations.

Impacts of the Oil Shocks upon New Zealand's Economy

New Zealand's serious external balance deficits accompanied with escalating debt problem, and the consequential 'Rogernomics' restructuring[1] can all be attributed to the increases of oil prices in the 1970s and the related energy projects. However, some viewed oil crises and rising import bills as only an excuse for poor economic performance.[2] The reason behind the argument was that although nearly all OECD countries were affected by the crises, most other countries could do better than New Zealand.

To assess whether the oil crises really caused severe economic problems to the country or not, one needs to consider the position of New Zealand in comparison with the others. What seems to be the point is that most western countries were hit by rising prices of petroleum and relative shortages but only those with structural strength could survive and prosper when applying appropriate strategies. New Zealand's virtually unrealised weaknesses limited the country's room to manoeuvre when facing a crisis. It could be said that the two oil shocks together with

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[1] An economic policy based on supply-sided economic theory aiming at more market and competition. It was so labelled after the name of Roger Douglas, Deputy Prime Minister and Finance Minister in the Fourth Labour Government.

[2] Statement of Bruce C. Beetham in New Zealand Parliamentary Debates. Vol. 423 (June 15 - July 13, 1979), p. 1156.

the dependent nature of the export sector revealed how semiperipheral status differs from a core status as regards structural resilience.

As cited by Beetham,[1] "[b]etween 1960 to 1976 Japan increased her real exports by 900 percent, West Germany by 662 percent, Australia by 215 percent, and New Zealand by a miserable 40 percent." That, however, should not let the readers to assume that before 1960, New Zealand export base was expanding far faster. New Zealand's export growth during the 1950s had much to do with the commodity boom that accompanied the Korean War and that boosted the prices of New Zealand exports during that decade (except for 1952 and 58). The decade was a period of tremendous growth in international trade; "[h]owever, it is notable that while enjoying a fairly prosperous and comfortable era in its history, New Zealand's export volume growth was only modest at an annual average of about 3.5 percent".[2] Relatively continuous and stable growth resulted from the country's dependence on a special relation with the United Kingdom, and a secured welfare-state led for a while to the belief that New Zealand was immune to the world's problems. But it was later revealed that the moderate growth in the past was merely the fruit of expanding international trade and privileges accorded to New Zealand by the UK. When the 1970s contraction period came, New Zealand's dependent status hindered her from sustaining the previous level of growth.

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[1] *Ibid.*

[2] Deane, Nicholl and Walsh, p. 96.

Deteriorating economic performance was caused only partly by difficulties in export sectors. Small increase in export earnings was offset by sharp rises in import values. In this regard, New Zealand was affected generally by the global downturn of the period and particularly by the oil embargoes, from which she then had nothing to protect herself. Mineral fuels import values in New Zealand rose disproportionately in the years 1974/5 and 1979/80 due to oil price increases and in the year 1979/80 imports of mineral fuels constituted about one fifth of total imports. (See Table 4.4)

Table 4.4 NZ's Major Import Commodities ($ NZ million, C.D.V.)

	1955	1960	1969/70	1974/75	1979/80
-Food,Beverages, and Tobacco	52.4 (19%)	40.3 (8%)	51.2 (5%)	143.3 (6%)	247.6 (5.2%)
-Mineral fuels	**33.1 (7%)**	**41.4 (8%)**	**59.1 (6%)**	**317.7 (13%)**	**944.2 (19.8%)**
-Chemical including manufactured fertiliser	31.6 (6%)	40.6 (8%)	116.3 (12%)	288.3 (12%)	602.8 (12.6%)
-Base metals and manufactures of metals	70.3 (14%)	78.6 (16%)	148.7 (16%)	348.4 (14%)	356.0 (7.5%)
-Machinery and transport equipment	150.9 (30%)	144.5 (29%)	319.7 (34%)	821.6 (33%)	1400.4 (29.4%)
-Textile, Clothing and Footwear	74.5 (15%)	71.4 (14%)	92.7 (10%)	178.0 (7%)	351.5 (7.4%)
-Other	88.5 (18%)	89.5 (17%)	156.6 (17%)	394.7 (15%)	868.2 (18.2%)
Total Imports	501.3	506.3	944.3	2492.0	4770.6

Source: Department of Statistics. Cited in Deane, *et al*, p. 103.

Apart from causing higher import bills, oil crises also affected New Zealand's economy indirectly. They created cost-push inflation which means New Zealand had to purchase imported goods and services at higher prices. Among other

costs, more costly overseas transport had a significant impact on the prices of New Zealand's export products in European and other major markets.[1]

In December 1973, for example, all freight cargoes from New Zealand to European ports were charged 6% extra due to the higher price of bunkering. Several lines also reduced the speed of cargo ships to save fuel, causing delays in shipping.[2] Spiralling effects of the two oil shocks thus caused severe damage to New Zealand's terms of trade.

In New Zealand, the crises meant not only price hikes but also reduction of supplies. The country was very vulnerable to external threats in the oil sector because she depended virtually totally on imported oil at least until the early 1970s, and still heavily relied on imported supplies even when local feedstock from Kapuni condensates and McKee oil field came into production.[3] "New Zealand's oil import bill rose from $114 million for the year ended December 1973 to $306 million for 1974; $374 million for 1975....".[4]

Since 90 per cent of New Zealand's imported crude came from the Middle East,[5] Arab's cut of production inevitably affected supplies to New Zealand.

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[1] See Statement of Hon. H. C. Templeton (acting Minister of Finance) in New Zealand Parliamentary Debates. Vol. 423, (June 15 - July 13, 1979) p. 1413.

[2] "Oil Price and Supply Squeeze will Soon Hit New Zealand Imports", New Zealand Herald, 28 November 1973, Section 1, p. 1.

[3] NZ Yearbook,1989, pp. 588-89.

[4] NZ Yearbook, 1981, p. 504.

[5] "Oil as a Weapon", New Zealand Herald. 6 November 1973, Section 1, p. 6.

In 1974 and 1980, the governments requested voluntary reduction of petrol use and in 1980 the government also imposed a carless day scheme as a supporting measure.[1] A shortage of diesel oil particularly affected the agricultural sector in 1973. Demands of farmers for diesel fuel for harvesting their crops were met by a government-imposed allocation scheme. Oil companies were instructed to allocate oil equal to the amount consumed in the previous year on a monthly basis to each farmers. As a consequence, the allocated supply was short of expectation while the farmers' demand rose, corresponding to an increase in crop production. Some were reported to be refused diesel oil by the oil companies.[2]

The major reason for the severe impacts of the two shocks on New Zealand's economy was that the country was deficient in liquid fuels. Though New Zealand is rich in coal resource (117,620 PJs recoverable),[3] and also possesses an abundance of gas deposits, (between 3340.6 to 5393.8 petajoules as estimated by Petrocorp)[4] New Zealand has never produced enough indigenous oil to meet domestic demand. Estimated recoverable oil in New Zealand as at 1 April 1986 was 1,029

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[1] Statement of W. Birch in New Zealand Parliamentary Debates. Vol. 382 (June 5 - June 29, 1973) p. 1091.

[2] See New Zealand Parliamentary Debates. Vol. 389 (February 4 - March 14 1974) Oral answers to questions by the Minister of Energy Resources, p. 25 and pp. 603-4; and "Warning from Minister to Oil Company", New Zealand Herald. 15 January 1974, Section 1, p. 1.

[3] New Zealand Yearbook, 1990, p. 486.

[4] Ministry of Energy, Energy 88. Edited by N. S. Wyatt, (Wellington, 1988) p. 15.

Petajouls,[1] and during the 1970s the production of these resources was negligible. Before 1974, New Zealand's total oil consumption was sustained by imports, and by 1980, domestic oil supply constituted only 8.96 percent of total consumption.[2] Imported oil, therefore, represented a very high percentage of total primary energy consumption: 28 percent, 51 percent, 58 percent, 51 percent and 32 percent in 1944, 1964, 1974, 1980 and 1984 respectively, as can be seen from Table 4.5.

Table 4.5: Trends in Consumption of Primary Energy (Petajouls)

Year	Coal	Wood	Imported Oil	Indigenous Oil	Natural Gas	Primary Electricity	Total	Imported Oil as % of Total
1924	75		10			0.5	86	11
1934	56		19			3	78	24
1944	72		30			7	109	28
1954	66		59			14	139	42
1964	66		103			34	203	51
1974	62		193	8	14	55	332	58
1984	52	15	142	41	115	77	442	32
1985	52	16	134	49	140	75	466	30
1986	50	17	100	53	169	83	472	21
1987	57	17	135	56	170	90	525	26

Source: Ministry of Energy, in NZ Yearbook 1988, p. 577.

The problem resulted from the lack of oil endowment was aggravated by a dramatic increase in the significance role of oil in the economy. Compared with solid fuels, gas and electricity, oil represented the most crucial source of energy supply for the country. The amount of oil consumed compared to t he type of energy used in New Zealand is presented in figure 4.1.

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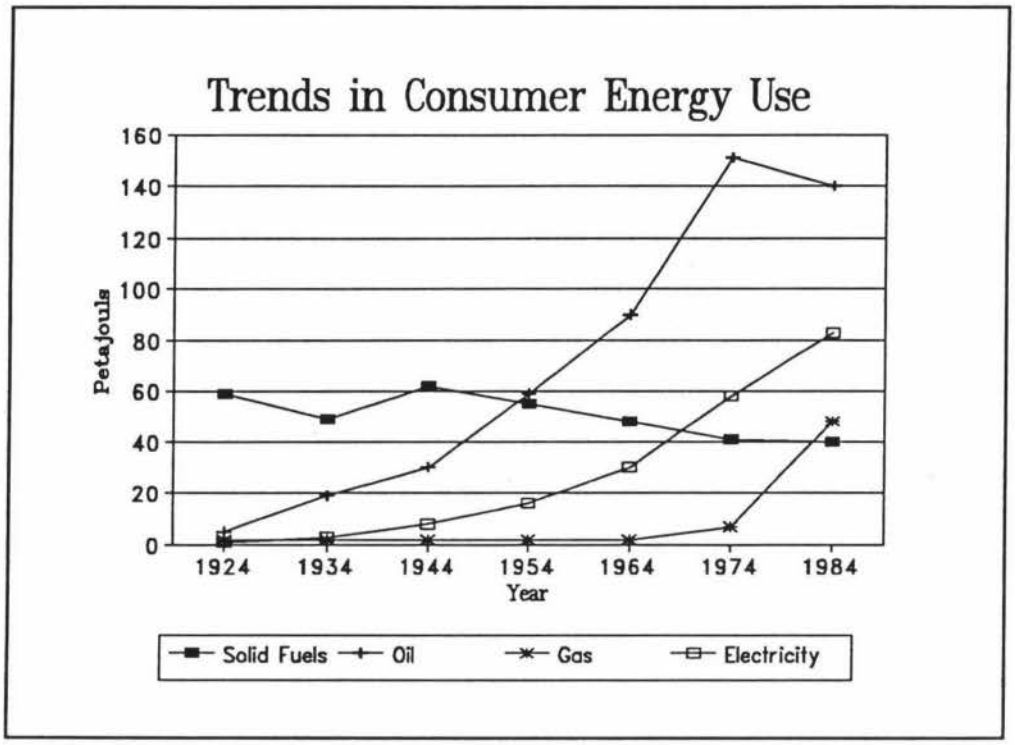
[1] New Zealand Yearbook, 1987-88, p. 515.

[2] *Ibid.*

Figure 4.1



Source: New Zealand Yearbook, 1990, p. 484.

New Zealand's Perception of the Oil Crises

How a country defined her particular problem dictated the country's strategy to counter the problem. In New Zealand's case the policy makers and the public did not necessarily share a common view of what the oil crises meant. Moreover, the interpretation of both the government and the public of the menacing problem facing the country after the first Arab embargo was different from that of the 1979/80 oil shock. Different strategies, therefore, were pursued in each period.

In 1973, it was widely believed that stocks of petroleum resources were approaching their exhaustion. Just after the oil embargo in October of that year, we could find some articles in daily newspapers, airing viewpoints which implied such thinking.[1] Even a high school discussion on the energy crisis was based on the assumption that oil supply was expected to last only about 40 years.[2] One major aspect that was articulated at the times of the relationship between increases in the price of oil and resource depletion was that the nationalisation of petroleum resources of Arab nations naturally spurred production cuts and price rises. Due to resource depletion theory based arguments, once a state held the control of its resource, it, unlike a company, usually needed no quick return but could wait for almost unlimited time if it could get the optimum return for the exhausting resource. It was , therefore, explicable that Arab governments would rather keep the oil in the ground and wait for its price to appreciate.[3] This belief implied ever-increasing oil prices from that time on, as the stock of oil resource would be depleted in a foreseeable future.

That perception, supported by a resource economic theory, was not necessarily shared by all New Zealanders, let alone realised. Many were just confused by the government changing positions and doubted whether the shortage was real. Mass passivity could be caused by the government's deliberate concealment of the

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[1] See for example, Robert Stephens, "Fuel Famine in Long-Term Perspective", New Zealand Herald. 14 December 1973, Section 1, p. 6.

[2] "The Energy Crisis", New Zealand Herald. 19 October 1973, Section 1, p. 8.

[3] This belief was shared by Stephens, "Fuel Famine in Long-Term Perspective", *ibid*, and P. G. Wilkinson, Public Affairs Manager of Mobil Oil as quoted in "Root of Oil Crisis Goes Deeper", New Zealand Herald. 29 November 1973, Section 1, p. 3.

situation. The Minister of Energy Resources, then, Mr. W. W. Freer, admitted that some facts were kept from the public to prevent panic buying of petrol.[1] Announcements by Arab countries that they would not harm countries not taking Israel side gave another reason to the public complacency. It seemed that the message about the global shortage of oil supply did not reach the public.

The most notable of all the 1973 perspectives was that of the government. Oblivious of the prevailing theory, the government saw the cut in production as temporary and blamed the wicked oil companies for all outcomes : supply shortage, higher price, and local outrage at reduced supply. Freer admitted in February 1974[2] that he had been aware of an energy crisis since attending an OECD conference in Paris in previous May. What he learnt from the conference was that there would be ample energy until beyond the turn of this century, but with higher and higher prices. However the government never expressed any serious concern about the increased price of this strategic resource.

Unlike the contemporarily popular themes in newspaper, none of the members of the administration mentioned the sharp increase in demand from the industrialised nations, depletion effects, nor the rising resource rent. And they seemingly unaware of companies' expressed concern over the extended impact of the

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[1] Oral Answers to Questions by Hon. W. W. Freer, Minister of Energy Resources on 14 Feb. 1974 in New Zealand Parliamentary Debates. Vol. 389 (February 4 - March 14, 1974), pp. 91-92.

