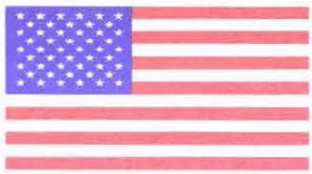
New Zealand

Australia



United States of America

Access to Tertiary Education Institutions in Six Nations: New Zealand, Australia, the United States of America, the United Kingdom, Sweden and Japan.

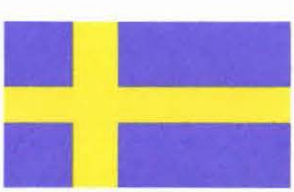
A Comparative Study of Funding.

A thesis presented in partial fulfilment of
the requirements for the degree of
Master of Arts in Social Policy
at Massey University

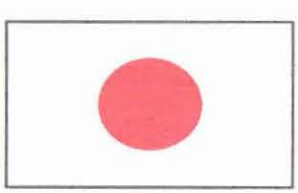
Darryl Clinton Benge

1997

United Kingdom



Sweden



Japan

ABSTRACT

This project is an examination of international experience, to determine what tertiary funding, and student aid policies, New Zealand should employ to enhance participation of traditionally under-represented groups. It consist of a comparative policy analysis of five other nations with comparable tertiary institutions and equality of access objectives: Australia, the United States of America, the United Kingdom, Sweden and Japan.

Through analysing the experiences of these countries and examining relevant research, it was confirmed that significant differences exist between the tertiary participation patterns of privileged groups of people and the participation patterns of lower socio-economic groups, ethnic minorities and women. Lower socio-economic groups and ethnic minorities are internationally under-represented in the tertiary education populace. In most countries studied women have numerical parity with their male cohorts, however women are proportionately over-represented in part-time and extramural studies. Of those disadvantaged students that do access tertiary education, many are concentrated in courses with lenient entry pre-requisites and mediocre anticipated financial returns.

The thesis concludes that the participation rates of these historically disadvantaged groups will not improve unless:
(i) the government adopts the primary role in funding tertiary education;
(ii) tuition fees are abolished, or at least made moderate and uniform; and
(iii) the student aid is enhanced, particularly the student maintenance grant.

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ACKNOWLEDGEMENTS

I wish to dedicate this thesis to my spouse (Frances) and two children (Kelsi and Petra), for I could not have completed it without their support and sacrifice.

Thanks to staff in the Department of Social Policy and Social Work, especially my lecturers Christine Cheyne, Andrew Trlin, Stuart Birks, Gary Buurman and Martin Sullivan.

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Finally, a special appreciation goes to my thesis supervisor - Christine Cheyne for her time, support and enlightenment. The end product of this thesis has been much enhanced from her contribution.

GLOSSARY

To avoid being plagued by semantics, special attention has been given to utilising words in their common or general meaning. However, a word is highlighted (when it first appears), if a specific meaning is attached to it and the definition is provided here in the glossary.

Aboriginal and Torres Strait Islander people: Indigenous people of Australia.

Access: The opportunity or right of approach to a place. Access must be access to quality if it is not to be, and be seen as, a deception and a new form of discrimination (Moodie 1991:9).

Ainu: Indigenous Caucasian people of Japan who have their own language and culture.

Awards: Includes degrees, diplomas, certificates or qualifications as per the New Zealand statute - the Education Amendment Act 1990.

Blacks: Persons of African-American origin of the United States of America.

Burakumin people: A discriminated caste of Japanese people, with origins that date back to medieval times.

Caucasian: A broad subdivision of people with a predominance of light skin colour. Caucasians are commonly referred to as whites or as people of European extraction.

Comparative Policy Analysis: The research technique that studies decisions and activities, by the state and non-statutory groups or institutions, that influence people's life chances, distribution and power, by contrasting different countries, communities or systems.

Deferment: Temporary postponement of payments on loans.

Discipline: An identifiable area of study or specialisation.

Efficiency: Maximum output yielded from the allocated resources.

Enrolment: Registered to partake in tertiary education during the academic year.

Equivalent Full-Time Student Formula (EFTS): The funding formula of that name that is based on the student workload that would normally be carried out by a full-time student in a single year pursuant to the Education Amendment Act 1990.

Externalities: The accumulated external benefits and costs which occur when one party's action provides a "gain" to someone else without receiving payment, or inflicts "harm" on another without compensating them.

Extramural studies: Provision of courses without the student requiring to attend the classes or lectures. (Another term for undertaking tertiary study by correspondence).

Hispanic: Persons of Mexican, Puerto Rican or Cuban origin.

Participation rate: The proportion of persons of a specified group who partake in tertiary education.

Perturbations: Variations in results from the impact of a large number of unknown unmeasured forces.

Student aid: Financial assistance and maintenance payments provided to tertiary students. This does not include cadetships (where students are bonded to, or employed by, the sponsoring organisation) or prizes (academic or otherwise).

Student loan: An advance to students that is required to be repaid. Income Contingent Repayments entail loan repayments being linked to a former student's income, in addition to the loan amount.

Student maintenance: Non-repayable government financial benefits to students, aimed at contributing to the student's costs of living.

Studiemedel: Financial aid for Swedish students in tertiary education.

Tertiary education institutions: The formal post-compulsory educational institutions that present recognised qualifications (certificates, diplomas, degrees etc.) such as universities, polytechnics, colleges of education and wananga.

Universal education: The provision of adequate educational opportunities and access to higher education for all young people who can benefit from tertiary education, and in particular to encourage those from underprivileged groups to attend tertiary institutions or undertake tertiary studies.

CURRENCY EXCHANGE RATE

The following table provides details of the exchange rate of the Australian, USA, UK, Swedish and Japanese currencies in relation to the New Zealand dollar, as at the close of 4 November 1996.

Exchange Rates

Country	Currency	Exchange Rate in relation to New Zealand dollar
New Zealand	$1	$1
Australia	A$1	0.89
USA	US$1	0.78
UK	£ 1 (pound)	0.43
Sweden	SEK 1(krona)	4.60
Japan	¥ 1 (yen)	80.20

Source: *New Zealand Herald,* (5 November 1996: C8).

Chapter 1

INTRODUCTION

The problems with access to tertiary education, since the consensual post-war period, have prompted a few commentators to proclaim that tertiary education is in crisis.[1] The problem with access to tertiary education primarily incorporates three aspects. The first is the rapidly expanding demand for tertiary enrolments. In the period between 1984 and 1995, in New Zealand, the number of internal and extramural university students increased from 58,242 to 104,525 enrolled students (Department of Statistics 1990:283; Statistics New Zealand 1996b:205). The second aspect deemed problematic with tertiary admissions is the rising cost to the state of tertiary education. The tertiary education system in New Zealand is one of the state's largest outlays, with an annual expenditure of about $1,593 million in 1993/94 (The Treasury 1994). The final facet of access that is of primary concern is the idiosyncrasies in tertiary participation patterns between disadvantaged groups and the general tertiary populace. Lower socio-economic groups, ethnic minorities and women are widely recognised in the scholarly literature as being under-represented in at least some tertiary institutions and courses. Hence, the participation rates of students from lower socio-economic groups, of ethnic minorities and of women require attention if there is to be equitable access.

There is a critical link between these three areas: access policies that address the first two components (namely the financing of tertiary education and student aid) have a substantial effect on the third (the participation from under-represented groups). The exact effect is unknown because of the paucity of relevant research. However there have been several studies that have indicated a strong relationship. A study by Reuterberg and Svensson [1987], of Sweden, on the influence of student aid on the participation rate of different social groups, concluded that when student aid was first introduced in Sweden, it had a significant socially equalising effect (cited in Woodhall 1989b). Baldwin (1994) conducted a questionnaire of 345 fifth, sixth and seventh form students at four secondary schools in New Zealand. The study confirmed the hypothesis that debt to fund tertiary study was

[1] Moberly (1949), Scott (1984) and Middleton (1996) are three examples of authors that have referred to tertiary institutions being in a state of crisis.

perceived negatively by some sectors of secondary students. Finally, Greenslade and Lamb (1992:63) conducted a survey of tertiary students and concluded that tuition fees had a strong influence on course choice for Maori and Pacific Island students.

This thesis will explore what access policies New Zealand should employ to enhance the participation of students from disadvantaged groups, particularly those from lower socio-economic groups, ethnic minorities and women. The focus here will be on the specific access policies concerned with the financing of tertiary education and student aid to residents of the country, rather than the broader area of access policies and entry criteria. Furthermore the research will focus on equality of access and not equality of survival or outcome.[2] Narrowing the scope of the inquiry in this way is appropriate given the focus of the study, namely the public policy framework surrounding the impact of government financial assistance on participation in tertiary education.

Impetus for this research

Since the beginning of this decade there has been a marked shift towards limiting the public financing of tertiary education and increasing the share of costs met by students and their parents. These changes were precipitated by the economic recession and a shifting political ideology that favoured diminishing the role of government and enhancing the role of the market in the delivery of services such as education, which have traditionally been publicly provided and funded.

Advocates of increasing private financing of tertiary education have primarily espoused four main benefits or propositions.[3] The first is that government will be relieved of some of the cost burden. The second is that many of the benefits of higher education accrue to private individuals and hence they should meet a greater share of the costs. The third premise is that both external and internal efficiency improves. Later in this chapter there is

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[2] Farrell (1982:43) distinguishes between the several facets of equality by the following definition:

Equality of access - the probabilities of people from different social groupings entering tertiary institutions.

Equality of survival - the probabilities of people from various social groupings staying in the tertiary system to some defined level, usually until the attainment of an *award*.

Equality of outcome - the probabilities that people from various social groupings will live relatively similar lives subsequent to and as a result of their education.

[3] Woodhall (1989a), Williams (1992), the Ministerial Consultative Group (1994) and the Committee on Higher Education Funding and are examples of documents that publicise all four benefits and propositions.

a discussion of the key theoretical approaches to government intervention in the tertiary sector. In the process many of these benefits are abated.

The final aspect highlighted, and one that is central to this thesis, is that expanding 'access' provision has had a marginal effect, at best, on the participation rates at tertiary education for economically disadvantaged groups. "Research evidence over a period of some thirty years indicates the scale of class differences in [tertiary] education and the ways in which very little has changed by the 1980s" (Fulton 1981:122). Blyth et al (cited in Ministerial Consultative Group 1994:116) concluded in 1987, when New Zealand had relatively open entry to tertiary education, that it is wealth and income, not ability, that determine who gets a university education in New Zealand.

Some proponents (like the Australian Wran Committee, the New Zealand Treasury (1987a), and the New Zealand Business Roundtable) have taken the argument one step further and proclaimed that a shift in the financial burden from taxpayers to students, or their parents, is more equitable. Their argument is based on the premise that tertiary institutions cater to a class, ethnic and gender elite. Taxpayers subsidies for tertiary students perpetuate that advantage. Such subsidisation is viewed as inequitable, particularly as many taxpayers have much lower earning prospects than highly privileged university graduates. The Treasury (1987a) applied the phrase 'middle class capture' to highlight this phenomenon.

Tertiary access policies have therefore been reformed to enhance market principles, increase user pays and delete universal provision. Many politicians have espoused the benefits of the reforms. Nick Smith (National MP) at the Public Tertiary Education Coalition Conference on 6 May 1996 characterised the reforms effects on the participation rates of traditionally disadvantaged groups as a success story. However what needs to be balanced against equity gains (if there are any as suggested by Nick Smith) is equity losses. A thorough analysis is therefore important in order to determine the costs of such policies.

New Zealand's tertiary access policies, and those espoused for the future, must be evaluated in terms of their effects, or potential effects, on the participation rates of traditionally under-represented groups. This will assist policy makers when determining what tertiary access policies New Zealand should employ to enhance participation of students from low-income families, ethnic minorities and women.

Benefits of equality

Tertiary education can no longer be regarded as the preserve of a privileged few, but is becoming increasingly necessary for all to participate fully in society and in the labour force. The opportunity to enter tertiary education is required in order that students in all groups be able to realise their potential and improve the quality of their lives. Tyler's study reported that data for 1971 showed that the earnings of university graduates were 1.7 times higher than non-graduates (Nash 1982:63). Furthermore, Spring (1980:63) reported that tertiary credentials have nullified the correspondence between people's socio-economic background and their current position.

Universal education also provides externalities and public rates of return, by way of enhancing economic performance. There is a higher return on the investment in tertiary assistance than in social security, as education may lead to a career or a promotion. The Todd report on funding growth in tertiary education in New Zealand (*Funding Growth in Tertiary Education and Training*), stipulated that during the 1980s the employment of graduates grew in contrast to those with fewer formal qualifications. Between 1981 and 1991, full-time employment of people with post-graduate qualifications grew by almost eight percent, whereas those with no formal qualifications experienced a six percent decrease in full-time employment (Ministerial Consultative Group 1994:37). Furthermore, there is the added advantage of being able to secure talent from the total population without regard to class, ethnic or gender considerations.

Comparative Policy Analysis

The under-representation of disadvantaged groups in tertiary education is not peculiar to New Zealand, but one of the major concerns of those responsible for educational policy and planning in most countries throughout the world (Pellegrin 1974b:67). There have been varying responses to the tertiary participation of disadvantaged groups in different countries and insights can be gained by analysing alternative settings: (i) in order to compare the methods and level of government funding of tertiary institutions and student aid, (ii) identify common trends and the unique aspects of policy approaches and (iii) to evaluate the effects of differing access policies on student composition.[4] Looking at New Zealand's policy framework without reference to overseas, fails to take into account that most of our ideas and arrangements have originated from other countries, and with

[4] It will be emphasised throughout this thesis that it is not possible to identify a causal relationship, as a number of variables need to be acknowledged, however general impressions may be made.

appropriate adaptations and modifications are now part of contemporary New Zealand. Furthermore New Zealand is increasingly part of an international market in tertiary education and other products and services (Trow 1981:100).

Hence, international experience is relevant to the current debates in New Zealand, and have already been used to advocate changes to tertiary funding and student aid. Two examples, which review international experience, are the Watts Review and the appendix in the Todd report (New Zealand Universities Review Committee 1987; Ministerial Consultative Group 1994).

In order to examine alternative policy frameworks, I will undertake a comparative policy analysis - the study of decisions and activities, by the state and non-statutory groups or institutions, that influence people's life chances, distribution and power, by contrasting different countries, communities or systems. This methodology is discussed in detail later in this chapter.

Selection of countries

The ideal study is one in which all potentially relevant countries are incorporated in the study. However to make the project more manageable, a more modest focus has been adopted. Woodhall (1989c) in a comparable study utilised the UK, Australia, New Zealand, Sweden, Japan, Germany and the USA, while Johnstone (1987) compared the USA with four nations: the UK, Germany, France and Sweden. Adopting a similar pattern, five countries have been chosen to provide a basis in the present study for comparison with New Zealand - Australia, the USA, the UK, Sweden and Japan. Australia, the USA and the UK were selected as they are Western countries which share elements of a common culture and history. Sweden and Japan were included as they were identified in the Todd report as being at the extremes in terms of tuition fees charged (Ministerial Consultative Group 1994). All the countries have comparable tertiary institutions and equality of access objectives (OECD 1991). Although there were profound data deficiencies in some countries (particularly with regards to the tertiary participation of ethnic minorities), these cases remain useful in demonstrating the impact of tertiary access policies on some key sectors of their population.

Evaluation

Evaluation is the process of delineating, obtaining and providing useful information for judging decision alternatives (House 1980). It is intrinsic to comparative research that the

same variables are considered for each country. The first aspect considered in this study will be the evolution of the tertiary access policies. A study of the evolution of the access policies is essential as no social phenomenon can be understood without an analysis of its origins and the major stages of its development (Hofmann and Malkova 1990). The second facet will be a description of the current methods and levels of tertiary funding, tuition fees and student aid. To avoid perturbations, it is also important to extend the scope of study beyond the policy itself and be sensitive to the differences in the context within which the policies are launched.

The following section will be an evaluation of the current (as of 1996) policies for each country.[5] The primary criterion by which the policies are assessed is the impact of the access policies on tertiary participation by different socio-economic groups, ethnic minorities and women.

It is acknowledged that the complexities and cumulative effects of the reforms of tertiary funding, and of student aid on student composition, as in many areas of social policy, have made evaluating their overall impact difficult. Many other factors, apart from finance and type of student aid, affect participation levels: demographic variables, retention rates at secondary schools, culture and changes in the economy and labour force, all influence the demand for tertiary education (Woodhall 1978; Ministry of Education 1993a and 1994a:176). These variables will be acknowledged where appropriate during the analysis, to avoid drawing inaccurate conclusions about the effects of tertiary funding, and student support, on student make-up.

Having introduced the research question, the subsequent sections of this chapter focus on aspects of the research methodology. First though, it is important to review the literature on comparative studies of access to higher education and to outline the theoretical basis for government intervention in the funding of tertiary education.

Literature Review

The first comprehensive comparative study of educational systems was devised by Marc-Antoine Jullien de Paris in 1817. His studies, and those spanning the nineteenth century, emphasised the cataloguing of descriptive educational data in order to perfect a national system from the importation of the best practices. In this period the research largely

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[5] When contrasting a country's social policies with another there is a strong tendency towards some form of evaluation (Castles 1991).

comprised academics travelling aboard and writing of their experiences of educational institutions in the countries they visited.[6] The first half of the twentieth century saw the culmination of these studies. In addition researchers learned to use considerably more caution when transplanting ideas from one country to another. Sir Michael Sadler, in 1900, stipulated that each educational system is not readily detachable but is instead intricately connected with the society that supports it and Kandell, in 1933, highlighted the necessity of a historical approach and the study of determining factors (Hans 1958; Bereday 1964).

In terms of access to tertiary institutions, there have been numerous descriptive accounts of the patterns, on a multitude of countries. A report of an international study of tertiary admissions was published in 1963 by UNESCO and the International Association of Universities (1963). The aim was to determine the methods used in various types of admissions operations, the conditions which led to their use, and the results achieved by the different methods. As background information the UNESCO researchers (directed by Frank Bowles) sent questionnaires to three hundred institutions of higher education in some eighty countries on admission operations. Bowles reported on the general observances and trends that were made, and provided a few case examples to illustrate points. Bowles concluded that the admission process, throughout the 1950s, had to cater for a rapidly increasing number of enrolments. This led to tertiary institutions being placed under considerable strain and having to impose more complicated selection requirements (for example examinations, selection interviews and deferred selection). Bowles made reference to increasing aspirations and national planning as being the primary causes of this development.

The second part of the research studied in detail access to tertiary institutions in twelve countries (Brazil, Chile, France, Japan, New Zealand, Senegal, South Africa, USSR, Egypt, the UK and the USA). A director was appointed from each country to be responsible for obtaining the information and reporting on: (i) the admission process, (ii) problems related to admission and (iii) to make an evaluation. This work was published separately as a supplement to the first volume. The information included admission requirements and procedures, student numbers, financial costs and/or assistance to students and educational opportunity. However the chapters were unconnected, so instead of being comparative it required the reader to make their own comparison and draw their own conclusions (UNESCO and the International Association of Universities 1965).

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[6] Bereday (1964) refers to this phase of comparative study of education as 'borrowing'.

Burn and Altbach published a text in 1971 titled *Higher Education in Nine Countries: A Comparative Study of Colleges and Universities Abroad.* This study presented a description of general trends in eight countries (France, the UK, Canada, Australia, Germany, Sweden, Japan and the Soviet Union contributed by Burn) and India (contributed by Altbach). It dedicated a chapter to each nation and largely repeated a similar format throughout the text. It described and presented data on the organisations of higher learning, enrolment trends, student financing and prospects for future development in each nation. It concluded that, in almost every country studied, there was a tendency to widen the range of admissions by establishing increased scholarships, new institutions, and instructional programmes relevant to widely divergent needs. It reported in all of the eight countries, except Japan, most of the costs of higher education were being met by public funds. It predicted that support for tertiary education would shift from local to central governments, from state to federal authorities and from private to public funding. This prediction did not stand the test of time (Burn, Altbach, Kerr and Perkins 1971).

A study by the Organisation for Economic Co-operation and Development (OECD 1991) was one of the few studies to incorporate details of the five countries studied in this present research (New Zealand, Australia, the USA, the UK, Sweden and Japan). This study presents trends on the number of enrolments in tertiary institutions of OECD member countries and was facilitated by the availability of detailed statements by, or on behalf of, national authorities to universities in higher education. The narrative and data (in tabular form) relating to the period from 1950 to 1987, showed various comparisons between countries and depicted case examples of highlighted trends. The concepts give a quantitative account and description of patterns of tertiary growth, student composition, course content, organisational structures and financing. It was reported that the expansion of higher education occurred both through the extension of the existing university sector and through the development of alternative educational structures. New Zealand was noted for having one of the largest overall increases in tertiary education and for the fact that funding was predominantly in the hands of government. Japan was highlighted as atypical in that since 1975 student numbers (except for one type of non university institution - the Senshu Gakko), had remained in a steady state within the tertiary sector.

Pellegrin (1974a), the OECD Secretariat, in a paper 'Quantitative trends in Post-Secondary Education' examined the advent of mass education, and its main characteristics, and identified policy measures for facilitating a transformation towards this end. Data were taken from national statistical publications of OECD member countries between 1960 and

1970 (but excluded New Zealand). Enrolment trends in tertiary education were documented by tables showing statistics (average annual growth rate and total enrolments) for each country. Pellegrin (utilising the data from the United Nations Demographic Year Book) argued that except for the USA, the demographic variable accounted for less than 50 percent of the total increase in student demand (and less than 30 percent in two-thirds of the countries considered). Pellegrin also described the composition of the student body for each country examined (under the concepts of female participation, socio-economic status, age and nationality) and observed that the proportion of students from "less favoured social categories" had increased, for example from 13 percent to 22.6 percent in Sweden. However Pellegrin failed to identify what constituted 'less favoured social categories'.

Pellegrin (1974b) also undertook another comparative study of tertiary access 'Admission Policies in Post-Secondary Education'. The first part of the paper reported, for the OECD countries, the channels of access to tertiary institutions and the second described the tertiary admission policies. Three selection channels of access were identified as: (i) admission based on secondary leaving examinations, (ii) admission based on selection procedures at entry and (iii) socio-economic factors in admission. Pellegrin cited countries as examples to illustrate points made. The second part of the paper cited various modes of government intervention in tertiary access (including restricted entrance, the development of secondary education, examinations, student aid measures) and some of the arguments for and against their implementation. Pellegrin advocates a policy of open admission accessible to all those capable of benefiting from it.

In the same publication Magnussen (1974) wrote a paper 'The Cost and Finance of Post-Secondary Education'. This comprised an analysis of the reasons for the rising costs of tertiary expenditure and the variations between countries in methods of financing higher education and student aid. Magnussen used data from twelve countries, including Australia, the USA, the UK, Sweden and Japan, but excluded New Zealand. Magnussen stipulated that two instances of market failure (externalities and concern with distribution of access to education) have justified government intervention in the provision of educational finance. However, Magnussen reported that countries will be unable to sustain the same degree of assistance to the tertiary sector in the future. Magnussen asserted that any system of financing tertiary education must be judged in terms of efficiency and equity. By efficiency, Magnussen means adequate investment in education, efficient use of resources and low administrative costs, and by equity he refers to measures to ensure that people

from disadvantaged groups are able to enter the tertiary system. The paper highlights some international practices which could increase tertiary productivity and efficiency (greater staff:student ratios, employing more economic teaching modes, reducing the length of courses). The Japanese practice was highlighted as an efficient one. It was depicted as "an elitist public system with high quality and high unit costs, combined with an expanding private system with low quality and low unit costs" (Magnussen 1974:198). However, Magnussen acknowledged that the criteria of efficiency may conflict with the goal of equity. He concludes that the balance is a political decision, but highlights the need to examine the specific effects of implemented policy.

Two authors have provided an illustration of how tertiary access policies can be analysed and compared, rather than merely described. A thorough comparative study on the share of financial costs borne by students, parents, tertiary institutions and the state was undertaken by Johnstone (1987). He compared the proportion of student living costs and tuition fees borne by these four sources, utilising 1985-86 data, in five countries: the USA, the UK, Germany, France and Sweden. Johnstone noted that the costs of tertiary education are borne by some combination of the four sources and that any cost shifted from one source must be shifted to another. From comparative analysis, Johnstone demonstrated that the burdens are shared in very different proportions in the four countries. Students bear the greatest share of the costs of tertiary education in the USA, whereas in the UK there has been free tuition for the vast majority of students, combined with student maintenance grants and the absence of student loans. (There has been substantial change to policies since this report was published). Parental share was similar in three of the four countries. Sweden was the exception as parents contributed a minimal amount there, but the taxpayer's contribution is greater than in the other countries. Educational institutions were identified as a source of finance via donations, endowment income and payments for research, but played an insignificant role in all but the USA.

Johnstone further segregated the costs borne by students and their families for low, middle and high income groups. He demonstrated for low income families, relatively high amounts were expected from parents in France and Germany and no contribution was expected from students for either France or the UK. For middle income families, moderate contributions were made by parents in all nations, except in Sweden, and the student share was minuscule in the UK, small in France, noticeable in Germany and large in the USA. For high income families, parents pay a tiny share of costs in Sweden, small

amounts in France, large shares in the UK and Germany and a huge share for American families with children in the private sector (Johnstone 1987 and 1989).

In 1978, Woodhall published a study of Australia, Canada, France, Germany, Japan, Netherlands, Norway, Sweden, the UK and the USA. It provided a descriptive overview of student aid in each of the ten countries for the period 1974-5. It also identified the most significant differences between countries' type and purpose of aid, proportion of students receiving aid, level of aid and eligibility criteria. It proceeded to briefly discuss the implications of alternative systems of student aid and their effectiveness in meeting educational, social and economic objectives (Woodhall 1978).

Woodhall (1989c) also completed an overview of the main trends and developments in financial support in the UK, Australia, New Zealand, Sweden, Japan, Germany and the USA. Woodhall stipulated that in most countries there was a marked shift in the 1960s and 1970s towards increased public financing of tertiary education and a reduction in the share of costs met by students and their parents. However, the trend was reported as having reversed in many countries in the 1980s. Some of the trends identified were increased targeting of student support, greater reliance on loans rather than grants, and the advancement of income-contingent rather than simple mortgage-type loans. Woodhall advocated increasing the proportion of tertiary cost meet by students and their families. "A system of student support which combines grants with loan ... is perfectly feasible, and would be more equitable than a system of grants that is now increasingly recognised as inadequate" (Woodhall 1989c:82). Woodhall stipulates that there is no evidence to suggest that loans necessarily discourage participation, pointing to empirical evidence revealing increasing proportions of women and mature tertiary students, after the implementation of loans in Sweden and the USA.

Although a few of the international or comparative studies have incorporated New Zealand data, few studies have originated from New Zealand. There are four exceptions and they will receive attention in the remaining literature review. The first comparative study to be conducted in New Zealand, on the financing of tertiary education and student support, was the Watts Review Committee (New Zealand Universities Review Committee 1987). The Watts Review panel obtained background information and comparative material on the UK, Canada, Australia, the USA, Sweden, Japan and Germany. When evaluating New Zealand's tertiary access policies, they reported on the procedures and experiences of these other countries if they were pertinent to the issue being addressed.

The findings of the Watts review are summarised in the section on New Zealand's evolution of tertiary access in chapter two.

Haines (1988) compared New Zealand's rates of participation in formal post-compulsory education and training with that of other OECD countries. New Zealand was criticised for having a low percentage of people undertaking tertiary study. Haines reported that in New Zealand 46 percent of 17 year olds were undertaking some form of education and training compared with 89 percent of the same age group in Germany, 78 percent in Sweden and 87 percent in the USA. The second part of the analysis concentrated on comparing New Zealand with Germany, Japan, the USA and the UK. Haines provided a superficial description of New Zealand's current system of post-compulsory education and training, then proceeded to give a brief description of post-compulsory education and training in the other four countries. The paper placed Germany at one extreme, with a predominantly vocational model, and Japan at the other, where education is school based and employers expect and get employees with an unspecialised theoretical education. The USA was characterised as somewhat mixed with stronger links with industrial demand. Reference was made to socio-economic, ethnic and gender variables for New Zealand only. In the document, it was noted that students from higher socio-economic backgrounds are over-represented, and Maori heavily under-represented, throughout most of the post-compulsory education and training area. It also highlighted that while there were minimal differences between the attendance rates of young men and women, there were still major differences between the genders in areas of specialisation. Haines concluded by highlighting the implications for New Zealand policy and practice. The recommendations consisted of encouraging more young people to train (particularly those from disadvantaged backgrounds) by bridging courses, experimenting with alternative modes of teaching, recognising prior learning (transferability of credits) and supporting unpaid educational leave.

The Todd report (Ministerial Consultative Group 1994) contained an appendix that contrasted the range of tuition fees in OECD countries, utilising material published by the OECD and Johnstone (1987). Sweden and the UK were identified as having nil or minimal tertiary tuition fees. New Zealand and Australia were described as having moderate tertiary tuition fees. Japan and the USA were distinguished as having high tertiary tuition fees. The Todd report concluded that student aid generally falls short of living costs internationally, sometimes by a considerable margin, and is often tightly means-tested on the basis of parental income and assets. (Sweden was identified as providing an exception to the rule.)

It further determined that student aid tends to be based on a mix of grants and loans, but many countries now rely more heavily on loans than in the past, and there has been a tendency to tighten the targeting of student aid (Ministerial Consultative Group 1994).

Finally, Maani produced a 30 page paper in 1995, as a sub-project by the Department of Economics at Auckland University. Maani reviewed some of the international research which attempted to ascertain the effects of tuition fees, grants and loans on participation in post-compulsory education. Maani stated that research findings had ascertained that tuition fees tended to deter those from lower socio-economic backgrounds (who were already less inclined to attend post-compulsory education), more so than the population at large. Maani also concluded there was a wide range of student loan repayment methods and interest rates, operational abroad, for New Zealand to select from (Maani 1995).

Economic Theories on Public Funding of Tertiary Education

There are four broad economic theoretical arguments underpinning public provision of education - (i) cost-benefit or rate of return analysis; (ii) human resource forecasting; (iii) the social demand approach and (iv) the economics of education. The theories outlined here are ones which receive substantial attention in the literature and are frequently cited by those seeking policy changes, (for example Treasury 1987a and Ministerial Consultative Group 1994), providing the rationale for particular forms of government intervention.

(i) **The cost-benefit approach**, or rate of return analysis, considers the benefits of education and compares these to the costs of education provision. In education there are two rates that are important. First there is the private rate which determines the decision of individuals, or firms, to invest in education and the social rate, which represents the overall return on resources committed to education. It has been conventional practice to measure the benefits by the increase in the student's lifetime earnings due to education. This has been estimated by observing earning differentials among people with various levels of education and attributing these differentials to the influence of further education. The cost is measured by adding the capital and operating costs of administering educational establishments, with the costs incurred by the student, including the opportunity costs of forgone earnings while studying (Musgrave and Musgrave 1973). The rate of return on an investment in education is then able to be compared with the rate of return on other possible investments. Willis and Rosen, in 1979, found that a ten percent

increase in the rate of return to education leads to a 20 percent increase in university enrolments (cited in Ministerial Consultative Group 1994:86).

However the positive correlation between education and higher earnings, is not conclusive evidence that the education causes the higher earnings. Differences in income may be attributable to ability and self-motivation, and part may be due to superior home background and other advantages (Reynolds 1978:410). In addition the rate of return calculations, based solely on earnings, understate the benefits from additional education, as education is more than an investment in income-earning potential (Musgrave and Musgrave 1973; Reynolds 1978). All that is ascertained is how much past graduates are now earning in comparison to their peers, and there is no guarantee that the trend will continue to be replicated. In essence, there is a lack of empirical evidence to provide a rationale for the appropriate level of public funding for tertiary institutions from cost-benefit analysis (Ministerial Consultative Group 1994:86).