[2] New Zealand Parliamentary Debates, *ibid.* p. 89.

oil embargo -a new unknown international energy regime- towards New Zealand.[1] The government distanced the country from any long-term trends in the oil industry. What seemed to be the point was that, provoked by the western allies' (led by the United States') support of Israel, the Arab nations cut their oil production as a retaliation to the West. The effect should be felt largely by the western countries who took a partial stance in the Middle East conflict and indirectly by others. Price rises in New Zealand were due to OPEC's increase of taxes and royalties and oil shortages were believed to be caused only by oil companies which had cut supplies to New Zealand on their own initiative.[2]

The government's neglect of the prevailing belief in an ever-increasing price problem due to depletion effects and its failure to see the oil crisis as having a serious impact on New Zealand economy were confirmed by its own moves. The energy crisis then was regarded by the government as the inadequate supply of electricity.[3] Thus in the middle of the first oil crisis, Minister for Electricity announced on 11th December 1973 that the government would build 3 more gas

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[1] Comments by Managing Director of BP, New Zealand and of General Manager of Shell BP Todd Consortium in "Fuel Rationing Hint for NZ" and "New Power Game - Rules Unknown" in New Zealand Herald. 19 November 1973, Section 1, p. 1, and 27 February 1974, Section 1, p. 3, respectively.

[2] See New Zealand Herald. 22 January and 12 March 1974, Section 3, p. 1 and Section 1, p. 1, respectively. See also New Zealand Herald. 18 October 1973, Section 1, p. 3 on government's no expectation of oil shortages in New Zealand. And New zealand parliamentary debates. Vol.395 (October 11 - November 8, 1974) p. 5311 on commenting on OPEC and domestic price rises.

[3] M. J. Minogue, statement in New Zealand Parliamentary Debates. Vol. 424 (July 17 - August 15, 1979) p. 1587.

turbined power plants[1] and that he was about to submit for government consideration a proposal of the oil-fired Marsden2 power station with a capacity of 250 megawatt.[2] Moreover, after closing Marsden oil-fired power plant temporarily, the government resumed the station's power generation in mid February, 1974.[3] The Minister of Energy Resources also acknowledged the unexpectedly high consumption particularly at the Otahuhu power station as a cause of diesel oil shortage.[4] While long-term projects and strategies for electricity generation were initiated, contrary to the trend in other OECD nations, nothing but interim measures were introduced in 1973-74 to respond to world shortages of petroleum supplies or price increases in the future.

The New Zealand view that the oil crisis was temporary in nature and was triggered by very few actors was not held by the government for long. It is quite clear that the major belief that the key figures in the government advocated during the second shock of 1979-80 had two aspects : an ever-increasing of oil and petroleum products' prices resulted from depletion effect of the resource supply, and the high risk involved in the country's dependence on imported liquid fuels.

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[1] This proposal was linked to another obligation the government had in mind-detailed to be discussed in the following chapter.

[2] New Zealand Herald. 12 December 1973 Section 1, p. 3.

[3] New Zealand Herald. 16 February 1974, Section 1, p. 1.

[4] New Zealand Parliamentary Debates. Vol. 389 (February 4 - March 14, 1974) pp. 603-04.

Table 4.6: External Current Account Balances[1]

Years ended March	GDP ($ m.)	BoP Current Account ($m.)	% of GDP	OET Current Account ($m.)*	% of GDP
1970	5,133	+ 29.6	0.6	+ 78.5	1.5
1971	5,832	- 198.2	3.4	- 38.9	0.7
1972	6,863	- 15.6	0.2	+ 95.0	1.4
1973	7,892	+ 138.8	1.8	+ 285.9	3.6
1974	9,135	- 91.5	1.0	- 30.0	0.3
1975	10,028	- 1,364.4	13.6	- 992.6	9.4
1976	11,484	- 1,015.6	8.8	- 814.5	7.1
1977	13,792	- 825.5	6.0	- 590.5	4.3
1978	15,217	- 712.4	4.7	- 426.4	3.3
1979	17,504	- 469.3	2.7	- 481.8	2.4
1980	20,908	- 718.7	3.7	- 751.6	2.3

Source: Department of Statistics, Reserve Bank
OET = Overseas Exchange Transactions

The short interval between the two shocks was a period that brought enlightenment to New Zealand, which was then realising what harm an oil crisis originated somewhere very far away could do to a fragile economy. Rising costs of imported oil were a major, though not the only, factor that contributed to the country's sluggish growth from 1974 onwards (less than 2% annually until 1984)[2] and huge deficits in the current account balance in the 1970s (See Table 4.6). As the impact of the crisis was felt in the country, at least by 1974, it is hardly surprising that the New Zealanders expressed their displeasure by electing, in November 1975, the opposition party, the National Party, led by a traditionist, Robert Muldoon, to hold 73% of the

[1] Deane, Nicholl and Walsh, p. 59.

[2] Europa Yearbook, 1986, p. 1922.

seats in the parliament and become the government.[1] It was a conservative government dedicated to the status quo.[2] The positive growth of the economy and the standard of living were sustained by heavy overseas borrowing and an extensive welfare-state. "The most severe limitation on a government is that its authority is limited to its national territory, whereas economic and social forces operate on a global scale. ... Muldoon delayed change as long as he could, but the relationship between New Zealand and the world economy is entirely one-sided, and eventually the world economy prevailed".[3] When the second wave of oil shock rolled towards New Zealand, the traditionalist government realised it would cause another crisis.

The expressions of concerns over an oil crisis appeared to be rather in concert in 1979-80. Minister of Energy, Bill Birch, acknowledged the key role played by oil to New Zealand's economic growth and predicted tighter supply of oil due to diminishing world reserves.[4] For him, it was very certain that oil and oil derived products' prices would rise.[5] The same approach was elaborated by his undersecretary, Mr. Barry E. Brill. He conveyed the then wellknown idea that "another oil shock was inevitable... when the world known reserves of oil and expected further finds would not

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[1] Europa Yearbook 1986, p. 1921, and Bruce Jesson, Behind The Mirror Glass, p. 55.

[2] Jesson, *ibid.*

[3] Jesson, p. 60.

[4] Statement of W. F. Birch, Minister of Energy. in New Zealand Parliamentary Debates. Vol 423 (June 15 - July 13, 1979) p. 1502.

[5] *Ibid*, p. 1503.

be sufficient to meet world demand". The scarcity of petroleum supply would trigger a price spiral caused by auctions by wealthy industrialised nations, and New Zealand would be gravely affected for she had "little hope of competing against the bids being lodged by such industrial giants as America, West Germany and Japan.[1] The view that a resource depletion driven price-rise was menacing was also implied by keymen in the Reserve Bank when they specified in their book that oil price increase was not an cyclical element but a permanent one.[2] It was then apparent that authorities at the time articulated a common view based on Hotelling's approach of resource depletion and price rise.

Such perception justified development of indigenous energy resources. It was then obvious that a fatal weakness in New Zealand economy was that the country lacks liquid fuels[3] which constituted more than half of the country's total energy consumption. The linkage between the worsening terms of trade and the dependence on overseas oil imports was widely taken for granted, and, during 1979-80, both political parties and the public took no objection of the country becoming more self-reliant on liquid fuels.[4]

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[1] Statement by B. E. Brill, Undersecretary to the Minister of Energy in New Zealand Parliamentary Debates. Vol. 423 (June 15 - July 13, 1979) p. 1159.

[2] Deane, Nicholl and Walsh, External Economic Structure and Policy : ... , p. 56.

[3] Speech of W. F. Birch quoted in "Liquid Fuel Key to Growth", in New Zealand Herald. 31 July 1979, Section 1, p. 8, and Brill, *Ibid*, p. 1160.

[4] See also comment of Hon. F. M. Colman, in New Zealand Parliamentary Debates. Vol. 423 (June 15 - July 13, 1979) p. 1168.

Pricing held a decisive factor in the aspiration. Again, implying Hotelling line of thinking, Minister Birch envisaged much lower prices of indigenous supplies than the cost of oil import, assuming lower costs of domestic production.[1] In addition, it was the expected ever-increasing in price of petroleum products that gave birth to at least 4 of the 5 "Think Big" Projects to be launched in early 1980s.[2] That was because most energy-related projects are very capital intensive and only high prices offered for the products can make an economically viable prospect. Despite some different ideas on government short-term measures and what development projects should be implemented, it was generally accepted in the decision-making cycle that the country should prepare to be more self-reliant on liquid fuels as a protection against future price rises as well as supply shortages.

Think Big coincided with the major oil companies' diversifications[3]. Exploration and development of energy resources in New Zealand proved to be rather attractive and contending firms competed to offer their newly-developed technological expertise to the government. A massive sum of overseas borrowing was thus made to fund the government share of investment, a prerequisite for multinationals participation in energy development projects.

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[1] New Zealand Parliamentary Debates. Vol. 423 (June 15 - July 13, 1979) p. 1503.

[2] 5 "Think Big" Projects are : 1. NZ steel, 2. Motonui Petrol Plant, 3. Marsden Point Refinery, 4. Ammonia-Urea Plant, and 5. Methanol Plant. Apart from the first, all latter projects are related to oil, gas or condensate as their inputs.

[3] About the oil companies' diversification move, see p. 74.

Unfortunately, the just-mentioned climate of opinion had withered away by mid 1980s and the dream that the country's self-sufficiency in liquid fuels would halt the outflow of dollars and alleviate current account deficit turned out to be a nightmare. In 1985, the world witnessed an era of oil glut and price slump. Budget deficit and overseas debt escalated due mainly to the energy projects. With the coming into power of the Fourth Labour Government and its Finance Minister, Roger Douglas, the thinking was turned upside down. The belief in ever-increasing petroleum prices was over and the necessity for the government to carry out indigenous energy supply projects was gradually rejected.

Conclusion

At the period of downturn in 1970s, states and multinationals struggled to keep their footholds on traditional sources of profits and protect themselves from fierce competitive threats. The hegemonic core and other core countries usually have technical and organisational instruments to help in dealing with crises and they did particularly well in the mid 1970s and afterwards. Moreover, multinationals, whose base was in these core countries, could help to sustain the level of profit by generating more economic activities within the cores' boundaries and by repatriating surplus from other countries where they have investments. Although overall profits of the core states might be reduced over the contraction period, most of them could adapt reasonably well to the situation. The relative strength of core status and the adapted structure of multinationals during the crises were the key to their survival from the downturn as well as to their take-off when the next cycle began.

At the same time it is normal for semi-peripheral countries to become inward-looking during contraction periods. Both diminishing world market and higher costs of imports naturally triggered protectionism and self-reliant thinking. In terms of energy related matters, the trend occurred in New Zealand after the first oil shock and became obvious during the second oil shock. How well a semi-peripheral country can perform depends on the countries' ability to protect itself from the global downturn. In the case of New Zealand, the adverse impacts of the world's recession of 1970s were strongly felt. As far as energy issue is concerned, New Zealand' s policy reflected a typical tendency in a semi-peripheral state to protect itself from external shocks; however, implementing such a policy does not guarantee a satisfactory outcome. The country achieved a certain level of self-sufficiency but without lessening the severe impacts of the global downturn and without strengthening its internal structure in preparation for the next economic high tide to come.

It was clear by mid 1980s that the country's policy in dealing with the 1970s' crises still left much to be desired. The inadequacy of the policy could be attributed firstly to New Zealand's vulnerable position as a dependent economy and secondly to the self-perception of the country's decision-makers.

V. Energy Policy, or Lack of It

Late 1970s was the period the New Zealand government proudly claimed it had an energy policy. On the one hand, the National Government's moves from 1976 onwards could be seen as a sequential strategic involvement in the energy, particularly petroleum, sector. This involvement was initiated by the third Labour Government which pioneered a joint-venture agreement with private companies in developing Maui gas resources and which launched the process of Marsden Point Refinery expansion. The National Government, in power during 1975 and 1984, carried out the initiated tasks and also restructured the administrative body by setting up new authorities to monitor or to take responsibility in the field of energy production. On the other hand, its critics say that the so-called policy was merely 'ad hoc government responses to initiatives by private industries'[1] and was not based on any planned or considered course of economic development. Planned or not, the so-called policy was gradually torn apart by the Fourth Labour Government, who took office in 1984, but not before it had left a profound effect in the New Zealand economy.

This chapter will elaborate major steps taken in the energy sector, particularly in oil and gas sectors before and during the "period of extensive involvement, 1973-1984" and during the following "period of state disinvestment, beginning in 1984 ". Those decisions concerning control and production in the energy industry, when viewed under the current framework, reveal the role of the state *vis-a-vis* MNCs and indigenous capital that has evolved through changing international

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[1] Jesson, Behind the Mirror Glass, p. 67.

environment. Here the study suggests that the series of state preoccupation in the energy sector during the "period of extensive involvement" could be seen both as an active endeavour towards an integrated energy strategy under the close control of the state, and as a subordinate reaction to a situation in which the immense influence of overseas capital and technology was, at the time, beyond control. The subsequent era of reverse government initiatives can only be seen as another reaction to an altered situation.

Natural Gas: The Beginning of State Involvement

New Zealand gas industry history could be traced back more than a century during which gas was produced from coal.[1] However, recent economic history placed much more emphasis on oil and electricity. With electricity supply being carried out in a large scale providing a cheaper source of energy, manufactured gas turned out to be an uneconomic business by late 1950s.[2] At the time the gas industry declined, New Zealand discovered two major gas reserves in the Taranaki Region: the onshore Kapuni in 1959 and the offshore Maui in 1969; still, the existing gas industry was not rejuvenated by the newly founded fortune.

Before 1973, it can be said that, apart from coal industry, New Zealand energy market was roughly divided into 3 sectors: the oil industry whose structure was dominated by four multinational companies, the rapidly expanding electricity market

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[1] Richard J. Bentley, Chief Executive, Natural Gas Corporation, "The Downstream Gas Business", Address to New Zealand National Committee World Energy Council, Energy Sector Reform Seminar. Wellington, 18 March 1992, p. 2.

[2] *Ibid*, and The New Zealand Yearbook 1981, p. 519.

under the leading role of the state, and the gas sector which was locally owned and managed. The fore majors, BP, Shell, Exxon and Caltex, dominating New Zealand oil industry enjoyed a benefit of "competitive oligopoly", a condition which almost guaranteed each company's market share and in which competition occurred only in areas other than prices. Together they had an interlinked interest in expanding the total market in a stable manner, and together, the were the major beneficiaries from the profit generated by the Marsden Point Refinery. Urbanisation and farm automisation undoubtedly went hand in hand with the growing demand for imported oil. On the electricity front, expansion of electricity supply grid was another successful episode of the government led development, implemented by the powerful Electricity Department. (Electricity supply was privately and locally pioneered in 1888, using water power and then steam generation. The government first took part in electricity generation in 1914 and during 1920 - 30s seized the industry and rapidly expanded the electricity market along with carrying out major hydro-electricity schemes.[1]) MNCs and the state thus each had a sphere of control in the country's energy market. Each had immense capital resource and political power to secure continuous supply of energy to the level of economy of scale. Under this circumstance, local gas distributors could have only a tiny share of the energy market.

The discoveries of valuable natural gas fields could not in itself revitalise the ailing gas industry. The Crown has been the owner of the resources *in situ* and the oil companies possessed the technical skills needed for developing the fields while the dispersed local gas distributors did not appear to have a potential to market gas in the

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[1] Yearbook 1981, p. 511.

bulk that was found. This disparity of bargaining power among actors that could be noticed during 1920 - 30 remained to be seen in the country even in the postwar era. Incidentally, each actor engaged initially in a particular branch of energy supply and that explains the lagging behind of the gas industry. The fact that the gas industry was then linked to local entrepreneurs with comparatively inferior role in the energy sector hindered their access to the resource development decision.

As for Kapuni, the situation then was that the oil market and the involving firms, who were also the Kapuni developers, were happy with the cheap import of Arab oil while the government was too happy generating more electricity. It could be clearly seen that gas reticulation using the newly discovered resource could be developed to be commercially viable only at the expenses of the oil and electricity markets, its rivals. The developers were not interested in reticulating the gas themselves and neither were the government who was considered the only potential bulk buyer in the country. Were New Zealand more industrialised and plenty of large firms available as long-terms purchasers of natural gas as their energy input, the situation might have been different.

In 1967, when further investigations had confirmed that the Kapuni field was sufficiently large to justify exploitation, the government took a crucial step in getting involved in the New Zealand oil and gas industry. It established the Natural Gas Corporation (NGC), a state-owned company, to develop this new energy resource.[1] The NGC built pipelines for supplying gas and began to supply natural gas to nine

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[1] Bentley, "The Downstream Gas Business", p. 3, and Yearbook 1981, p. 519.

local North Island natural gas undertakings, previously producing coal gas, in 1970-71, and a pipeline to supply gas to the Stratford and New Plymouth electricity generating stations was completed in 1975.[1] In a sense, this means the state became the sole buyer of Kapuni gas and made use of existing local gas industry to market treated gas, at the same time the state reinforced its role in electricity expansion. Building a pipeline to supply gas to selected gas undertakings might provide a commercial opportunity for some local firms but the monopolistic role of the NGC in processing and supplying gas at the national level in itself deterred the integration, and thus the development, of the local gas industry. On the other hand, supplying natural gas for electricity generation helped foster the diversification of electricity generating capability as well as drain excess gas in the way that did not undermine the existing balance of power in the energy market. In short, when Kapuni field first necessitated a state active intervention in the oil and gas market, the state decided to enter the field to sustain the structural status quo in the energy scene.

As for the MNCs, they also had their share of the increased indigenous resource supply. The consortium of Shell, BP and Todd[2] companies, the discoverers and also the developers of the gas resource, got a firm footing in the natural gas industry and secured their satisfactory return through a take-or-pay agreement with the NGC.

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[1] R.E. Low, and P.L. Read, Energy Pricing Policies in New Zealand. (Auckland: New Zealand Energy Research and Development Committee, University of Auckland, 1982), pp. 109-10, and Yearbook 1981, p. 519.

[2] A New Zealand oil firm.

In fact, Kapuni development was merely a mild overture for the Maui play. Both the state and the companies took a cautious step in expanding a new frontier into natural gas production. Products from the field were in a manageable amount that could be absorbed by growing local market.

What really mattered was the Maui field which is a very large well by world standards. With the discovery, New Zealand suddenly found herself being an energy rich country without really knowing what to do with the natural wealth. That developing an off-shore gas well requires a huge amount of capital, with high risks involved, turned the Maui field into a hot potato for the government. As studied by officials, there were four possible uses of the gas: as a premium fuel for domestic and commercial purposes, in a petro-chemical industry, in a large energy-intensive industry, and as a fuel for electricity generation. Unfortunately, New Zealand is a small country and its level of industrialisation then did not match the sudden increase in energy supply. They found that the domestic market for a premium fuel was saturated by the supply from Kapuni, that the country had limited demand for petro-chemical products and had limited capacity to produce and export petro-chemical products at competitive prices, that large energy-intensive industry was absent in the country like New Zealand at the time, and that the least efficient use of the gas -burning the gas to fire boilers at the power stations- was the most promising way to utilise the Maui gas.[1]

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[1] W.W. Freer, White Paper on the Development of the Maui Gas Field. (Wellington: Government Printer, 1973) pp. 14-15.

There were proposals to build three or four very large gas-fired power stations in preparation for the Maui gas , predicted to be brought ashore by 1974.[1] However, on the negotiation table, the Maui development issue was very slow in progress and had reached an impasse by October 1972.[2] It was understood that the Crown would be the sole buyer of the gas on a take-or-pay basis and the gas would be used to fire power stations. The problem was that the government could not pay the world market price, demanded by the Consortium, for the gas, since it was much cheaper to generate electricity by existing means. From the companies viewpoint, the proposed price of 37 cents per million Btu of gas was not worth the risky and high initial cost investment.[3]

What broke the impasse and led to the historic 1973 Maui Agreement was more party politics than purely economic reasons. New Zealand politics was characterised by two major contending parties and vast power constitutionally accorded to the administrative body. In New Zealand, the leader of the winning party is appointed the Prime Minister and the Prime Minister hand picks the ministers, so the PM controls his or her cabinet. The cabinet is large enough to control the caucus and thus the majority in the parliament.[4] In addition, the unitary parliamentary system

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[1] Roger Wilson, From Manapouri to Aramoana: The Battle for New Zealand's Environment. (Auckland: Earthwork Press, 1982), p. 52.

[2] B.M.H. Sharp, and B. Simon, "Long-Term Natural Resource Contracts", New Zealand Economic Papers, 26: 1 (1992), p. 34.

[3] See Wilson, From Manapouri to Aramoana..., and Sharp and Simon, "Long-Term natural Resource Contracts", *ibid.*

[4] Jesson, p. 58.

generates complacency in the administration which controls the majority vote in the parliament because the government decisions are certainly to be carried out. However, it would be wrong to assume the PM and the ministers are licensed to conduct anything without being checked; they are subjected to a popular judgement every three years. The government is at liberty to lead the country in the direction it wishes for a period of three years then a general election will decide whether the ruling government or its rival party deserves the next three years.

1972 was election year and the national Government was in an awkward position because the giant Maui reserve was challenging the conventional framework in energy resource management. What were already agreed upon were the take-or-pay principle and the producer's right to the whole profit from condensate sale at the world market price.[1] The government felt urgency to close the deal before the election and proposed a joint-venture framework to develop the gas, but the negotiation was a slow process. The Labour Opposition, "sensing public frustration with the slowness of the negotiations, promised that, if they won the election, the Maui agreement would be concluded within three months of their taking office".[2] They did win, and so in three months the agreement was concluded.

The joint-venture proposal to develop the Maui field was first raised in the first half of 1992. Under it the Government and the Consortium would participate

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[1] Sharp and Simon, p. 34.

[2] Wilson, P. 52.

in both the development of the field and the on-shore transmission of gas.[1] The consortium positively responded to the proposal and the proposal was agreed upon in principle just before the election in November 1972. A little later, before the third month that the third Labour Government took office was over, the Consortium, led by Shell, tabled the latest joint-venture proposal in March 1973, and the deal was concluded on 3 April 1973. Then began the era of active state involvement in the petroleum sector. It is difficult to conclude whether the historic breakthrough in the energy production in New Zealand was the result of the daring and far-sighted acts of both the National and Labour Governments or of a political haste that was dictated by the circumstances.

According to the agreement, the government bought its fifty-percent share in the gas development venture at $ 30 million taxfree and then, as the buyer, it promised to buy the gas at a certain quantity for 30 years, starting from 1978. The delivered gas price would be 37 cents per MMBtu at 1975 prices but could increase at about half the inflation rate, which means the real price of the resource would decline over time.

At this stage, the state had become involved actively in the gas sector, It owned the gas resource, it took a vital part in the gas production, it was the sole buyer of the Kapuni and Maui gases, and it controlled plans for the development and construction of electricity generating stations which were supposed to be the prime user of the Maui gas.

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[1] Freer, p. 18.

At the time of the concluding of the agreement, just before the first oil crisis, the Consortium was entitled to several benefits from the deal. It bore no marketing risks since the Crown purchase contract guaranteed a minimum return for the gas taken off, and the profit was secured against any change in the tax regime. Another point that should not be overlooked is the increased return for the Kapuni gas that could be invested in the Maui field development. The latter benefit involved the attached Acceleration of Kapuni Gas Purchase Contract. Its substance was that, (a) since the recoverable gas resource of the Kapuni field was found to be at a level 84 percent higher than originally thought and (b) the government wanted to buy an additional amount of Kapuni gas to allocate to the New Plymouth power station while the Maui gas had not yet been brought ashore, the contract agreed to the purchase of a specified additional amount of gas at the "Additional Gas Price" during 1975-78.[1]

The Consortium's actual benefits were even higher than had anticipated. As mentioned earlier, condensate in the Maui field was not a bone of contention in the negotiation since it was of little amount and considered to generate only a marginal income. But with the oil price escalations, the condensate sold to the Marsden Point Refinery at the world oil price accounted for more than half of the total income accrued to the Joint-Venture, not to mention the richer-in-condensate Kapuni field which belonged totally to the Consortium. Thus the increased offtake of the Kapuni gas not only created additional income from gas but it also generated considerable profit from condensate sale to the Consortium. According to official estimation, the Consortium, who invested $ 20 million in the Kapuni production could enjoy $ 50 million profit

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[1] See Freer, p. 46.

between 1976 and 1977.[1] In this way, Shell-BP-Todd could easily finance their part of initial investment in the Maui platform construction and when the second oil price hike came, they simply received windfall gains from the condensate from the Maui field.[2]

The early stage of a virtually risk-free expansion of the upstream activities of the MNCs in New Zealand petroleum sector was natural development. They were indispensable in New Zealand energy market then not because of their capacity to dispose the oil and gas products but because they were the ones who possessed enough expertise and capital to take the resource off the well. There is doubt whether public sector at the time could even verify the technical information supplied by the Consortium[3] since hitherto the experience of the government in the energy sector had been in electricity and not petroleum production.

The immense involvement of the state in the energy industry, without the corresponding growth of indigenous firms, potentially capable of rising to the situation with some assistance by the state, was almost as natural. In the Kapuni case, there was a possibility that the declining local gas industry could be revived had the government provided an appropriate financial incentive and institutional support.

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[1] Geoff Bertram, "The Political Economy of Oil: New Zealand and Peru Compared", The Australian & New Zealand Journal of Sociology. 14: 3 (part two), October 1978, p. 292.

[2] Bertram, "The Political Economy of Oil:...", p.293.

[3] As hinted by Ms. Molly Melhuish, an independent energy consultant, in an interview on 25 May 1993, Wellington.

But, as previously mentioned, the state did not want a strong gas reticulation sector lest it would jeopardise its electricity market. And in the Maui case, at the time of the signing of the contract, the government was still so obsessed with its electricity supply ability that it was confident enough to pledge a secured demand for a huge amount of gas for 30 years, during which it hoped to resell the gas in bulk to generate electricity. The deal closed the door for local private gas marketing.

As a semiperiphery that traditionally relied on the export of farm products, the country's lack of local industrial capitalists was understandable. The state, though relatively powerful compared to local capitalists, was weak in relation to the core corporations, let alone states. With most of its competent human resource in the energy field devoted to electricity and never before in the petroleum sector, when the situation demanded major involvement by the state, it began from with a rather disadvantaged position.

That Todd family engaged in domestic petroleum development at this stage should not be regarded as a sign of rising importance of local firms. Todd holds a minor share in the Joint -Venture and appeared to be a local appendage to the Consortium partners led by Shell. The role of the Todd group as a "door-opener" for foreign oil firms was confirmed when it sold the Europa company, an old local oil firm controlling a certain share in petrol retailing, to BP. Before 1978, the prospect that national capitalists could grow and undertake oil development on their own was rather small.[1]

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[1] See Bertram, "The Political Economy of Oil:...", p. 295.

Promotion of indigenous entrepreneurs was never in the mind of the decision makers when the Maui contract was concluded. Weak industrialisation in the country was regarded as an unfortunate limitation more than an obstacle to be overcome. The major interest of the state lay in the electricity market, and when the growth in electricity demand turned sluggish, more state ventures as well as an expanded role for multinationals were chosen as the alternative. When the oil price rose there were proposals to use gas as a substitution for oil along with reticulation of gas, but these options were turned down. The decision of the state to join hand with the multinational oil firms in extensive downstream projects were later known as "Think Big".

Among the three consecutive terms of the Muldoon Government, beginning in 1976, the first term was a confusing period as far as energy policy was concerned. Energetic involvement of the state in the energy sector, an amplified extension of the policy pursued by previous governments, especially the Labour Government since 1973, was manifested, but the direction was not clear at first. Despite indications that growth in electricity demand was significantly slower than forecasted, the government still proceeded with its major hydropower projects.[1] Continuing with the decision to use the Maui gas as a fuel for electricity generation had not been ruled out either. Moreover, an exploration friendly stance was overturned in 1976, when the government announced that production of petroleum liquid, which referred mainly to the Kapuni condensate, would be taxed at a flat rate per barrel, with the intention to appropriate some of the windfall profit from the Consortium. But the

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[1] Sharp and Simon, p. 38.

decision was postponed because the announcement discouraged other ongoing offshore drilling projects.[1]

During the period between the two shocks, which was incidentally a world recession period, electricity generation appeared not to be the best choice to burn the Maui gas and that placed the government in the Maui dilemma. If faced a tough choice of buying the gas it had invested in the development as promised or renegotiating the contract. In the first case it had to convince taxpayers, in the latter case, the Joint-Venture partners led by Shell. Thanks to the obvious interest shown by the major oil companies in downstream activities at the time, the government took a bold step in committing to buy the stated amount of gas and in deciding to draw more multinational involvements into the energy sector with the state correspondingly expanding its role in the sector.

Proliferated State Activities

The Muldoon Government tried to formulate an integrated energy policy. A major move appeared in the institutional framework. It merged the Ministry of Energy Resources, the New Zealand Electricity Department, and the Mine Department into a single department responsible for all energy policy planning and operations. The

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[1] Bertram, "The Political Economy...", p. 293. The postponement did not mean that the government intentionally gave incentive for private companies to carry out the exploration activity by allowing them to retain excess profit from condensate, as the previous Labour government did. The National Government itself regarded the task of exploring petroleum reserves as a government's one, as can be seen by the massive sum of money spent in the exploration activity through the newly established Petroleum Corporation.

new Ministry of Energy came into being on 1 April 1978.[1] The government also published the first energy Goals and Guidelines in May 1978 for public comments, and in 1980, for the first time, the Ministry of Energy prepared an overall energy plan. Several bodies were set up later to foster each expanded energy activity. And during the second term in office, incidentally the period of the second oil shock which also shook the country, the government came up with a clear direction in the energy field: massive involvement aiming at self-sufficiency in transport fuels production.