(ii) **The human resources forecasting approach** emphasises the importance of human capital in production. This method attempts to reconcile the demand for labour of different levels of skill with difficulties of meeting this demand. As the name suggests, one of the major functions is that of estimating future requirements in terms both of worker numbers and skills and of suitable teaching staff (Buurman 1994). However accurate estimates of future demand for personnel are very difficult. For example, Craven, Dick and Wood (1987) report that employers' estimates have had a very poor track record. The skills level required in the future cannot be predicted with any certainty.

(iii) **The social demand approach** emphasises market demand for education and attempts to meet this demand. This mode tends not to receive as much attention in economic circles as it negates the fact that resources are scarce and limited. Buurman (1994:141) stipulates "[the social demand approach] is the "all who want should have" principle, but is confused in that demand is related to price and there may be differences between what an individual or [their] parents might and what society might consider optimal".

(iv) **The economics of education** contends that government may be justified in intervening in the education market, due to the occurrence of 'market failure'. A case for government intervention would rest on some combination of the following arguments: (1) that the present distribution of income is too unequal and that, in addition to redistributing

cash to low-income families, goods such as educational benefits can assist with a more equitable distribution; (2) that some groups are more poorly informed about the long term benefits of education than others, and would hence under-invest in tertiary education; and (3) that subsidies for higher education are warranted by consumer benefits and flow on benefits that accrue to society at large (Musgrave and Musgrave 1973; Reynolds 1978:418; Buurman 1994).

With respect to the last matter, a central question is to what degree does society benefit from additional education to an individual? At one extreme (for example Friedman 1962) is the belief that higher education is essentially a private investment good, which benefits the individual through the prospect of higher lifetime income, lower risk of unemployment and an appreciation of learning for its own sake. Another school of thought is the belief that tertiary education should be priced at nil or minimal cost for all students on the grounds that there are significant positive externalities to the rest of society (Reynolds 1978).[7] Better education, for example, is a positive influence in encouraging social responsibility and tolerance. It is also a foundation upon which excellence and economic achievement can be built (Department of Education 1989a).

The remaining section of this chapter will provide further details of the research methodology under the subheadings: theoretical perspective, research technique and research design. A theoretical perspective frames the research features considered pertinent and provides a meaning for the facts gathered. The research technique is the method employed to study the material. The research design is the strategy or breakdown of the steps required in order to complete the study.

Theoretical Framework of Policy Analysis

The theoretical perspective underpinning this research is known as 'statism'. Statism is one of the two schools of thought that bring the state (government and statutory organisations and bodies) into the centre of analysis (hence it is described as a state-centred approach).[8] However, most proponents of statism incorporate societal, or "outside", influences (political, economic, social and cultural) into their analysis. Thus, statism does not

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[7] Boston (1988) cites many researchers who acknowledge the formidable problems involved in identifying and quantifying externalities.

[8] The other state-centred approach is corporatism, which emphasises the importance of key organised interest groups in state negotiations. Hence, the corporatist explanation of the changes in public policies is in terms of the balancing of key sectoral interests (Vowles 1992).

substitute society-centred perspectives, but rather expands their focus of analysis (Skocpol 1985; Weir and Skocpol 1985; Howlett and Ramesh 1995).

Skocpol, a leading advocate of statism, argues the development of one grand commonly accepted social theory is neither obtainable nor desirable (as it would need to be so general that it would be virtually useless). Rather theory needs to be rooted at the 'middle' level (whereby explanations of observed particulars can be solidly grounded) and integrative (Skocpol 1985). Social policy has accordingly moved from the level of grand theorising to incorporate practical politics (Ritzer 1992).

Skocpol also suggests that precise and accurate explanations of social policy, are best obtained by investigations of a particular policy area, understood in a comparative and historical context. Skocpol reasons that analysis of the particular and peculiar development of social policies amongst nations, provide a rounded account of the similarities and differences in the formation of modern social policy (Skocpol 1985; Weir and Skocpol 1985).

Comparative Policy Analysis

The research method used in this study is comparative policy analysis. Heidenheimer, Heclo and Adams (1983:2) describe comparative policy research as "the study of how, why, and to what effect, different governments pursue courses of action or inaction". Their adoption of the term 'different governments' is intentionally vague, so as to incorporate cross-national comparisons and comparisons among local units of government.[9] However, as Sullivan (1995:2) points out, the focus of contemporary social policy analysis extends beyond the boundaries of state provision.[10] The focus includes other non-statutory channels that influence human lives - including kin, religious or voluntary organisations and private provision. The specific approach of this study is to explore the decisions and activities, by the state and non-statutory groups or institutions, that influence people's life chances, distribution and power, by contrasting different countries, communities or systems.[11]

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[9] Cross-national comparison is also referred to in the literature as country-by-country or international research.

[10] State incorporates central or local government and statutory organisations or bodies.

[11] There are variances of opinion as to when comparative research evolved. Adams and Winston (1980) and Ginsburg (1992) proclaim that comparative research is a relatively new art, whereas Deutsch (1987) traces the technique back to Greek times, when Thucydides compared Athens and Sparta.

Trethewey (1976) provides an excellent account of the boundaries of comparative policy analysis.

> Within this broad interest area there is room for rigorous and sustained inquiry at a number of levels (descriptive, analytical, interpretative); there is room for inquiry of different kinds (area or regional studies, case studies of particular problems or comparative studies) and there is room for inquiry directed to different ends (widening the educational and cultural horizons of students, testing hypotheses about relations between education and society by using cross-national data, providing policy alternatives designed to solve educational problems). (p. 119)

It follows that comparative research draws on material associated with many different disciplines including political science, sociology, demography, anthropology, history, economics and philosophy.

Comparative policy analysis has primarily three (not mutually exclusive) benefits, which have justified its use as a vital instrument to better understand social policy. The first involves the study of models in one setting for their close imitation in another setting. Many institutional ideas and arrangements have been borrowed from other countries with some appropriate adaptations and modifications (Trow 1981:100). Useful lessons may be learned from the experiences of other countries, or communities, in regard to policy formulation and implementation. Some of the lessons may provide guidelines of what to do, while others may inform us of what not to replicate (Heidenheimer et al 1983:2). Comparative research does not involve the simple replication of particular strategies and methods that have proved effective elsewhere, but rather their creative adaptation to a different context and their further development. This process of adaptation might well be of interest to the 'exporting' countries also, if it suggests new styles of work which they themselves could use (Room 1986). It follows that comparative research can advocate social change or reform.

The second prospect is that comparative policy analysis can lead to a better understanding of foreign countries or communities and an enhanced comprehension of one's own country. "[Researchers] may be encouraged to look beyond national boundaries and to develop both wider knowledge and concern about other societies and less parochial or ethnocentric views about their own" (Trethewey 1976:119). In other words to be sensitive to other nations and their point of view. Simultaneously, new perspectives may be

achieved on one's own country. Once we move outside our own culture we often discover that conceptions that we took for granted are not necessarily fitting of other systems (Adams and Winston 1980:17). Furthermore, judgements can be founded by using other systems or countries as benchmarks.

A final aim of comparative research is to gain a deeper understanding of the general nature of the problem or system itself (Antal 1987). There is a wide and rich range of experiences from which comparative policy analyst can draw from. Researchers can observe and comment upon the formulation, implementation and effects of social policies across different locations, across policy sectors and across different historical eras (Heidenheimer et al 1983:16). Comparative research may highlight aspects of social policy, and their effects, which might otherwise be taken for granted. "Relationships that may escape the analyst's notice in an individual case study may emerge as critical once the initial case is compared with [another]" (Adams and Winston 1980:14). It follows that comparative policy analysis may aid the development of social theory. Skocpol (1985:28) highlights that comparative and historical investigations can usefully contribute to the development of explanations or middle range theories on public policies.

However, comparative policy analysis also has some potential pitfalls that must also be highlighted. Comparative research entails largely the same methodological challenges as those confronted in any research, but the focus here will be on those problems central to the utilisation of this methodology.

Resources: Ready access to a wide range of primary and secondary material is a prerequisite for a comprehensive literature study. In addition, it is increasingly necessary to access material on the internet, in order to ascertain recent and detailed information. Some material was not available in English and access to this information would require a translation and/or cultural advice. However, only material printed in English was utilised in this study.

The limitations of data: UNESCO and the International Association of Universities (1963:95), Garms (1969:414), Pellegrin (1974a:15) and OECD (1991:17) all make reference to the difficulties in obtaining reliable data. For example, minimal data has been collated on the socio-economic backgrounds of students. Furthermore, experience has revealed that figures for the same period may differ between the sources, creating a problem of the

selection of sources.[12] The problem is further exacerbated by data incompatibility in terms of terminology and measures between countries or communities. For example, many concepts are employed to refer to "tertiary education" (higher education, university education, college education, Post-secondary education, Post-compulsory education) but they do not have equivalent meanings across nations or even across social or cultural groups. UNESCO and the International Association of Universities (1963:115) reported that some countries do not make any distinction between programmes for full-time and part-time students, or correspondence, and therefore do not distinguish between these groups when reporting enrolment figures. Furthermore, in some countries it is both easy and inexpensive to register as a student, and many who are not serious students may register because they benefit by student concessions (Magnussen 1974:194). In essence, there were numerous gaps in the available information base and some data was incompatible. Although the ideal could not be realised, data limitations had to be conceded and available data utilised to draw conclusions.[13]

Quantitative bias: There is generally a strong quantitative emphasis in comparative research. Some feminist researchers have expressed a range of concerns on the use of quantitative research methodology as: (i) respondents are dehumanised as data, (ii) individuals' experiences are usually placed into categories pre-determined by researchers, (iii) findings are often simplistic, over-generalised and an inaccurate interpretation of actual practice (Jayaratne and Stewart 1991; Smith and Nobel-Spruell 1986). However, this must be balanced against the benefits of a strong quantitative component as it is more measurable and unobtrusive.

A few studies have drawn significantly upon qualitative research (Antal 1987). Ginsburg (1992:23) argues that much of this qualitative analysis is dominated by a 'structural diversity' approach, which accentuates the variety or peculiarity of each welfare state in its social and historical context. Many of these texts devote a chapter to each welfare state, which in itself tends to emphasise variety or peculiarity, especially if the authors of each

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[12] The Treasury (1987b:182) reported the average unit cost per full-time equivalent student at university in 1986 as $9,731, yet Perrings (1988) stipulated the operational cost per full-time student enrolment at university for the same period had a mean of $6,711 and Department of Education (1987a) $7,900.

[13] Further segregation of the social categories was an alluring proposition for this comparative study. For instance, even though women can be regarded as a social group, women are a diversified section of the population. In Rice's research, conducted in 1987, it was ascertained that the tertiary participation rates of females were interrelated with socio-economic background (Maani 1995:7). However, inadequate data made the conception of further separation of social categories impractical.

chapter are different people. Ginsburg therefore disputes this kind of literature deserving the accolade 'comparative' - since methodical and/or theoretical comparison is lacking. However, the research technique employed in this study includes a comparative element and is interactive in nature, integrating some qualitative data.[14]

Complexity: Countries have adopted paradoxical systems of tertiary funding and different types of student support in combination. The multiplication of sources for data has increased opportunities for greater understanding of social policy, but they have multiplied its difficulties by vastly increased complexity (Deutsch 1987). Carrier and Kendall (1977) and Tracy (1992) highlighted the need to establish a framework to understand the material. While in this study a framework has been developed along the lines indicated by these authors, nevertheless making sense of the mass of heterogeneous data is still problematic. A number of variables needed to be considered simultaneously to avoid drawing illegitimate conclusions. There is also a danger in comparative research of equating correlation with causation. However a showing of strong partial effects can give powerful support to a theoretical framework which presents a reasonable basis for causality (Garms 1969).

Subjectivity: Comparative research will tend to reflect the researcher's bias and hence may be unreliable. Researchers, studying the same phenomena, have come to contrary conclusions.[15] Researchers are moulded by their own characteristics and experience and bias is therefore inescapable (Trethewey 1976). As Harris (1980) explains:

> The beginning of any fruitful study is a frank recognition and admission of one's own bias without necessarily abandoning a personal view which is the very platform on which one's convictions are based at that point of time. (p. 56)

Despite personal bias, it is a fundamental ethical principle that truthfulness is at the foundation of all research. In relation to comparative policy analysis, it applies to collecting balanced and comparable data from sources. It also involves scrupulous analysis of data and striving to present the data fully and fairly, without camouflaging findings that researchers personally regret or blowing out of proportion findings that they happen to

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[14] Louis (1984) employed the term "interactive" to characterise research that combines quantitative and qualitative data.

[15] Heidenheimer et al. (1983) reports that those who contest the influence of political variables have utilised cross-national research to demonstrate that per capita Gross National Product and demographic characteristics predominantly explain the expansion of social security, and that one can belittle party programmes and ideologies. Analysing similar data differently, their opponents have come to contrary conclusions.

like (Weiss 1987:68). A preferred option is to critique any 'natural' conclusions and/or counter-balance the findings.

Generalisations: Generalisations must suffer from imprecision and vagueness for they fail to take into account the variation and complexity of the phenomenon studied. For instance admission policies may not be extended to the whole tertiary sector within a nation, but instead be limited to certain disciplines which are most likely to lead to lucrative professional careers - such as medicine, dentistry, engineering and law. On the other hand, by concentrating on particulars and local variations, the researcher could miss opportunities to identify more general characteristics or trends (Trethewey 1976:47). Antal (1987) highlights the problem of "going native" (i.e. trying to capture too many details) versus "going naive" (i.e. failing to account for important details). A balance therefore needed to be made between concentrating on national trends and acknowledging the discrepancies within each country. Likewise, acknowledgement was given to the whole tertiary education sector and the variances between tertiary institutions and disciplines.

Trends can also change, as demonstrated by Magnussen (1974:203) when after stipulating that in Japan there was almost no public finance of private universities, the author had to add a footnote acknowledging -

> In conversation, Japanese authorities stated that the role of the government had changed considerably in the last years, and that the public now (1971-1972) provides 50 percent of total expenditure in private education. We have not, however, at the time of publication of this study, been able to verify this change in official statistics. (p. 203)

Need to consider totality: It is vital that the context is also taken into account when studying tertiary access policies to avoid a misinterpretation of actual practice (Skocpol 1985; Weir and Skocpol 1985). Focusing on the impact of financing tertiary education and student support, in isolation, may negate other forms of financial support, such as social security schemes, tax relief and indirect aid (Woodhall 1978).[16] Furthermore higher demand for enrolments may reflect high unemployment and increase in the age for which pupils are required to remain at school, rather than any change in the provision of tertiary access.

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[16] Indirect aid includes subsidised meals, accommodation, health or insurance facilities (Woodhall 1978).

Hence, perturbations (like demographic variables, cultural differences and changes in the economy), needed to be identified and explicated where possible.

Research Design

There is no agreed procedure or established schools of thought for the comparative analysis of social policy (Ginsburg 1992). In fact, Antal (1987:499) stipulates that "conducting comparative research is to a large extent not a technique that can be mechanically applied, but rather an art that requires stable attention and investment over time". However, Bereday (1964 and 1969) and Eckstein and Noah (1969) provide at least some procedural guidance. Bereday sets out four proposed steps to facilitate comparison:

(1) Description: the systematic collection of pedagogical information.
(2) Interpretation: the interpretation of the tabulated pedagogical information to social science analysis - written up in terms of history, political science, economics and sociology.
(3) Juxtaposition: the preliminary matching of data from different countries to prepare them for comparison. Such matching has to include the systematisation of data so that they may be grouped under identical or comparable categories for each country under study and to establish similarities and differences.
(4) Comparison: The essence of this method is that every type of information from one country must be matched, balanced by comparable information from other countries.

Presumably the steps set out in his analysis are not intended necessarily to be consequential - but this is not explained.

Eckstein and Noah (1969) advocate the following steps for what they believe is a necessary social science framework:

(1) Identify the problem: the identification and clarification of a particular problem.
(2) Develop the hypothesis: after a brief exploratory study of the literature and gathering of information a formulation of the hypothesis which provides a focus for the investigation and an aid to limiting the possible relevant data.
(3) Define the concepts and indicators: to attach an explicit meaning to each concept to avoid confusion.
(4) Select the cases: Eckstein and Noah write the criteria for selection are three-fold: (i) the relevance of the cases to the hypothesis, (ii) control of major extraneous variables and (iii) economy of investigation.

(5) Identify and collect the data: Access sources of data that are representative, sufficient and reliable.
(6) Manipulate the data: Eckstein and Noah reason the techniques adopted will vary in particular cases and be appropriate to the types of measures or indicators decided upon in the basic research design.
(7) Interpret the results: At this stage both conclusions and the process of reaching them are reviewed (Eckstein and Noah 1969; Trethewey 1976).

Bereday's steps follow more of an inductive school of thought and Eckstein and Noah follow more of a deductive model. The 'deductive' school of thought entails analysing information based on preconceived premises. This deductive approach to public policy is a powerful intellectual tool. It makes manageable a number of complex issues that otherwise can overwhelm any examination (Heidenheimer et al 1983:3). The 'inductive' approach is most closely affiliated with pluralist schools of political persuasion. In this case, behavioural regularities are inferred by observing contrary interests that occur on any public policy issue. Policy does not result from a given set of objectives; rather, particulars are discovered and changed in a never-ending process of conflict and negotiation. In contrast to the deductive approach, inductive approaches to public policy highlight complexity, uncertainty, and ambivalent relations between ends and means (Heidenheimer et al 1983:3; Ginsburg 1992).

The phases of the present study

The present study, draws on aspects of Bereday's, and Eckstein and Noah's, methods of comparative policy analysis. The phases of the research are outlined below, although these were not approached in chronological order, some reappraisals and further consideration and analysis were required.

(a) Identification of problem

As discussed earlier in this chapter, the problem of access to tertiary education is a pressing concern for contemporary public policy. Education plays a significant role in relation to occupational opportunities, hence it is imperative that all sectors of the population have access to the higher levels of education for private benefits (for example improved standards of living and social mobility) and public benefits (for example enhanced economic performance of the country and improved social tolerance).

(b) Identification of aims of study

Garms (1969) remarked that researchers must determine whether their study seeks to advance theory, to improve practice, or to aid in the solution of social problems. This must be clearly articulated in ways that permit assessment of results.

There are three identified purposes of this research: (i) to describe tertiary access policies, and their development, in the six nations (descriptive research), (ii) to investigate the impact of implemented policies on the overall population, lower socio-economic groups, ethnic minorities and women (evaluative research), (iii) to examine the utility of a new paradigm for organising or studying data (exploratory research) and (iv) to determine the policy implications for New Zealand, from the comparison and understanding of the research data (analytical research) (Theisen and Adams 1990:282).

(c) Selection of cases/unit of analysis

The choice of countries, cases or systems for comparison needs to be rationalised. The unit of analysis for this research is the nation. Castles (1991:13) warns of the need to study numerous nations and to obtain some degree of balance between homogeneity (which makes the experience of other countries relevant) and dissimilarity (which "weed out" groundless generalisations). Five nations were selected for the research from developed countries to be studied alongside New Zealand. Australia, the USA and the UK were selected as they have had and still have close cultural and political connections and affinities to New Zealand. Sweden and Japan were selected as they were located at the two extremes of the continuum, with respect to tuition fees. Sweden has been a world leader in many aspects of tertiary access. It was the first country to implement a student loan system and widen access by making experience a criteria for entry (Usher 1989:65). Japan was identified by Williams (1992) as having the highest tuition fees of all OECD countries.

All the countries selected are advanced democratic OECD members, with comparable tertiary institutions and there is extensive literature available on their experiences. They will acquaint the reader with the range of prevailing practices of the financing of tertiary education and student aid. Hence an understanding of their access provisions, and a comparison with New Zealand, will be of benefit to all stakeholders concerned with tertiary education in this country.

All six countries have comparable economic conditions - post-industrial societies, ranked in the top 20 countries in the world, in terms of international competitiveness, by the World Economic Forum (Gareli and DeGuertechin 1995). Moreover, all six countries are labelled "liberal democracies" by Walt (1994:20), characterised by the ability of people to vote and participate as a member of a group in order to express their preferences and influence government policy. Briar (1993) labels this form of comparison as a "comparison of two or more similar countries" and explains this enables the researcher to contrast 'like with like' and enhances assessments of the grounds and effects of relatively minor policy distinctions.[17] This is similar to what Adams and Winston (1980) refer to as a "type 2" comparison.[18] "Type 2" comparisons involve the study of a situation where different policies have originated from fundamentally similar environments.

(d) Framework and definition of concepts

Carrier and Kendall (1977) and Tracy (1992) highlight the need to establish a framework to guide gathering and analysing information in a methodical and systematic way and also to deal with the study nations in a similar fashion.[19] The framework integrates theory, facts, interests and action (Rein 1983a). Concepts also need to be explicitly defined to avoid ambiguity.

The first element of the research analyses is the evolutionary forces that have led to the tertiary access policies in each country. The evolution or background events are an account of how phenomena originated and what stages it passed through in its development (Hofmann and Malkova 1990:23). The second component is a cross-sectional analysis of the substance of the tertiary access policy or policies for each nation. The following set of provisions are included: method and level of tertiary funding, tuition fees and student aid.

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[17] Even though the countries are all developed industrial nations, it is noted that they still have distinctive characteristics and histories.

[18] Adams and Winston (1980) identify four possible relationships between policy environments and policy outputs. They stipulate Type 1 and Type 4 comparisons offer minimal analytical opportunities. Type 1 compares similar policy outputs produced from similar environments. The absence of distinguishing characteristics of the environment or the outputs means that there is only a remote chance of isolating any particular features for special attention. Type 4 entail the study of different policies originating from different context. There are no features of either the environments or the policies to link the events together. Type 2 and 3 provide the opportunity to furnish valuable insights. In Type 2 different policies stem from similar environmental context. Type 3 involves similar policies being generated out of different environments. In this instance, the divergence between the two contexts permits a concentration on the small number of similarities in environments, to establish the factors that account for the similarity in policy outputs.

[19] A framework assists in concentrating analysis on those aspects of a particular social policy or programme that are considered the most consequential and hence avoid wasteful time and energy (Tracy 1992:344). However there needs to be caution so as not to fit the facts to the conceptual framework developed.

The third aspect is a study of the impact of the current policies for each nation. In studying the effects of policy on access to tertiary education, the key variables used are: socio-economic status, ethnicity and gender. Socio-economic status is defined as the income status of the student and their parents. Ethnicity focuses only on the predominant ethnic minority groups for each country: Maori and Pacific Island people of New Zealand, Aboriginal and Torres Strait Islander people of Australia, Blacks and Hispanics in the USA, West Indians of the United Kingdom, the Saami or Lapps of Sweden and Burakumin and Ainu people of Japan. Gender refers to segregation into male or female. To reduce the perturbations, a reference was also composed on other variables that may have had a bearing on participation rates for each country.

(e) Data identification and collection

The collection of data, and its manipulation, involves the identification, accumulation, organisation and analysis of both bibliographical details and other data relevant information (Trethewey 1976:106). In the present study, a range of sources of primary and secondary data (especially official statistics) were used.[20] Denzin (1989:237) refers to this as data triangulation - where there is an explicit search for as many different data sources as possible that bear upon the events under analysis. The sources of the information were examined and tests of credibility applied (Trethewey 1976:42). Aspects conceived to be significant were recorded (cross referenced with the sources) and systematically classified under identical concepts outlined for each country, by means of a computer.

(f) Writing descriptive report

As part of the processing of the data, a narrative account of the evolution of tertiary access policies and the consequences of the strategies employed were compiled for each country.

(g) Interpreting results/comparison

This phase involved the systematic shuttling back and forth between comparable information for each nation (Bereday 1964). The primary goal was to identify the similarities and differences across time and space of access policies and their impact on disadvantaged groups. Briar (1993) highlights that it is important for the consistencies and diversities to be explained and not just presented.

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[20] Dale, Arber and Procter (1988:3) distinguish between primary and secondary sources by referring to primary material as the original written document and secondary analysis as "any further analysis of an existing data set which presents interpretations, conclusions or knowledge additional to, or different from, those presented in the first report in the inquiry as a whole and its main results".

Summary of Introduction and Structure of Thesis

As explained in this chapter, the problem of tertiary access incorporates three aspects: increasing enrolments, increasing cost and inequality of provision, and is a prevalent problem around the world. The object of this research is to compare the tertiary access policies of New Zealand, Australia, the USA, the UK, Sweden and Japan, and ascertain any effects of the implemented policies on lower socio-economic groups, ethnic minorities and women. There were many motives for the selection of this study including the topical nature of the issue and concerns about equity. Although some of the literature has dealt with some aspects of this research, no source has covered the whole spectrum.

As stipulated, the theoretical perspective advocated is statism and it provides the foundation for the methodology of this research - comparative policy analysis. This methodology has the benefits of (i) providing lessons from the experiences of other countries, (ii) enhancing social change, (iii) increasing understanding of foreign societies, (iv) achieving new perspectives of one's own country and (v) increasing an understanding on the nature of the problem or system itself. Challenges of resourcing, limited data, quantitative bias, complexity, subjectivity, generalising and needing to consider the wider totality, needed to be grappled with in order to maximise the potential of this technique.

As outlined, there is no agreed procedure for comparative policy analysis, but the research design has been instigated by the work of Bereday (1964 and 1969) and Eckstein and Noah (1969). The following steps are a brief summary of the research design, but this does not imply that any steps can not be revisited.

(a) Identification of problem: the inequality of access to tertiary education as a result of tertiary funding policies.
(b) Identification of aims of study: to describe and compare tertiary access policies and evaluate their effects on lower socio-economic groups, ethnic minorities and women. The research also explores the use of a new paradigm for organising and studying data. The final aim of this research is to provide recommendations for the reforms of New Zealand's policies, as a result of empirical findings.
(c) Selection of cases/unit of analysis: the nations studied are New Zealand, Australia, the USA, the UK, Sweden and Japan.
(d) Framework and definition of concepts: the framework consisted of determining the evolution of the policies on tertiary funding, tuition fees and student aid, for all the

nations considered in this study. The second aspect involved a detailed study of contemporary access policies. Finally, there was an analysis of tertiary participation trends, particularly with respect to lower socio-economic groups, ethnic minorities and women.

(e) Data identification and collection: this involved data triangulation and cross referencing information to the paradigm.

(f) Writing descriptive report: this entailed the writing of a descriptive summary.

(g) Interpreting results/comparison: this involved comparing all comparable information, discovering similarities and differences and determining implications for policy.

The written report of this research is organised into four sections. The first section (chapter 2) presents a descriptive account of the government funding of tertiary education, levels of tuition fees, student aid measures and participation patterns of key groups in New Zealand. The next section (chapter 3) provides similar material for Australia, the USA, the UK, Sweden and Japan. All this information provides the foundation for amalgamation and comparison of the data on the six nations. Chapter 4 therefore comprises a comparative analysis of tertiary funding, tuition fees, student aid and participation patterns. The final chapter summarises the key findings of this research and highlights the implications for New Zealand's tertiary access policies.

Chapter 2

NEW ZEALAND

The Evolution of Tertiary Access

This section highlights the background events that had a bearing upon New Zealand's current tertiary funding and student aid policies. The first tertiary institution to be established in New Zealand (the University of Otago), opened in 1869, as a result both of the area's prosperity, following the discovery of gold, and the determination of the Scottish settlers to establish the best of Scottish traditions. Canterbury and Auckland University and Victoria College were established soon after. Access was largely free (in terms of tuition fees), once entry qualifications were attained. After the First World War, entrance without examination was allowed to ex-servicemen. A Royal Commission on University Education led to the Reichel-Tate report in 1925. It was critical of the University of New Zealand for enrolling too many part-time students, relying on external examinations and for being under-funded (Tarling 1994; Butterworth and Tarling 1994).

Following more pressure for reform, another report was commissioned and in 1959 the Hughes Parry Report was published. This report's recommendations were largely implemented by the government and by the universities, and set the pattern for the next 25 years of tertiary education (Butterworth and Tarling 1994). From 1950 the universities were funded from block grants approved five years in advance (Wellington 1985). Under the Universities Act 1961, the University Grants Committee recommended the size of grant from government, distributed the money to the individual universities and reviewed the expenditure by the universities. Technical institutions and teachers' colleges were subject to direct control by the Department of Education (The Treasury 1987b:183).[21]

In 1976, the Labour Government introduced a tertiary bursary and grant scheme. This composed of a bursary that met all tuition fees for students with university entrance, and a

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[21] Technical institutions are now primarily denominated as polytechnics and teachers' colleges are now known as colleges of education (since the Education Amendment Act 1990).

universal allowance to help fund living and educational costs. Additional targeted support was available to those able to demonstrate hardship (Ministerial Consultative Group 1994:168).

From November 1978, the Universities Grant Committee commenced negotiations with Treasury officials on the new block grants, but no consensus was able to be reached. The Treasury continued to argue for further budget reductions. It was narrowly voted by National's Cabinet that a block grant of $640 million be approved for the next five years, over-riding Treasury's recommendations. By March 1984, however, with the fifth year to run, the block grant had swollen to $733 million (Wellington 1985).

Merv Wellington (then Minister of Education), on 5 February 1980, announced modest increases in student fees approved from 1981-82. The tertiary scheme would also be replaced by tertiary assistance grants ($23 per week standard and a possible supplementary 'hardship grant' of $17 (that was income tested). The hardship provisions were administratively unwieldy so were somewhat simplified in 1983 ($27 per week standard with a supplement of $23 for those living beyond the broad boundaries of the university. In addition students could apply for a $10 per week hardship allowance). The imposition of the wage/price freeze in 1982 meant that student fees were held at 1982 levels until the change of government (Wellington 1985).

At the time of the 1984 general election, the previous administration was in the midst of negotiating the university block grants for the 1985/6-1989/90 quinquennium. The negotiations were completed, and the block grants were approved by Cabinet in November 1984. At the same time Cabinet issued officials with a directive to investigate the form, level and efficiency of the present funding arrangements for all tertiary institutions. The Fourth Labour Government also needed to honour an election promise to 're-open' public debate on education. The period 1984-89 subsequently saw a plethora of reports by government working parties and various interest groups on tertiary education issues (Patterson 1991).

The *Review of University Funding*, a joint report by the Treasury, Department of Education and the Universities Grants Committee, was presented to the Minister of Finance on 30 August 1985, and released to the Universities on 7 November that year (Department of Education 1989a). The Universities Grants Committee and the Department reached substantial agreement about the additional funding required, but the Treasury submitted a

separate report. The Treasury proposed funding constraints to catalyse the process of more effective use of existing resources. They suggested that a deeper review of policy issues be undertaken (Patterson 1991; Butterworth and Tarling 1994:83).

The report *Key to Prosperity 1986*, by the Ministerial Working Party on Research and Development (commonly referred to as the Beattie Committee), recommended expenditure on university education should increase from $90 million in 1985/86 to $160 million by 1993/94. The *Probine/Fargher report 1987* recommended a more co-operative approach between universities and technical institutes (Patterson 1991). The Watts Committee (consisting of international academics) published their report *New Zealand's Universities: Partners in National Development* in 1987, following extensive consultation. They endorsed the overall favourable standard of New Zealand universities, considering increasing enrolments and poor resourcing. However they recommended higher state expenditure in order to enhance access to university courses, especially by under-represented groups like women, Maori, Pacific Island and disabled people (New Zealand Universities Review Committee 1987; Boston 1988).[22]

The Treasury's two-volume report *Government Management* was prepared prior to the election in August 1987, as a briefing paper for the incoming government. In essence, the Treasury saw the key problem with the tertiary sector as lying in too much state intervention and badly targeted intervention. The recommendations were deceptively simple: a reduction in the role of the state and funding to allow greater rein to market forces (economic liberalisation), re-organisation to eliminate conflicting roles (separation of funding and service delivery), increased user-pays and more careful targeting of assistance to the disadvantaged (The Treasury 1987a and 1987b). Shirley (1990:364) described this document as "the blueprint for the economic policies of the New Right ... a set of ideological statements based on the libertarian ideas of the Chicago School".