The Ministry of Energy's Energy Strategy'79, derived from the outcome of public discussion on the 1978 Goals and Guidelines, set five goals to be achieved, as follows.

1. To Reduce Dependence on Imported Oil
2. To Increase Diversity
3. To Ensure that Energy Is Used Efficiently
4. To Transfer to Renewable Resources in the Long Term
5. To Provide for Changing Social and Economic Circumstances.

However, the stated goals should not be mistaken as the National Government energy policy since they were not materialised by actions. The direction the government really pursued from 1979 onwards contradicted almost all of the above goals. The Think Big projects encouraged, among others, perpetual use of the petrol engine and non-renewable, oil-based fuels as well as perpetual energy inefficiency

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[1] Yearbook 1981, p. 504.

through conversion losses. The self-sufficiency aim was also directed first and foremost to petrol and to a lesser extent diesel and aviation fuels, and thus reinforced the existing lifestyle.[1]

It is worthwhile recalling that this period was when the whole country panicked about oil prices and scarcity. At the time the government had several options and as several constraints. It was believed that the imported oil would be ever increasing in prices so the government had better do something to insulate the country from the rising oil bills. Unfortunately, the energy resource with which the country was richly endowed and in which the state had committed a massive investment, was gas and not oil, while the majority of farmers used diesel and the urban voters used petrol oil. Four of the five think Big projects were therefore launched to make use of the Maui gas and to alleviated external shocks that would affect oil users in the country.

Since it was not compatible with the determined goal of extensive state and MNC investments in the energy sector, the option of compressed natural gas (CNG) and Liquified Petroleum Gas (LPG) as substitutes for oil was not paid attention to. CNG was the most popular proposed use of the natural gas. "No huge plants are necessary to produce it, no foreign corporations play a role in its reaching the New Zealand public".[2] But the nationwide conversion to CNG by the customers required

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[1] Jeanette Fitzsimons, Synthetic Petrol or Sustainable Fuels. An Energy Watch Special (Wellington: Environment and Conservation Organisations of New Zealand, 1981), p. 6.

[2] Low and Read, p. 116.

a firm assurance that CNG would be available at an attractive price in the long run, and a government subsidy for the imported CNG conversion kits. The negligible share of the Maui gas allocated to CNG production and the negligible subsidy for conversion kit[1], combined with a clear emphasis in oil as a primary transport fuel virtually meant a denial to CNG. As for the LPG, a more transportable form of gas, its role was more a supplement to CNG in remote areas and in the South Island, and required similar support from the government.

The government's half-hearted support which means no support of CNG was widely felt and criticized, as "the policy against greater use of CNG [was] far stronger than [were] the reasons mentioned in support of it".[2] The reason not officially mentioned seemed to link with the government's masterpiece project - the synthetic petrol plant. A key energy advisor to Minister of Energy, Dr.Colin Maiden, Chairman of the Liquid Fuels Trust Board (LFTB), made "an interesting slip of tongue" in 1981 when he said that only the synthetic fuel option could "use the gas fast enough" - then corrected himself quickly "achieved self-sufficiency fast enough".[3] What he said could be translated as ..."the government could not conserve the Maui gas for a long-lasting efficient use because it had a commitment to take the gas off the field, and may also because it wished the government-owned Petrocorp to recover some investment through its share in the Maui Joint-Venture, and that income could be generated by the

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[1] As of 1980, the price of a standard conversion kit was $1,450, and the motorist who bought the kit could get a $200 government rebate. See Fitzsimons, p. 10.

[2] Low and Read, p. 117.

[3] Jeanette Fitzsimons, Synthetic Petrol ..., p. 7.

valuable condensate recoverable only when the gas was taken off the well". With the aim of quick return from condensate sale, the government could not wait for uncontrollable private consumers to create a sufficiently massive demand for gas.

The quest to let domestic oil consumption grow unperturbed despite increasing prices of imported oil led to the high-tech Marsden Point Refinery expansion and the Mobil Gas-to-Gasoline project. The expansion of the refinery, without going hi-tech, was initiated during the third Labour Government and was first approved by the National Government in mid-1979. "Three months later, the Government decided to proceed with the synthetic petrol plant, which required the refinery's design to be changed to include the complex and expensive hydrocracker.[1] The expansion contract was signed in December 1981. The decision to invest in the advanced technology, giving the refinery a flexibility to process almost any type of crude oil, resulted in another sunk cost of (projected) $ 550 million for the government.[2] This would be financed entirely from overseas loans.[3] The New Zealand Refinery Company (NZRC) realised the financial unattractiveness of the proposal and "chose to invest no shareholders' funds in the project but to accept instead a 12.5 % guaranteed profit on 'allowable' shareholders' fund". Moreover, it arranged confidential agreements with the government to "ensure a local market for products from the expanded refinery, even if they are more expensive than imported products".[4] To justify the expensive

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[1] Energy Watch. No.2, 1984, p. 3.

[2] Fitzsimons, p. 5.

[3] Energy Watch. No.2, 1984, p. 3.

[4] *Ibid.*

expansion, a large market for petrol, diesel and jet fuels must be maintained, at least until 1993, the dateline for the government to pay off the debt.

As for the Mobil's synthetic fuel plant, it was chosen despite, or because of, its very inefficient nature in the use of gas. The project was the fruit of Mobil's joint-venture proposal in 1979 to convert natural gas into methanol and, using the newly discovered "Mobil Process" to convert the methanol into petrol.[1] The cost involved as initially stated was $ 450 million which was regarded as relatively cheap for one-third self-sufficiency in petrol production in the 1979 situation. The government agreed to allocate 28% of the Maui gas to the synthetic petrol plant (based on total reserves of 4,800 PJ)[2] and set up the New Zealand Synthetic Fuels Corporation (25% owned by Mobil and 75% owned by the Crown) to construct and operate the facility.[3] Mobil was pleased that New Zealand agreed to be the showroom for its new technology, and the Minister of Energy was also pleased with and proud of it. He believed the project could protect New Zealand's economic security with the liquid fuel to be produced. "However, the fact that a synthetic fuel plant could use the large quantities of gas available under the take-or-pay contract must have featured in government decision making.[4]

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[1] "Maui Fuel Venture or Study", New Zealand Herald. 2 July 1979, section 1, p. 3.

[2] Sharp and Simon, p. 38.

[3] Sharp and Simon, p. 39.

[4] Sharp and Simon, p. 38.

In this case, the government, in 1980, committed itself in another long-term contract in which it had an obligation to deliver the agreed amount of gas to the Corporation and buy the gasoline produced from the plant.[1] This time it seemed to be safer because the government certainly could find both the gas to deliver to the plant and the market for the petrol. What seemed to be a problem was the 75% share in the corporation. As of 1981, the Prime Minister said in the House that 80% of the capital cost would be financed through overseas loans.[2] The profit to be generated and to repay the debt would depend on the oil price (hoped to be increased), since Mobil agreed to "tolling fee" - 16% real rate of return on its investment. The higher the oil price, the more income to the government, and vice versa.

Two other projects, ammonia-urea plant and the stand-alone methanol plant, which were also capital intensive, as well as an energy-intensive steel plant were also carried out. Together with the two projects already mentioned, they constituted "Think Big" programme.

To summarise, in 1980, the state had a 75% share in the synthetic petrol plant, 100% in the ammonia-urea project, and 51% in the stand-alone methanol plant, three projects that were directly related to the Maui gas. At the time the capital cost to the Crown in the projects equalled $2.5 billion[3], most of it was spent overseas.

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[1] Sharp and Simon, p. 39.

[2] Fitzsimons, p. 11.

[3] Sharp and Simon, p. 41.

To implement the four energy-related Think Big projects and other ongoing natural gas upstream and downstream activities, the government reorganised its institutional framework. It created the Liquid Fuels Trust Board to promote and cooperate in activity that involved the substitution of imported fuels for transport purpose, it set up the state-owned Petroleum Corporation of New Zealand Ltd.(Petrocorp) to take responsibility for the government interests concerning petroleum industry. The NGC had then been allocated to be a subsidiary of Petrocorp. Petrocorp was responsible for the government's 50% share in the Maui Development Ltd. through its subsidiary, Offshore Mining Co Ltd. It also represented the government's share in the ammonia-urea project and the methanol plant.[1]

Such extensive and interlocked commitments of the state were a logical expansion of its initial involvement in the development of the Maui gas and were made possible by the eagerness of the multinational oil firms to develop downstream activities in a non-OPEC sphere and by the generous attitude of the international financiers towards energy related projects.

Heavy investment by the government was consistent with the Keynesian economic approach it held to in the fight against world recession. Government expenditure concerning social welfare was also increased during the Muldoon era. The government also intervened in other sectors of the economy, e.g. wage and price freezes. Massive involvement of the government in the energy sector as well as other economic aspects continued until 1984.

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[1] Yearbook 1981, p. 505.

Disinvestment

Political structure of New Zealand enables sudden policy shifts. During the Muldoon era, only a few key persons in the cabinet could lead the whole country deep into an expensive adventure. And abruptly with the coming into office of the Fourth Labour Government who won the 1984 election, the policy was turned over as easily as it had been formed.

In 1984, budget deficit and overseas borrowing were no longer the fashion with world policy thinking. Before the election, the National Government policy of heavy government spending and extensive intervention in the economy was criticized by the IMF and the OECD.[1] The two organisations, of course, hailed the deregulation policy of the Labour Government. As suggested by the IMF, the Labour Government devaluated and floated New Zealand dollar and reduced its direct intervention in economic activities.[2]

Apart from extensive reforms in the financial sector based on monetarist policy, among the first major policies to be dismantled was that on energy projects. In 1985, Minister of Finance reviewed 5 Think Big projects performances. Using cost-benefit analysis at 10% discount rate, the review showed that all but the methanol projects would perform worse than expectations and would cost $150 m. net loss of

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[1] "OECD and IMF Give Govt High Marks for Economy", New Zealand Herald. 28 June 1985, section 1, p. 1.

[2] *Ibid.*

income.[1] At that time, however, the four energy-related projects had reached the irreversible point. What the government could do then was to try to operate the ongoing projects in a "commercial" manner.

A new development in the 1980s that offered another option for the government was in the sphere of private accumulation. Fletcher-Challenge was formed in 1981 to become the New Zealand's largest company. In addition, "it was connected to most of the rest of business community by a network of interlocking directorates and shareholdings".[2] From then on merging and takeovers intensified and, except for the Todds and the Spencers, most large corporate went public and expanded their capital base.[3]

With the growing of local private firms, the government in 1987 pursued the policy of privatisation of state enterprises - among them, Petrocorp (while electricity generation was delegated to the newly established state-owned enterprise, Electricorp). First, the government sold 30% of its share in Petrocorp in 1987 and then in 1988 it sold the remaining 70%. The latter sale was intended for British Gas but due to political controversy it was actually sold to Fletcher Challenge.[4] With the sale of Petrocorp, and later of the government share in the synthetic fuel plant (1990), the

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[1] "Treasury Raps Energy Optimum", New Zealand Herald. 16 July 1985, Section 1, p. 3.

[2] Jesson, p. 66.

[3] Jesson, pp. 66-67.

[4] Europa Yearbook 1989, p. 1896.

government retreated from major energy activities and removed itself from several obligations and ownership in energy industry- a process which can be called "disinvestment". The government then confirmed its standpoint by dissolving the Ministry of Energy and put the leftover energy activities under the Ministry of Commerce.

It also proceeded in the sphere of deregulation to help the energy market become "more market". The Petroleum Sector Reform Act 1988 was the key to the deregulation process. The objective of the act was to remove existing controls in the distribution industry to induce competition.[1] The four majors from then on could compete in energy areas including prices and they were free from the unwritten obligation to buy refined products from the Marsden Point Refinery. As a result, the NZRC was forced to compete in price with the import supplies and, for a 3 year transitional period, a $ 25 million annual bounty would be paid to the operator of the refinery to compensate the loss.[2]

The gas sector is not as easy to deregulate due to the limited number of players in the field and the long-term contracts. In the distribution sector, local firms have a potential to compete in a more market condition, but the NGC still hold a monopoly in gas wholesaling which is guaranteed by contracts.[3] Moreover, 42.8% of the gas from the Maui field was to be taken by Electricorp for electricity generation

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[1] Peter Clough, *et al.*, Issues in Oil Sector Deregulation, p. 1.

[2] Clough *et al.*, p. 11.

[3] Energy 88, p. 28.

purpose.[1] Only the gas left from what has been taken by Electricorp and the 3 gas-related Think Big projects , approximately 16% of the total gas supply, is reticulated by the NGC to 13 retail utilities and as a fuel for some industries.[2]

Deregulation of the gas market began in the reticulation sector in 1993 under the National Government monitoring. From April 1, regional gas franchises were abolished and the NGC, having a monopoly in gas transmission as well as being a main retailer (owning 6 of the 13 retail utilities) must transport gas for others at the same cost as its own internal rate.[3] At the time, the NGC was only 1/3 owned by Fletcher Challenge and the other 2/3 was sold in the stock market.

The deregulation and disinvestment processed have been continued since 1984 and the decreasing role of the state in the energy sector corresponded to the emerging role of the indigenous private enterprises. The local private sector certainly was not in a position to replace the state's previous role in the Think Big programme as far as capital investment is concerned; however, the financial burden imposed upon the company that took over the projects from the state was not extreme and the functioning security markets helped alleviate the burden. At the same time, the climate of investment in the petroleum sector has not demanded proliferating investments due to the oil price slump in mid 1980s.

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[1] James Weir, "No Action over Gas Sale Contracts", Dominion. 28 August 1992, p. 11.

[2] Ministry of Commerce, Energy Data File. (Wellington, January 1992), pp. 34-35.

[3] John Barton, "No Rush of Rivalry in Deregulated Gas Market", Dominion. 7 April 1993, p. 15.

The continued process has not affected the MNCs' stake in New Zealand's energy market. Close cooperation between the majors and local firms like Todd and Fletcher Challenge ranging from in the field of exploration to downstream activities are witnessed in contemporary drilling and oil development projects in Taranaki region. Moreover, MNCs slowly expand their involvement in existing downstream projects by buying ownership share from local firms, for example, Methanex Corporation of Canada has bought Fletcher Challenge's shares in the methanol and the synthetic gasoline plants.[4]

Conclusion

New Zealand's energy industry has experienced three phases of development: first the traditional one, marked with exclusive interest of the state and the MNCs in the electricity and petroleum sectors respectively, then extensive involvement by the state in energy development projects in partnership with MNCs, and recently, disinvestment and deregulation by the state with an increasing role of local private enterprises. During these periods, the role of the MNCs was slowly but steadily expanding as the total market enlarged. The major shifts were seen in the role of the state. The state once encroached the entire energy reticulation market, except for petroleum industry, then, it involved itself more and more in the petroleum sector and acquired ownership in processed resources as well as manufacturing facilities, and lastly, it lost the interest in the energy market and began to transfer most of the rights and obligations to private sector. As for local capital, it could become a crucial actor in the energy scene only in the last period.

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[4] See Dominion. 13 January, 6 February, and 20 February 1993.

The afore-mentioned development took place in a particular international climate of investment in the energy sector, although the decisions made by the government in power were also vital to determine the outcome. The government, however, had to choose the limited options available in each situation. New Zealand's structural position as a semiperiphery necessitated the state initial involvement in gas development project. Thereafter, successive governments must make do with the outcome of the previous policy until the changing external environments creates pressure for a change.

VI. New Zealand Economic Performance as an Outcome of the Country's Energy Policy

New Zealand's structural position in the semiperiphery led initially to the state's extensive involvement in the energy field. But then changing international and internal environment induced a shift in policy towards non-interference and a lesser role of government in the energy market. Even though steps taken by the New Zealand government could result in the country's increasing self-sufficiency in liquid fuels, which adds to the economic security of the country in the long run, decisions in major energy issues appeared to be reactions to one crisis after another rather than long-term consistent policy planning, and that cost the New Zealand economy dearly.

Bearing in mind the criterion of development set forth by the World-System Theory, that a semiperiphery can improve its status *vis-a-vis* other states by the state's assistance to its owner-producers to compete against MNCs and to sell high-waged products in the world market, New Zealand energy policy seemed to produce an opposite result. There are four crucial aspects of the detrimental effect of the government's energy policy: energy inefficiency, outflow of capital, reproduction of weak bargaining position of local entrepreneurs and, unsustainable use of resources. All of these outcomes added to the country's structural imbalance.

Energy Inefficiency

Efficient use of energy is important for a desirable economic performance. For production of goods and services, less energy input cuts the cost and results in increasing the viability and competitiveness of an economy.[1] In contrast, if a country utilises increasing amount of energy without generating the same increase in output production, its competitiveness in the world economy declines, unless the total cost of inputs is offset by a marked drop in the costs of the other inputs. For New Zealand, geographical distance from most major trading partners and the bulky nature of her main exports already cause a disadvantage in terms of transport costs. As concession markets wither away, the country needs more than ever the least cost and most efficient production for export. Unfortunately the energy policy so far has not resulted in energy efficiency, or competitiveness.

A country's level of inefficient use of energy is measured by the energy/GDP ratio. Recently, the measurement of energy intensity with a particular reference to New Zealand compared with other OECD countries has attracted much attention from scholars as well as the authorities concerned. In 1990, the IEA expressed its concern over the New Zealand energy/GDP intensity which rose at a rater faster than any other OECD country.[2] The point was very well taken, since, in

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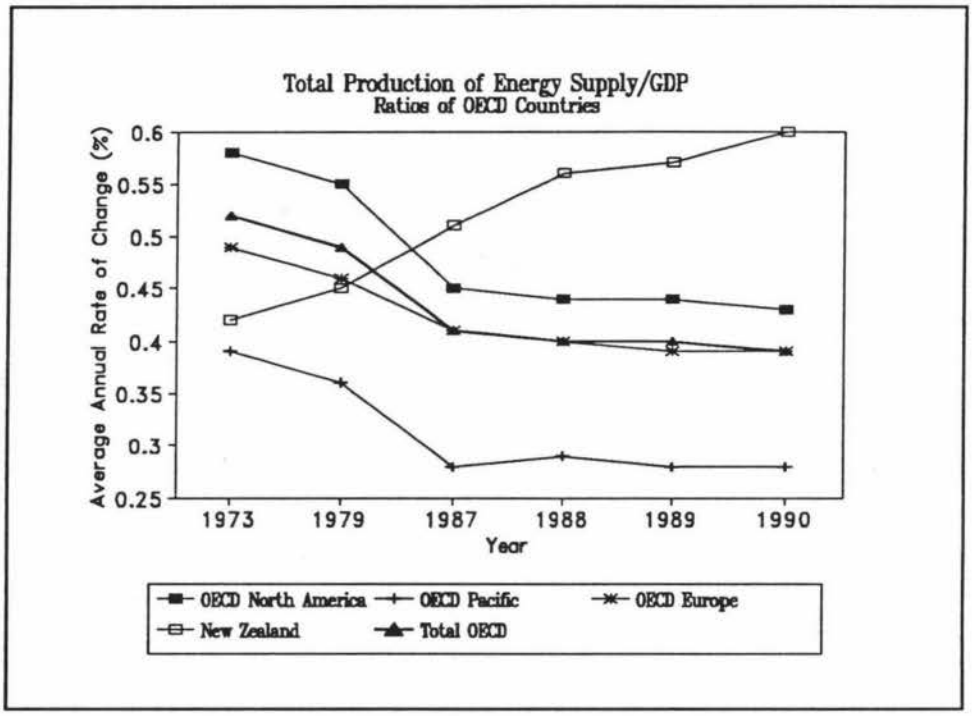
[1] D. Butcher, Energy Management Handbook: 1989.(Introduction Sector). (Wellington: Ministry of Energy, 1989). cited in M.G. Patterson, Energy Productivity and Economic Growth: An Analysis os New Zealand and Overseas Trends. Market Analysis Report Number 89/1006. (Wellington: Ministry of Energy, 1989) p. 4.

[2] IEA, Energy Policies and Programmes of IEA Countries, 1989 Review. (Paris: OECD, 1990) p. 191.

contrast to the declining overall trend, New Zealand's rising energy intensity rose sharply as can be seen from figure 6.1.

Figure 6.1



Source: IEA, Energy Policies of IEA Counties, 1990 Review. OECD, Paris, 1991.

In this regard, there are two major New Zealand-based research works worth mentioning, the first is the study o f M.G. Patterson in 1989, and the second is that of I.G. Bertram in 1991.

- Patterson on Energy Productivity and Economic Growth

According to Patterson, from 1971 to 1984, the ratio of the increase in New Zealand energy/GDP was 18.89%, 10.43% of which was attributed to the

substitute of energy for labour, and 8.39% to the Think Big projects.[1] He concludes that, "the relatively poor performance in the New Zealand energy:GDP ratio is due to : a probably high ratio of energy for labour substitutions, the petrochemical projects start-ups, and most importantly no overall technical improvement in the utilisation of energy."[2]

It is possible that the substitution of energy for labour occurred mainly because the cost of energy is relatively low compared with labour.[3] But other factors could as well add more incentive to increasing demand for energy input. For instance, the rate of energy price rises in relative to other prices was cited by Bertram as a lack of price incentive to conserve.[4] "At the same time, Think Big's emphasis on energy supply seems to have created a sense of security that was not felt in other OECD countries,... ."[5] The lower price which offers an incentive to consume was clearly seen during the study period (1971-1984) in the electricity sector which has a tariff system designed to discriminate in favour of more consumption rather than less

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[1] Patterson, Energy Productivity and Economic Growth..., p. 1.

[2] *Ibid.*

[3] Patterson, p.54.

[4] As shown by Bertram, The Rising Energy Intensity..., pp. 18 - 19, and p. 45, NZ price indices of fuel and light have been slightly lower than consumer price index (all groups) since early 1970s. This means that oil price may fluctuate over time, but, *compared to* other goods, at any point of time the rise in oil price still relatively low.

[5] Geoff Bertram, "Six Steps to Energy Efficiency", p. 24.

consumption.[1] Moreover, "New Zealand not only has relatively low electricity price by international standards but its electricity rices have decreased in real terms since 1960".[2]

During the same period, mass unemployment emerged as a major economic problem. As previously mentioned[3] migrant workers were the first to be affected, but the overall economy suffered a setback too. It can be said that energy inefficiency that led to unemployment created a heavy burden for the state in terms of social unrest and direct social security payments from the state. In this respect, energy inefficiency undermined the economy's strength by consuming the resource which could have otherwise been used to promote the performance.

As for the Think Big projects, it must be noted that the study does not include the synthetic petroleum production which was still in the pipeline.[4] Nevertheless, it is evident that the projects use much energy but contribute negligibly to the GDP.[5]

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[1] P.L. Read, To Plan or not to Plan: Reflections on Commercialisation in the Energy Sector. (Wellington: New Zealand Associations of Economists, 1986), p. 12. From 1988 on price incentives has applied to oil sector too, for the reason to be discussed later.

[2] Patterson, p. 23.

[3] In Chapter III.

[4] Patterson, p. 84.

[5] Patterson, p. 47.

Another point mentioned by Patterson is crucial as far as energy policy is concerned. The lack of technical improvement in the utilisation of energy can be related to the direction of the energy policy so far which had emphasised self-sufficiency and not efficiency. This direction distinguishes New Zealand from the advanced OECD nations who succeed in 'decoupling' of their production growth from energy consumption. It is true that energy intensity does not always reflect poor energy policy making. To an extent, New Zealand is a country that is under a process of industrialisation which naturally requires energy inputs. To what extent the energy inefficiency manifested in the form of energy intensity per GDP growth rate is caused by the natural process of industrialisation and to what extent by the government policy is difficult to estimate. However, if there was an initiation by the government sector through regulations, price signals and other clear massages, more efficient use of energy in the private sector could have been achieved. In the case of New Zealand, the government's emphasis on energy supply without a strong aim to reduce energy intake adds to, instead of lessens, energy intensity in relation to what it should be in a normal industrialisation process.

- Bertram on Rising Energy Intensity

The study already mentioned does not cover the disinvestment and deregulation period started from the coming into power of the Fourth Labour Government. An analysis by I.G.Bertram confirms that energy inefficiency continues despite a minor change in detail. The dominant contribution to the energy intensity

ratio for the period of 1978 - 1988 were conversion losses and industry, with transport third place.[1] "The rising level of conversion distribution losses was a steady trend throughout the period , with a jump in 1983 attributable to the starting-up of the Huntly thermal power station (Energy losses associated with electricity generation and transmission rose from 3.40 million tonnes of oil equivalent in 1982 to 3.85 mtoe in 1983)".[2] "In the first half of the 1980s, the Think Big drove up the economy's energy intensity, while in the second half the upward pressure came from deregulated transport sector. A sharp further increase in energy intensity in 1989 was due to increased use of gas for electricity generation as Electricorp's sales drive bore fruit".[3]

The analysis also reveals a tangible aspect of energy inefficiency caused by government policy. According to Bertram's finding, between 1973 and 1988, total energy consumption increased by 2.95 mtoe but total primary energy requirements increased by 5.13 mtoe. "The proportion of total primary energy actually delivered for consumption thus fell from 69 % in 1973 to 65 % in 1988, with conversion and distribution losses rising from 31 % to 35 %. The low thermal efficiency of synthetic petrol production and fossil-fuel fired electricity generation account for much of the deterioration".[4]

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[1] I.G. Bertram, The Rising Energy Intensity of the new Zealand Economy. (Wellington: Victoria University, 1991), pp. 8-9.

[2] Bertram, *ibid*, p. 8

[3] Geoff Bertram, New Zealand's Rising Energy Intensity, p. 39.

[4] Bertram, The Rising Energy ..., p. 8.

- Other Studies

Increasing energy intensity caused by the continued neglect of the demand side of energy consumption contrasts with the trend in advanced OECD countries. At the same time, it can interestingly be compared with the trend in other semiperipheral countries in Asia.

The Asian Development Bank has studied energy policy patterns in 9 Asian countries and found that apart from the low-income countries (or the periphery), the two oil crises appeared to have reduced the link between economic growth and energy consumption.[1] "A fall in the GDP elasticities of demand in the high and middle-income countries over the period of the two crises was associated with a decline in the energy intensity of their manufacturing sectors. This decline may be attributed to the combined effects of energy conservation, structural changes, and the substitution of capital (and possibly labor) for energy".[2] The trend, of course, helps in explaining the competitiveness in the export products from the four lower and upper middle-income and high-income countries : The Philippines, Thailand, Teipei and Korea, the competitiveness which has made some of the countries become 'NICs'.

The study reveals that most Asian countries were affected by the oil shocks especially by the second oil shock which was accompanied by deep world

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[1] Asian Development Bank, Energy Policy Experience of Asian Countries. (Manila, 1987), p. 135.

The countries studied by the ADB are Low-Income Group: Bangladesh, India, Nepal, Pakistan, and Sri Lanka; Lower Middle-Income Group: Philippines and Thailand; and, High and Upper Middle-Income Group: Teipei China, and Korea.

[2] *Ibid.*

recession and contraction of market for their exports; however, the Asian semiperipheral countries were able to continue their industrialisation process while, at the same time, lessening their increase in energy intensity. Like New Zealand, most of them switched from oil to other fuels, but unlike New Zealand, some countries also managed energy demand in an efficient way, mostly through the price mechanism.[1]

A sense of security in energy supply and industrialisation process can hardly be cited as excuses for increasing energy intensity especially when compared with the experience of Thailand, a country which expanded her domestic energy supply capacity and was going through industrialisation process at about the same time as New Zealand. Thailand had the highest energy intensity of output of the five ASEAN countries, excluding Brunei, by 1979.[2] But that was due largely to the high ratio of growth in the industrial sector. Between 1971 and 1979, the rate of increase in total energy use in the Thai industrial sector was 8 % but from the 1979 onward the increase has been only 3.2 %.[3] Therefore, a major attribute to Thailand's satisfactory growth rate during 1980s without corresponded increasing rate of energy intensity lies in efficiency. The drive for efficiency in the industrial sector happened while the government was also creating some degree of security on everyday supply, through the

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[1] ADB, pp. 97-116, and p. 136.

[2] John C. Sheerin, "Energy and Economic Interaction in Thailand", The Energy Journal. 13:1 (1992), p. 147.

[3] *Ibid.*

development of domestic energy resources - gas, oil, and lignite - and negotiating long-term oil purchase contracts with oil exporting countries.[1]

Compared with the experiences of advanced OECD countries and middle-level countries in Asia, New Zealand's energy intensity explains the relatively deteriorating economic performance. Switching form costly imported oil to domestic substitutes alone cannot free the economy from economic threats, especially during the time when locally produced energy supply is even more expensive. Government determination in decoupling economic growth from energy consumption is required to produce a similar outcome. In the case of New Zealand, Think Big and electricity expansion policies induced energy waste in the government sector and later the deregulation policy, which has led to declining real prices of petroleum products and more reliance of road transport, as well as pricing policy for electricity, induce energy waste in the private sector. Altogether, the waste has resulted in an economy unable to produce goods and services at the amount it would with the energy supply available. Moreover, the unemployment problem has worsened, due to both the substitution of energy for labour, and the slow growth of the entire economy.