The superficial unity that appeared to dominate the first term of the Fourth Labour Government began to break irrevocably over the free-market policies advocated by the Treasury (Shirley 1990:370). In a press statement issued on 13 April 1988, then Prime

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[22] Strategies included better information on the nature and benefits of university education, additional financial assistance for students form disadvantaged backgrounds, more flexible timing of courses (e.g. evening classes and summer schools for degree credits), the extension of childcare services, bridging courses for mature students, the establishment of marae, the appointment of liaison officers for Maori and Pacific Island students, affirmative action, moves to bring Maori kawa (protocol) into the life of the university, the provision of better services and facilities for disabled people including specialised accommodation, study aids and counsellors and so forth (New Zealand Universities Review Committee 1987; Boston 1988).

Minister David Lange distanced himself from the Treasury's arguments. "The Government will be the substantial provider ... education is not a market commodity ... this Government has articulated the position of education which does not mirror the Treasury position at all" (cited in Patterson 1991:33). Simultaneously, Roger Douglas (then Minister of Finance) pressed for an advancement on the type of proposals already instigated.

The Government contracted Professor Hawke, and a team of inter-departmental officials as assistants, to bring together the various reviews that already existed, and to present a comprehensive framework for a new and simplified system of funding the tertiary sector. However, the report Hawke produced (*Report of the Working Group on Post Compulsory Education and Training 1988*) went beyond co-ordinating or integrating earlier reports, and provided its own recommendations. No previous report, for example, had proposed the abolition of the University Grants Committee (Butterworth and Tarling 1994:137). Hawke recommended bulk funding based on a formula related to equivalent full-time students, a student loan scheme and increasing student's tuition fees to meet 20 percent of total course costs, but this was balanced against an improved tertiary allowance. The same recommendations had been proposed in Australia (Hawke 1988).

In response to the Hawke report, the Fourth Labour Government published *Learning for Life: One*, and its amendment *Learning for Life: Two* (Department of Education 1989a). The government indicated that the post-school education system should be accessible to as wide a range of students as possible. It therefore intended to encourage greater participation in post-school education and training, with particular emphasis on removing barriers to access for those groups who have so far been under-represented. *Learning for Life* was somewhat ideologically mixed and avoided applying the more 'radical' free-market principles. It failed to provide details of tuition fees and student support, but advised that further information would follow.

Phil Goff (then Minister of Education) announced further details in September 1988. A student allowance scheme was introduced in 1989 which was significantly more generous than the standard tertiary bursary that it replaced. The level of student allowances was set equal to that of the unemployment benefit (although it was means tested unlike the unemployment benefit at that time). Students aged 20 years and over received a weekly allowance of $108, if living away from home, or $86 if living at home. Some students also qualified for an accommodation allowance, a transport allowance, or both. Parental income

was included in the means test for students aged under 20 years of age (Ministerial Consultative Group 1994:168).

On the other hand, the tertiary system was no longer to be fully state funded, as students were expected to make greater contributions to tuition costs. The Government initially proposed a graduate tax but subsequently suggested higher fees coupled with the introduction of a government guaranteed loan scheme. Due to difficulties in establishing a loans scheme, the Government recommended a standard tertiary fee (Ministerial Consultative Group 1994). In 1990, the Government introduced a centrally determined flat fee of $1,250 (LaRocque 1995:5).

The National government, elected in 1990 with a pledge to drop tertiary fees, did abolish the flat rate fee. However, they simultaneously reduced *EFTS* funding and transferred the right to set fees to tertiary institutions. The principles were legislated for in the Education Amendment Act 1990. Section 227(1) of the Education Act 1989 was amended by this Act to read "the Minister may (a) fix or specify a means by which there may be calculated or ascertained a tuition fee for any specified course of study or training at an institution and (b) specify any course of study or training at an institution whose tuition fees may be fixed independently." The tertiary institutions raised their fees as anticipated, although there was some variation in degree (Butterworth and Tarling 1994).

National picked up where Labour left off, introducing an income contingent student loan scheme in 1992. In addition student allowances were targeted more tightly on the basis of the incomes of the parents. The age, whereby parental income was included in means test for student allowances, was increased from 20 years of age to 25 years of age. National also commenced the Study Right scheme, under which institutions receive lower EFTS funding for students aged 25 years (Ministerial Consultative Group 1994).

The Ministerial Consultative Group (referred to as the Todd Committee) was established in August 1993 to advise the Government on the funding of growth in tertiary education. The Todd Committee presented its report *Funding Growth in Tertiary Education and Training* to the Minister of Education on 12 May 1994. The ten members were unable to reach a consensus and instead two options were outlined in detail (Option A and B). Options A and B were supported by four members. A further two members were unable to support either option as they opposed any further increase in student contributions.

Option A reflected the viewpoint that considerable progress has been made since 1990 reforms and hence current arrangements were relatively sound and effective in meeting needs. It proposed that a combination of measures, including marginal increases in private contributions (to about 25 percent of course costs by the year 2000) and changes to increase the diversity of education and training opportunities, should be sufficient to accommodate projected increases in enrolments. Option B was based on the view that the current arrangements were inadequately targeted at those most in need. Increased targeted assistance funded from those most able to meet the cost of their education was proposed. Option B suggested that Government bulk funding (EFTS grants) be gradually reduced and replaced by income contingent loans funding, to assist students to pay for increased tuition fees. Simultaneously, Option B suggested a gradual advancement in student contributions, to a level roughly 50 percent of the costs of the student's tertiary education, by the year 2000. Public funding would then be redirected to provide additional assistance to: (i) students from under-represented backgrounds attending all levels of education, (ii) encourage people who have left school who are from low income backgrounds to undertake further education and training, (iii) tertiary students with disabilities and (iv) increase the choice available to students by broadening the range of providers and courses that attract state assistance. It also asserted that efficient and effective outcomes are best ensured by empowering student purchasers and promoting competition between providers (Ministerial Consultative Group 1994).

The Ministry of Education (1994a) submitted a discussion document, 'Education for the 21st Century', for the perusal of the Todd Committee. It provided an analysis of recent enrolment trends and some driving forces behind them (changes in the labour market and in population size and composition) and medium and long term projections of future tertiary demand. The medium enrolment scenario, considered the most 'probable', recorded a growth in the EFTS demand at an average of 1.2 percent per annum through to 2002 and about 1.4 percent between 2002 and 2011, with improvements in participation working to offset the decline in the population at the core tertiary ages.

Contemporary Funding and Access Policies

The New Zealand tertiary education sector consists of 39 institutions: 25 polytechnics, seven universities, five colleges of education and two wananga (Maori tertiary

institutions).[23] In 1994, these institutions had a cumulative enrolment of approximately 261,720 students (part-time and full-time). In the 1995/96 fiscal year, the Government was expected to provide around $1.7 billion towards financing the tertiary sector, which was about 33 percent of the total education budget in New Zealand (LaRocque 1995:2).

The financing of the tertiary education sector in New Zealand is by way of four main avenues:

(i) Government Bulk funding: Section 199(1) of the Education Act 1989, as amended in 1990, stipulates that "in each academic year an institution (a) shall be paid a general grant, the amount of which shall be determined by the use of the Equivalent Full-time Student formula and (b) may be paid one or more special supplementary grants, out of money appropriated by Parliament for the purpose". Further section 199(2) states "the amounts of every general grant and every special supplementary grant shall be determined by the Minister".

Hence the basic mechanism for government funding of tertiary institutions is a bulk grant from which institutions meet all their costs. The amount of the bulk grant is based on the projected number of student enrolments (agreed between the Ministry of Education and the individual institution), converted by formula into equivalent full-time students (EFTS). The grant is adjusted by weightings for different disciplines (so that similar courses in different institutions will be funded similarly) and the number of students who meet the 'Study Right' criteria (estimated using the previous years data). Students with Study Right Status (that is beneficiaries or school leavers under age 22 at first enrolment) are subsidised at 95 percent of the applicable base funding level and other students are subsidised at 75 percent. The Study Right level of tuition subsidy is only available for the equivalent of three years of full-time study (LaRocque 1995:3; Ministry of Education 1996).

The Minister of Education is able to influence the expenditure in two ways: (i) by adjustment of the real funding for each EFTS place and (ii) by changing the number of EFTS subsidies in each category at each institution. However, institutions are free to enrol more students than the EFTS for which they are subsidised.[24] There is also a small base

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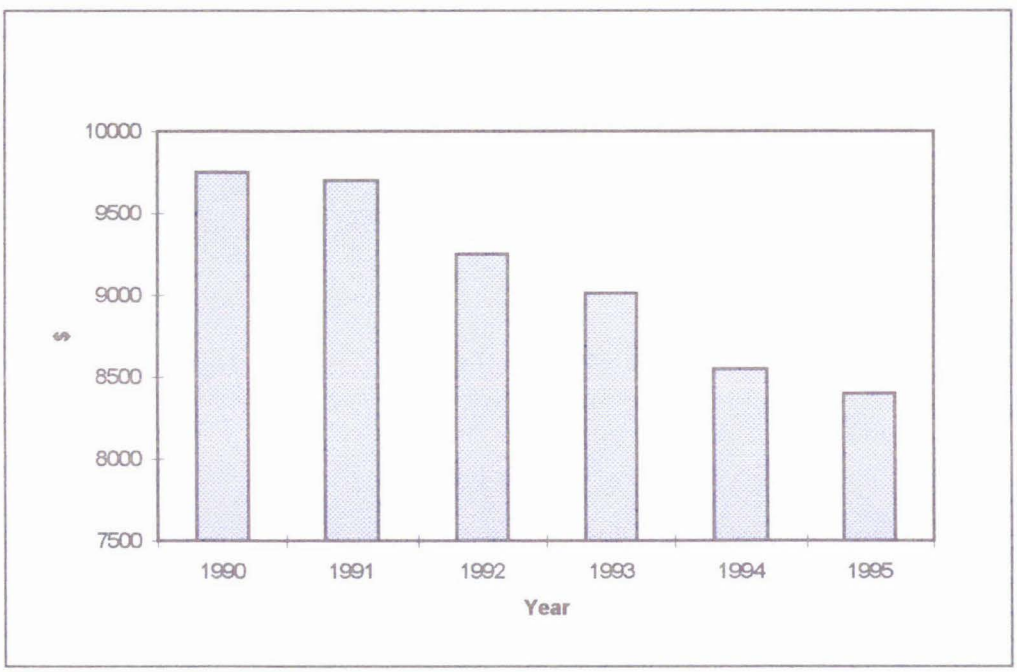
[23] A wananga is characterised by teaching and research. It maintains, advances, and disseminates knowledge, develops intellectual independence, and assists the application of knowledge regarding ahuatanga Maori (Maori tradition) according to tikanga Maori (Maori custom). The first two wananga were established in 1993.

[24] Unsubsidised places are known as "unfunded places".

grant component in the funding system, introduced in 1994, which effectively provides small institutions with a slightly larger per-EFTS subsidy to negate economy of scale. The Government may also provide additional targeted funding, in order to achieve equity or other objectives. EFTS subsidies was expected to total $1.15 billion for the 1995/96 fiscal year (LaRocque 1995:2; Ministry of Education 1996). The average government funding per EFTS was $8,406 in 1995 and about $8,302 in 1996 (New Zealand Vice-Chancellors' Committee 1995a:11).

Figure 2.1: ***Average Government Funding per EFTS University place in constant 1995 dollar terms***



Source: Public Tertiary Education Coalition (1996:3).

(ii) Tuition Fees: Section 24 of the Education Amendment Act 1991 changed section 227(1) of the Education Act 1989 to read "the council of an institution may fix, or specify a means by which there may be calculated or ascertained, a tuition fee for any course of study or training at an institution". Hence, the National Government, in 1992, granted the freedom for tertiary institutions to set their own fees. Full-time student fees at tertiary institutions have risen from an average of about $180 in 1981 to an average of approximately $1,300 in 1991, as table 2.1 illustrates (Ministerial Consultative Group 1994; Public Tertiary Education Coalition 1996:20). In 1996, they were estimated to average $2,500, although there was a significant differentiation (from $1,700 to $17,000 per annum). Fees account for around 20 percent of tertiary tuition costs (New Zealand Vice-

Chancellors' Committee 1996:6; Robertson 1996). Along with tuition fees there are examination fees and internal assessment fees of about $55 to $88 for each paper (Rivers 1995:C3).

Table 2.1: ***University Tuition Fees 1981 to 1992***

1981	1982	1983	1984-1986	1987	1988	1989	1990	1991	1992
$180	$208	$240	$240	$264	$288	$516	$1,250	$1,300	Various

Source: Public Tertiary Education Coalition (1996:20).

(iii) The income targeted student allowances scheme: The student allowances scheme provides non-repayable grants to students from low-income backgrounds. To receive student allowances all the following criteria must be met: the student must be a New Zealand citizen or have permanent residency, they must study full-time and anticipate an income of less than $135.13 before tax per week. In 1996, for a single student, between 18 and 24 years of age, whose parent(s) earned under $28, 080 per annum before tax, if they were residing with their parent(s) they received $92.29 per week and if they lived away from their parents, they received $115.37 per week, plus an accommodation benefit. Amounts start to reduce on a graduated scale until students receive no allowance when parental income reaches $45,760 per annum before tax if they live with a parent and $50, 752 per annum before tax if they live away from their parent's home (LaRocque 1995:5-6; Ministry of Education 1996).

For 1995, nearly 47,000 students were expected to receive an allowance. This represents about 40 percent of full-time students. For 1995/96, expenditure on student allowances was expected to be around $271 million (LaRocque 1995:5).

(iv) The income contingent student loan scheme: Students can borrow to cover three types of expenditure - tuition fees, associated academic costs such as books (to a maximum of $1000 per year) and living costs (to a maximum of $4,500 per year). The scheme is not means tested, but the amount available under the living cost component is reduced dollar for dollar by the amount of student allowance the individual receives. Repayments are income contingent - borrowers repay ten cents on every dollar above the threshold (the current threshold is $14,300). Where an individual's repayment obligation in any given year is less than the amount of base interest that they owe in that year, the difference is written

off, rather than being capitalised into the amount outstanding on the loan (LaRocque 1995:6-7; Robertson 1996).

Of the 99,160 full-time students attending universities, polytechnics, or colleges of education at 31 July 1993, 55 percent were student loan clients. Of the 97,974 part-time students attending universities, polytechnics, or colleges of education at 31 July 1993, nine percent were student loan clients. Public funding of students' loans is anticipated to be roughly $347 million (Ministerial Consultative Group 1994:172).

Future Prospects

There are numerous stakeholders in New Zealand's tertiary education, with diverse and sometimes conflicting objectives, who have, and will continue to have, an influence on New Zealand's future tertiary access policies. At one end of the continuum is the Public Tertiary Education Coalition which advocates increased public funding of tertiary institutions and an increase in student financial support.[25] At the other end of the continuum are many in the business community who advocate for the converse. Morgan (1996), for example promotes privatisation of tertiary education, arguing that quality will be enhanced if competition between education suppliers and tuition fee increases is promoted. Hunt (1995) printed an article in the *National Business Review* supporting the minimisation of the state's role in tertiary education. Furthermore, the Business Roundtable promotes educational institutions being more akin to small business enterprises and endorses a dramatic reduction in tuition subsidy levels (Kerr 1992 and 1993).[26]

Public opinion on tertiary education in New Zealand is very diverse. On the one hand there seems to be a high degree of optimism in New Zealand as to the potential of tertiary education to contribute to both economic growth and equity. However, there is also a widespread perception that tertiary institutions are elitist 'ivory towers', which students of Caucasian origin, and higher socio-economic backgrounds, tend to predominate (The Treasury 1987a). Although some New Zealanders may support the concept of 'free-

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[25] The Public Tertiary Education Coalition comprises of the Aotearoa Polytechnic Student Union, Association of Polytechnics in New Zealand, Association of Staff in Tertiary Education, Association of University Staff in New Zealand, New Zealand Council for Teachers Education, New Zealand University Students Association, New Zealand Vice-Chancellors' Committee and the Te Mana Akonga (the National Maori Students Association).

[26] This is ironic as employers obtain a great benefit from workforce entrants who have their required skills, yet the New Zealand business contribution to the funding of tertiary education is small, in comparison with overseas (Haines 1988).

education'(to the student), others seem intent on better value for money. While some may consider the benefits of tertiary education as related to society, others may consider that there are substantial individual returns, to students, in terms of higher lifetime income.[27]

The main political parties' manifestos on tertiary funding reflect the wide divergence of opinion in the community. Prior to the election, the Alliance promised it would make education free, raising allowances and abolishing all fees, loans and means testing. New Zealand First promised to maintain existing levels of student fees, but would increase student maintenance to equal the unemployment benefit. Labour pledged to lower tertiary fees to $1000 per annum, pay students the same as the unemployed and progressively abolish most parental means testing. ACT stated that tertiary students would meet all costs, with the assistance of loans (*East and Bays Courier* 1996). National articulated its position on 10 January 1995, when Lockwood Smith (former Minister of Education) announced tertiary fee subsidies would be progressively reduced to 75 percent of tuition costs, resulting in an average fee rise for students of $407 from 1996 to 1999 (Hunt 1995:41).[28] The future of tertiary funding and student support in New Zealand is a matter of guesswork, but in all probability it will remain at the forefront of political debate and reforms.

Social Impact of New Zealand's Access Policies

It is important to highlight the manifestations of New Zealand's tertiary access policies, particularly the discriminatory barriers to low income families, ethnic minorities and women. It is acknowledged that barriers to participation at the tertiary level are both financial and non-financial. The Todd Committee stipulated one or all of the following factors may be undermining the participation of under-represented groups: attitudes and values, information on education options, abilities, opportunities, institutional barriers and availability of finance (Ministerial Consultative Group 1994:118-19). However, there is no doubt that the cost of tertiary access is a fundamental factor in deciding whether or not to undertake tertiary education.

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[27] No research has been conducted to measure the exact degree of support.

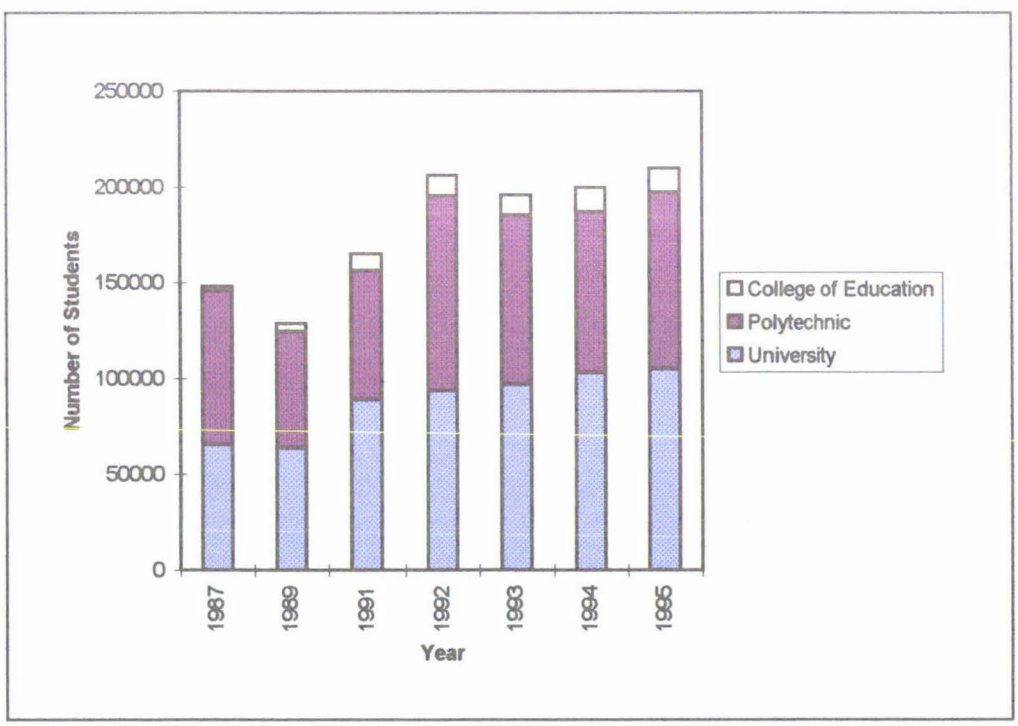
[28] Scott (1996) highlighted that the government contributions have already fallen below 75 percent, if inflation, compliance cost and increases in staff salaries are taken into account.

Overall Participation Rates

The Government expected enrolments to continue to grow despite the increase in user pays and student debt. Although government officials predicted tertiary enrolments would have declined due to demographic trends (the school leaver age group peaked in the mid 1980s), they anticipated that this would be counter-balanced by high unemployment levels and the increase in the compulsory school age, from 15 to 16 years of age (Ministerial Consultative Group 1994:25).

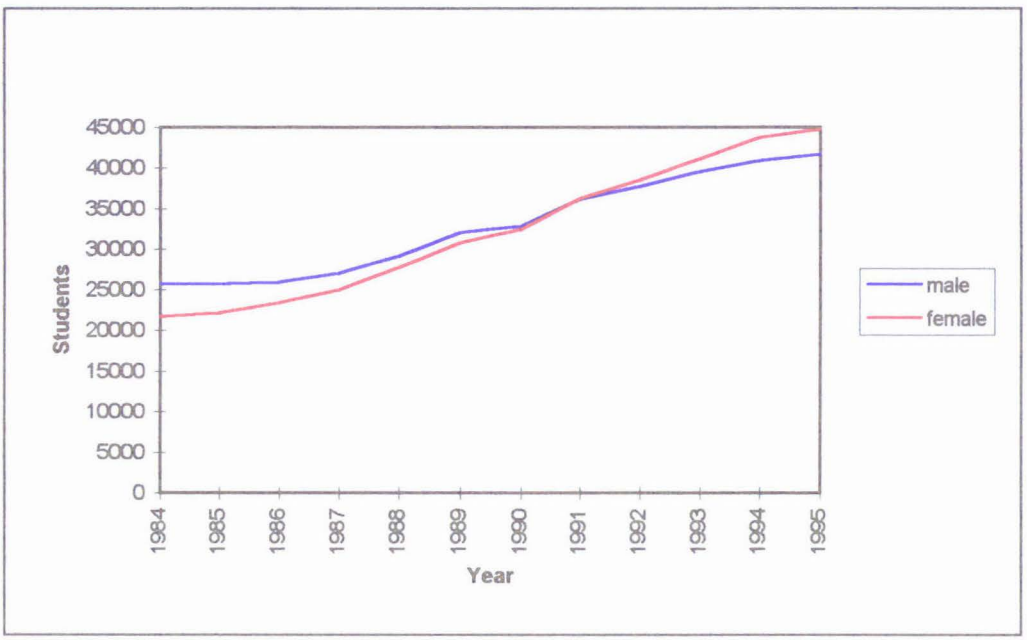
As figure 2.2 illustrates, there was an overall decline in tertiary enrolments in 1989, 1993 and 1994, largely due to the decline in polytechnic enrolments. As depicted in figure 2.3, there was no obvious changes to the growth in overall internal university student enrolments, however there was a slight decline in growth between 1989 and 1990 and from 1994 to 1995. Yet from these graphs one can not easily identify a correlation between the overall tertiary participation rates and reforms of the tertiary access policies. Yet figure 2.4 indicates the introduction of the standard tuition fee, in 1990, resulted in significant enrolment drops amongst extramural university students, although numbers did recover in subsequent years.

Figure 2.2: ***Tertiary Enrolments from 1987 to 1995.***



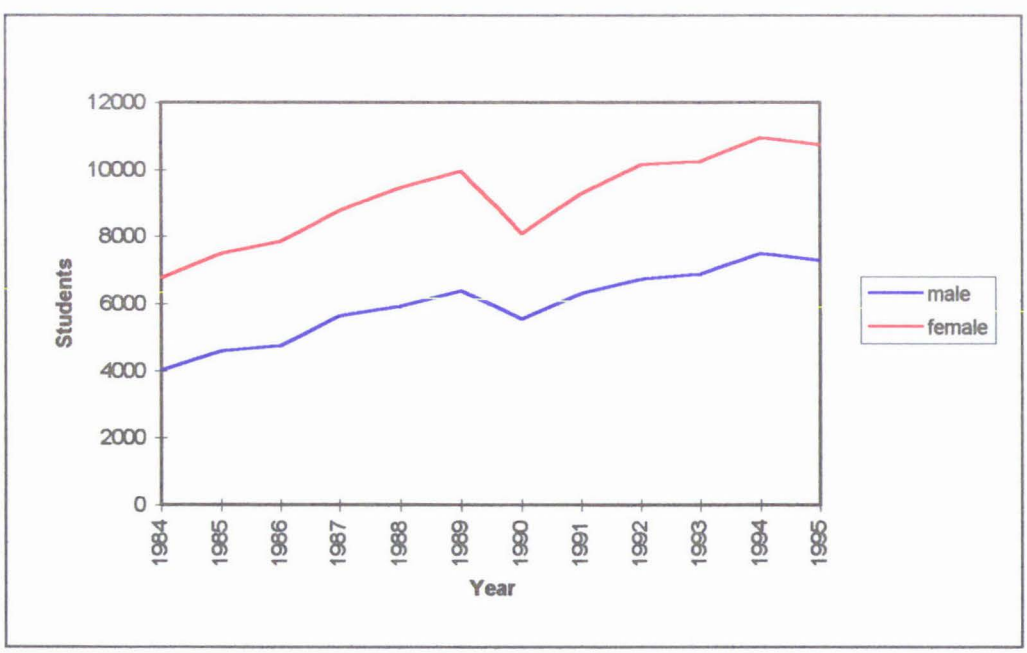
Source: Statistics New Zealand (1996b:205). **No data for 1988 and 1990 available*

Figure 2.3: ***Internal University Enrolments (full-time and part-time) from 1984 to 1995.***



Source: Department of Statistics (1990 - 1993) and Statistics New Zealand (1994b - 1996b).

Figure 2.4: ***Extramural University Student Enrolments from 1984 to 1995.***



Source: Department of Statistics (1990 - 1993) and Statistics New Zealand (1994b - 1996b).

Between 1985 and 1994, publicly funded places in tertiary institutions increased from approximately 71,000 to about 137,200 equivalent full-time students (EFTS), an annual average growth of over seven percent a year (Ministerial Consultative Group 1994:25). Yet provisional figures for 1996 indicate that there was only a two percent increase above 1995 levels (according to the media release by Mr Creech, Minister of Education, on 8 July 1996).

First year university enrolments flattened out in 1993 and 1994, then dropped in 1995 by 2.6 percent. Provisional records indicated that in 1996 first year university enrolments have descended further by 7.6 percent (according to Mr Creech's media release).[29] Obviously the changes to enrolment trends are not all attributable to reforms of tertiary access policies. The increasing tuition fees may well be one of the factors that have led to changing patterns in tertiary attendance (as denoted by the dramatic decline in extramural student numbers in 1990), but further research is necessary.

Lower Socio-Economic Groups

There has always been an imbalance in the representation of different socio-economic groups at tertiary institutions. People from higher socio-economic backgrounds have predominated the tertiary student populace. An individual whose father was of professional or managerial status was at least twelve times more likely to attend university, teachers' college or Form 7 than an individual whose father was semi-skilled or unskilled in 1987 (The Treasury 1987b:188). A survey, completed by the New Zealand Institute of Economic Research (1990), determined that the median annual combined parental income,

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[29] Mr Creech explained that the decline in university numbers was a result of a change in two universities' statistical specifications, a fall in the number of school leavers and more students enrolling for their introductory year at polytechnics. The first reason does not account for the variance between 1995 and 1996 as the universities performed uniform data gathering for this period. The number of school leavers, with the necessary qualifications to enter tertiary institutions decreased by 2242 between 1994 and 1995, according to Mr Creech, but the majority of new entrants come from those aged 20 years and over (58 percent in 1993)(Ministerial Consultative Group 1994:115). Finally, if students enrolled in polytechnic courses are really serving the first year of their university degree, then polytechnic numbers have been inflated.

Although these variables account for a portion of the overall decline, two alternative causes (which are interrelated) may have also had an impact: (i) **Enrolment rates may have declined as a result of the improving job market.** As soon as the economy was more buoyant tertiary enrolment rates declined, since greater availability of jobs does result in the removal of some of the pressures which have led to rapid increases in participation in recent years (Garms 1969:191); (ii) **Enrolment rates reflect the increased cost of tuition and mounting debt.** A basic market principle (supply and demand) is that as price increases demand falls. Students either relinquish study or consider alternatives like shorter courses or studying abroad.

of a sample of those in receipt of student allowance, was $42,444, with mean income in the range of $46,000-$52,000.

In contrast, those from lower socio-economic backgrounds have not been well represented in New Zealand tertiary institutions. In 1990, the New Zealand Institute of Economic Research determined that 7.7 percent of the student sample had a combined parental income up to $15,000, 4.5 percent between $15,000-$18,500 and 4.1 percent between $18,500-$22,000 (New Zealand Institute of Economic Research 1990).

Yet the increase in the price of tertiary education may accentuate the bias in favour of those from higher socio-economic backgrounds, as students are required to self-select on the basis of an ability to pay rather than academic merit. Unfortunately, there is insufficient comparable data over time on the proportion of tertiary students from lower socio-economic groups. Recent research has just validated that lower socio-economic groups remain substantially under-represented in tertiary education. A survey of 2,427 students by Greenslade and Lamb (1992), found that 52 percent of respondents had both parents working and 42 percent of mothers and 58.6 percent of fathers worked in the professional or managerial sector. In contrast only 3.5 percent of respondents' mothers, and 5.0 percent of fathers, were labourers and 0.5 percent of mothers and 0.2 percent of fathers (of respondents) were unemployed or receiving a benefit. Ministerial Consultative Group (1994:21) reported that in 1994, approximately 27 percent of those attending polytechnic, and 16.5 percent of those attending university, were from lower socio-economic families, even though this group made up 41 percent of the total population (see table 2.2). Moreover, the Ministerial Consultative Group (1994:21) stipulated the socio-economic bias was more pronounced in the faculties of medicine, law and architecture.

Table 2.2: ***Comparing the Household Incomes of 18-19 year olds who attend University and Polytechnics with the Household Incomes of all 18-19 year olds.***

Category	Under $26,624	$26,624 to $35,567	Over $35,568
Polytechnic	26.8%	8.3%	64.9%
University	16.5%	10.3%	73.2%
All 18 to 19 year olds	41.0%	15.0%	44.0%

Source: Ministerial Consultative Group (1994:115).

Analysis of the official statistics revealed that the proportion of university students in receipt of a Student Allowance has declined. Between 1992 and 1995, the number of university students receiving a Student Allowance increased from 23,392 to 24,15 (or 3.16 percent), whereas full-time internal university students increased from 76,320 to 86,502 (or 11.77 percent), for the same period (Statistics New Zealand 1994b and 1996b). This may indicate that the proportion of tertiary students from lower socio-economic backgrounds has declined. However, alternative explanations may also explain part of this phenomenon. For example, if overall incomes have increased but cut off levels for eligibility remained the same.

The increasing tariff for tertiary education means that students who are presently enrolled from lower socio-economic groups are more inclined to undertake part-time, or extramural study at tertiary institutions (Public Tertiary Education Coalition 1996:102). Students undertaking part-time and extramural study have some advantages in the sense that the students may also be earning a wage. However part-time and extramural study also entails inefficiencies, as students take longer to obtain their qualifications (and thus utilise their newly attained skills) and divided commitments may mean the quality of study is reduced (Pool 1987:24).

Uptakes of loans: Fee levels affect the recruitment and retention of tertiary students from lower socio-economic groups. It is generally accepted in the literature that students from lower socio-economic backgrounds tend to be more risk averse (Ministerial Consultative Group 1994). James (1988:7) stipulates that some people will always experience excessive debt, as some individuals will always have lower incomes than they anticipated. However, James notes that it is of concern if a particular group of people systematically over- or under-estimate their ability to repay student debts. So there is a concern that people from lower socio-economic groups will choose not to attend tertiary institutions, rather than take up a student loan. In 1993, 3,000 students withdrew from tertiary education, citing financial reasons for their decision (Ministerial Consultative Group 1994: 121 and 159).