Current Account Deficits

Think Big was originated in the hope that it would alleviate the deficits in external trade balance by import substitution and also in the hope that before the programme bore fruit, foreign exchange brought into the country during the construc-

[1] ADB, p. 77.

tion of the projects would stimulate the economy.[1] Unfortunately, the treatment turned out to be worse than the disease. The inflow of private foreign capital during the construction period was not very large compared with the capital cost to be spent overseas and with outflow of money in terms of repatriated profit and interest payments. The unfavourable balance of payments in the 1980s was attribute more to the outcome of government policies than to external shocks.

As already mentioned in Chapter 3, the windfall gains from Kapuni condensate under a favourable tax regime were so huge that they were equivalent to be, most, if not all of, the Consortium's capital investment in the Maui platform. The Maui development project thus attracted negligible, if any, inflow of external currency as far as the Consortium's investment was concerned. On the contrary, condensate, a valuable product from the Maui field as well as from Kapuni, had been rapidly lifted at both wells, to be sold to the Marsden Point Refinery at the world oil price. The profit from the Maui condensate, as other forms of company profits, could be transferred abroad; therefore, the result was hardly different from importing oil - outflow of hard currency.

The impact of the projects on the balance of payments might be favourable at the early stages, due to the inflow of money in terms of overseas loans. Still, the hi-tech nature of most projects means a large sum of capital had to be spent overseas to buy expensive equipment. Moreover, since most of the Think Big projects

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[1] See Energy Watch. Issue 3, 1984, p. 6.

are import-substitution, they do not generate foreign exchange directly and the overseas debt repayments must be financed by income earned through other productive economic activities.

Table 6.1 Estimated Balance of Payments Flows Associated with Large Projects (in 1981 Dollars Millions). Figures in Parentheses = Net Foreign Exchange Cost.

Projects	1981 -82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90
1. NZ Steel Expansion	(35)	(90)	(110)	(45)	10	-	115	185	190
2. Marsden Point Refinery Expansion	(65)	(140)	(140)	15	85	60	75	95	110
3. Mobil Synthetic Petrol Plant	(60)	(60)	(280)	(215)	(65)	70	80	95	105
4. Stand-Alone Methanol Plant	(25)	(70)	(15)	45	55	65	60	60	60
5. Third Pot-Line at Tiwai Point	(80)	(20)	30	35	40	45	45	45	45
6. Second Aluminium Smelter	-	(15)	(60)	(95)	(175)	(80)	(30)	150	155
7. Ammonia-Urea Plant	(5)	-	20	30	35	35	35	35	35
8. Electrification of the Main Trunk Railway			(10)	(10)	5	15	10	20	15

Source: Energy Watch Issue 3, 1981, p. 4.
(Projects 1, 2, 3, 4, and 7 are Think Big)

The table derived from the estimated balance of payments flows for 10 years from the major projects, presented to the House of Representatives on June 23, 1981. "It shows Mobil [Synthetic Petrol Plant] to be clearly the worst performer, paying back its foreign exchange in 6 to 7 years, compared to the refinery expansion

at 5 years, NZ Steel at 4 years, the second smelter in about 3, the Comalco third potline in 2 1/2 and the Petralgas Methanol Plant and the Main Trunk Railway electrification in 2 years each".[1]

The balance of payments deficits associated with ambitious projects, suffered by New Zealand and other intermediate and low level countries, served the need of the core countries. For overseas bankers, Think Big helped 'recycle' OPEC funds. Big projects also created jobs for engineers and managers form highly developed economies.[2] Moreover, demands for hi-tech equipments boosted export industries in the core. "In turn, products of the projects would go onto world markets at very competitive prices; this is being confirmed by falling world prices for most petrochemical and fuel products".[3]

What was left to New Zealand was a huge debt burden. The debt does not associate only with initial investments, but also with additional overseas borrowing to meet operating losses when they were privatised.[4] Mounting debt is partly caused by misfortune. Had the Think Big projects been carried out at the perfect timing the outcome might have been otherwise. What really happened was that the Think Big investment was made during the time New Zealand's financial status was weak, due to the second oil shock aftermath; therefore, when the currency exchange risk involved

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[1] Energy Watch. Issue 3, 1981, p. 4.

[2] Energy Watch. Issue 3, 1984, p. 6.

[3] *Ibid.*

[4] Colgate and Stroombergen, A Promise to Pay..., p. 26.

the use of newly-developed hi-tech equipment, most of the projects had cost escalation. These sunk costs and operational costs were not offset by the profit the projects were expected to generate. In mid 1980s oil prices dropped. The clear loser was the synthetic fuel plant. At first LFBT estimated the price of Mobil gasoline at around $ US 23 per barrel, but as the construction cost escalated 2.5 times since the first estimation, it was clear by 1981 that the projected price was unrealistic. In addition, the government was bound to pay operating costs to Mobil approximately $17-26 million yearly.[1] In 1986, it was calculated that the plant would break even if the oil price stayed at $ US 36 per barrel in real terms over the 18 years life of the plants.[2] When the plant was sold to Petrocorp, the contract was signed on the condition that the state would still be responsible for the $ 1-2 Billion debt and pay Petrocorp additional $ 173 million.[3]

As for the refinery, the costly 'hydrocracker' that was installed actually gains an intangible benefit of security of supply for it can refine almost any type of crude and produce more distillers proportion than a conventional refinery type. However, from a financial aspect, the tangible benefit is hardly evident. Firstly, because the sunk cost in the refinery expansion justified the import of crude oil and an increasing demand for light oil products, in order to maximise the expensive investment. And, secondly, because "[t]he refinery's saving depends not on the world price of crude oil but on the margin in world prices between the light refined products

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[1] Energy Watch. Issue 2, 1981, p. 2.

[2] Sharp and Simon, p.40.

[3] *Ibid.*

(petrol, diesel, and jet fuel) and the heavy residual oil that the hydrocracker will convert into light fuels. ... [After many countries, including New Zealand, have expanded their capacity to crack residual oil,] world margins have dropped from $ 170(US) per tonne in 1982 to $ 130 in 1983. New export refineries in Saudi Arabia, Indonesia and Singapore are expected to market products aggressively, which will cut the margins still further".[1] The inability of the refinery to produce real savings for the country was implied when the government agreed to pay an annual bounty to the refinery during the first years of the oil sector deregulation, knowing that importing light refined products would be cheaper than running the high cost refinery.

The net financial losses to the country and the disproportionate burden to the government were envisaged at the very beginning of the project. The government was criticized in the House since July 1979 against Maui gas related big projects, that "ill-research commitment to massive-capital investment" "could get ourselves in trouble".[2] Critics of "Think Big"'s expensive reliance on fuel oil, in favour of "small-is-beautiful" CNG were also apparent during the time the decision on Mobil plant was made. But as the government was empowered to do what they wished and their wish was security in oil supply to sustain the growing demand for oil and a status quo for the electricity market, the government persevered with the Think Big programme regardless of the cost involved.

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[1] Energy Watch. Issue 2, 1984, p. 7.

[2] M.J. Minogue (Hamilton West), in New Zealand Parliamentary Debates Vol. 424, p. 1589.

The unfortunate outcome would not have so greatly burdened the government financially, had the risks involved been shared equally among partners. But as we have seen, most risks were accrued to the governmental partner of each project. The government was obliged to find the utilisation of the Maui gas while the Consortium got a guaranteed minimum return, and the government was also bound by the contract "to secure the maximum commercial advantage for the Joint Venture";[1] therefore, it must 'take' the gas out of the ground to enable the Joint Venture to recover more valuable condensate, and not just 'pays' but leaves the gas in the ground. The four Majors partners in the Marsden Point Refinery also enjoyed a guaranteed return for their allowable fund; likewise, Mobil got a fixed return in the Synthetic gasoline project through the tolling fee. It was thus only the New Zealand state taking care of both the financial losses and the uneconomic outcomes of the projects. As for the companies, the financial situation is on the contrary. Shell(NZ), for example, reported amidst the oil price slump and huge government deficits that its net income profit rose 62.7% to $59.4 million in 1984 thanks to the favourable downstream oil sector.[2] It could hardly be specified whether the unequal risk sharing and its results were caused by the overwhelming bargaining power of the MNCs or the incompetence of the governmental negotiators, or both.

In any case, the government would rather run the losses than renegotiate the Maui contract and remove its original burden that induced the subsequent ones.

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[1] Freer, p. 37. (para. 7.1 Sect.2. of Joint Venture Agreement).

[2] "Buoyant Trading Helps Shell", New Zealand Herald. 18 June 1985, Section 3, p. 3.

That was not because the government always honours all its obligation at any costs to the country, as a precedent was set when an undesirable situation caused the government to successfully renegotiate the electricity agreement with Consolidated Zinc (Comalco) in 1977 to achieve a fairer outcome.[1] Rather was it, because all the competent human resource in the bureaucracy dealing with energy matters were channelled to the electricity sector, and the government was not strong enough to build able combatant units in all fronts. Mostly, negotiations with the majors concerning oil and gas issues were carried out by the Treasury which did not commit itself willingly. The existing obligations that were initiated from the 'take-or-pay' Maui agreements thus remain due to the lack of professional competence to conduct a renegotiation.[2]

Again and again, the MNCs have turned a slight edge in their experiences into tangible advantages while the New Zealand state was caught with overseas debts and subsidising ventures that made a loss. The $11.5 billion rise in government overseas debt between 1975 and 1985 was attributed largely to the Think Big programme.[3] It was hardly surprising that government budget deficits dramatically increased in 1978, dropped a little in 1979, and increased again until it

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[1] D.H.Jones, Power Development and Environmental Protection of Lake Manapouri and Te Anau. Electricity Division, Ministry of Energy, Dunedin, 1980, p. 36.

[2] P.L.Read, conversation, 4th June 1993, quoted a Treasury official as saying that the Treasury had tied up all of its disposable resources for 18 months in dealing with the contract and that renegotiation of the contract was too demanding a task to be faced.

[3] Colgate and Stroombergen, p. 25.

reached its peak in 1984, at $3.2 billion, with foreign debts reaching its peak in 1982 at $21.7 billion.[1]

If the Think Big has caused much of the government deficit through construction costs and debt repayments, and indirectly caused the continued import of crude oil thus affecting the trade account[2], did the subsequent privatisation alleviate the balance of payment problem? As far as public finance is concerned, the burden of debt repayments is still born by the government. To a broader extent, the diseconomy that accrued to the large projects still prevails for the country as a whole.

What was directly originated by the Fourth Labour Government's reform in the energy sector was the lower price of oil, and that encouraged even more import. Figures 6.2 to 6.4 reveal that, since 1979, New Zealand tried to reduce the volume of oil imports but the reduction was not much and the total cost of import was still high. The slow increase in indigenous oil production substituted the margin between import and the sustained level of consumption. When the product from the Synthetic Petrol Plant came to the market in 1985, it helped reduce the oil import markedly. But due to cheap import price and perhaps to other reasons, the demand for oil jumped upwards and the volume of oil imports doubled in 1987 and was still on the increase thereafter. From 1988 onwards, the volume of import increased at a slower rate and the price for the imported oil began to appreciate. Nevertheless, the retail

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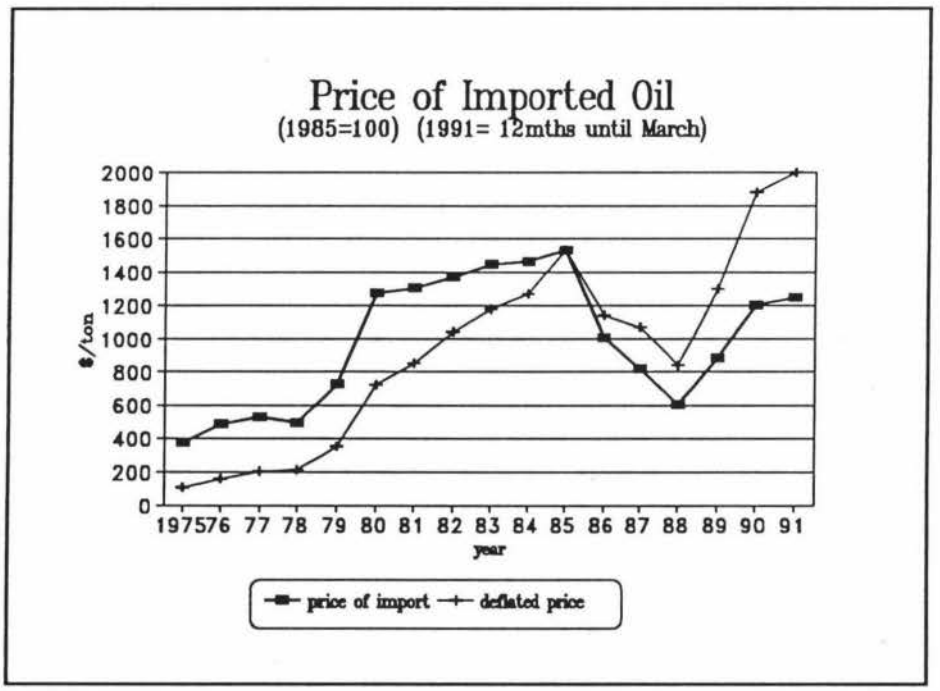
[1] IMF Statistics, 1993, pp. 536-37.

[2] See pp. 116 - 7, and p. 139, on government policies that favoured continued consumption of oil.

prices for motor fuel oil still dropped against the rising price of imports, and not until the 1990 oil crisis caused by Iraqi invasion of Kuwait that retail prices showed a temporary rise again. In the end, deregulation has resulted in a decline in importers' margins with New Zealand petrol becoming relatively cheaper compared to international prices.[1]

Figure 6.2



Source: Energy Data File, July 1991.
IMF, International Financial Statistics Yearbook 1993. p. 537.

Figure 6.3 also implies that, in the 1980s, it was not the security of supply that mattered but the growing overall demand for oil (which was left unabated or even encouraged). Whenever its demand rises faster than indigenous production capacity, more crude or refined products will be imported.

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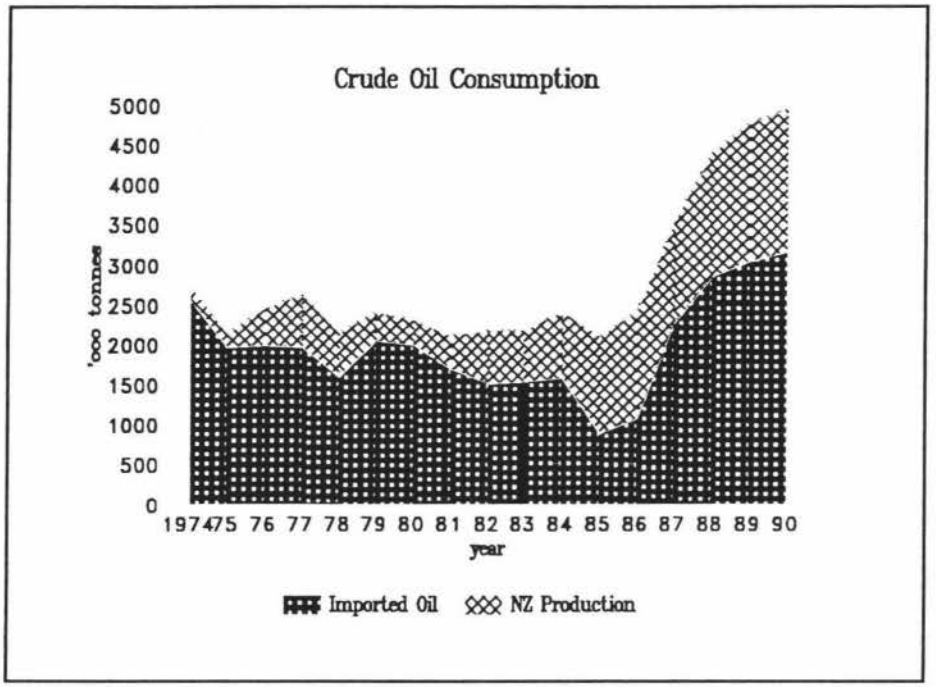
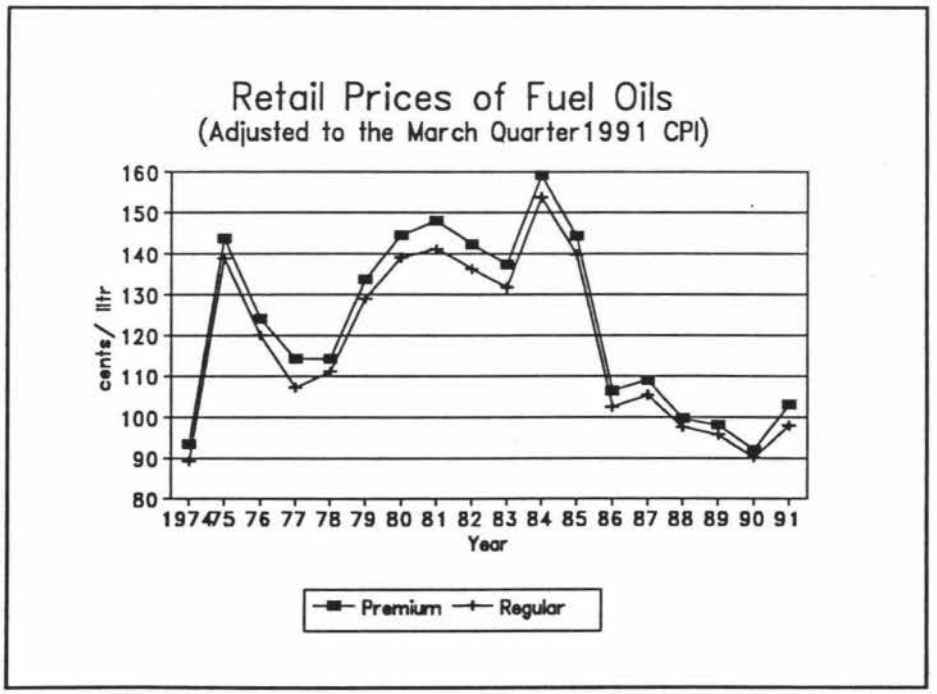
[1] See Energy Data File, January 1992, pp. 62-63.

Figure 6.3



Source: Energy Data File, July 1991.

Figure 6.4



Source: Energy Data File, January 1992.

As long as there is demand for imports, an annual outflow of money from the New Zealand economy is inevitable. Here, the point is not that the projects run a financial loss or gain a profit but that how the loss is financed or how the profit is used. If the private sector borrows from overseas, the overall result might be worse since private borrowing is prone to a less favourable term. And if the profit is reinvested or repatriated abroad, it will equally negatively affect the balance of payments. The privatisation thus merely saves the taxpayers' money but not the New Zealand economy.

Local Capital

Private entrepreneurs in a semiperipheral country are predictably less powerful than multinational corporations, so it is left to the state to both prevent adverse effects from multinational capital that penetrates into the country and promote local accumulation. Successful nations that shift their status up to the core level, or from the peripheral up to the semiperipheral level, have used their state apparatus to contain outside influence and provide "extra-market" assistance to help local capital. Usually this is done during contraction periods when the MNCs get less support from their home governments. Recently, after the 1970s contraction decade, the world also witnessed upward mobilities by some OPEC countries and the Asian NICs.

Sadly, such an outcome did not happen to New Zealand. Here the central role of the state in the area of economic development is clearly seen, but its mechanism has been strengthened to provide certainty and a guaranteed climate of

investment for the MNCs at the expense of local entrepreneurs. As far as energy is concerned, the state has undermined role of the local capital by various means. Even though state strategies may alter over time, the essence of facilitating overseas capital and retaining relatively weak bargaining position of indigenous entrepreneurs continues.

Instead of helping local private ventures in electricity and gas production and reticulation, the state used its power and capital to encroach on local businesses and expanded its strength in these energy areas while the local private sector declined. Compared to the vast resource owned by the state sector, neither local electricity generators nor coal gas manufacturers could compete to get a firm footing in the small New Zealand market. And when the Kapuni gas was about to come on stream, the marketing of the gas was a task beyond the capacity of the weak undertakings without strong support by the government. For these local private sectors, the state never provided a risk-free guarantee of a return on investment nor a share in initial construction capital as it later accorded to alien investors. In contrast, since natural gas reticulation had the potential to compete with the government-owned electricity generating business, a state-owned authority, NGC, was established to ensure the utilisation of the gas in a way that would not affect the growing electricity market. The state's interest in electricity industry was clearly against the local business' interest and the state's prevailed.

As for the state's relationship with the MNCs, it has always been one of mutual benefits. When the vital interest of the companies was elsewhere, the state was busy establishing itself in electricity in competition with the local gas producers.

The four majors were allowed to co-possess the oil industry. They were guaranteed a share in the securely oligopolistic New Zealand market, a fixed importer margin, a considerable return for their share in the only refinery, and a guaranteed right to develop the resource in the well when they struck. Again, all of these privileges have never been accorded to local firms in the gas and electricity sectors. Later, when the multinationals at the global level decided to diversify geographically and to engage in more downstream activities after the first oil shock, the state's presence in the energy sector was secured enough to facilitate the companies' involvement. Realising its secured position in the energy industry, the state was confident enough to bear any risks involved in cooperation contracts. The state also created a favourable tax regime allowing the depletion rent be absorbed by the companies as an incentive for more explorations. It committed substantial capital investment in return for the companies' technology and expertise. Moreover, it guaranteed a satisfactory return for every companies' involvement.

When local businesses emerged as large corporations in the 1980s, thanks to the development of the financial sector, a buddy role of the state could have helped nurture the expansion. On the contrary, the state retreated from downstream activities, leaving the local businesses, which inherited the colossal projects, on their own to struggle against overseas capital in the globalised energy industry. In the late 1980s, when the energy market was deregulated, state-owned companies were privatised, and the Ministry of Energy was dissolved, the oil majors were enjoying their high tide both in the international and domestic arenas. Their bargaining position over the producing countries was apparent and their secured presence in both the upstream

and downstream sectors in New Zealand was assured. Moreover, with the liberalised transactional environment which accompanied Rogernomics, several overseas newcomers could enter the race. In this situation, local interest could be taken over by MNCs anytime. In the case of Fletcher Challenge, although its energy business earned a positive return, the company's financial troubles triggered the sale of its stake in the methanol and the synthetic gasoline plants to Methanex Corporation of Canada.[1] In this regard, indigenous firms will always play the role of a comprador for foreign capital because their limited level of accumulation offers few options.

As observed by Bertram, the recent history of oil exploration and development in New Zealand indicates that "national capitalists are unlikely to undertake oil [or natural gas] development on their own, probably because joint-venture with multinationals are cheaper and easier than a deliberate attempt to set up 'autonomous' national enterprises... ."[2] The assertion is still hold true. But the transformation of "national capitalist" into a "comprador class" has been catalysed by the government's neglect of the interest of local business. Even if a local conglomerate is developed within the country, there is no guarantee that it will reinvest its profit in New Zealand where no privileges are accorded to them to compensate the risks. As far as investment in the risky oil and gas sector is concerned, an MNC-piggyback approach offers the most secured future for the local firms' engagement in indigenous resource development.

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[1] As mentioned in chapter V. See footnote 4 p. 124.

[2] Geoff Bertram, "The Political Economy of Oil...", p. 295.

The reproduction of a dependent comprador capitalist class results in New Zealand's passive reaction to global accumulation. The ever-dependence on international capital will aggravate the external impact upon the country when the next cyclical downturn comes.

Unsustainable Use of Indigenous Resource

As previously mentioned, the first oil shock occurred when the government had no idea whatsoever about resource depletion and scarcity rent. It suspected that few companies manipulated the price rise and saw no linkage between natural gas and oil prices. During the second oil shock, however, the notion of resource depletion was well known in the circle of the decision makers. This implies that most of the gas-related big projects were approved in the light of the Hotelling belief. In 1979, the Minister of Energy did not have in mind the possibility that the oil price would ever have a cyclical fall. He stated confidently that since the price of indigenous fuels would be based on production costs of energy, "the pricing of these fuels must be much lower than the imported alternative".[1] At the first glance, Think Big approach appeared to be a policy version of Hotelling principle.

Unfortunately, Hotelling principle is based on the notion of finite resource stock but somehow in our actual world the known reserves of petroleum increased. As discussed in Chapter 4, recent history has shown that there are several factors determining the rise and fall of world oil prices, and, in the mid 1980s, the

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[1] New Zealand Parliamentary Debates. Vol 423, 12 July 1979, p. 1503.

price of crude dropped markedly. The vulnerability for a country basing its long-term investment decisions on the belief in ever-increasing scarcity rent has been theoretically confirmed recently by Y.H Farzin in 1992.[1] Farzin disproves the notion that th scarcity rent should continually grow as a resource is depleted. According to the study, the scarcity rent path can be oscillating. He suggests that "its oscillatory behaviour over time necessitates devising a stabilising scheme for its optimal management and use".[2]

The problem of the unsustainable use of indigenous resources revolves around four major questions.

First, there is a question of depletion rent. Whether the price of a mineral resource should appreciate when it is approaching its exhaustion or not has not been the case for the Maui gas. The government seemed to ignore the implication of the Hotelling principle on gas issues even though it had much confidence in the rising oil prices. In the case of the Maui gas, the price of gas is fixed over the period under the contract and allowed to appreciate at a slower rate than inflation rate. This means the real price of gas has been set to depreciate over time, that is because the government had no intention to appropriate a scarcity rent to fund further exploration to reproduce the depleting resource.

It is believed that New Zealand's natural gas supply can be depleted by the next decade, but there has been no manipulation of the resource price to signal the

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[1] Y.H. Farzin, "The Time Path of Scarcity Rent in the Theory of Exhaustible Resources", The Economic Journal. 102 (July 1992), pp. 813 - 30.

[2] Farzin, p. 827.

depletion. The price of the gas has been dictated to depreciate and the ever lower price justifies a faster and not a moderate rate of gas depletion in the light of increasing interest rate.

Second, the *raison d'etre* of the Think Big projects that involve gas use was that they would be cheaper than to import oil for those purposes. It appears logical to assume that it will always be economic to use indigenous gas as a substitute for imported oil wherever possible because the price of gas will never exceed that of oil as both prices appreciate at the same rate of interest and the price of the Maui gas is cheap. However, if one uses a Hotelling approach, one should bear in mind that the price concerned is "price net of extraction cost".[1] In the case of the Maui gas, the cost of fixed capital and platform maintenance is very high, and, as the gas is used to substitute oil in the form of gasoline, the cost of transforming gas to methanol and methanol to gasoline should also be added. This fact sets the threshold price of synthetic gasoline at a very high level which can cast some doubts on the Minister's belief that the price of the locally produced fuel will be much lower than the imported ones.

Seeing the world oil prices as comparatively cheap, the New Zealanders have not been convinced that it is logical to deplete the Maui gas reserve at a fast rate to produce a high-cost gasoline as a substitute for cheap imported oil. The government's policy of fast depleting indigenous resource despite low prices of import

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[1] G.C.Watkins "The Hotelling Principle : Autobahn or Cul de Sac?", IAEE Presidential Address, The Energy Journal. 13:1 (1992), p. 3.

suggests that when the next oil crisis comes, there may not be any gas left to produce any form of substitute. Unfortunately, the high fixed cost, the contractual obligations and some other reasons to be mentioned, prevent the government from using the gas at any slower and less wasteful rate.

Third, while the price of gas is kept at an artificial low rate through long term contracts, the price of condensate is fixed by the world price for oil. Again, if the government uphold the Hotelling approach, there is a question of depletion rent or depletion tax that should have been applied to rectify the price of condensate for the owner of the resource, the Crown. Anyway, the core of the problem that arises from the discrepancy between the prices of the two resources is that the valuable condensate cannot be recovered without lifting a certain amount of the depreciating-valued gas from the ground. For the government to act 'in a commercial manner' to 'secure maximum commercial advantage to the Joint Venture', it must take the gas it has paid for to have the condensate extracted. Since the price of the condensate drove decision, it is not the value of the gas that matters.

There are several options that the Joint Venture can do with the gas: flare it, reinject it into the ground, or utilise it. The point is to get the condensate. There was a suspicion that the Maui field operator was flaring gas merely to recover the condensate, and the Minister of Energy replied to the question that the flaring was for testing purpose.[1] Whatever the reason, the Joint Venture gained considerable

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[1] Hon. F.M.Colman (Pencarrow) questioned W.F.Birch (Minister of Energy) on 3 August 1979 in New Zealand Parliamentary Debates. Vol 424, p. 2011.

income from the condensate recovered through flaring the Maui gas while the Think Big projects designed to utilise the gas were still in the pipeline. Using the gas in an inefficient way, i.e. transforming gas to electricity or gasoline , is not much different from flaring the gas to waste in the eyes of conservationists.

The story of the gas and condensate can be best summarised as Jeanette Fitzsimons has put it: "[C]onventional economics dictate that [the condensate] should be used as fast as possible, to maximise the rate of return on the investment - but it cannot be used without extracting much larger volume of gas, for which we must then find a use. So it becomes "economic", in conventional terms, to flare the gas to waste... . So for planning purposes, the gas is given a zero value - it is something to be got rid of, which makes it difficult to argue that future generations may need it! The whole condensate-gas policy can be described as letting the tail wag the dog".[1]

Finally, fast depletion of the Maui gas is justified by the principle of single high discount rate; moreover, the discretion over the rate of depletion is also justified by the principle of commercialisation. In New Zealand, the Treasury states 10% rate of return as a criteria for a proposed project to be desirable.[2] The principle might be useful to screen public projects when consider the high cost of capital. However, when used as a discount rate to justify natural gas-related projects, it also results in the real value of gas and the profit from gas products being regarded as

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[1] Fitzsimons, p. 7.