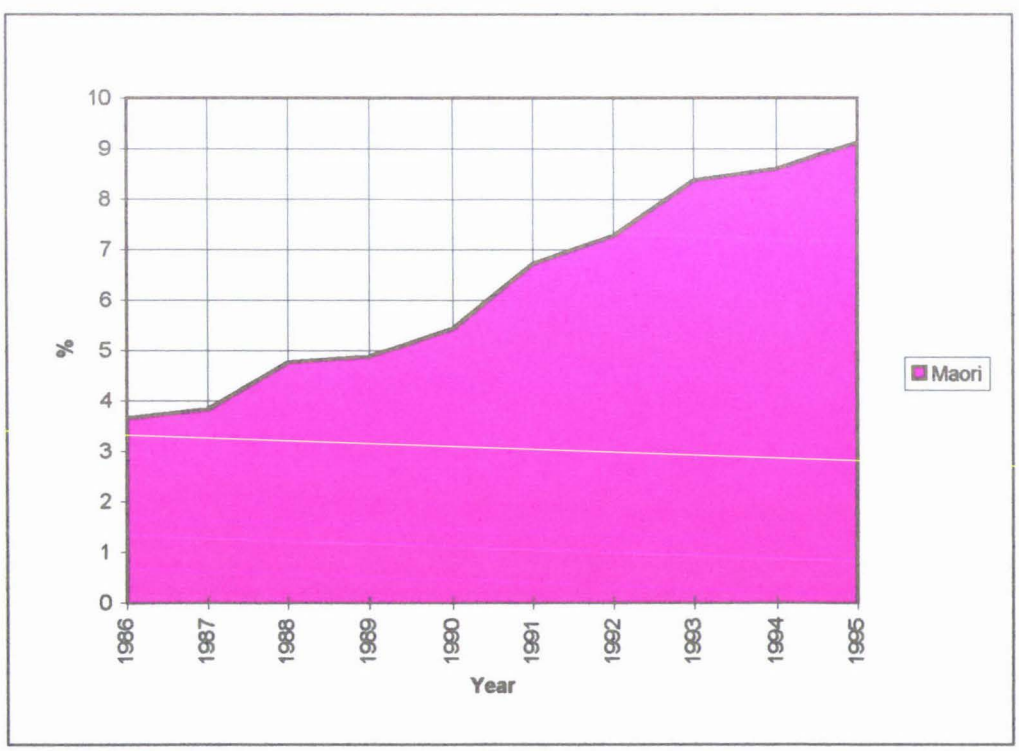
The current tertiary education funding policies mean that the financial pressures on students vary significantly. About 20 percent of university students have no debt and 12 percent have debts of less than $1000. The remaining 68 percent of students have considerable debts (Public Tertiary Education Coalition 1996:6).

Ethnicity

The following is an account of the tertiary participation patterns of Maori and Pacific Island people in New Zealand. It depicts that both of these ethnic groups are under-represented across the tertiary education sector. However, as outlined already, there are numerous reasons for the differential ethnic participation trends, in addition to tertiary funding policies.

Maori: Maori participation in tertiary education has increased dramatically from 1986. Between 1992 and 1993, the proportion of Maori tertiary enrolments (excluding wananga) increased from 9.00 percent to 9.37 percent (Ministry of Education 1993b:68 and 1994b:68). In the Universities, as figure 2.5 illustrates, the rate of growth has also largely been maintained. However, despite the unprecedented growth in enrolments, Maori continue to be under-represented in tertiary education (Davies and Nicholl 1993).

Figure 2.5: ***Percentage of Maori University Students at 31 July 1986 to 1995 (excluding overseas students).***

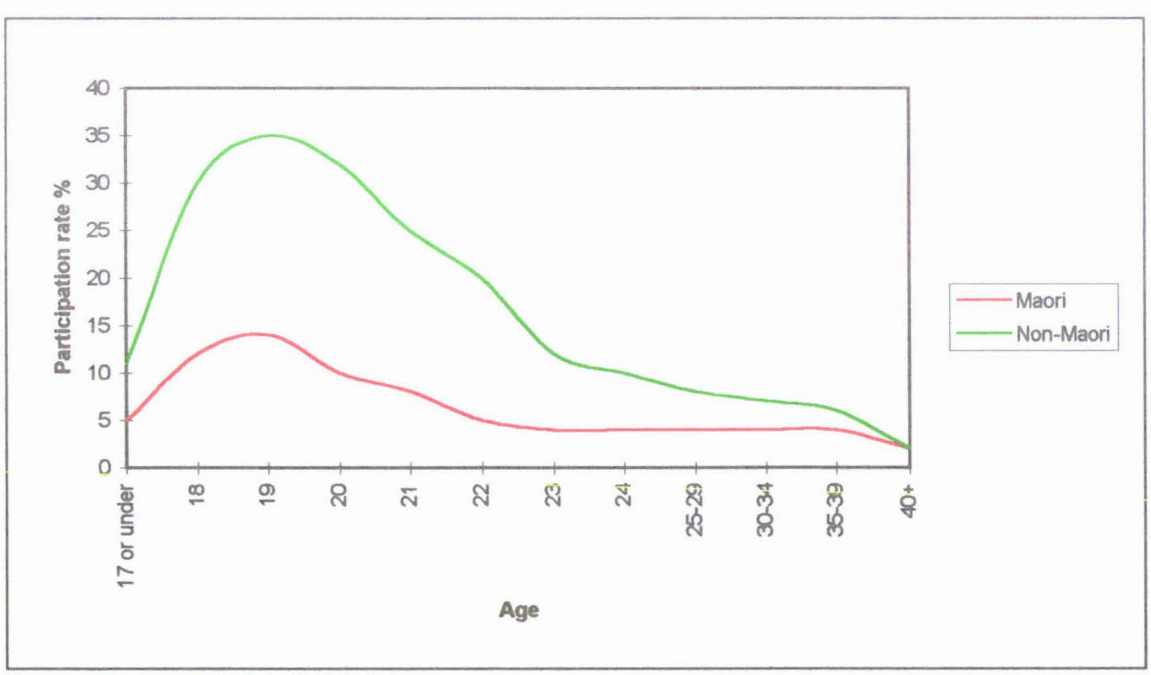


Source: Department of Education (1986b-1989b) and Ministry of Education (1990b to 1995b).

There were 27,091 Maori enrolled in tertiary education in 1994, accounting for 10.4 percent of all tertiary students (11.2 percent of enrolments in polytechnics, 11.3 percent of college of education students and 8.8 percent of university enrolments). Maori constituted around 14 percent of the population as a whole and approximately 16 percent of secondary pupils. Approximately 30 percent of all Maori university students attend Waikato, comprising 18 percent of Waikato University's student populace (Statistics New Zealand 1995b:241; Ministry of Education 1993a and 1995b). Figures 2.12 to 2.16, in the summary of this chapter, illustrate the proportion of Maori students enrolled in 1994 for each tertiary sector.

Differentials in Maori and non-Maori participation are most marked at the core age groups (18-24 years), as there is a dramatic difference in the age distribution of Maori and non-Maori, as figure 2.6 indicates. Over 50 percent of Maori women attending university were over the age of 25 years (Davies and Nicholl 1993).

Figure 2.6: ***Maori and non-Maori participation in Tertiary Education Institutions by age.***



Source: Davies and Nicholl (1993:66).

Lower retention rates for Maori students in the upper forms of secondary schools, have been cited as an explanation for the limited Maori participation in tertiary education.[30] Yet the Ministry of Education (1993a:34) reports that Maori retention rates at secondary schools have improved dramatically. Eleven percent of the secondary pupils who obtained tertiary entry qualifications were Maori in 1993 and a comparable proportion (10.4 percent) of tertiary students were Maori in 1994 (Statistics New Zealand 1995b:226; Ministry of Education 1995b). School leavers are, however, only one source of new entrants to tertiary education programmes. Sixty-three percent of Maori first year university students came from sources other than secondary school (Davies and Nicholl 1993:63).

Where Maori do participate in tertiary education, they tend to be concentrated in lower level (and lower cost) tertiary courses. Maori students are over-represented in low level polytechnic programmes (in particular ACCESS and pre-employment programmes) and university undergraduate diplomas and certificates. Furthermore they tend to be enrolled in a narrow range of disciplines, especially in education and social science programmes. In 1991, 27 percent of all Maori women studying internally at the bachelors level were enrolled in education programmes, compared with ten percent of Maori men and 12 percent of European women. Eighty-three percent of Maori students in undergraduate diplomas were studying towards a diploma in teaching in 1991 (Davies and Nicholl 1993).

Maori enrolled in tertiary education are also more likely to be part-time and sit fewer papers than their non-Maori peers. Extramural enrolments of Maori declined in 1990, with the introduction of tertiary fees, along with the other ethnic groups (Davies and Nicholl 1993).

Pacific Island: Pacific Island students also remain under-represented in tertiary education programmes. In the 1991 Census, Pacific Islanders accounted for 4.7 percent of the total population but constituted only 2.4 percent of tertiary students in 1993 (Ministerial Consultative Group 1994:39). The percentage of Pacific Island students at University has increased from 2.0 percent to 2.7 percent between 1986 and 1995, as figure 2.7 depicts.

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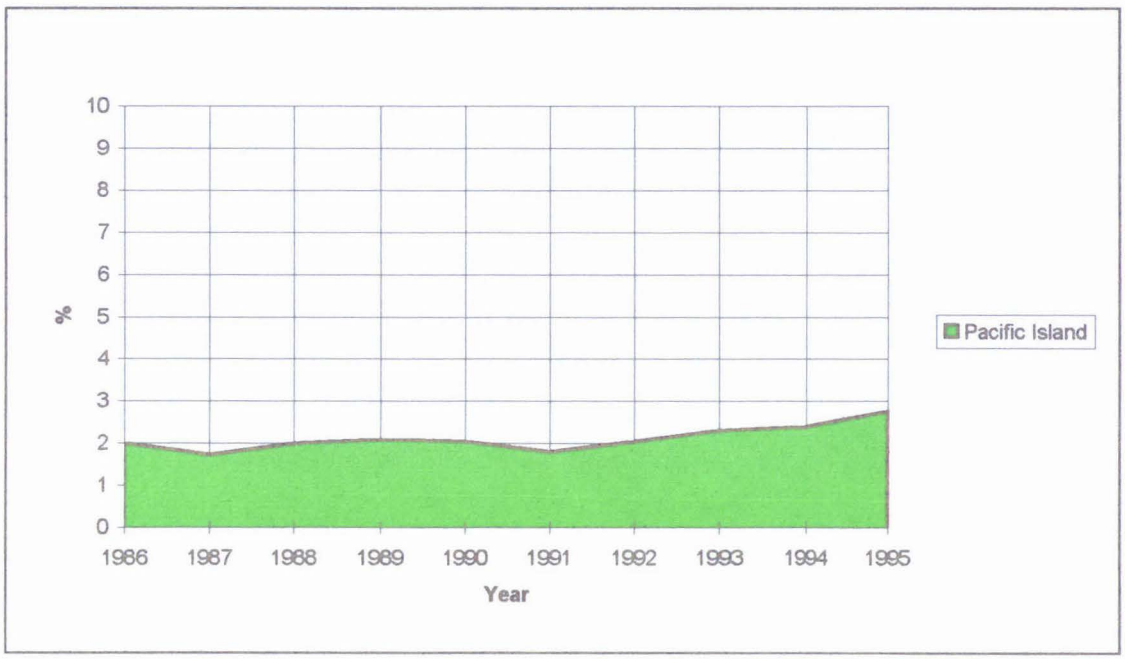
[30] New Zealand Universities Review Committee (1987:69), Haines (1988:43) and Ministerial Consultative Group (1994) have all stipulated that the source of low participation of Maori students lies not so much with tertiary access, but in the low retention rate in the secondary school system.

Figure 2.7: ***Percentage of Pacific Island University Students at 31 July 1986 to 1994 (excluding overseas students).***



Source: Department of Education (1986b-1989b) and Ministry of Education (1990b to 1995b).

A significant difference exists between the number of Pacific Island students who are eligible to, and those that do, continue past secondary studies. Five and a half percent of the secondary pupils that obtained tertiary entry qualifications were of Pacific Island origin in 1993, yet they comprised only 2.9 percent of tertiary students for 1994 (Statistics New Zealand 1995b:226; Ministry of Education 1995b). Figures 2.12 to 2.16, at the end of this chapter, illustrate the proportion of Pacific Island students enrolled in 1994.

The age distribution of Pacific Island tertiary students is modestly skewed. Only 30 percent of Pacific Island students were aged 25 or over, compared with 37 percent of European students, and 42 percent of Maori students (Ministry of Education 1991b:5).

Uptakes of loans: The Todd report commended New Zealand's income-contingent loans scheme on the grounds that Maori and Pacific Island tertiary students had shown an equal willingness to borrow to that of Caucasians. In 1992, Pacific Island students had the highest uptake rate, with almost three-quarters of tertiary students taking out a student loan. Maori students also had high loan up-take rates, with over half the Maori students taking out a student loan (Ministerial Consultative Group 1994:172). However, this may in fact indicate that many Maori and Pacific Island people cannot support the tertiary education of their children. Hence the Maori and Pacific Island students who decide to

study at the tertiary level, are already resigned to the fact that they will need to borrow, in order to attend. It does not account for the possibility that Maori and Pacific Island students may be deterred by the cost of tertiary study.

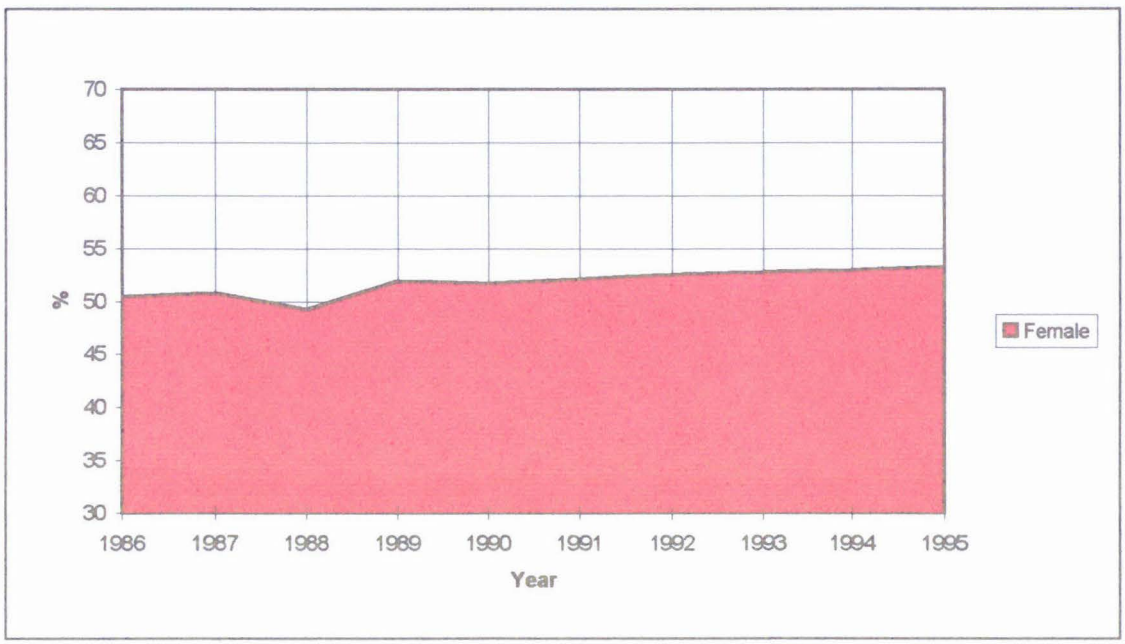
Davies and Nicholl (1993) indicate that the benefits of education for Maori, may not materialise. They stipulate that further education for Maori had not secured cherished vocations, compared with non-Maori. Furthermore, with so many Maori concentrated in the lower level (and low cost) courses, there is some scepticism about their future individual returns. It is anticipated that 38 percent of Maori women with student loans will still be repaying their loans at the age of 65, while a further 54 percent will still be repaying their loan when they are 50 years old (Public Tertiary Education Coalition 1996:6).

The impact of the access policies on Maori participation in tertiary education may have been more pronounced but for the advancement of a few initiatives, geared at improving Maori participation, which coincided with the increase in cost to tertiary students. Examples include the growth of bicultural tertiary establishments and courses, developing tertiary support networks (such as Te Timatanga Hou at the University of Waikato) and moves to bring Maori kawa (protocol) into tertiary institutions. Scholarships for Maori students have also negated some of the potential impact.

Women

Figure 2.8 illustrates there has been a homogeneous proportion of female university students since 1986. It appears from this graph that the participation rates of women have not been substantially effected by the enhanced costs of tertiary tuition fees. However, further research is required in order to control for perturbations. For example, more women are obtaining the necessary academic prerequisites for tertiary study. In 1993, 52 percent of those secondary students that attained university bursary and entrance qualifications were female (Statistics New Zealand 1995b:226). Furthermore, it is impossible to tell from these national statistics if some sub-sectors of women have been impacted upon.

Figure 2.8: ***Percentage of Female University Students at 31 July 1986 to 1995 (excluding overseas students).***



Source: Department of Education (1986b-1989b) and Ministry of Education (1990b to 1995b).

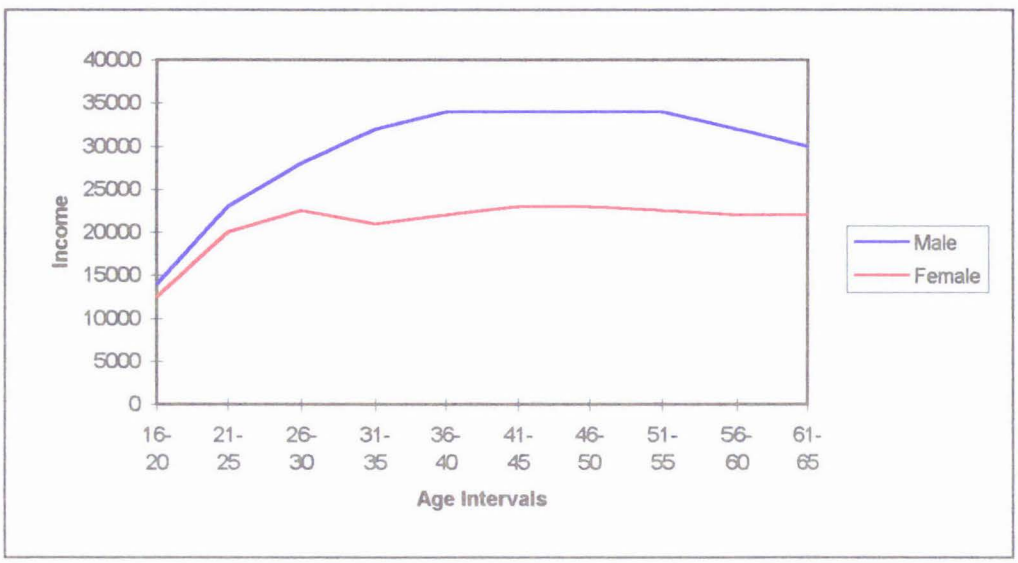
Figure 2.12 to 2.16 also show that there are comparable numbers of male and female students enrolled in tertiary institutions. However overall numerical parity does not equate to equity. Women are over-represented among part-time and extramural students. In 1993, females studying part-time constituted 27 percent of attendees at universities (as opposed to 22.9 percent for males), 23.6 percent of polytechnic students (as opposed to 26.4 percent) and 41.3 percent of pupils at colleges of education (as opposed to 8.7 percent)(Statistics New Zealand 1995b:237).

Major differences also remain between the two groups in areas of specialisation. In 1993, females attained 68 percent of awards in education, the humanities and social behaviour and communication skills from universities. However, only 33.7 percent of awards were received by females in commerce, computing, engineering, architecture, town and resource planning (Statistics New Zealand 1995b:239).

Furthermore, proportionately fewer women proceeded to go on and obtain higher degrees. In 1993, although 52.8 percent of those who graduated with a Bachelor degree from university were women, only 45.5 percent of masterates awarded and 34.7 percent of doctorates were awarded to females. This situation shows little sign of improving with no change since 1991, when women represented 44.4 percent of masterate students and 35.9

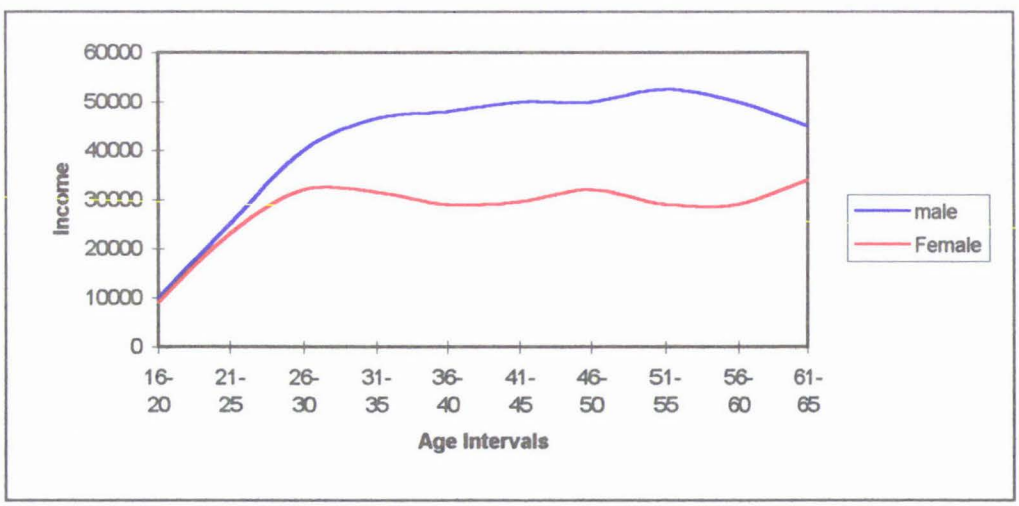
percent of students studying towards doctorates (Ministry of Education 1991a:6; Statistics New Zealand 1996b: 204). Increasing fees may have acted as a deterrent for female students pursuing a second degree or taking a post-graduate qualification. Knowledge that financial rewards may not materialise may also have precipitated their decision. Figures 2.9 to 2.11 demonstrate the differences between male and female incomes despite an equivalent qualification.

Figure 2.9: ***Age Earning Profiles of Male and Females after receiving Diploma.***



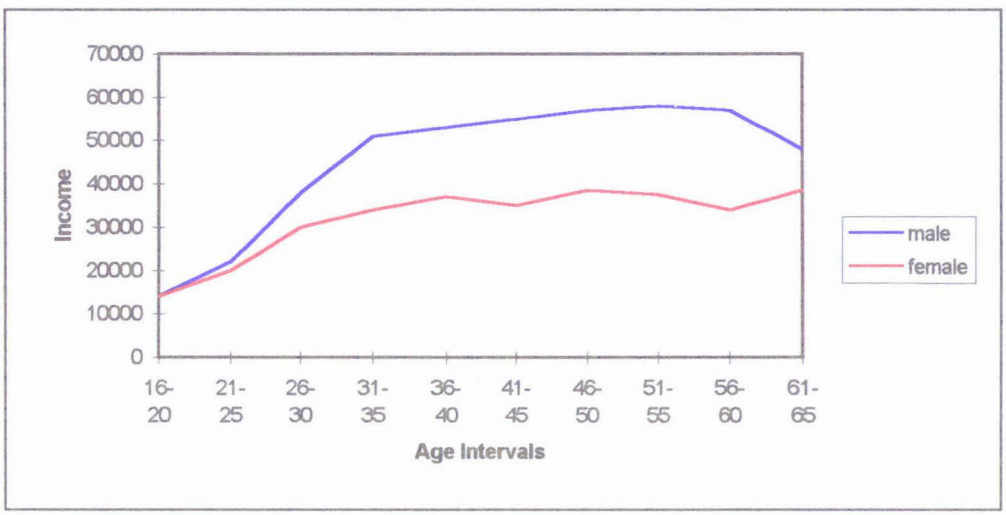
Source: Ministerial Consultative Group (1994:128-129).

Figure 2.10: ***Age Earning Profiles of Male and Females after receiving Bachelor Degree.***



Source: Ministerial Consultative Group (1994:128-129).

Figure 2.11: ***Age Earning Profiles of Male and Females after receiving Post-Graduate Qualification.***



Source: Ministerial Consultative Group (1994:128-129).

According to Women in Tertiary Education (1987:24) increased costs of tertiary study have made it difficult for many women to afford tertiary study and/or justify to their family. This is particularly the case for women who engage in education for personal development rather than for specific job training. Women constitute a significant proportion of mature students and since 1990 (when there was a significant increase in tertiary related costs for students) there has been a drop in the proportion of mature students, previously a rapidly growing sector of the student population (Hercock 1994). Further research is necessary to determine if the decline in the participation of mature students, is attributable to the impact of access policies or are explained by other factors, like demographic changes or a saturated market.

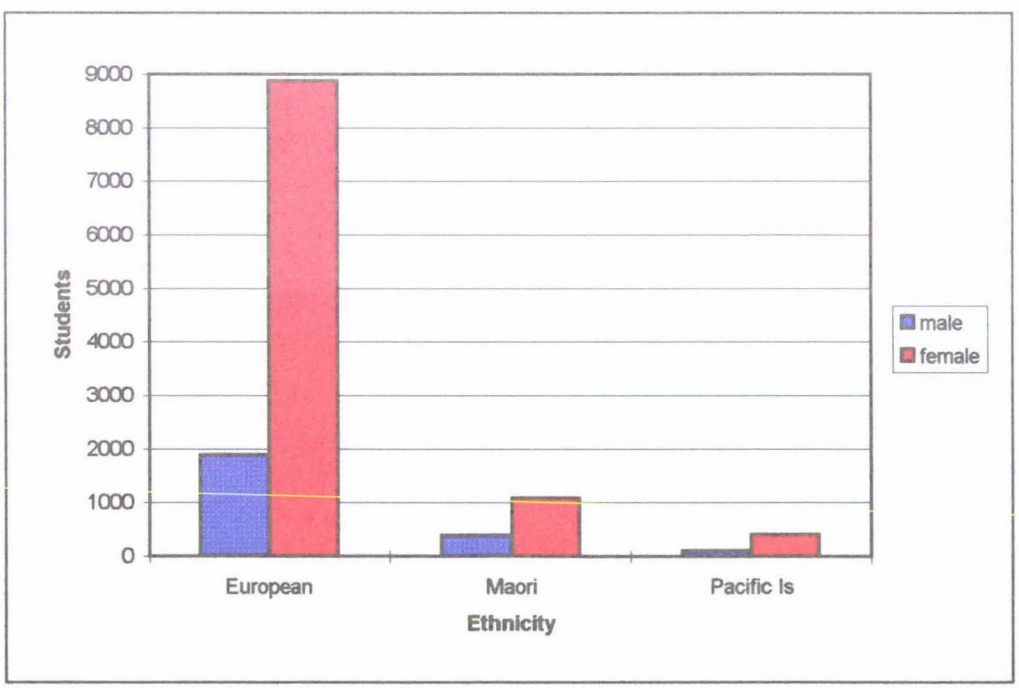
Uptake of loans: In 1992 and 1993 males had a higher uptake of loans than did females. This may reflect an awareness of the differences in life-time earnings between females and males, as figures 2.9 to 2.11 indicate. Hence women, who on average earn less than men, will take a lot more time to pay back their debt, and as a result will pay more interest (Public Tertiary Education Coalition 1996).

Summary

Lack of data, make it difficult to ascertain the exact effects of escalating tuition cost on tertiary participation in New Zealand. Further collection of statistics and research is a necessary prerequisite for the evaluation of tertiary access policies. It was determined that lower socio-economic groups continue to be substantially under-represented in tertiary education. The proportion of tertiary students from lower socio-economic groups may have even declined. Maori and Pacific Island ethnic groups remain under-represented throughout the tertiary sector, with the exception of the two wananga, as figures 2.12 to 2.16 display. Female and male numbers are comparable, but women remain concentrated in part-time and extramural studies, and lower level (and cost) courses. Equal opportunity initiatives by government and tertiary institutions may be being negated by the rising cost of tertiary study, but further research is necessary.

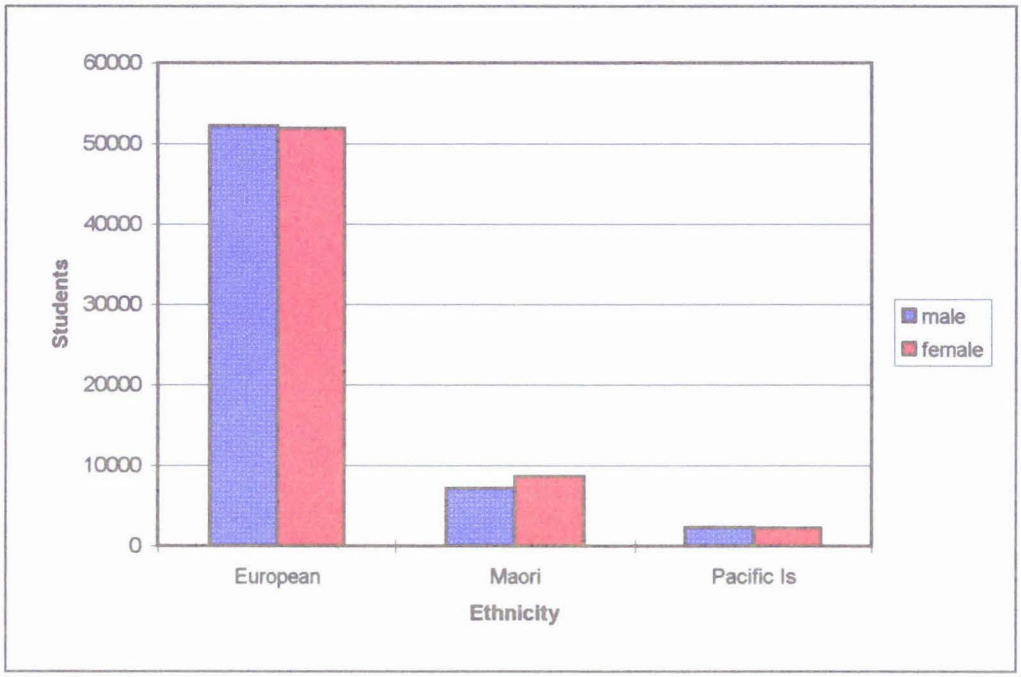
Figures 2.12 to 2.16 show the numbers of tertiary students enrolled for 1994, by ethnicity and gender.

Figure 2.12: ***College of Education Student Numbers for 1994.***



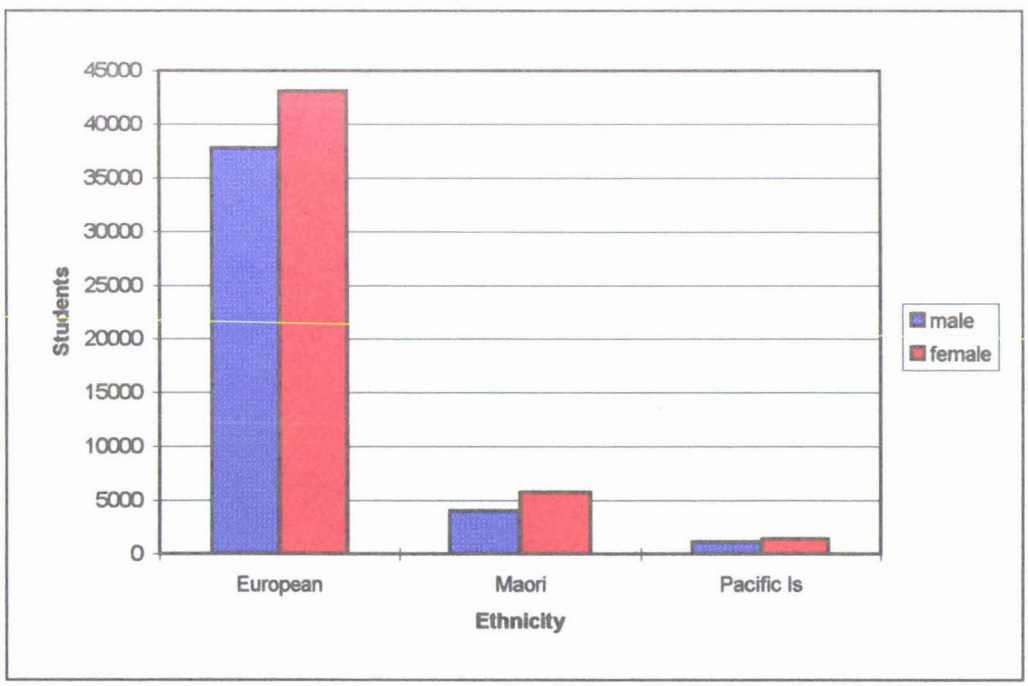
Source: Ministry of Education (1995b:12).