[2] P.L. Read, Maui Gas Issues Seminar: The Economic Framework. paper. (Palmerston North: Massey University, 1986), p. 3

dropped 10% annually -a situation which favours more use of gas today than later.[1] When the development of the resource concerns oil companies, the need to make high return in the early years of the project is even more intensified, because, due to risky nature of petroleum industry, companies usually use a discount rate of 20% or more.[2] As the government and the companies control the development of New Zealand natural gas resource, there is no possibility that the gas can be conserved to use in the long run as a substitute for imported oil.

In the case of Maui, these high discount rates imply that there might be no gas left after the contract terminates in 2009, or even before that. If the gas is depleted before 2009, the contract simply terminates. But if there is some gas remains, the ownership of the gas residue, especially the gas that is already paid for but not taken, is not clearly stated, and, the problem of high maintenance cost of the offshore platforms is not mentioned. The problems that may arise after the end of the contract can be avoid by using up the gas.

The commercial nature of the companies ensure that they will maximise their profit sooner and not later. And the commercial nature assigned to the public authorities that deal with the resource during the liberalisation period enable the gas to be depleted at any rate the Joint Venture deems appropriate because this information is kept from the public.

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[1] For critics of this single high discount rate, see Low and Read, pp. 79 - 81, and P.L.Read, *ibid*, pp. 3 - 8.

[2] Read, The Economic Framework, p. 12

After considering all aspects that involve the implementation of natural gas resource development scheme, one may come to a conclusion that the government that carries the Think Big programme was overconfident in relation to the Hotelling idea with a particular regard to imported oil but neglected the Hotelling implication when the natural gas was concerned. The results were that the price path of oil was miscalculated and the indigenous gas resource is depleted at an unnecessary high rate. The succeeding government has done something to alleviate financial impacts of the mistake that was laid on the government but nothing has been done to conserve the resource for sustainable use. On the contrary, the privatisation and the promoted role of MNCs in the oil and gas sectors could result in even more quick return from the resource.

The unsustainable use of natural resource undermines the country's economic strength in the long run because the energy wasted could have been used to generate economic activities and can be of much more value in the future if the supply of imported products discontinues or triggers a high price.

The only positive aspect of past energy policy is that the country is more self-reliant in liquid fuel production, with a particular emphasis on petrol. Still, in the light of fluctuating oil prices, it is difficult to state that the only benefit of the policy is worth the economic costs. It should also be remarked that, increasing indigenous supply is not the only way nor the cheapest way to achieve the self-reliance. A better way is to give equal attention to the demand side of the problem. The government should constrain growth in demand by price measures, by expediting of research in the

more efficient use of energy, and by creating public awareness. Without restrained demand, oil consumption can outproportion local production at anytime, and the fifty per cent self-reliance may not be sustained for long.

As for the supply side, what should have been done is utilising the gas and not waste it through conversion losses. A high level of energy self-reliance can also be achieved through efficient use of gas as a substitute for oil in the form of CNG or LPG. This option requires less capital investment but more policy commitment. If motor vehicles had been appropriately encouraged to convert to liquified gas, there would have been no need for the costly expansion of the Marsden Point Refinery either.

In all, the role of the government is most beneficial to the country when it behaves as both good referee and caring foster parent. The government should maintain favourable investment climate without involving too much in the game, and at the same time, it should not leave the market to function unattended. A successful country requires a financially strong state in which local owner-producers are initially assisted to venture into production of high-waged merchandise. An attempt should be made to compensate the inferiority in the status of local entrepreneurs. The past is now unable to be corrected but the ongoing privatisation of energy authorities should not continue with worsening the status of indigenous energy firms through unassisted competition with the more powerful multinationals. In the unequal world system, it is the duty of the state to be partial towards its own country and people.

Aiming at an enhanced status within the global hierarchy, the state should try its best to reverse the so far unfavourable outcomes. A priority should be accorded to decouple growth from energy consumption, to remove unnecessary financial burden for both the government and local entrepreneurs concerning production of relatively high- cost supply, to assist indigenous firms to compete with foreign capital, and to rectify the real price of indigenous resources as well as slow the depletion rate to save them for the long run.

At this point, the combination of the four adverse effects of existing energy policy mentioned in this chapter indicates that, instead of mobilising indigenous natural resource to guard against external shocks and efficiently transforming the energy reserve into growth, New Zealand chose to develop her own resource with wrong timing, in an expensive way, and under an overwhelming influence of multinational oil firms - an option which produces opposite results. The country, unlike Sweden in the 17th Century,[1] could not turn her resource endowment into strength at a right juncture of time. In contrast, New Zealand burdened herself with development schemes that put indigenous labour forces and entrepreneurs in a disadvantageous position as well as preventing available resource from being used in otherwise productive activities. The burden has put a serious constraints on forthcoming policy options. When the crisis was over, New Zealand still struggled to lessen her burden, and, because the four problems related to energy policy are not solved, the prospect for her retaining her relative position within the changing world hierarchy is still in doubt.

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[1] See pp. 28 - 30, and also p. 38, in chapter II.

VII. Conclusion

Development is a process of relative enhancement of a nation's wellbeing. A country is developing when it shows progress, relative to its past performance, and relative to other contemporary states. With the help of a social theory, the level of a country's development can be systematically assessed.

Immanuel Wallerstein's World-System Theory offers an appropriate framework to analyze a period in New Zealand's development attempt with particular interest in the energy field. The theory addresses social phenomena at a macro-level and sees linkages between politics and economics, past and present, as well as exogenous and endogenous factors, an integration of which is useful to understand New Zealand's energy policy.

Wallerstein's worldview was manifested in the first volume of The Modern World-System (1974). Later, he wrote the other two volumes in 1980 and 1989 and published several books and essays elaborating the world-system approach and analyzing particular circumstances basing on the theoretical worldview. For him, development and underdevelopment are two sides of the same coin; as one state accumulates wealth through buying cheap materials and selling high-waged products, at least one other state is deteriorating in its economic status because the surplus flow out in the form of imports or appropriated profits to be reinvested elsewhere. Thus the world system will always comprise unequal state-members namely the rich and the poor. In between the two poles, there lies an interesting stratum, the semiperiphery,

a category of countries in the middle layer struggling to maintain their standard of living against the exploitation by the core and to improve their status in comparison to fellow members of the semiperiphery and the periphery. The concept of the semiperiphery originated by Wallerstein leads to a tri-modal world-system as a guideline for further analysis.

Wallerstein's own notion of semiperiphery is vague and functional. He has not specified a precise criterion for classifying countries into this level, but he does specify the name of some countries that are clearly situated within this middle scope, New Zealand included. In Wallerstein's classification, New Zealand belongs to the category of "Old white Commonwealth" with Canada, Australia and South Africa which form a part of the semiperiphery.

New Zealand has been a semiperipheral country since the very beginning. The New Zealand state was "created" to facilitate international accumulation by guaranteeing a secure return for overseas investment mainly from Britain. Dependence on a core economy induced a steady growth for the colony during the global expansion periods, and New Zealand could enjoy a relatively high living standard by specialising in producing temperate foodstuffs for the European market. However, the living standard was sustained by importing high-waged products from the core, and the domestic economy was virtually "de-industrialised" by the complementary, yet dependent, nature of the relationship with her mother state.

A semiperipheral state usually finds itself stricken by internal weaknesses during a downturn period but a strong semiperipheral state can grasp the opportunity to cure the revealed problems. During the great depression of 1930s, the dominance of Britain over New Zealand was weakened; therefore, New Zealand could build a relatively strong base of import-substitution industry during the interval between two expansion periods. The industrialisation was led by the state because, unlike the core, the semiperipheral New Zealand lacked an industrial capitalist class. Unfortunately, the dependent relationship resumed and the complacency over the semi-colonial status was aggravated by the period of postwar commodity boom. The emphasis on import-substitution technology also pressed the country to depend more on export earning from farm products. The proportion of import/export per GDP was so high that the only capitalist class that could emerge within the country was that of the "comprador". In this way, neither the expansion of industrialisation nor the arrival of an industrial capitalist class occurred in pursuit of the initial phrase of industrialisation in the early 20th century's downturn.

While in semiperipheral New Zealand, the important actors were the state and the comprador class, influence of core states over New Zealand economy came through multinational corporations. This phenomenon marks the distinction between a core state, in which the business sector must be very competent at the global level, and a semiperiphery whose state mechanism represents the most powerful actor within the economy and whose local entrepreneurs cannot protect themselves from outside competitors without "extra-market" assistance from the state.

The period under consideration - the 1970s downturn and 1980s expansion - reflects the same pattern of development. At the global level, several countries made use of their natural resource to gain economic strength to shift into semiperipheral level - for example, Saudi Arabia and Iran, while core countries suffered a severe setback during the contraction period. As far as the energy issue was concerned, major adaptation during the 1970s went along well with Wallerstein's portrayal of contraction scenario. Core states became more inward-looking and reduced the level of dependence on overseas imports, MNCs conceded more to peripheral and semiperipheral countries and at the same time diversified their activities to avoid risks. Most core states and international oil firms could do well in this regard, thus minimizing losses and building a potential for growth when the next hide-tide comes.

The 1970s crises distinguished strong states from weak ones and highly developed from moderately developed within the OECD. In accordance with the tri-modal world perspective, core states were explicably more resilient because they had an efficient state mechanism that could detect changes and react to the changes early. They also possessed a relatively more advance production technology that could adapt to the new situation and regain value-added for their high-wage products. The semiperiphery, on the other hand, was not yet technologically matured but was in the process of industrialisation and automisation, a process which depended upon both increasing energy consumption and imported technology. The intermediate level of development and of state power resulted in their less flexibility in adapting to the

recession. New Zealand in particular, was so dependent an economy that the coincidental loss of the traditional market for farm exports - Britain - in 1973 could severely aggravate the downturn.

As most stronger states freed themselves from energy-dependent growth, New Zealand was not in a position to do so. Her technology was imported and the state was not competent enough to face multiple crises at the same time. At the time when core states and MNCs were busy restructuring themselves to recover from the first oil shock, New Zealand still did not realize the nature of the shock, and when the core states and the MNCs calmly faced the second shock, New Zealand caught unprepared and panicked. While the country tried to react to the external economic threats, as a semiperiphery, she has few options available: the state was the only major local actor within the energy industry. Apart from the electricity sector, the state had very little expertise to manage energy resources. In contrast, the MNCs possessed capital, technology, and technical expertise, as well as the intention to get a foothold in th country. The State's subordinate role marred the possibility for realizing where the general interest of the country lay.

New Zealand energy policy during 1970s-80s can be explained by the interacting roles of the New Zealand state, the MNCs and local owner-producers within a historical context. A peculiar feature of the relationship among the three actors is that the state has consolidated its power within the energy sector at the expense of private local entrepreneurs. Given the country's semi-colonial background, private

businesses could never compete with the state in an area that the state decided to dominate. In the pursuit of such aim, the New Zealand state found MNCs to be natural allies.

The state first took over electricity generation industry pioneered by the local private sector. The expansion of this sector under the state electricity department was so successful that it encroached on the power reticulation market and weakened local gas manufacturers. While the state won the household reticulation market, the domestic oil market was left solely to the oil majors. The success in electricity marketing was so great that the major gas field, Maui, was decided to be developed by a joint-venture between the state and the oil firms involved and to be allocated to the most inefficient but viable use of electricity generation. At this stage, the level of industrialisation in the country was not high enough to provide a bulk market for the gas, and the local industrialists in the energy sector, hitherto weakened by the country's imbalance structure and the state strategy, was not in a position to put in a bid or to market the gas product.

As the MNCs showed more interest in downstream activities, the New Zealand state got further involved in the petroleum sector. The cooperation between the two actors within this field placed the state in a disadvantage position. Had the state promoted local entrepreneurs to counter foreign interest, it would have stayed in a better bargaining stance, since the MNCs would have been pressured to defend against both the state and the locals, and to concede more to the state demand. On the

contrary, the state neglected indigenous firms and encountered the powerful oil majors who had no fear of local competition. The hi-technology and capital-intensive nature of the Think Big programme led to the state's massive involvement in and MNCs' expansion into the petroleum sector.

After a while, the state exhausted itself through disadvantageous engagements and passed over the stake in the energy projects to the emerging private sector. At the moment, the state clearly lacked power to assist the local business against the MNCs who had already set a firm footing in the downstream energy industry. Eventually, local firms, left on their own, appeared to be nothing more than a "comprador capitalist" that paved the way for more involvement by overseas investors.

In a sense, the energy policy carried out during 1970s-80s was a continuous promotion of external accumulation and undermining of local owner-producers. Such a strategy is detrimental to the development of a semiperipheral state. For a core state, allowing the private sector to appropriate profit in a free market situation strengthens its economy. However, in a semiperiphery, the country's interest can be achieved by containing outside influence and promoting indigenous industrialists during the downturn and helping the local firms export high-waged products to the world market during the expansion period.

Making a policy in favour of MNCs' interest harms national interests in several ways. That is because the multinationals have a shorter time frame for any

investment. They always expect quickest return for their capital, intensify their presence when higher profits are envisaged but retreat from the business when their benefits are in doubt. Their concern is limited to the scope of the projects, without taking into consideration the economic externalities that the projects caused to the society. The interest of the host country, in contrast, is the best and sustainable use of its natural resources to generate the highest productivity for the whole economy. This does not mean the state and the MNCs will always been in conflict. But the state should supervise to have the corporations get their fair return without harming local private profits and the overall economy of the host country. In the case of New Zealand, the 1970s-80s energy policies, while securing MNCs' accumulation, caused four major undesirable effects to the New Zealand economy: inefficiency that is accompanied by unemployment, outflow of capital, reproduction of weak bargaining position of local entrepreneurs, and unsustainable use of resources.

The past energy policy contains three mistakes that has restrained the country's development. The three mistakes are the failure to promote indigenous businesses, the exhausting of the state's resource and bargaining position, and the facilitating of MNC's expansion. To enhance New Zealand economic position within the world hierarchy, the opposite strategy should have been pursued. Compared to those who could react appropriately to the energy crises in the contraction period and take off with the 1980s expansion, New Zealand can at present retain only a roughly status quo (in the sense of national GDP) which means relatively lagging behind.

The mistakes might not have been made had the country realized her semiperipheral status and acted accordingly. It should not have put so much faith in a linear path of oil price nor of economic environment. In this regard, the experience learned through the world-system perspective is that economics has its cycles, and that when the next contraction period comes, the state should concentrate on enhancing local accumulation and protect indigenous private sector against external influence.

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