Figure 2.13: ***Polytechnic Student Numbers for 1994.***



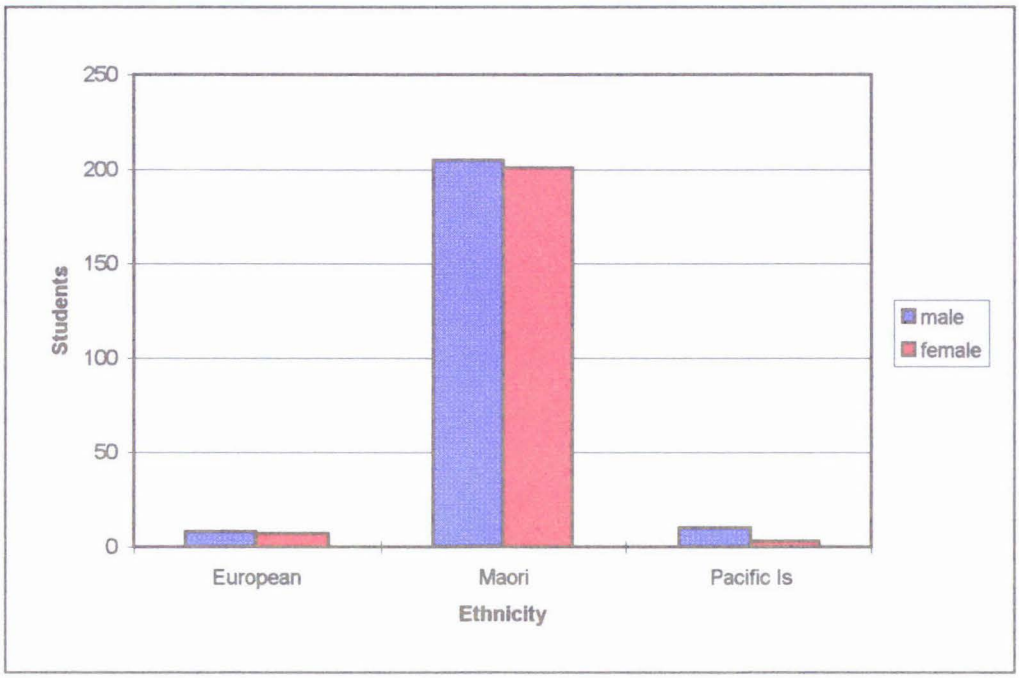
Source: Ministry of Education (1995b:13).

Figure 2.14: ***University Students Numbers for 1994.***



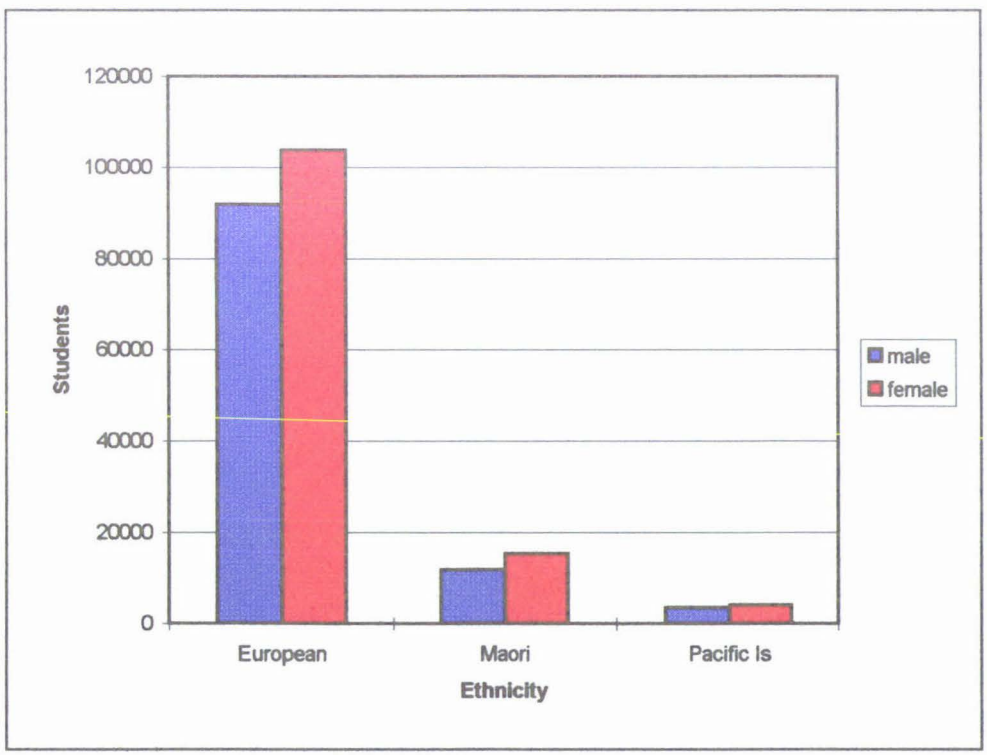
Source: Ministry of Education (1995b:14).

Figure 2.15: ***Wananga Student Numbers for 1994.***



Source: Ministry of Education (1995b:15).

Figure 2.16: ***Tertiary Student Numbers for 1994.***



Source: Ministry of Education (1995b:16).

Having outlined the evolution of the tertiary and student funding policy framework in New Zealand, the focus of this thesis turns in chapter 3 to five other nations. The goal is to establish a basis for comparison and to this end the same approach will be used, namely, outlining the historical development of policies underpinning public funding of tertiary education, describing the contemporary policies and supplying data about the participation rates of key groups.

Chapter 3

INTERNATIONAL COMPARISONS

As outlined in chapter one, the aim of this study is to explore the nature of public policies underpinning funding for tertiary students, in order to identify policies which have enhanced tertiary participation rates. This chapter reviews the tertiary funding and student aid programmes in operation in Australia, the USA, the UK, Sweden and Japan. It is vital in comparative policy analysis to describe and classify phenomena within each nation with precision, before exploring the similarities and differences between them (Castles 1991:11). An identical format is employed for each country throughout this chapter. The funding arrangements and student aid programmes were shaped in earlier periods, so the initial part of the study of each country inspects the foundations, or the evolution, of the access policies. The second aspect provides a description of the contemporary funding of tertiary education and the student aid provisions. This incorporates the government and student contribution to tertiary revenue. The final component of the discussion explores the social composition of the tertiary students, including the participation of the total population, socio-economic groups, predominant ethnic minority groups and women. It is also important to acknowledge at this point that changes of government and policy frameworks have led to subsequent policy reviews. The time-frame considered in this study is limited to the end of 1996. However, a note has been made of the imminent policy changes in Australia, resulting from the 1996 change of government, where a newly elected Coalition Government replaced the Labour Government which had held office since 1983.

Australia

The Evolution of Tertiary Access Policies

Australia's first tertiary institution, the University of Sydney, was established in 1850. By 1913 each state had a university, based on the Oxford or the Dublin model. Nevertheless, only a small proportion of students could afford the financial costs associated with a university education (Sheehan 1996a:14). Student enrolments increased slowly from 14,000

in 1039 to 30,000 in 1955.[31] Universities were entirely funded by each state (excluding private sources), but from 1958, the national government (called the Commonwealth government) commenced funding tertiary education.[32] This funding progressively increased to just under one-third by the early 1960s, and in 1974 the Commonwealth government assumed full responsibility (Australian National Audit Office 1993:5-6).

With the enhanced contribution from the Commonwealth government, the significance of tertiary fees as a source of revenue declined. In 1973, fees comprised approximately 15 percent of course costs. However, 75 to 80 percent of full-time students, and a substantial number of part-time students, received relief from fees (OECD 1990:390). Tuition fees were abolished in 1974, and a new scheme of student maintenance was introduced, termed the Tertiary Education Award Scheme. The scheme was introduced as a means of negating financial barriers to tertiary access. It was income tested, inclusive of family income, with between 31 and 41 percent of students receiving some funds (Woodhall 1989c; Ministerial Consultative Group 1994:213).

Tertiary fees were re-introduced in Australia in 1986, under the auspices of a Higher Education Administration Charge. Set at only A$250 per annum, the charge still had a clear deterrent effect on tertiary participation among certain disadvantaged groups (Allport 1996). Nevertheless, the fees were raised to A$263 in 1987, or the equivalent of four percent of the average tertiary course cost (OECD 1990). In addition, the government announced that tertiary institutions would be able to charge full fees for specified courses, subject to the approval of the Education Minister (Allport 1996).

However, the increase in tertiary fees was offset by the replacement of the Tertiary Education Award Scheme, in 1987, by a more generous programme called Austudy. This scheme was introduced to make student maintenance more comparable to unemployment benefit rates (Ministerial Consultative Group 1994:213). The following year, Austudy allowances were made equivalent to the unemployment benefit levels. However, Austudy was subject to an income test, which included family income, in contrast to the unemployment benefit (Haines 1988:41).

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[31] Females were not permitted to participate in university education until 1880 (Anderson 1992:24).

[32] In 1936, the national government did provide a grant to universities for research (Aitkin 1994).

In 1988, the Wran Committee on Higher Education Funding recommended that students make a greater contribution towards the cost of tertiary education provision.[33] They insisted that this was more equitable, as tertiary education disproportionately benefited students from the higher socio-economic groups. The Wran Committee also endorsed the adoption of three levels of fees, according to the discipline studied. However, this suggestion was revoked, as it had the potential of deferring students from entering high priority disciplines. In addition, the Wran Committee made a novel proposal, to recover a proportion of the costs of tertiary education through the tax system (Australian National Audit Office 1993).

In the same year, the government made a pledge, in the White paper, to fund tertiary institutions on the basis of achievement, rather than historical precedent and arbitrary classifications. The subsequent Higher Education Funding Act 1988 introduced a number of significant changes to the funding of tertiary education. The major changes were the establishment of a unified system of funding tertiary institutions, the introduction of rolling triennial funding and the announcement of the Higher Education Contribution Scheme (Australian National Audit Office 1993).

The Higher Education Contribution Scheme (HECS), which came into effect in 1989, replaced the Higher Education Administration Charge. Students were required to pay A$1,800 (approximately 22.5 percent of the cost of the average full-time tertiary course, instead of about four percent as previously). However, students could pay the fee 'up front' (and receive a 15 percent discount) or defer payment as an income contingent loan. The scheme was justified to the public by government, using arguments of fairness and equity (OECD 1990; Neave and Van Vught 1991).

A joint report by the Higher Education Commission and the Department of Employment Education and Training was released in 1990. With some minor amendments in the wake of this report, the Higher Education Funding Act 1988 still remained the basis of Australia's tertiary funding policy through to the end of 1996 (Australian National Audit Office 1993:29). Two, further reforms are worthy of mention. In 1993, the Australian government introduced the Austudy/Abstudy supplement loan. In its first year of operation, 45,138 tertiary students were recipients of the loan (Australian Bureau of

[33] The Wran Committee was commissioned by the government in 1987 to examine options for broadening the resource base available to tertiary education (Neave and Van Vught 1991).

Statistics 1996:293). Furthermore, in 1994 all restrictions on the ability of universities to charge fees for post-graduate courses were removed (Allport 1996).

In summary, from the time of their establishment, in 1850, to 1958, universities were entirely funded by the separate states of Australia and private sources. Thereafter, the Commonwealth government enhanced its capacity as a financier of tertiary education, until in 1974 it accepted full responsibility. Although tertiary fees were not abolished until that year, a majority of tertiary students did not pay fees before that time and many were in receipt of government scholarships. Moreover, the Whitlam government introduced a student maintenance scheme (the Tertiary Education Award Scheme) to facilitate tertiary access to students from lower socio-economic groups.

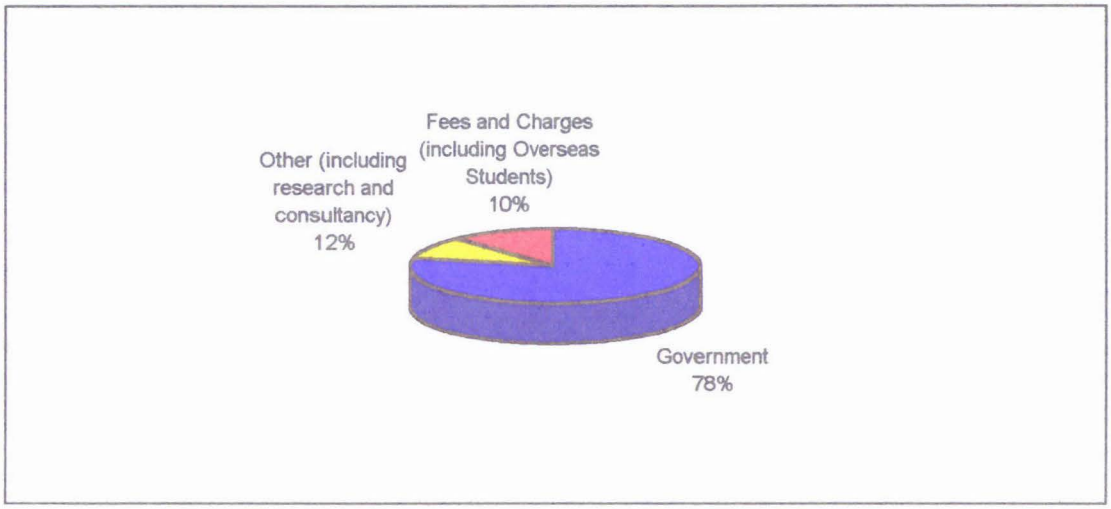
Tertiary fees were re-introduced in Australia in 1986 (A$250 under the Higher Education Administration Charge), but were offset the following year by a more generous scheme of student maintenance (Austudy). As a repercussion of the Wran Committee, the White paper and subsequent Higher Education Funding Act 1988, the tertiary fees were increased dramatically in 1989, as a result of the Higher Education Contribution Scheme (HECS), and a unified system of funding tertiary institutions was instigated.

Contemporary Funding and Access Policies

At the time of writing (1996), Australia has 43 universities and Technical and Further Education (TAFE) institutions, which provided education to 585, 440 enrolled students, in 1994. Only two of these institutions are private (Bond University and the University of Notre Dame). In 1994, the Australian government expended A$4.08 billion on the tertiary sector. Total expenditure per equivalent full-time student, from all sources, increased from A$11,038 in 1988 to A$11,602 in 1992, an increase of about five percent in constant 1991 dollar terms (Australian National Audit Office 1993; Aitkin 1994; Australian Bureau of Statistics 1996:280).

As can be seen in figure 3.1 the tertiary sector is largely funded by the government, which contributed 78 percent of the total revenue obtained by tertiary institutions in 1991. However, income from tertiary fees has been increasing since 1989 (Australian National Audit Office 1993).

Figure 3.1: ***Tertiary Education Sources of Revenue for 1991.***



Source: Adapted from Australian National Audit Office (1993:15).

Government Grants: The bulk of tertiary education funding is allocated by government to tertiary institutions according to an agreed 'profile' between the tertiary institution and the government. In general, government outlays to tertiary institutions are determined by the number of equivalent full-time students, weighted according to the students in each discipline and relative course costs.[34] In 1992-93, the government provided A$3,894 million in operating grants to tertiary institutions (Australian National Audit Office 1993; Allport 1996).

In addition to the settlement of the educational profile, tertiary institutions negotiate with government on supplementary grants to develop and maintain programmes for improving access to disadvantaged groups (Australian National Audit Office 1993). Six designated groups are identified within the appraisal - women, rural and isolated students, students from non-English speaking background, indigenous students and students with disabilities (Allport 1996). In 1993, an additional A$19 million was assigned by government for the Higher Education Equity Programme. Allotments from the scheme vary between the various equity groups as table 3.1 illustrates. Approved Aboriginal and Torres Strait Islander students attracted additional funding per equivalent full-time student of A$3,355, in 1993, comprising 75 percent of the Higher Education Equity Programme sum (Australian National Audit Office 1993).

[34] There are five undergraduate cost categories, three post-graduate categories, and two higher degrees by research categories (Australian National Audit Office 1993:29).

Table 3.1: ***Estimated Funding for various Equity Groups in 1992.***

Equity Group	Group as % of total student population (full-time equivalent)	Funding by Tertiary Institutions	Funding by Commonwealth government
Lower SES Groups	15-20%	A$2.9	approximately A$1
Women	49.8%	A$3.3	approximately A$1
Aboriginals	0.9%	A$19.4	A$10.8

Source: Adapted from Australian National Audit Office (1993:41) and OECD (1995b:143).

The newly appointed Education Minister (Amanda Vanstone) announced that the new Coalition government intends to increase tertiary funding in 1997 by 0.6 percent, or A$28.7 million. However, the government proposes to reduce operating funds in 1998 (to 1.2 percent below 1996 levels) and again in 1999 (to 1.3 percent below 1996 levels). Although the government has pronounced its commitment to maintain the existing budget of the Higher Education Equity Programme and it will also further fund research conducted in tertiary institutions (Vanstone 1996).

Higher Education Contribution Scheme: Government grants are provided to tertiary institutions on the condition that they do not charge students' fees, with allowable exceptions such as fees for post-graduate and overseas students (Australian National Audit Office 1993:34). However, the government imposes a charge for the majority of tertiary students through the Higher Education Contribution Scheme (HECS). For the year of 1996, the fee was A$2,442 for a full-time course, with part-time students paying proportionately less. The scheme incorporates two choices for payment, namely an 'up-front' payment on enrolment, which qualifies the consumer to a 25 percent discount, or a deferred loan (inflation adjusted), repaid through an additional tax on future earnings. No payment is required until the income of former students exceed the average Australian salary, currently A$28,495. Then levies vary from 1 to 6 percent, depending on the level of taxable income (Commonwealth of Australia 1995a). Seventy-four percent of students liable for the HECS fee nominated the deferred option in 1993. In the same year, the total HECS debt was A$2.3 billion (Ministerial Consultative Group 1994:213; Allport 1996).

The Australian government has announced several reforms to the HECS system for 1997. The fundamental proposal is the introduction of differential HECS charges to reflect both course costs and expected incomes. Hence, students studying arts, social sciences, education or nursing will pay A$3,300 annually; students studying mathematics, computing, agriculture, science or business will pay A$4,700 and those enrolled in law, medicine,

dentistry or veterinary science will pay A$5,500 (Vanstone 1996; Juddery 1996d). Simultaneously, HECS repayments will commence when the student's income reaches only A$20,701. Furthermore, tertiary institutions will be permitted to enroll fee-paying students along with the government-sponsored students. However, these proposed reforms have drawn an angry response from various stakeholders. It therefore remains unclear whether the government has sufficient support in parliament to ensure the adoption of these amendments (Garcia 1996b; Maslen 1996b).

Austudy: The principle form of student aid in Australia is Austudy, which provides full-time undergraduates with student maintenance grants, if aged 17 and over.[35] Assistance is awarded on a non-competitive basis, but is subject to student, family and partner's income and assets testing, and to certain academic requirements (Yardley, Munns and Lord 1996). The maximum standard rate, in 1994, for students under 18 years of age residing with their family was A$66.15 per week. Tertiary students, under 18 years, living away from their family or deemed to be independent received up to A$109.20 per week and students who were married or had a dependent child, could receive up to A$132.65 per week. The maximum standard allowance for students over the age of 18 years was A$79.55 which could be increased to up to A$120.75, if living away from family or deemed independent, or up to A$132.65 for married students or students with a dependent child. If family income was below A$21,300, the maximum allowance was payable (Ministerial Consultative Group 1994:214-5).[36] Supplementary assistance is also provided for certain Department of Social Security pensioners (Australian Bureau of Statistics 1996). The expansion of the Austudy programme is presented by table 3.2.

Table 3.2: ***Austudy Aid to Tertiary Student 1988-89 to 1994.***

Austudy (tertiary)	1988-89	1994
Recipients	142,155	252,571
Total funding	A$275,660,000	A$898,170,000

Source: Coppell (1994:226) and Australian Bureau of Statistics (1996:293).

[35] To qualify for Austudy a student must be undertaking at least 75 percent of an EFTS unit (Ministerial Consultative Group 1994:214).

[36] Concessions are provided for parents with other dependent children. The Commonwealth of Australia (1995c) pronounced that A$12,000 can be deducted from parents' or partners' income for the first dependent child in the family who is under 16 years old, and a further A$2,500 for each other dependent child under 16 years old. In addition A$3,700 can be deducted for each dependent student aged 16 to 21 years old and receiving student aid.

The Australian Coalition government, elected in March 1996, has announced that it wants to tighten the income test and increase the age at which students are deemed 'independent' (and therefore excluded from parental means test), from the present 22 years to 25 years (Juddery 1996d).

Abstudy: Abstudy provides student maintenance to Aboriginal and Torres Strait Islander people studying in approved tertiary education courses. Some Abstudy allowances are paid whatever the family income, while others are subject to income testing (Australian Bureau of Statistics 1996:293). In 1994, there were 17,988 tertiary students in receipt of Abstudy. The total government expenditure on Abstudy was A$69,181,000 (Australian Bureau of Statistics 1996:292). In contrast to other forms of student aid, the Australian government has stipulated that it will maintain or enhance Abstudy assistance to indigenous Australians (Vanstone 1996).

Supplement Loans: Students are able to 'trade-in' part of their Austudy or Abstudy grant, in return for a supplement loan of double the amount traded in. The maximum amount of Austudy or Abstudy grant a student can trade in is A$3,500, resulting in a A$7,000 loan. Students ineligible for Austudy or Abstudy due to family income exceeding the allowable threshold, may qualify for a supplement loan of up to A$2,000, if their family income is under A$50,000 (Australian Bureau of Statistics 1996:293).

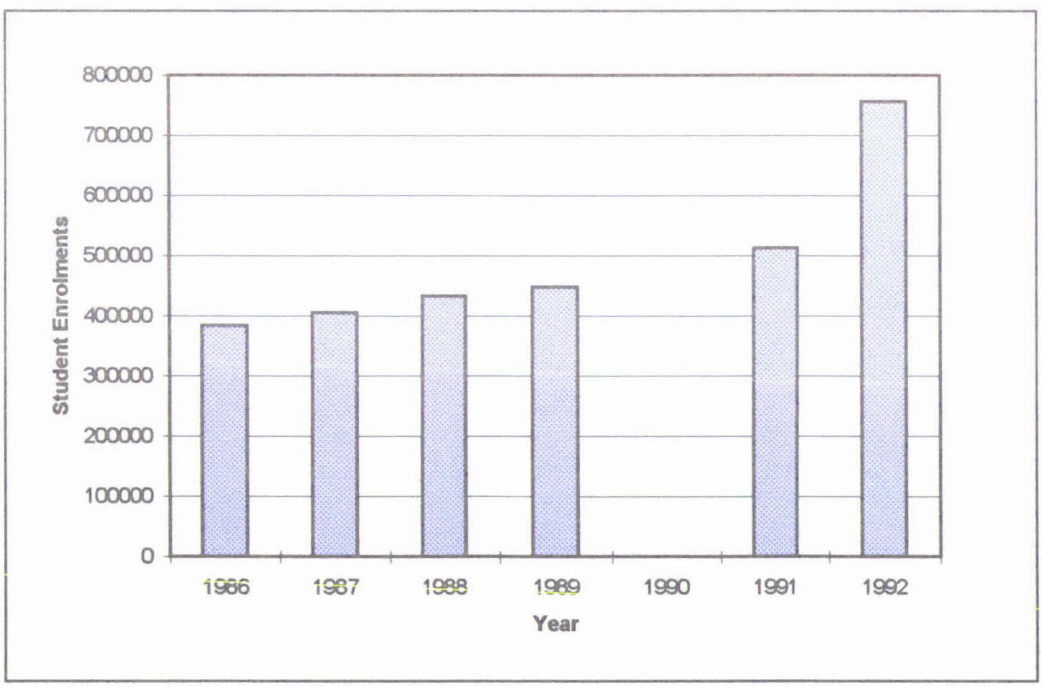
Supplement loans are interest free (but are adjusted for inflation) and repayments are not compulsory until after five years from the year in which the loan is received. Thereafter, recovery is made through the taxation system, on a similar basis to HECS, when taxable income reaches average weekly earnings. However, if the loan is repaid within five years, students only have to repay 85 percent of the amount outstanding (Ministerial Consultative Group 1994:215; Commonwealth of Australia 1995d). In 1993, 45,138 tertiary students were paid an Austudy/Abstudy supplement loan (Australian Bureau of Statistics 1996:293).

Post-graduate awards: The Commonwealth government also offers student maintenance to students studying for post-graduate degrees, but the Post-graduate awards are administered by individual tertiary institutions. Recipients of the Post-graduate awards are selected, based on academic merit or anticipated contribution to industry. In 1995, the maximum allowance was A$286.93 per week, in addition to an exemption from HECS fees (Commonwealth of Australia 1995b; Yardley et al. 1996).

Overall Participation Rates

There were 585,440 students enrolled in tertiary education in 1994 (Aitkin 1994:3). Since 1986, there has been substantial growth in tertiary enrolment rates, as figure 3.2 illustrates. The proportion of persons aged eighteen enrolled in higher education increased from 17.6 percent in 1988 to 19.7 percent in 1992. (Australian National Audit Office 1993:xv). Nevertheless, enrolment rates may have been significantly higher, but for the increase in financial obligations expected from students. Research conducted by the Department of Employment Education and Training in 1990, concluded that the HECS obligation had deterred 10.9 percent of potential university students (Juddery 1996b). In 1994, 59 percent of students were enrolled in full-time study, 29 percent in part-time study and 12 percent in extramural studies (Australian Bureau of Statistics 1996:281). The Australian government's goal is that people from lower socio-economic groups, Aboriginal and Torres Strait Islander people and females contribute to the growth in the tertiary education sector.

Figure 3.2: ***Enrolments in Tertiary Education (EFTS) from 1986 to 1992.***



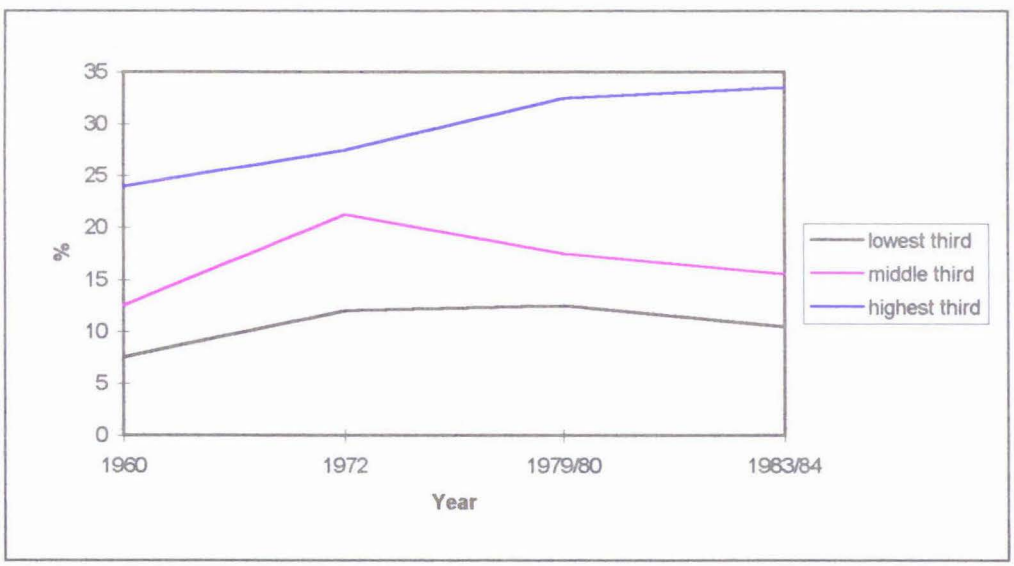
Source: OECD (1995b:142). **No data for 1990 available*

Lower Socio-Economic Groups

The participation trends of students from lower socio-economic groups are reported to be uncertain due to difficulties in definition and incompatible bases of measurement.

However, people of lower socio-economic groups have been estimated to comprise between 15 and 20 percent of all tertiary students (Anderson 1992; Australian National Audit Office 1993:22). Don Anderson's research revealed that Australia compared favourably with other nations with respect to the representation of lower socio-economic groups among university students. However, he also showed that the proportion of tertiary students, from the lower socio-economic groups, began to curtail between 1972 and 1983 (see figure 3.3). Anderson reported "there was some disappointment among supporters of the government's interventions when evaluations of fee abolition [and student aid] reported little change in the social mix" (Anderson 1992:20). Anderson suggested that this could be rationalised by perturbations, the inadequacy of the interventions and the enhanced efforts of the higher socio-economic groups (Anderson 1992).

Figure 3.3: ***Participation in Tertiary Education by Socio-Economic Groups from 1960 to 1984.***



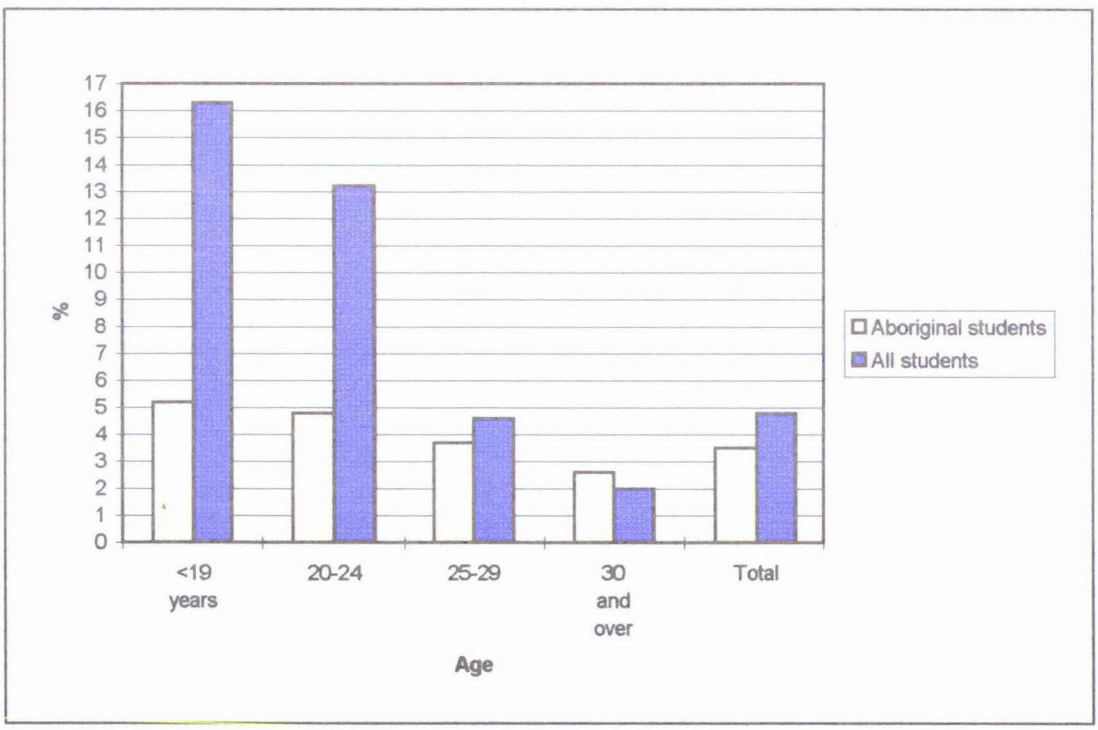
Source: Anderson (1992:23).

The Australian Council for Education Research established that although the majority of tertiary students came from higher socio-economic backgrounds, entrants from lower socio-economic origins were becoming more predominant. Their investigation found that, in 1980, 34 percent of 19 year old entrants to tertiary education, were from lower socio-economic backgrounds, yet this proportion had grown to 38 percent by 1989 (Australian National Audit Office 1993:24).

Ethnic Minorities

Aboriginal and Torres Strait Islander people are under-represented in tertiary institutions. Of the 756,711 equivalent full-time student enrolments in 1992, 5,105 (or 0.7 percent) identified themselves as Aboriginal and Torres Strait Islanders (Australian National Audit Office 1993:23; OECD 1995b). Likewise, only 3.5 percent of Aboriginal and Torres Strait Islander people participated in tertiary education in 1990, compared with 4.8 percent for the general population (Australian National Audit Office 1993:xv). The participation rates of Aboriginal and Torres Strait Islander people compared with the total population is presented in figure 3.4.[37]

Figure 3.4: ***Participation Rates for Aboriginal and Torres Strait Islander people and Total Population by Age in 1990.***



Source: Australian National Audit Office (1993:66).

However, the participation rates of Aboriginal and Torres Strait Islander people have improved. Aboriginal and Torres Strait Islanders were alien to tertiary education prior to 1960, although no statistics were recorded or published by government departments.

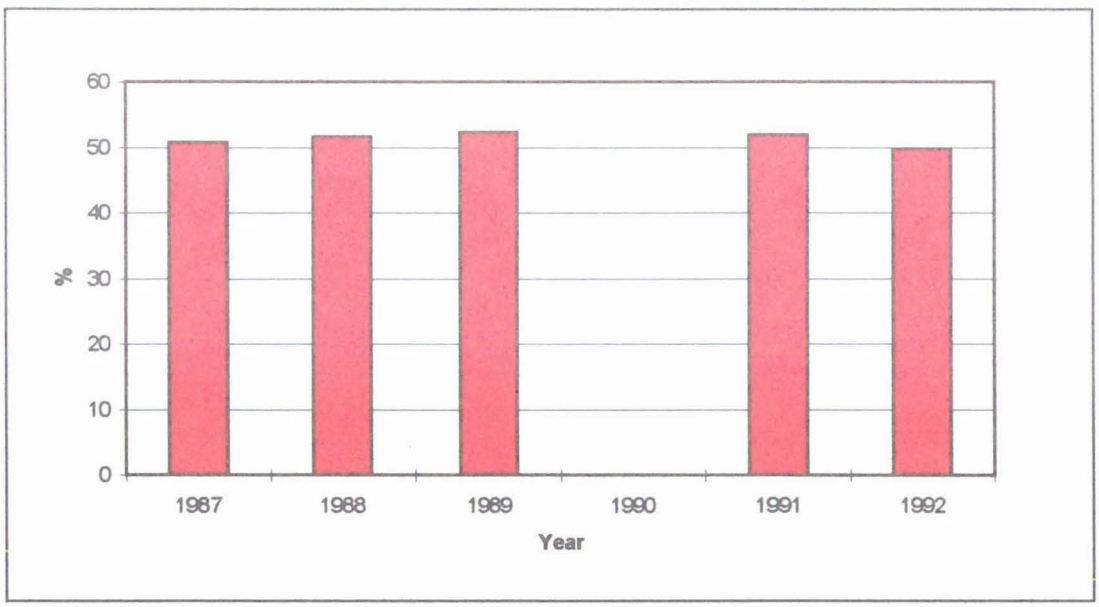
[37] Unfortunately data was unavailable for comparing Aboriginal and Torres Strait Islander participation rates with Caucasian participation rates.

Between 1973 and 1991, tertiary enrolments by Aboriginal and Torres Strait Islander people increased 30 times, from 110 to 3,300 (Anderson 1992:24). However, inequities persist for Aboriginal and Torres Strait Islander students enrolled in fee paying tertiary courses (Allport 1996:5).

Women

As figure 3.5 illustrates, female enrolments in Australian tertiary institutions have been comparable to male enrolments since 1987. As a consequence, statisticians and sociologists at Monash University have disputed the classification of women as a disadvantaged group within the Higher Education Equity Programme (Maslen 1996c). However, an investigation by Williams in 1987 found that females were more likely to pass the academic prerequisites for tertiary education, but less likely to advance into tertiary education (cited in Maani 1995:12).

Figure 3.5: ***Percentage of Women Enrolled in Tertiary Education in Australia from 1987 to 1992.***



Source: OECD (1995b:143). **No data for 1990 available*

Furthermore, although women comprise the majority of total enrolments, females are under-represented in certain disciplines (although progress is being made) as presented by table 3.3.

Table 3.3: ***Women in Tertiary Education by Discipline from 1983 to 1992.***

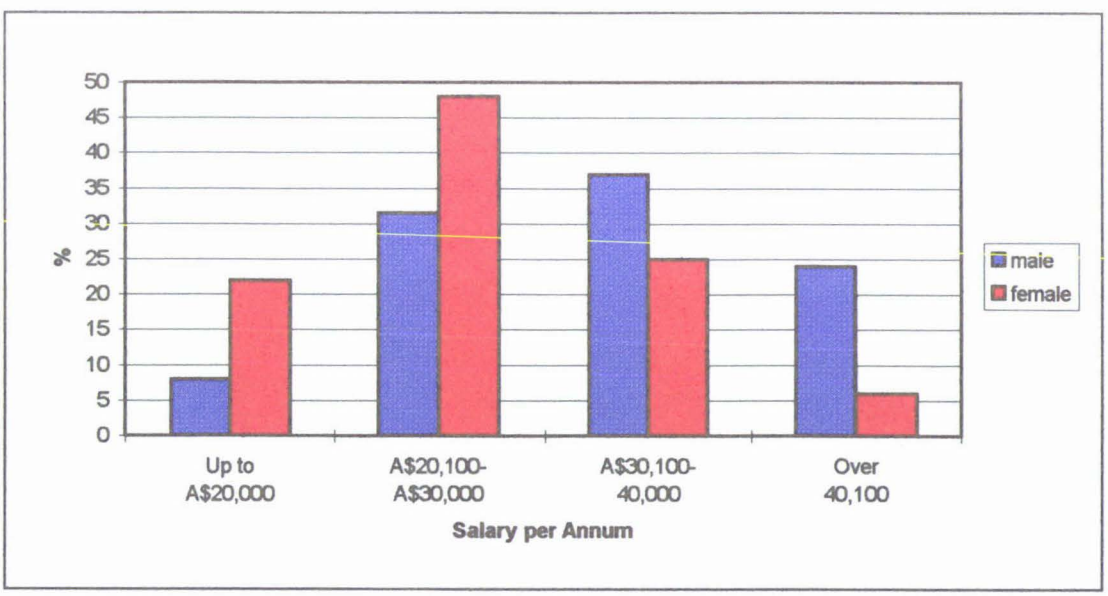
Discipline	1983 Number	1983 %	1990 Number	1990 %	1992 Number	1992 %
Arts	54890	64	74480	68	84872	68
Business	18539	30	42643	41	49922	43
Education	48945	66	54143	72	56782	73
Architecture	1610	21	3586	33	4085	34
Law	4165	40	6385	45	8379	47
Total	161260	46	255655	53	298812	53

Source: Australian National Audit Office (1993:66).

Of particular concern, is that female students are especially under-represented in tertiary courses which charge fees (Allport 1996:5).

Fifty-five percent of female tertiary students (as opposed to 45 percent of male students) paid the HECS fees at the outset of their tertiary studies (Allport 1996:3). This corroborates the argument that women have more of an aversion to the utilisation of loans. The reluctance to attend tertiary education and/or take up a student loan may have been influenced by the acknowledgement of future returns. Currie (1991:249) reported that "women graduates earned less than males in the late 1980s in Australia ... even when women entered the same [disciplines] as men, they earned less and the wage differences increased over time".

Figure 3.6: ***Salary of Graduates by Gender for 1988.***



Source: Currie (1991:253).

The Australian government projected that 21.6 percent of student debt owed by females, was unlikely to be repaid, whereas only 10.9 percent of student debt owed by males was foreseen as unlikely to be recollected (Ministerial Consultative Group 1994:213).

Summary

The overall number of tertiary enrolments in Australia has increased significantly since 1988, although the advent of the HECS fee may have had a deterrent effect. This is illustrated by the research conducted by the Department of Employment Education and Training in 1990, which calculated that HECS had deterred 10.9 percent of potential university students (Juddery 1996b). Trends in participation rates among disadvantaged groups have generally improved, although inequities persist. It is estimated that 15 to 20 percent of tertiary students originate from lower socio-economic groups (Australian National Audit Office 1993:41). There is contradictory evidence as to the advancement of the lower socio-economic groups in tertiary education. Aboriginal and Torres Strait Islander people are under-represented in the tertiary sector. Only 3.5 percent of Aboriginal and Torres Strait Islanders participated in tertiary education in 1990, in contrast to 4.8 percent for the general population. However, the Aboriginal and Torres Strait Islander participation rates have increased significantly (from 110 in 1973 to 5,105 in 1992). Females comprised 49.8 percent of tertiary students in Australia, but remain under-represented in certain disciplines and tertiary courses which charge fees (OECD 1995b). A higher percentage of females elect to pay tertiary fees (HESC fees) in advance, rather than incur a loan. This may be caused by an awareness of anticipated lower future earnings when compared to their male counterparts.

United States of America

The Evolution of Tertiary Access Policies

The first tertiary institutions in the USA were private. Nevertheless, Harvard University, founded in 1636, though private, received public funds from the colony and then the Commonwealth of Massachusetts through the first quarter of the nineteenth century. The first piece of legislation concerning access, in the USA, was the Morrill Land Grant Act 1862, which provided land to each state, in order for them to establish tertiary institutions. While this legislation enabled tertiary institutions to subsidise places for many secondary school graduates, access and equity were not major concerns in the nineteenth century or the first half of the twentieth century (Hansen and Stampen 1991).

In 1954 the Supreme Court, in *Brown versus Topeka Board of Education*, ruled separate schools for Black students unconstitutional and thus laid the groundwork for the civil rights movement. The late 1950s and 1960s saw more government tertiary education legislation passed than all the previous history of the country. Some 17 statutes were enacted aimed at expanding tertiary educational opportunities for minority students (Hansen and Stampen 1991). The key legislation was the National Defence Education Act 1958, which provided government funds for a low interest student loan scheme (now called Perkins Loans).[38] The next main development was the work-study programme, unfolded in 1964, which provided 80 percent of the cost of salaries paid to financially deserving students for part-time employment on campus. In 1965, these two measures, along with the Educational Opportunity Grant Programme (now called Supplemental Educational Opportunity Grants), were consolidated into the Higher Education Act (OECD 1990:50; Hansen 1989:46).

The Carnegie Commission's report of 1968 called for further student assistance, and both the Nixon and Carter Administration endorsed their recommendations (Hansen and Stampen 1991).[39] The Higher Education Act was hence further amended from 1968 to 1980 to expand the available aid and to make it more predictable. In 1972, the Government created the Basic Educational Opportunity Grant programme (now called Pell Grants)(OECD 1990:50).

Pressure from middle income families for greater access to student aid, resulted in the Middle Income Student Assistance Act 1978. This legislation removed the requirement for students to demonstrate financial need in order to be eligible for Guaranteed Student Loans (with a fixed level of interest of seven percent)(Hansen and Stampen 1991:64; Hansen 1989:47).

In 1980 the new Reagan Administration advocated a reduction in public spending on social programmes, including tertiary education (Cross 1987:66). They repealed the Middle Income Student Assistance Act by restricting Guaranteed Student Loans to students with financial need. In 1988, the Guaranteed Student Loan scheme was changed to Stafford

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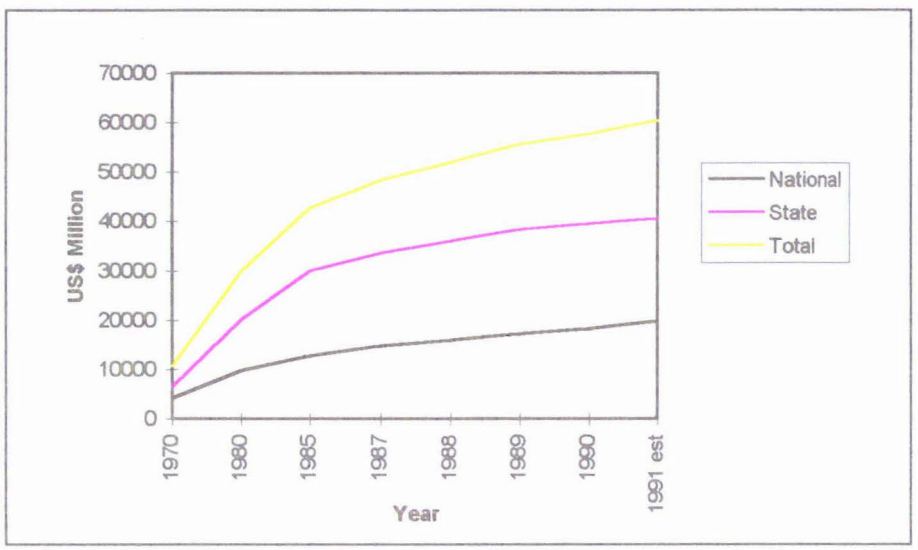
[38] Perkins Loans were called National Defence Student Loans in 1958, but were later renamed as National Direct Student Loans, prior to their current label (Hansen 1989:65).

[39] In 1970, President Nixon stated "No qualified student who wants to go to [tertiary institutions] should be barred by lack of money" (Hansen and Stampen 1991:63).

Loans and PLUS loans for parents (Hansen 1989:47-8). Since 1980, there has been a reduction in the proportion of direct tertiary funding from government. However, there has been a shift towards the subsidisation of fees and living costs of individual students, rather than a reduction in the total government share of tertiary education funding (OECD 1990:20). Government expenditure on tertiary education from 1970 to 1991 is presented in figure 3.7.

Figure 3.7: ***Government Expenditure on Tertiary Education 1970 to 1991.***



Source: US Department of Commerce (1995:fig 281).

In summary, before the mid 1960s, the burden of paying for tertiary education in the USA fell almost entirely on students and their families. A triad of government programmes (grant, loan and work) was introduced between 1958 and 1980, following the civil rights movement. These policies remain as the foundation of USA's student aid programme, although its rapid expansion has been discontinued.

Contemporary Funding and Access Policies

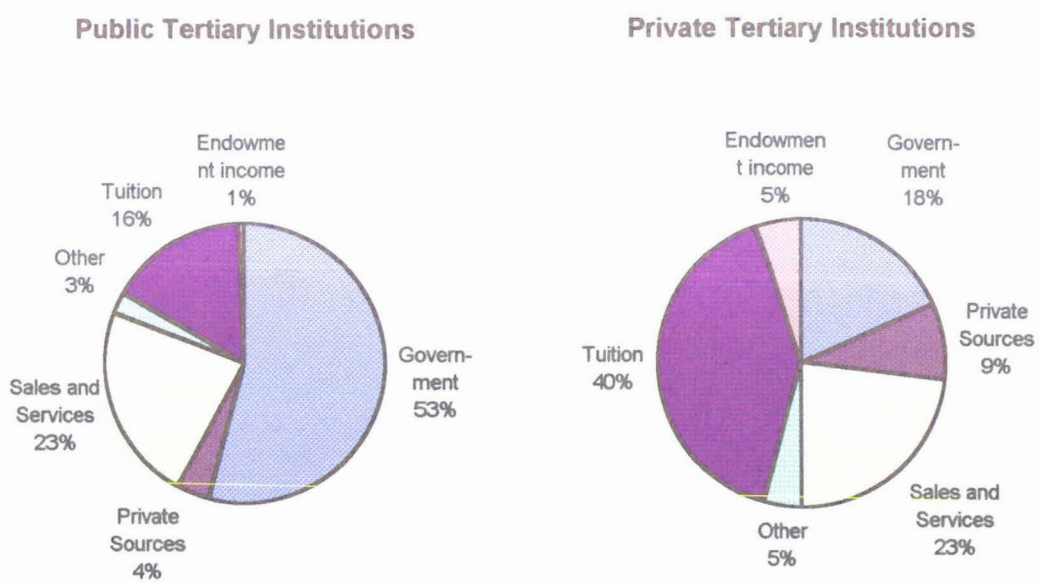
The USA's tertiary education system and student aid schemes are large and heterogeneous. There are now over 3,500 tertiary institutions in the USA and close to 14 million students (Franzosa 1996:126). In 1995, over 35 billion dollars was awarded in student aid, and the average student received over US$1,500 (College Finders 1996). Assistance is provided by the national government (called federal government), state and local governments and by institutions themselves. There is therefore a diverse range of tertiary funding and student aid programmes, both between and within states. In this study, data on national, state and local governments is aggregated and the focus is on the primary sources of tertiary revenue

and nation-wide implications. However, appendix I and II provide a summary of interstate data to illustrate the diversification within the USA.

First however, it must be noted that the USA has broadly two systems of tertiary education: government-administered or public tertiary institutions and private institutions. Many private institutions are high prestige, high quality and high cost institutions.[40] Hence, to obtain a full comprehension of the practice in the USA, it is imperative to account for both the public and private tertiary systems.

Figure 3.8 illustrates the sources of funds for tertiary institutions in the USA. Private institutions in the 1990-91 academic years received only 18 percent of their US$51 billion funding from government sources. Public institutions, on the other hand, received most of their US$89 billion funding from government (53 percent). The government also provides tax incentives for charitable contributions (estimated to be worth about US$1.6 billion in 1994) and purchases research services from tertiary institutions (OECD 1995c:128). In 1991, the public share of total funding for the tertiary sector was 56.2 percent (Ministerial Consultative Group 1994:205).

Figure 3.8: ***Sources of Revenue for Tertiary Institutions 1990-91.***



Source: OECD (1995c:128).

[40] In the USA, average expenditure per student in private universities is 60 percent higher than in the public institutions (OECD 1990:36).

Tuition fees: In 1995-96 the average cost of tuition, fees, room and board at 4-year public tertiary institutions was US$6,585 and the average cost at 4-year private tertiary institutions was US$15,648. However the fees varied substantially, from free services (at the US Service Academies) to those institutions charging over US$25,000 per annum, including Sarah Lawrence College (US$28,448), Yale University (US$27,630), Brown University (US$27,489), Stanford University (US$27,237) and Harvard (US$27,265)(Famighetti 1995:221). Nearly nineteen percent of undergraduates that attended 4-year private institutions in 1993-94, paid more than US$15,000 in tuition fees for the year (US Department of Commerce 1995:185). The average tuition fees from 1969-70 to 1993-94 are provided in table 3.4. In the USA, fees accounted for one quarter of tertiary institutional income in 1990 (US Department of Commerce 1995:figure 281).

Table 3.4: ***Tertiary Institution Charges (US$) from 1969-70 to 1993-94.***

	Tuition			Board Rates (7 day basis)			Hostel Charges		
	All	**2-yr**	**4-yr**	**All**	**2-yr**	**4-yr**	**All**	**2-yr**	**4-yr**
Public									
1969-70	323	178	427	511	465	540	369	308	395
1979-80	583	355	840	867	894	898	715	572	749
1989-90	1356	756	2035	1635	1581	1728	1513	962	1561
1990-91	1454	824	2159	1691	1594	1767	1612	1050	1658
1991-92	1624	937	2410	1780	1612	1852	1731	1074	1789
1992-93	1782	1025	2349	1841	1668	1854	1756	1106	1816
1993-94	1939	1114	2543	1880	1688	1894	1877	1204	1937
Private									
1969-70	1533	1034	1809	561	546	608	436	413	503
1979-80	3130	2062	3811	955	924	1078	827	769	999
1989-90	8147	5196	10348	1948	1811	2339	1923	1663	2411
1990-91	8772	5570	11379	2074	1989	2470	2063	1744	2654
1991-92	9434	5752	12192	2252	2090	2727	2221	1789	2860
1992-93	9942	6059	10294	2344	1875	2354	2348	1970	2362
1993-94	10594	6343	10994	2440	1981	2451	2498	2113	2513

Source: Famighetti (1995:220).

The federal and state governments contribute towards tuition costs, by operating programmes that extend grants, work-study programmes and loans to students. There are two national grant programmes, where the grants do not have to be repaid to the government:

The Pell Grant is the most popular and largest of the need-based government programmes. The amount awarded is determined by the government through a standard formula. Grants range from US$200 to US$2,340 per academic year. Students must be studying towards a first award, be a US citizen or eligible non-citizen, graduated from secondary school and continue to make satisfactory progress, have demonstrated financial need and be studying at least half-time (College Finders 1996; US Department of Education 1996).[41]

The Federal Supplemental Educational Opportunity Grant is given to undergraduate students with exceptional financial need above the Pell Grant. The same criteria associated with Pell grants apply here. It is administered through the tertiary institution and there is no guarantee that every eligible student will be able to receive this form of grant. The grant ranges from US$100 to US$4,000 per year, depending on the level of demonstrated need and the funding level of the tertiary institution the students attend (College Finders 1996).

The Work-Study programme is where government grants are provided to tertiary institutions, which develop part-time jobs for tertiary students with demonstrated financial need. This enables students to earn money to help pay current educational expenses or to repay student loans. The employment is usually 10-20 hours a week and largely involves community service work and work related to the student's course of study. Pay rates must be equal to or greater than the minimum wage. The government pays for 70 percent of the wages for students working for non-profit employers, including the educational institutions, and 50 percent for those employed in commercial arrangements. The same eligibility criterion applies as that of Pell grants, although post-graduate students also qualify (DeLoughry 1992:A20; OECD 1995c; College Finders 1996; US Department of Education 1996).

The federal and state governments also operate several student loan schemes. The three primary student loans must be repaid with interest:

The Stafford Loans are government-backed loans made to students and are either subsidised or unsubsidised. A subsidised loan is awarded on the basis of financial need and the government pays the interest on the loan during a grace period or during authorised

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[41] Financial need is determined by formula and largely entails the cost of tertiary attendance minus the expected family contribution (US Department of Education 1996).

periods of deferment.[42] An unsubsidised loan is not awarded on the basis of need and students are charged interest from the time the loan is disbursed until it is repaid in full. This is the most common form of government student aid. The same criterion apply as Pell grants, but again one can be completing post-graduate study to be eligible. Recipients borrow money through commercial lenders. Dependent undergraduates can borrow up to US$2,625 for the first year and US$3,500 for the subsequent years, until the total debt reaches US$23,000.[43] An independent undergraduate can borrow up to US$6,625 for the first year, US$7,500 for the second and US$10,500 for the subsequent years, until the total debt reaches US$46,000. Post-graduates can borrow up to US$18,500 each year, until the total debt reaches US$138,500. All these amounts are adjusted if the period of study is less than an academic year. The interest rate is adjusted each year (but will never exceed 8.25 percent) and this applies for both subsidised and unsubsidised loans (College Finders 1996; US Department of Education 1996).

The Perkins Loans are very similar to the Stafford loans. However they are administered through the tertiary institution, not commercial lenders. The Perkins Loan is a low-interest (five percent as of November 1996) loan for both undergraduate and post-graduates with exceptional financial need. Undergraduates can borrow up to US$3,000 a year, until the total amount reaches US$15,000. Post-graduates can borrow up to US$5,000 per year, until the total reaches US$30,000. There is a grace period of nine months after graduation, withdrawal or dropping below half-time status. Furthermore, students have up to ten years to repay (College Finders 1996; US Department of Education 1996).

PLUS loans are targeted at parents with good credit histories, so they may borrow money to pay the educational expenses of each child who is a dependent undergraduate student enrolled at least half-time. The maximum loan is equal to the cost of attendance at the tertiary institution, minus any financial aid their child receives directly. The interest rate is variable, but will never exceed nine percent and there is a maximum ten year loan repayment period (US Department of Education 1996).

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[42] The grace period entails an exemption from interest until six months after the student's graduation, withdrawal or dropping below half-time enrolment.

[43] One is considered dependent on their parents in the USA until the age of 22 years, unless the individual is: (i) married or has dependants; (ii) an orphan or ward of the court; (iii) a veteran or (iv) enrolled in a post-graduate programme (US Department of Education 1996).

Table 3.5 provides a summary of the expenditure on these student aid programs from 1970 to 1993. Students may acquire more than one form of financial aid and receive advice from 'Financial Aid Directors' in order to secure all their entitlements (Ministerial Consultative Group 1994).

Table 3.5: ***National Student Aid programmes from 1970 to 1993.***

Programme	Unit	1970	1980	1985	1988	1989	1990	1991	1992	1993 est
Pell Grants										
Recipients	1000	...	2708	2813	3198	3322	3405	3786	4002	3539
Funds	Mil. US$	...	2387	3597	4476	4778	4935	5793	6176	5683
Av. Grant	US$	...	882	1279	1399	1438	1449	1530	1543	1606
Supplemental Education Opp. Grant										
Recipients	1000	253.4	717	686	678.8	727.6	761.2	881.3	976.3	908
Funds	Mil. US$	134	368	410	423	466	503	586	651	663
Av. Grant	US$	527	513	598	621	641	661	665	667	730
Work-Study										
Recipients	1000	425	819	728	672.7	676.7	687.4	697.3	714.4	813
Funds	Mil. US$	200	660	656	625	664	727	760	780	813
Av. Salary per Yr	US$	470	806	901	930	980	1059	1090	1097	1000
Perkins Loans										
Recipients	1000	452	813	701	692.1	695.9	660.2	654.2	669	571
Funds	Mil. US$	241	694	703	874	903	870	868	868	720
Av. Loan	US$	532	853	1003	1262	1297	1318	1326	1333	1261
Loans in Default	Mil. US$	n.a.	612	690	749.8	741.1	727.5	744.7	569.3	n.a.
Default rate	%	n.a.	11.6	8.3	7.3	6.8	6.2	6	12.2	n.a.
Stafford Loans										
Recipients	1000	1017	2905	3730	4584	4558	4587	4403	4677	5551
Funds	Mil. US$	1015	6200	8839	11965	12166	12669	12336	13427	16425
Av. Loan	US$	998	2135	2369	2610	2669	2762	2802	2871	2959
Loans in Default	Mil. US$	n.a.	1440	4256	8417	10454	13134	16373	19452	n.a.
Default rate	%	n.a.	10.1	8.9	9.2	9.6	10.4	11.6	12.9	n.a.

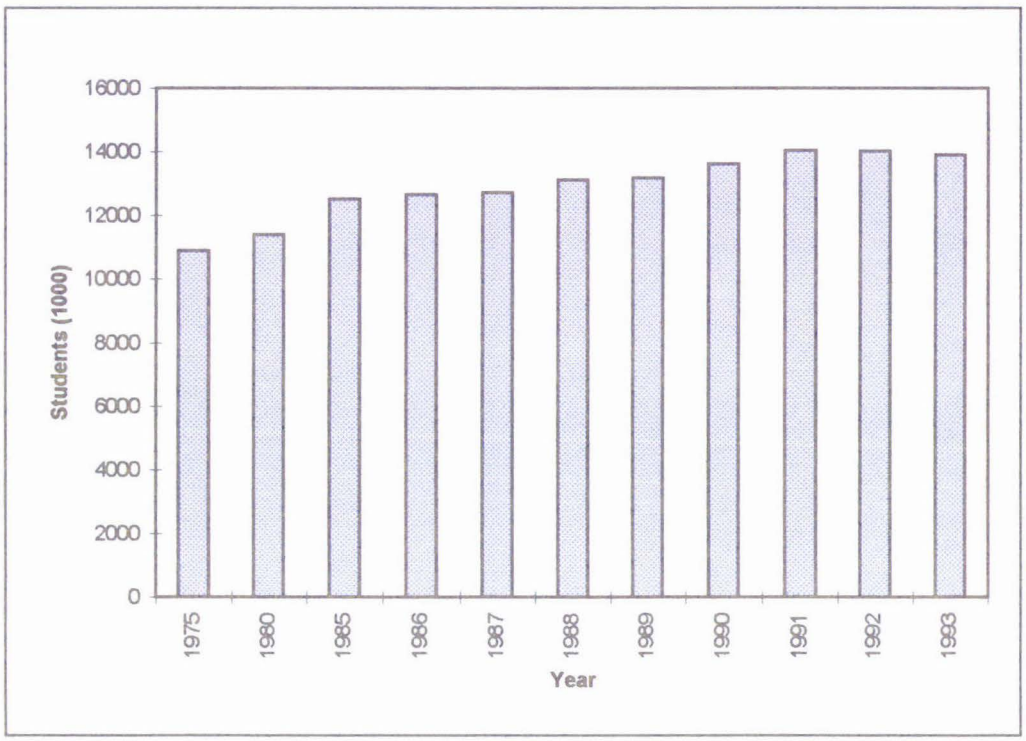
Source: OECD (1995c:table 20) and US Department of Commerce (1995:fig 285).

Overall Participation Rates

Figure 3.9 presents the number of enrolled tertiary students from 1970 to 1993, however about one third of these tertiary students would have studied part-time. Nevertheless, the USA has a high proportion of its population engage in tertiary studies. Sixty percent of

those who successfully complete secondary education go on and experience some form of tertiary education (Moodie 1991:4).[44]

Figure 3.9: ***Number of Enrolled Tertiary Students - 1975 to 1993.***



Source: US Department of Commerce (1995:figure 279).

Numerous studies have been conducted in America on the influence of tertiary access policies on overall tertiary participation. Jackson, in 1975 concluded that the availability of student aid only played a relatively small role in the individual's tertiary attendance decision (compared with variables such as test scores, high school grades, peer group effects and parental education). However, given the constancy of the effect of most of these variables over time, and the increased availability of aid during the 1970s, Jackson rationalised that student aid accounted for a relatively large percentage (15 to 25 percent) of the predicted increase in tertiary participation between 1972 and 1980 (cited in James 1988:2).

A subsequent study, by Manskie and Wise, determined that the US Pell Grant in 1979-80, contributed to a 21 percent advance on tertiary enrolments, with the greatest effect on lower socio-economic families (cited in McPherson and Schapiro 1991:310).[45]

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[44] Although 60 percent of secondary school graduates proceed to tertiary education, fewer than two-thirds of these eventually graduate (Moodie 1991:4).

McPherson, in 1978, analysed the statistical significance of tuition fees and other variables on overall tertiary enrolment rates in the USA. McPherson calculated that a US$100 reduction in tuition fees would result in a one percent expansion in the participation rate of 18 to 24 year olds (cited in Maani 1995:8). This finding was replicated by Leslie and Brinkman in 1987. Reviewing 25 relevant studies conducted in the USA, Leslie and Brinkman concluded that, once extreme cases were removed, data of the studies consistently indicated that for every US$100 increase in tuition fees, one could anticipate a 0.6 percent to 0.8 percent reduction in the participation rates of the 18 to 24 year olds (Leslie and Brinkman 1987:199).

Lower Socio-Economic Groups

As table 3.6 reveals, on average low income students, or their families, bear 38 percent of the cost at the average public tertiary institution, 36 percent at the average private institution and about 31 percent of the cost at a high-cost private institution (OECD 1995c:133).[46]

Table 3.6: ***Estimated Costs and Funding Sources for Tertiary Education.***

	Annual Cost US$	Share of Total Costs Borne (%)					
		Low Income			Middle Income		
		Family	Public	Institution	Family	Public	Institution
Average Public	5314	38	62	0	89	11	0
Average Private	9659	36	47	18	65	19	17
High-cost Private	15000	31	33	36	51	15	33

Source: OECD (1995c:Table 21).

A survey, conducted in 1986, indicted that only 38 percent of all undergraduate students received grant assistance and only 45 percent received student aid from any source (Hansen 1989:48). Most of the recipients of the grant, work-study and loan programmes

[45] Manskie and Wise calculated that student aid had contributed to a 59 percent increase in enrolments for lower socio-economic students, a 12 percent increase for middle-income students and a three percent increase for higher socio-economic students (cited in McPherson and Schapiro 1991:310).

[46] Thirty-eight percent of the cost at the average public tertiary institution was equivalent to US$2,019 per year, 36 percent at the average private institution was equivalent to US$3,477 per year and 31 percent of the cost at a high-cost private institution was equivalent to US$4,650 per year. The data is based on the 1991 publication by Clotfelter, C.T. et al (OECD 1995c:133).

would be students from lower socio-economic backgrounds. The loan schemes has been a cause for particular concern, as the USA has a relatively high default rate (see table 3.5). Many of those that default on loans are found among students, or former students, who enrolled in relatively short-term programmes, withdrew before receiving an award and people with low incomes (Hansen 1989:62).[47] Juddery (1996b:3) points out that many loans schemes in the USA had resulted in a high proportion of bankruptcies.

Bishop (1977) cited a number of studies which demonstrated that tertiary attendance was positively correlated with socio-economic background and negatively related to tuition fees.[48] Bishop's research suggested that the impact of attendance costs on tertiary participation was greatest for students from the lower socio-economic stratum.[49] Bishop stipulated that targeting student aid to lower socio-economic groups was the most efficient means of increasing overall tertiary enrolments (Bishop 1977).

In a study published in 1983, Hansen (cited in McPherson and Schapiro 1991; Maani 1995:14-15) calculated the enrolment rates of 18 to 24 year olds, of below- to above-median-income families for 1971-72 and 1978-79. Hansen argued that the proportion of tertiary students from the lower socio-economic groups had declined when the level of student aid was dramatically advanced and increased with price hikes. This study is still cited in the literature advancing the reduction in student aid or increase in student contribution.[50]

However, research published in 1991 by McPherson and Schapiro, made some methodological improvements and extended the time frame considered by Hansen. McPherson and Schapiro concluded that a US$100 tertiary cost increase in 1978-79 dollars, would result in a 2.2 percent enrolment decline for Caucasian students from lower socio-economic groups (McPherson and Schapiro 1991).

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[47] A major concern in the USA is the rising annual costs associated with student loan defaults. One quarter of the student population borrow funds and 14 percent default, costing US$1.5 billion annually (Hansen 1989:62). High default rates and the interest rate subsidies mean that the average government cost per US$1,000 of Stafford programme lending was US$400 in 1989 (OECD 1995c:231).

[48] Bishop (1977) identified studies by Campbell and Siegel in 1967, Hopkins in 1974 and Corazzini, Dugan and Grabowski in 1972.

[49] Economists refer to this scenario as demand being elastic for lower socio-economic groups, but inelastic for middle and higher socio-economic groups.

[50] For example, Gladieux (1983), Woodhall (1989a) and Morris (1989) cite Hansen's study.

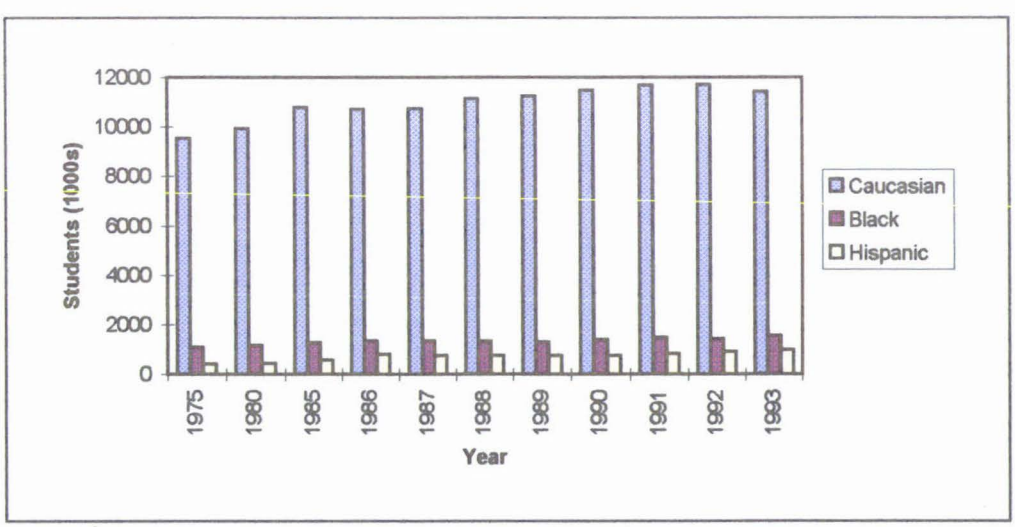
Ethnic Minorities

Ethnic minorities are an increasing percentage of the American population, and this trend is likely to continue. The key ethnic minority groups in the population of 245.8 million, are 44 million Blacks, 47 million Hispanics and 2 million Native Americans. Demographic projections estimate that there will be approximately 100 million ethnic minority persons in a nation of 260 million by the year 2020 (Hodgkinson 1995:16).

Figure 3.10 provides an account of the changing pattern of tertiary enrolments by Caucasian, Black and Hispanic ethnic groups. In 1993, Caucasians comprised approximately 82 percent of the tertiary populace, Blacks accounted for about 11 percent and Hispanics accounted for close to seven percent (US Department of Commerce 1995). When demographic growth is compared with developments in tertiary participation rates, only a slight improvement can be detected for Black and Hispanic groups. In 1980, approximately 4.35 percent of Blacks were engaged in tertiary education and in 1990 4.5 percent were engaged in tertiary education. In 1980, 3.0 percent of Hispanics were engaged in tertiary education, and this advanced to 3.3 percent in 1990 (US Department of Commerce 1995:figure 240; Microsoft 1995).

Ethnic minorities are particularly under-represented in post-graduate study. Nearly three and a half percent of Blacks and nearly three percent of Hispanics have an advanced award, as opposed to approximately eight percent of Caucasians, in 1994 (US Department of Commerce 1995:figure 240).

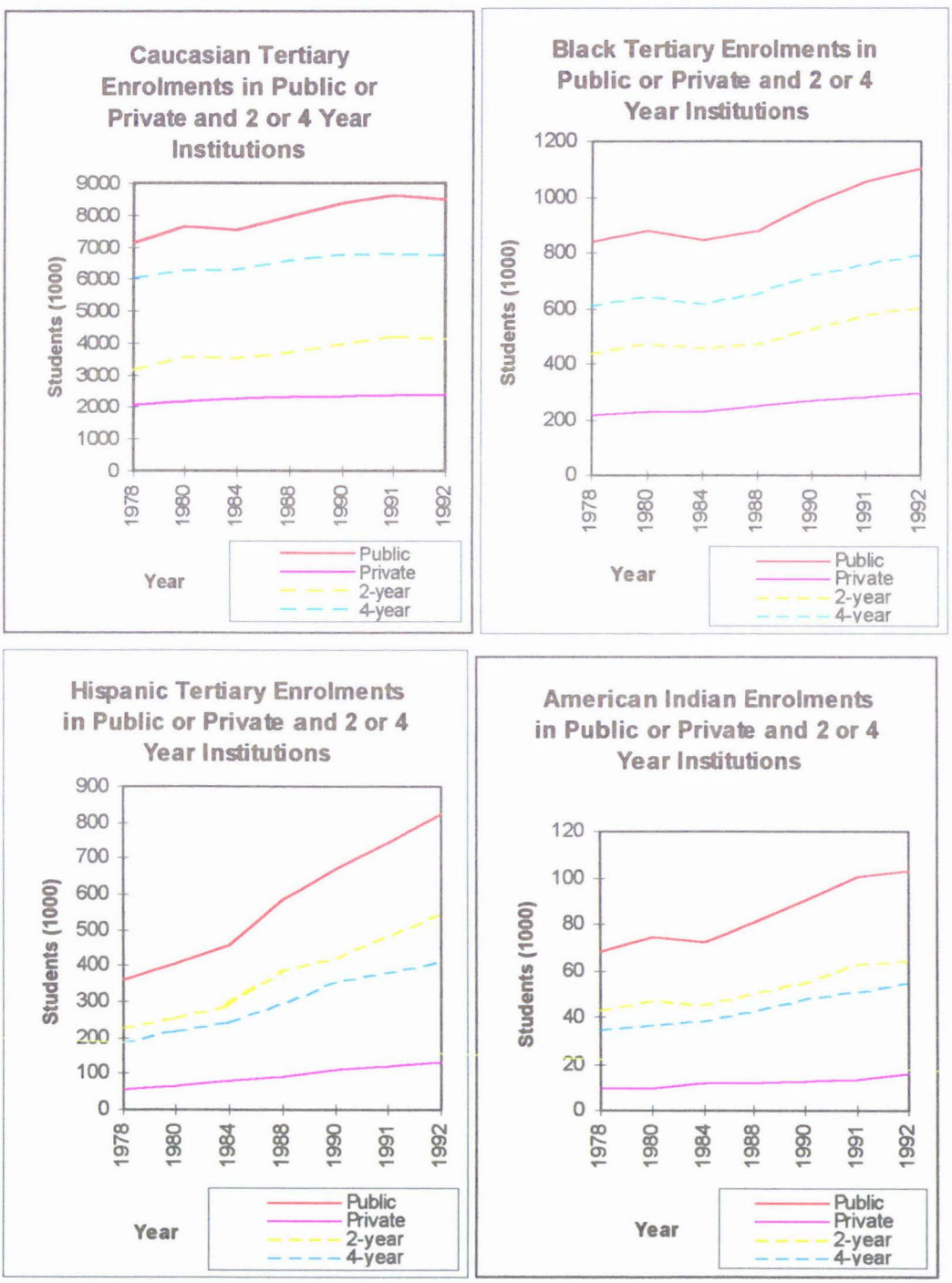
Figure 3.10: ***Tertiary Enrolments by Ethnicity from 1975 to 1993.***



Source: US Department Of Commerce (1995:figure 279).

Ethnic minorities have been primarily absorbed into 2-year and public institutions as figure 3.11 shows.

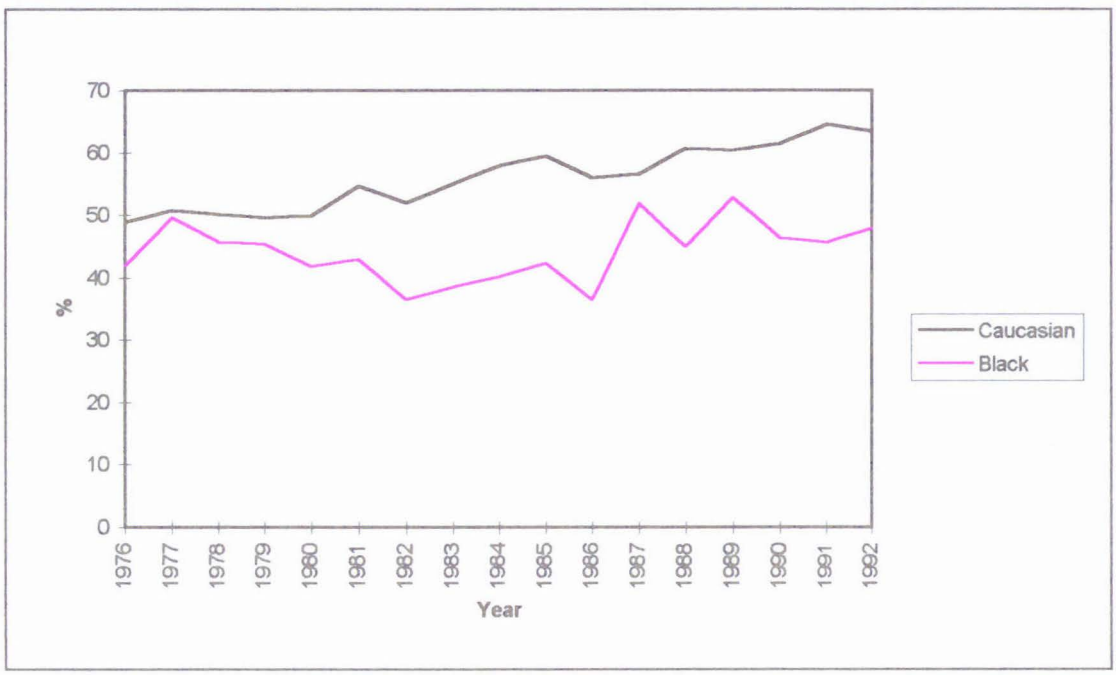
Figure 3.11: ***Tertiary Enrolments in Public/Private and 2/4 year Institutions by Ethnicity - 1978 to 1992.***



Source: US Department of Commerce (1995:figure 278).

Those from minority ethnic groups are less likely to proceed directly into tertiary education from secondary school. Figure 3.12 shows that this situation has generally deteriorated for Blacks since 1980.

Figure 3.12: ***Proportion of Caucasian and Black Students Entering Tertiary Education Directly from 1976 to 1992.***

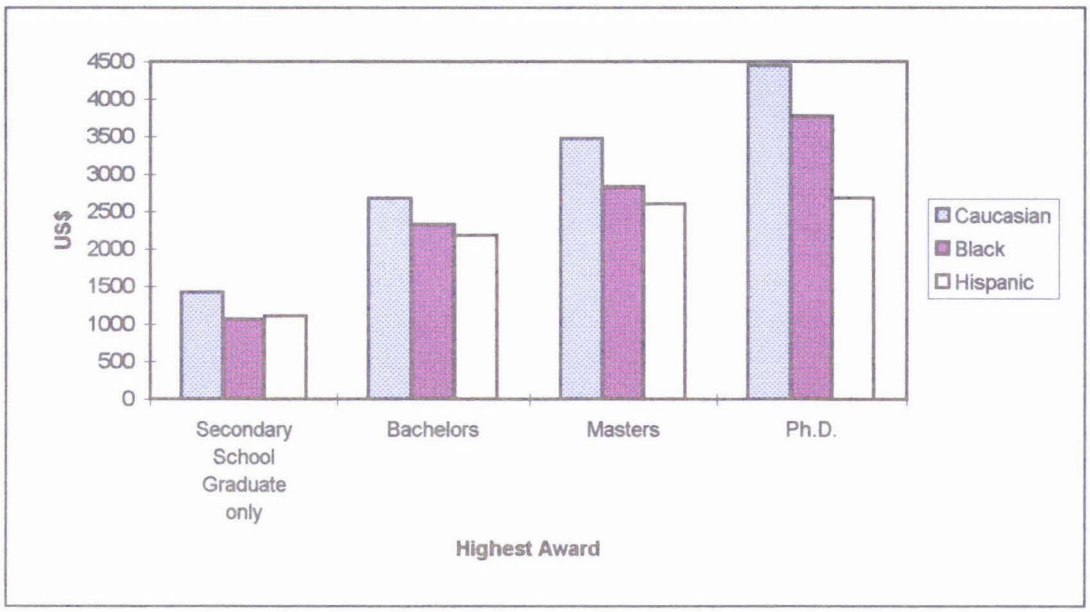


Source: US Department of Commerce (1995:figure 276).

Cronin and Simmons (1987) and Hansen (1989) reported that minority participation rates have declined since 1980, when there was an emphasis by government on curbing tertiary costs. Both authors noted that many critics felt that increasing reliance on loan financing had contributed to the regression. However, Cronin and Simmons (1987:6) did caution against adopting this as a total explanation, as one could not account for the impact of the decline in affirmative action policies and alternative opportunities available to minority youth.

The choice to pay for the increasing share of tertiary education costs, is in part a response to realistic expectations about the rewards of education. Figure 3.13 shows the results of a survey by the US Bureau of the Census, which compared the mean earnings of Caucasian, Black and Hispanic individuals (18 years and over), with equivalent qualifications. Even with the same educational qualifications, the average Black and Hispanic wage is significantly less than their Caucasian contemporaries.

Figure 3.13: ***Mean Monthly Income by Ethnicity in 1993.***

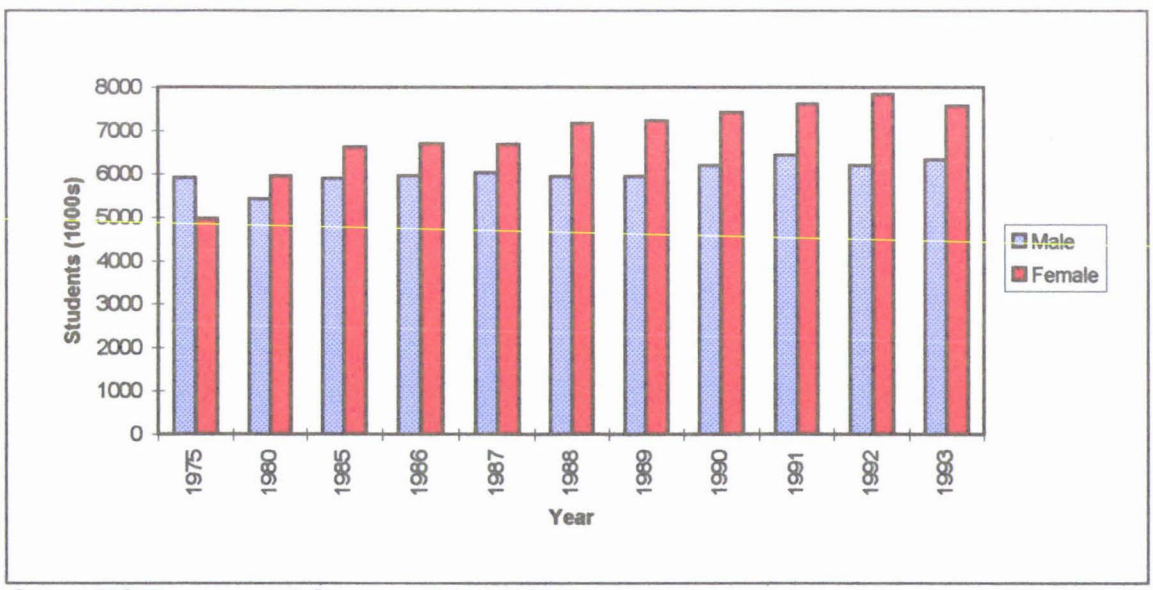


Source: US Department of Commerce (1995:fig 241).

Women

As figure 3.14 exemplifies, since 1980 females have outnumbered males in tertiary enrolments. Of the 14 million students enrolled in 1993, women accounted for 55 percent of the total student populace and 51.5 percent of full-time students (US Department of Commerce 1995:figure 277). From 1975 male tertiary enrolments have remained static. Only female tertiary enrolments have shown general growth.

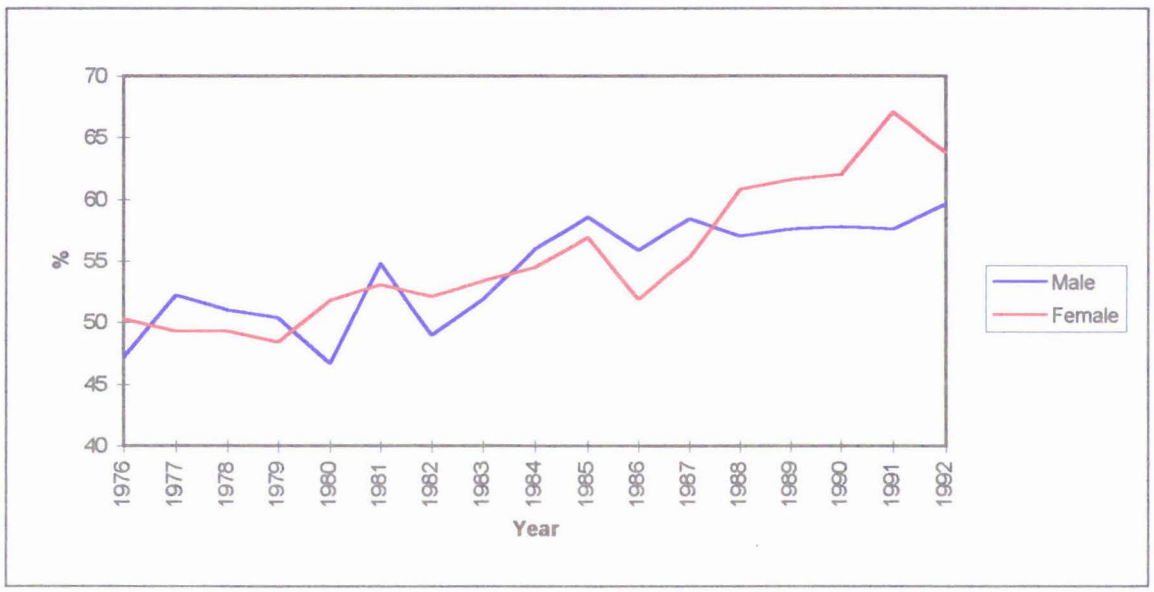
Figure 3.14: ***Tertiary Enrolments by Gender - 1975 to 1993.***



Source: US Department of Commerce (1995:fig 279).

Figure 3.15 illustrates, that this has been accompanied by equal proportions of females that proceed directly to tertiary education from secondary school.

Figure 3.15: ***Proportion of Males and Females that Entered Tertiary Education Directly from Secondary School - 1976 to 1992.***



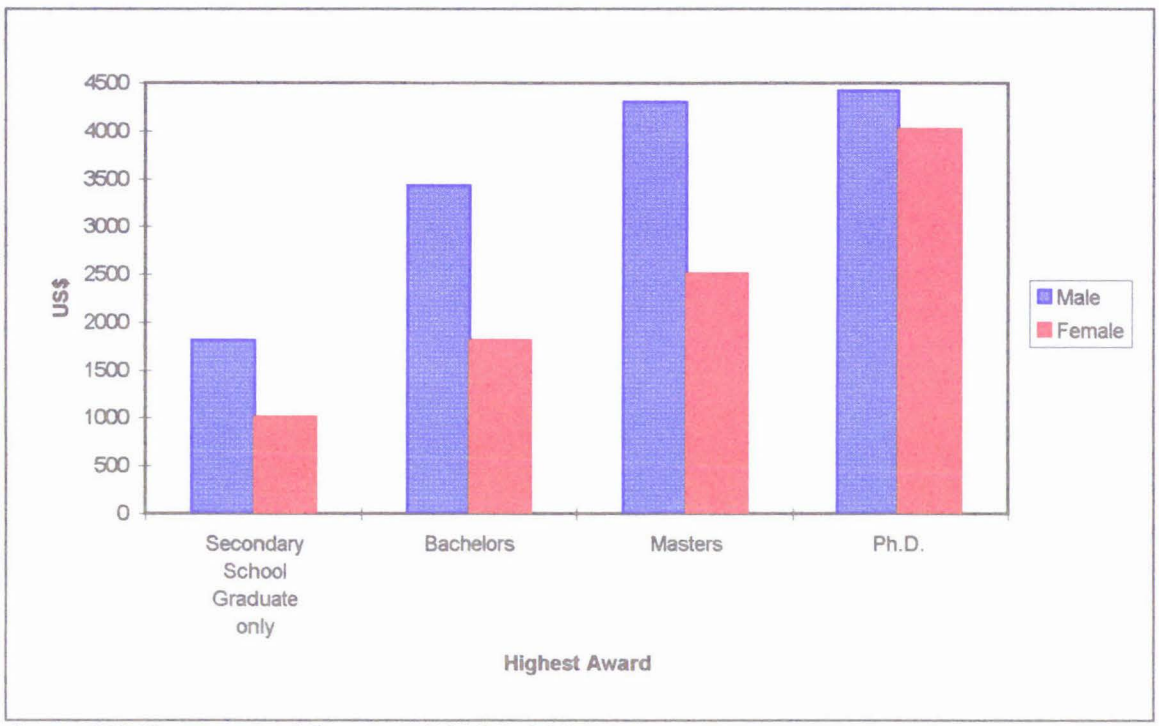
Source: US Department of Commerce (1995:fig 276).

Despite overall numerical parity, in terms of overall participation in tertiary education, females are still under-represented in post-graduate study. Of those that were awarded doctorates in 1994, there were half as many women as men (Hodgkinson 1995:14). Furthermore, females are modestly over-represented in part-time study. In 1993, 38.9 percent of female students (as opposed to 30.6 percent of male students) were enrolled in tertiary education part-time or extramurally, and 29.1 percent (as opposed to 28.6 percent of male students) were simultaneously engaged in part-time employment (US Department of Commerce 1995:figure 280).

Another area of concern is that female students are more likely to default on their loans or seek deferments. This is a direct result of the differences in average salaries between males and females. Figure 3.16 shows the results of a survey by the US Bureau of the Census, which compared the mean earnings of males and females, 18 years and over, with equivalent qualifications. Despite attaining equivalent qualifications, women on average

receive substantially less pay than their male counterparts (US Department of Commerce 1995).

Figure 3.16: ***Mean Monthly Income by Gender in 1993.***



Source: US Department of Commerce (1995:fig 241).

Summary

The social impact of USA's tertiary funding and student aid programme is difficult to determine, as the growth of low-cost public institutions has meant that students can attend tertiary education at minimum cost and these institutions attract disproportionate numbers from ethnic minorities, women and presumably those from lower socio-economic backgrounds.

Nevertheless, it has been ascertained that students on low incomes contribute 38 percent of the cost at the average public tertiary institution, 36 percent at the average private institution and about 31 percent of the cost at a high-cost private institution, despite student aid (OECD 1995c:133). This is likely to act as a significant barrier to people from lower socio-economic groups, even with the availability of government guaranteed loans.

Since 1980 the tertiary participation rates of ethnic minorities have been stagnant, or even declined. In 1993, Blacks accounted for 18 percent of the American population but only 11 percent of their tertiary populace (up only one percent from 1980). Hispanics comprised

19 percent of the population and just seven percent of enrolments (up three percent). Ethnic minorities are particularly under-represented in private and 4-year institutions and post-graduate programmes. Many have attributed this trend to the increasing tuition fees and the impact of loans.

Female tertiary enrolments outnumber males in both full-time enrolments (51.5 percent) and total enrolments (55 percent), but females are significantly under-represented in post-graduate studies. Another concern is that females are more likely to default or seek deferments on their loan repayments. This may be related to the differences between male and female average earnings.

The United Kingdom

The Evolution of Tertiary Access Policies

The Universities of Oxford and Cambridge were established in the UK, in the twelfth and thirteenth century respectively. They were founded to advance the interest of the aristocracy. Four further universities were founded in the following two centuries, all in Scotland (St Andrews, Glasgow, Aberdeen and Edinburgh), but in general expansion was slow until the nineteenth century (Burnett, Saul and Harrison 1995; Central Office of Information 1995:445). From 1917, the government channelled financial assistance to universities through a semi-autonomous agency, the University Grants Committee (UGC), and this institution acted as broker for the universities for the next 70 years (Burnett et al. 1995).

In 1956 the Weaver Committee recommended the introduction of a national student maintenance allowance for students remaining in full-time education beyond the mandatory requirement. The Weaver Committee also proposed that the maintenance grant be means-tested, however the recommendation was not implemented (Rice 1987:466).

The quest to up-skill the population for economic prosperity and the enhanced demand for tertiary education, led the government in 1961 to set up the Robbins Committee (Burnett et al. 1995:1291). But prior to the finalisation of their report, the government introduced the existing system of student grants in 1962 (Woodhall 1989c). The Robbins report, published in 1963, recommended an increase in government funding, in order to induce a socially optimum amount of investment in tertiary education. However, it also sanctioned the replacement of student grants with loans, arguing graduates could anticipate

considerably higher earnings. Yet the Robbins Committee stipulated that this should only be instigated after the pursuit of a tertiary education was more customary in the UK (Williams 1992:136; Williams 1993).

With the advent of the economic recession in 1969, the Secretary of State for Education and Science, warned university administrators that their pursuit for academic excellence should be balanced against a need for greater efficiency. Nevertheless, the tertiary budget continued to expand. From the 1970s the government gradually developed more of a supervisory role over the affairs of the UGC, which in turn exercised greater oversight of the universities' practices and finances (Burnett et al. 1995).

In 1981, the government resolved to reduce the funds available to the UGC by 17 percent over three years. However, the overall reduction was about 11 percent, because of additional funds being earmarked for engineering and technology. During the 1980s, a more sophisticated and selective formula was developed for the distribution of government funds, rewarding achievements in research and the expansion of student numbers (Burnett et al. 1995:1293-4).

The Thatcher government passed the Education Reform Act 1988, which replaced the UGC with the Universities Funding Council (UFC). The UFC was a statutory body assigned with the task of allocating government funds to the universities. It was a prerequisite that six of the 15 members were from outside of the tertiary education sector. The polytechnics were funded by the Polytechnics and Colleges Funding Council (PCFC) in England and Wales and by the Scottish Education Department in Scotland. In November of the same year the government published the White paper, which promoted the replacement of student grants by loans (Williams 1993).

In 1989, the government decided to shift its emphasis from bulk funding to that based on fees. In 1990, a top up loan was introduced and tertiary students became ineligible for social security benefits (Ministerial Consultative Group 1994). These reforms were enacted in legislation under the Further and Higher Education Act 1992. Simultaneously, the government eliminated any distinction in status, between the universities and other tertiary institutions, to enable a unified system of financing. Alarmed by the growth in government expenditure, in 1993 the government announced that it intended to reduce government spending per student by three percent per year until 1997 (The Economist 1994; Burnett et al. 1995).

In summary, the UK has a long tradition of university education, but had a modest attendance rate until the Second World War (Burnett et al. 1995:1290). The government supported the expansion of the tertiary education sector, with the introduction of student maintenance grants, in 1962, and progressive funding, endorsed by the findings of the Robbins Committee. But with the advent of the economic recession (commencing around 1969), the government exercised greater control over the funding and practices of universities, through the funding body (the University Grants Committee).

Throughout the 1980s, a more detailed formula was developed for the distribution of government funds, taking into account research achievements and growth in student places (Burnett et al. 1995:1293-4). On three separate occasions the government instigated initiatives to reduce government spending on tertiary education: (i) in 1981, with the government's 17 percent reduction in funding to the University Grants Committee, (ii) in 1989, with the passing of the Education Reform Act and (iii) in 1993, with the Government's resolve to reduce funding per student by three percent per year until 1997.

Contemporary Funding and Access Policies

The UK has 89 universities, including the Open University, and 70 other tertiary institutions which incorporate colleges for teacher training, art and technology (British Council 1996).[51] In 1992 there were 1,033,439 equivalent full-time students (OECD 1995b:142). Except for Buckingham, tertiary education is, for the most part, financed by government funds (either directly or indirectly) and research contracts. Apart from Oxford and Cambridge, endowment income in 1991-92 accounted for only 3.7 percent of the total revenue (Burnett et al. 1995:1294).

Government Bulk Funding: The major source of funding for universities is the block grant, allocated by the Department of Education and dispensed to individual universities by the national funding councils. Funding is based on a formula that takes into account research achievements and growth in student places (Burnett et al. 1995:1294). Government expenditure has risen sharply in recent years, to around £6.5 billion a year. However, due to the expansion in student numbers, government expenditure per student has fallen by a third (in real terms) since 1980. The government plans a three percent, or more, reduction in government spending per student until 1997 (The Economist 1996).

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[51] The Open University specialises in extramural tertiary education.

A reserved fund is also available to recruit and retain tertiary students facing financial barriers or difficulties. The capital is administered by the tertiary institutions. In 1995-96, £27.7 million in England and £4.1 million in Scotland was designated to negate financial barriers to disadvantaged students (Central Office of Information 1995:444).

External Research Income: Research income is obtained from three sources: (i) the government, administered by six research councils, (ii) charitable foundations and (iii) commercial firms. The government is calling for universities to seek more private sources of support (Burnett et al. 1995:1294).

Tuition Fees: About 14 percent of university income, and 17 percent of polytechnic income, come from tuition fees set by government (OECD 1990:31). In 1993-94, undergraduate fees were £1,300 for classroom based subjects, £2,770 for laboratory based subjects and £4,985 for clinical subjects. Fees for full-time undergraduate students are reimbursed by government, irrespective of family income. The fee for post-graduate studies was £2,260 (Ministerial Consultative Group 1994:206).[52]

Local Education Authority Awards: In addition to reimbursement of fees, students in the UK may be entitled to student maintenance grants, under the auspices of the Local Education Authority Award. Table 3.7 shows the maximum amount of annual grant in 1995/96. Students studying in London receive a higher amount, due to higher living costs, and students living with family receive a lower amount.

Table 3.7: ***Student Maintenance Grants for 1995/96.***

Living at Family Home	£1,530
Living away from family, in London	£2,340
Living away from family, elsewhere	£1,885

Source: Comerford (1995:4).

The amount of student maintenance is reliant on the income of the student and their family (or spouse where applicable). Table 3.8 provides details of the family contribution expected, by reason of family income. The expected contribution from the family is

[52] This is mainly through local education authorities, which are reimbursed by the Department of Education (Ministerial Consultative Group 1994:206).

deducted from the maximum grants (shown in table 3.7) for each dependent studying at a tertiary institution (Comerford 1995).[53]

Table 3.8: ***Family Contribution Towards Student Maintenance Grants 1995-96.***

Parent's Income	Contribution
Below £15,510	£0
£15,510 to £20,000	£45
£20,000 to £25,000	£409
£25,000 to £30,000	£968
£30,000 to £35,000	£1,550
£35,000 to £40,000	£2,244
£40,000 to £45,000	£2,939
£45,000 to £50,000	£3,633
£50,000 to £60,599	£4,327
£60,599 or above	£5,800

Source: Comerford (1995:4).

Over 95 percent of full-time undergraduates in England and Wales receive mandatory awards covering tuition fees and student maintenance (Central Office of Information 1995:444).

Student Loans: In addition to student maintenance, most students take out a student loan. The loan is not subject to a means test or interest (but repayments are indexed to inflation). The maximum loans available are provided in table 3.9.

Table 3.9: ***Maximum Student Loans 1995-96.***

Living at Family Home	£1,065
Living away from family, in London	£1,695
Living away from family, elsewhere	£1,385

Source: Comerford (1995:4).

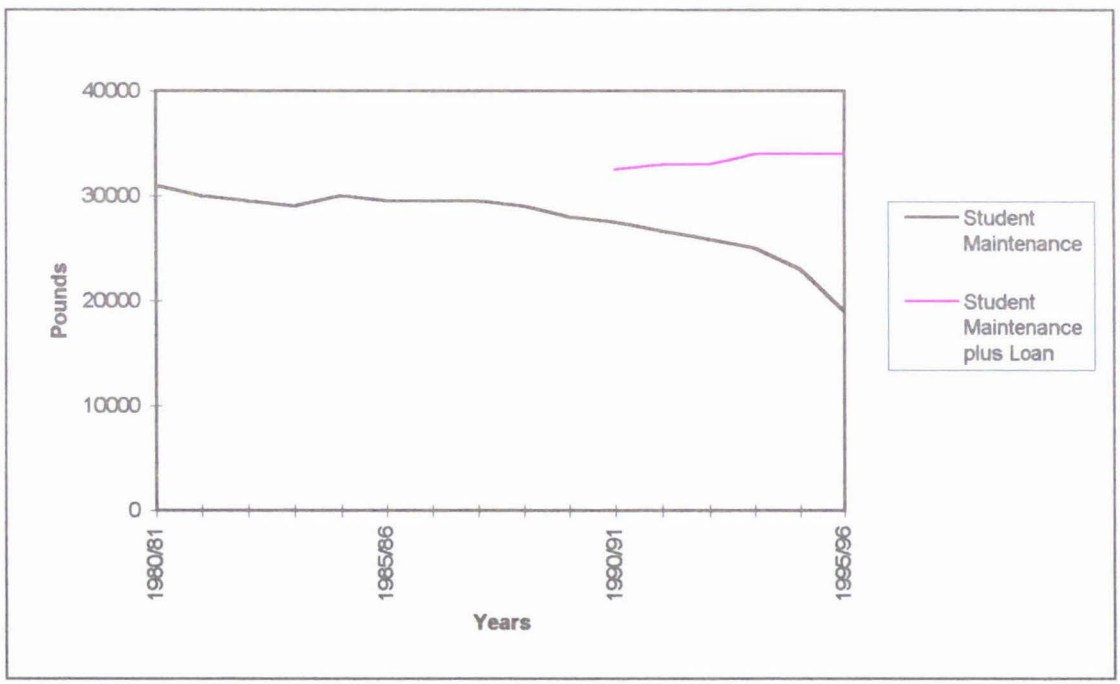
Repayments commence in the April following the completion of a student's course. In general, repayments are made by monthly instalments over five to seven years. Although,

[53] The maximum deduction is the total amount of the maintenance grant.

repayments are deferred if a consumer's income is under 85 percent of the national average. The debt is dispensed with if the consumer dies, reaches 50 years or if the duration of the loan exceeds 25 years (Ministerial Consultative Group 1994:212). In 1993-94, student loans worth £317 million were made to 430,000 students in Britain (Central Office of Information 1995:444).

Of note is that the real value of the student maintenance grant has decreased since 1980/81. Since 1990/91 even the cash value has not been increased. However, with the introduction of the loan scheme in 1990, students have been enabled to augment their income (Central Statistical Office 1996a:78). Figure 3.17 provides a graphical presentation of this.

Figure 3.17: ***Standard Student Maintenance and Loan Payments Adjusted to 1995-96 Prices.***



Source: Central Statistical Office (1996a:78).

Overall Participation Rates

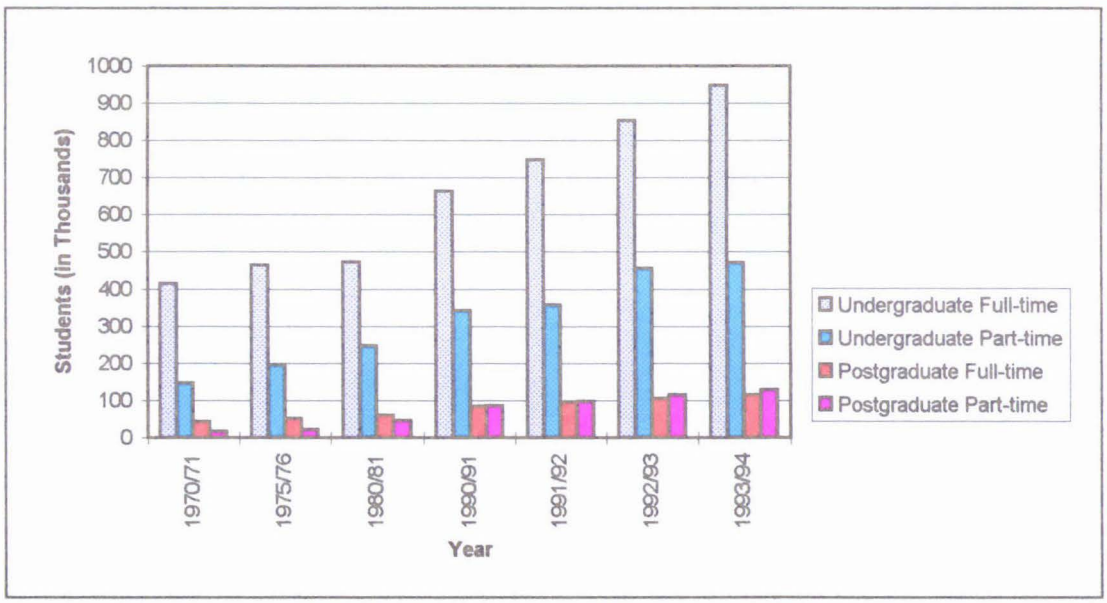
The government's goal is to obtain a substantial rise in participation rates with no increase in government funding (Williams 1993).[54] Figure 3.18 presents the enrolment rates in

[54] Similar terms of reference were provided in the Todd Committee in the *Funding Growth in Tertiary Education and Training* report in 1994 (Ministerial Consultative Group 1994).

tertiary education, from 1970/71 to 1993/94. Undergraduate and post-graduate tertiary enrolments (for both part-time and full-time study) continued to expand within this period.

Of the 1,541,000 students enrolled in tertiary education in 1993/94, 67 percent were enrolled full-time, as opposed to 65 percent in 1982-83 (Central Office of Information 1995:444). The number of students engaged in post-graduate studies has also increased dramatically, as also depicted in figure 3.18 (Burnett et al. 1995:1296). However, no statistics are available for the period beyond 1993/94, so no relationship can be identified between the current resolve to reduce funding per student and overall tertiary participation trends.

Figure 3.18: ***Tertiary Enrolments from 1970/71 to 1993/94.***



Source: Central Statistical Office (1996a:76).

Lower Socio-Economic Groups

Rice (1987:473) reported that children from professional backgrounds were twice as likely to participate in tertiary education as the children of skilled manual workers, and some five times more likely than the children of unskilled workers. Barr (1989:111) presented similar statistics, stipulating that tertiary students were twice as likely to come from higher socio-economic families (the top 40 percent of income earners), and over three times as likely to come from those with uppermost incomes (the top 12.5 percent of incomes). Barr added that the trend was more pronounced in Oxford and Cambridge, where students are 2.5

times as likely to come from higher socio-economic groups, and nearly four times as likely to come from the highest socio-economic group.

Shattock (1981) compared the results of different studies, conducted at different times, on university participation rates among the socio-economic groups. Shattock concluded that the proportion of students from the lower socio-economic groups increased, albeit slowly, in the post Second World War period to around 1970 and then declined. Shattock's data on the participation rates of the various socio-economic groups are presented in table 3.10, with category I in the Social Class axis representing the highest socio-economic group and category V the lowest.

Table 3.10: ***Social Class of University Students 1928 to 1980, as defined by Father's Occupation (%).***

Social Class	1928-47	1951	1955	1961	1961-62	1971	1977	1978	1979	1980
I		3	22	3	19	4	21	2	22	22
II		18	42	18	43	21	41	41	42	48
IIIN		}47	11	}47	12	11	15	14	13	10
IIIM	}	}	20	}	19	37	17	16	16	14
IV	}23	17	4	22	6	19	5	5	5	4
V	}	14	1	9	1	8	1	1	1	1

Source: Shattock (1981:387).

Ethnic Minorities

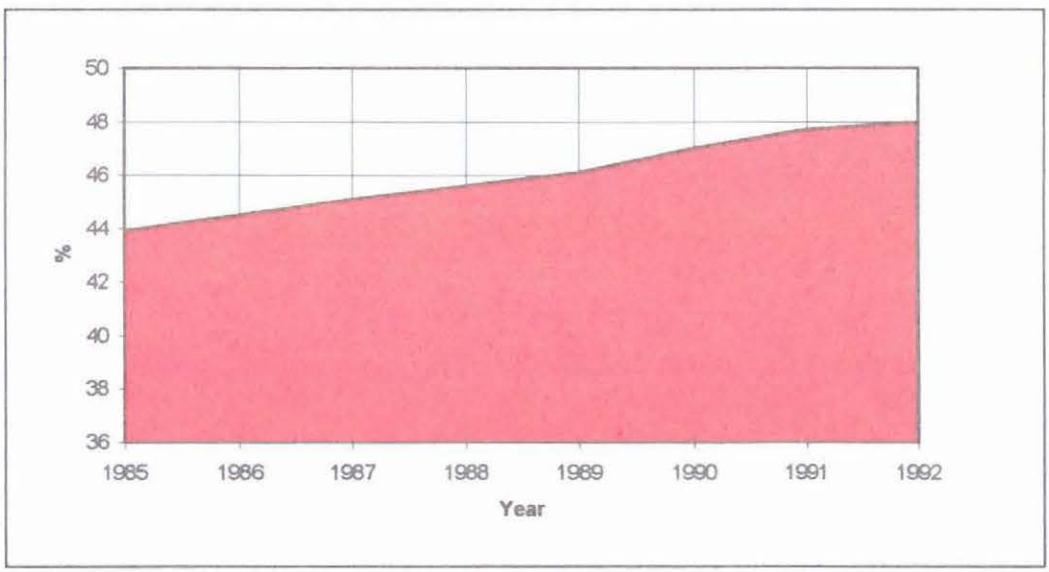
The UK has been the recipient of immigrants from all parts of the world for centuries. By 1971, there were three million inhabitants born abroad. However, there is very little information about the participation rates of ethnic minorities, due to the unavailability of statistical data (Craft and Craft 1983:11). Craft and Craft studied the vocation of a sample of 435 sixth form students in 1979. They established that half of the Caucasian children in the sample and 76 percent of the Asian children, pursued further or higher education, whereas only 44 percent of the West Indian sample did likewise. Moreover, of those West Indian children that continued their education, all took up places in non-university tertiary institutions. In contrast, of the sample of Caucasian children that furthered their education, 46 percent attended a university. Unfortunately, the size of the sample was insufficient to make the findings statistically significant (Craft and Craft 1983).

Women

The participation rate of females in tertiary education has improved in recent years, as figure 3.19 displays. The proportion of women partaking full-time tertiary studies, increased by nearly 25 percent between 1982-83 and 1992-93, to roughly equal numbers to males (Burnett et al. 1995:1296). Yet the gender balance in each discipline remains dissimilar, as depicted in table 3.11.

The gender dispersion in post-graduate education is likewise uneven. In 1992-93, 44,000 women were undertaking full-time post-graduate studies and 50,800 were engaged in post-graduate studies part-time, but this only comprised 42 and 44 percent of those engaged in post-graduate studies respectively (Central Statistical Office 1996b:113).

Figure 3.19: ***Women as a Percentage of Total Student Population from 1985 to 1992.***



Source: OECD (1995b:143).

Table 3.11: ***Percentage of Male and Female Enrolments in Tertiary Education by Discipline in 1993/94.***

Discipline	Male Full-time	Female Full-time	Male Part-time	Female Part-time
Languages/Humanities	40.7%	59.3%	41.7%	58.3%
Business and Finance	50.3%	49.7%	51.1%	48.9%
Engineering and Technology	84.4%	15.6%	89.7%	10.3%
Education	26.6%	73.4%	30.0%	70.0%
Social Sciences	46.3%	53.7%	41.7%	58.3%

Source: Central Statistical Office (1996a:76).

The results of a study by Rice, in 1976, indicated that for 16 to 18 year old males there appeared to be no relationship between the decision to partake in tertiary education and household income. By contrast, for the similar cohort of females, there was a positive correlation between participating in tertiary education and household income. Rice therefore concluded that student aid would significantly benefit female participation, but have a marginal effect on male participation (Rice 1987).

Summary

The overall enrolment rates in the UK have increased in recent years, and there has been a trend towards full-time study (Central Statistical Office 1996a:75). Barr (1989) noted that tertiary students were twice as likely to originate from higher socio-economic groups. Furthermore, Shattock (1981) concluded that although some improvement occurred in the participation rates of the lower socio-economic groups during the 1950s and 1960s, a relapse occurred during the 1970s. (However, the validity of these findings could be disputed as the data for comparison was questionable). The participation rates of ethnic minorities in the UK's tertiary sector have not received substantial appraisal. Craft and Craft (1983) concluded, from a sample of 435 sixth formers, that West Indians were less likely to further their education than their Caucasian contemporaries. Moreover, when West Indian students opted to further their education, they tended to enter polytechnics rather than universities, and vice versa for Caucasians. The gender balance has improved, but women remain under-represented in certain disciplines and post-graduate studies.

Sweden

The Evolution of Tertiary Access Policies

From their foundation in 1477 to the nineteenth century, Swedish universities were private and recruited students only from the middle and upper strata. However, during the nineteenth century a number of social assemblies emerged and prevailed, including trade unions, co-operative societies and free churches. They helped determine the egalitarian nature of Sweden and the character of its education (Jones 1985).

A nation-wide scheme of student aid has existed in Sweden since 1918. It comprised predominantly of interest-free loans, awarded on the basis of scholastic merit. In 1939, some national scholarships were introduced, which covered board and lodging, during the first two years of study. By 1964, half of all university students were recipients of such scholarships (Morris 1989:85).

In 1950, the government broadened the system of loans and grants to enable more students from low-income groups to attend universities. Grants covering board and lodging for three years were made available to students with ability and low parental income. In addition, some state guaranteed loans were available at interest rates of five percent, through the State Scholarship Grant Board. In 1962-63 nearly half of the new entrants to university institutions received government grants, and over two-thirds had loans authorised by the State Scholarship Grant Board (Burn et al. 1971:214).[55]

A royal commission (the Committee on University Development) was appointed in 1955, to review the universities and propose recommendations for change. Their proposals led to a series of legislative measures, including the abolition of fees from 1958 (Dixon 1965:160).[56] Another commission was appointed in 1959, specifically to design a new system of financial aid for tertiary students (to limit the burdens of student debt and encourage students from low income families). On the basis of its report and those of other committees, including the U63 Committee, new legislation was introduced in 1964. Under the new system, all tertiary students (not exclusively university attendees as formerly) received a grant of SEK 175 per month or SEK 1,750 per year, and study means (loans) of up to SEK 5,700 per year. Both grants and loans were means tested in relation to student earnings, not parental income (Burn et al. 1971; Morris 1989:85).

There were student riots in 1968, which led the government to set up the U68 Committee to review tertiary education (Boucher 1982:132). In the same year, the 25/5 programme was introduced to widen tertiary access. People who were over 25 years of age and had five years of work experience, were eligible to enter certain tertiary courses (Jones 1985).[57] The U68 Committee produced its report in 1973. It recommended increased financial support for anyone who wished to study for extended periods.

After extensive consultation with interested parties, a new bill was introduced in 1977. Despite the first non-Social Democratic coalition for forty years forming a precarious government, the vote in favour of the measures was 216-14, illustrating the high level of cross party support for the reforms. The explicit goals of the Higher Education Act 1977 were equity of access and promotion of continuing education. Student aid (studiemedel)

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[55] Repayments on the student loans did not commence until two years after graduation.

[56] Although tertiary institutions did not charge students, all students were required to pay the students' union subscription fee (Dixon 1965:164).

[57] By 1975, 62 percent of students at university were over 25 years old (Jones 1985).

remained a combination of grant and repayable loans. However, the value of the grant was raised.[58] In addition, student loans were made interest free, but repayments were linked to a cost of living index (Vadzis 1980; Boucher 1982; Jones 1985:12).

After the passing of the Higher Education Act 1977, support for its provisions declined, despite minimal evaluation of its performance. A national commission was set up in 1985 to reappraise the *studiemedel* system. Their report, submitted in 1987, rationalised that as the real value of the student grants had declined, so to had the proportion of students from lower socio-economic groups. This led to a 17 percent increase of the total student aid expenditure by Parliament in 1989. The value of the grant was significantly enhanced, but repayment terms on the loans were tightened (Morris 1989:104; Juddery 1996b).

In 1993, a new Higher Education Act came into effect, to decentralise government control over tertiary institutions. Individual institutions could determine their own admission criterion (based on secondary school marks, aptitude test, work experience and special admission procedures) and student numbers. In the new system, funding of tertiary institutions has been made more dependent on the demand of the students and the achievements of the individual institutions (Swedish Institute 1994).

In summary, Sweden has been at the forefront of tertiary financing and student aid development. Following the findings of various commissions and committees, set up by the government with the aim of expanding tertiary access, Sweden initiated a student loan scheme (in 1918), introduced national scholarships (in 1939), abolished tuition fees (in 1955) and liberalised admission criteria (in 1968). Sweden is characterised by its continued planning and reform of its tertiary education system. Its current tertiary policies should therefore be of particular interest to all those concerned with tertiary education policies.

Contemporary Funding and Access Policies

The bulk of tertiary education in Sweden is funded and provided by central government. Tertiary institutes, incorporate seven universities; (Goteborg, Linkoping, Lund, Stockholm, Umea, Uppsala and the University of Agricultural Sciences); four specialised institutions (the Karolinska Institute of Medicine, the Royal Institute of Technology, Lulea and the Stockholm Institute of Education) and some 50 other sub-universities. There are only a few non-government run institutions, (the Stockholm School of Economics, Jonkoping

[58] In 1980, the grant was SEK 2,318 per month for full-time students (Vadzis 1980).

and Chalmers) but even these institutions receive significant financial support from government (Swedish Institute 1994).

Government Bulk Funding: Tertiary education is financed almost entirely by government funds. Even the private universities are heavily subsidised by the government. Appropriations are based on proposals from the Government and disbursed as lump sums to each institution. (Research and post-graduate education are financed separately.) Approximately 40 percent of each institution's bulk funding is based on the number of equivalent full-time students taught and about 60 percent is dependent on the academic results of the students (Swedish Institute 1994).

The government appropriation for tertiary institutions, in the 1994/95 fiscal year, was SEK 12,890 million, of which SEK 7,911 million was earmarked for undergraduate education and SEK 4,979 for research and post-graduate education (Swedish Institute 1994).

Tuition Fees: Virtually all Swedish tertiary tuition is free to students. All students, however, must be members of a student union and pay an obligatory term fee of about SEK 300. Students must also pay for their living expenses, books and equipment (Lund University 1996).

Studiemedel: Student aid (studiemedel), for undergraduates, is paid out partly as a non-repayable grant (about 30 percent of the total amount) and partly as a loan, which must be repaid. In 1994, the maximum grant portion was SEK 17,000 for a nine-month academic year and the repayable loan portion SEK 44,600. A rate of interest is charged on the loan portion and is fixed by government. Repayments of the loans commence within six months of the final receipt of student assistance. Instalments are income contingent (four percent of annual income) and must be paid back before the age of 65 (Swedish Institute 1994).

To receive such assistance, in addition to gaining entry to the tertiary sector, students must be Swedish citizens, be under the age of 45 years and show acceptable scholastic achievement. In general, a person can obtain studiemedel for up to six years. The aid is reduced if the student's own income becomes too substantial. However, no account is taken of the financial situation of the family or partners (Swedish Institute 1994). In the 1994 fiscal year, the Swedish government spent SEK 11,368 million on student allowances to undergraduates (Statistics Sweden 1996).

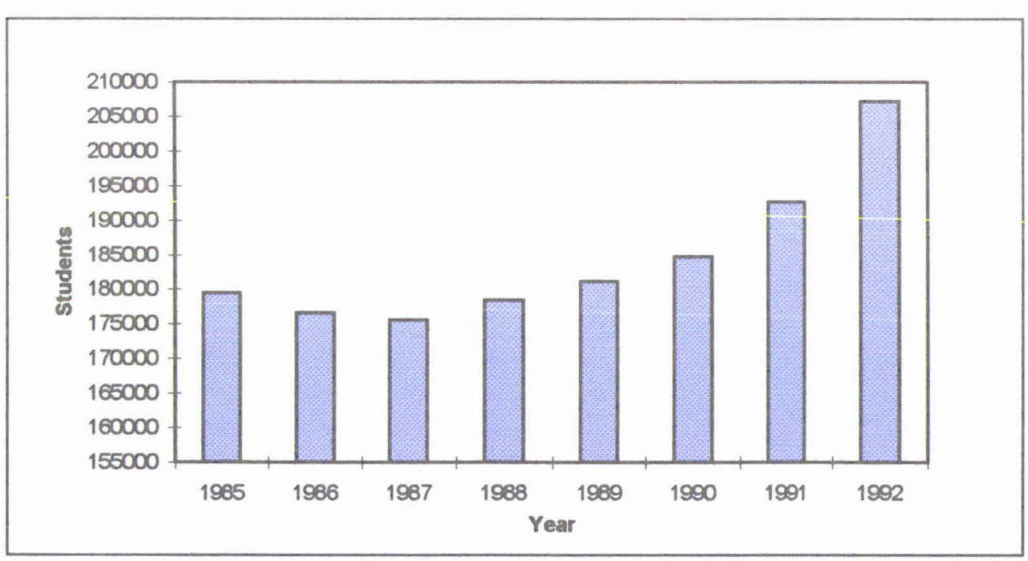
Financial aid, to students undertaking post-graduate tertiary studies, is financed by the research and post-graduate appropriation provided to tertiary institutions. The financial provisions to post-graduate students therefore vary from one tertiary institution to another. Post-graduate students can supplement their income by combining research studies with teaching or other types of work. Another common means of financing post-graduate studies is to combine one's studies with a job on a funded research project (Swedish Institute 1994).

Overall Participation Rates

The number of tertiary enrolments has escalated since 1989. Between 1991 and 1995 student enrolments increased by approximately 30 percent (Lund University 1996). The enrolment rate for the period from 1985 to 1992 is presented in figure 3.20. Slightly more than 30 percent of young people go on to tertiary education after completion of their upper secondary schooling (OECD 1995a:307).

Sweden's tertiary student composition is unique, as it has a high number of students over the age of 25 years of age. It is common that students enter tertiary education after a break from formal education. Sweden was also renowned for having a high percentage of students studying part-time and having a high drop-out rate. However, the funding arrangements and student aid endowments were amended to discourage this occurrence and to encourage greater scholastic achievement.

Figure 3.20: ***Equivalent Full-Time Enrolments in Tertiary Education from 1985 to 1992.***



Source: OECD (1995b:142).

Lower Socio-Economic Groups

The proportion of tertiary students drawn from the lower socio-economic groups have been the focus of numerous studies. Pellegrin (1974b:80) reported between 1960 and 1970, the probability of individuals from lower socio-economic backgrounds in Sweden accessing tertiary education, by comparison with young people from more privileged social backgrounds, rose from 11 to 20 percent.

Studies have reported that the percentage of tertiary students from lower socio-economic groups rose from eight percent, in 1969, to 34 percent in 1976 and to 37 percent in 1977/78. However, the proportion of tertiary entrants from lower socio-economic groups declined to 34 percent in 1982/83.[59] However, the decrease in the real value of the studiemedel may have mitigated some of the socially levelling effects of the reforms. Very little up to date information is available to appraise the reforms since 1983.

Even when youth from lower socio-economic groups gained access to tertiary institutions, they tendered not to penetrate the prestigious disciplines. For example, Levin (1982:328) calculated while about 25 percent of male tertiary students in 1972-73 came from lower socio-economic groups, only 4.4 percent of male students, with lower socio-economic origins, studied law and 1.5 percent studied medicine. These findings were duplicated by Svensson who showed that whilst nine percent of children from professional backgrounds (five percent of the population) studied to join the elite professions, only 0.2 percent did so from lower socio-economic backgrounds (about half of the population)(Jones 1985:37).

Reuterberg and Svensson conducted a series of investigations into the effects of student aid on social equity in the tertiary sector. They concluded that even though socio-economic background strongly influenced participation in tertiary education, the socio-economic bias would have been greater if it had not been for the student aid provisions. Reuterberg and Svensson's questionnaire of students, found that 40 percent of those from lower socio-economic groups indicated that they would probably not have entered tertiary education without student aid. The corresponding proportion for the higher socio-economic groups was 12 percent (see table 3.12)(Reuterberg and Svensson 1983; Morris 1989:93-96).

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[59] Burke's (cited in Burn et al 1971) survey concluded that only eight percent of tertiary students came from the working class in 1969. Kim's study (cited in Jones 1985:35), conducted in 1976, identified that 34 percent of tertiary students came from working class backgrounds. Jones (1985:38) provided the percentage of tertiary students from working class backgrounds for the 1977/78 and 1982/83 periods.

Table 3.12: ***Reuterberg and Svensson: Socially Equalising Effects of Student Aid.***

Socio-Economic Group	Reported wouldn't have entered tertiary education without student aid
Academic, Civil Servants, Industrialist, White Collar Workers with tertiary education	12%
White Collar Workers without tertiary education	27%
Farmers and Labourers	40%

Source: Morris (1989:93).

Furthermore, Svensson's research, conducted in 1987, found that financial concerns, and aversion to student debt, were identified most frequently by those students coming from lower middle and lower socio-economic groups (cited in Morris 1989).

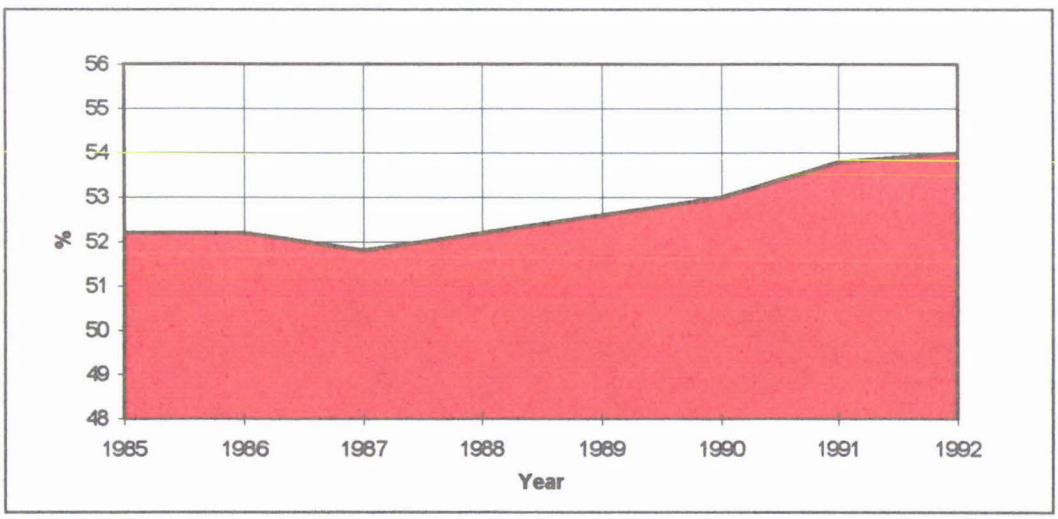
Ethnic Minorities

The Swedes have adopted educational policies that give Saami (indigenous Lapps) the choice of attending special schools aimed at retaining their ethnic identity or assimilating into mainstream schools (Wirt 1982). Unfortunately, there is no specific data available on the participation rates of Saami in the Swedish tertiary education system.

Women

In 1992/93, 132,000 females were enrolled in undergraduate studies (55 percent of the total number) and 5,760 were enrolled in post-graduate studies (36 percent of the total number), making a total of 137,760 full-time and part-time students (or 53.8 percent)(Swedish Institute 1994). Figure 3.21 shows the number of enrolled female tertiary students from 1985 to 1992.

Figure 3.21: ***Percentage of Women in Tertiary Education (EFTS) from 1985 to 1992.***



Source: OECD (1995b:143).

The student aid provisions and reformed admission criterion are credited with bringing more women into tertiary education, particularly women over 35 years (Jones 1985).

Reuterberg and Svensson (1983) discovered that student aid was not of equal importance to both sexes across the board. When the data was segregated by the length of courses, student aid had the most positive effect for women in longer courses, in which men tended to predominate. In shorter courses, in which women were in the majority, the aid had been of the greatest importance to men. Reuterberg and Svensson concluded that student aid has had an equalising effect on sex role differences in the choice of course.

Bryson (1993) reported that Sweden was ranked first in the world for the degree of similarity between male and female earnings. The average women's hourly rate is 90 percent of that of the average men's rate. There are therefore comparable gains, between male and female's investment in tertiary education.

Summary

The number of tertiary enrolments has increased since 1989, with a large proportion over the age of 25 years of age. The student populace is drawn primarily from the middle and higher socio-economic groups. Nevertheless, student aid provisions have helped encourage the recruitment of individuals from lower socio-economic backgrounds (although the languishing support from 1980 to 1989 may have mitigated some of the gains made). It is acknowledged though that the students from lower socio-economic backgrounds were more likely to access less prestigious institutions and disciplines. Reuterberg and Svensson conducted several questionnaires that exonerated the benefits of student aid for lower socio-economic groups. As for the gender balance, 53.8 percent of full-time and part-time tertiary students were female, a significant number of which are over 25 years of age. Student aid is credited with enhancing female participation rates and having an equalising effect on gender differences in the selection of study programme.

Japan

The Evolution of Tertiary Access Policies

The Japanese have had a long tradition of formal education and have always valued scholarship. In ancient Japan, noble families maintained their own private educational facilities and Buddist temples provided alternative voluntary educational facilities (Watanabe and Mackereth 1992:4; Microsoft 1995). With the reign of Emperor Meiji, in

1867, Japan underwent a radical transformation of its education system. A Ministry of Education was created in 1872 and it established an integrated education system, from primary school to university, based on American and European models. Although attendance at primary schools became compulsory, tertiary institutions only catered for the male elite until the Second World War (Burn et al. 1971:227).

During the Second World War, the Ministry of Education announced its new education policy named "Education Policy to Build a New Japan". Included in the reforms, was the establishment of the Japanese Scholarship Foundation, which was set up in 1943 as a public corporation aided by the Ministry of Education (Tokyo Metropolitan Government 1979).

The US Occupation, following the war, resulted in the transformation of Japan's education system to make it more akin to the American system. The reforms were denominated as the Fundamental Law of Education 1947, Article 3 of which stipulated:

> People shall be given equal opportunities of receiving education according to their ability, and they shall not be subject to educational discrimination on account of race, creed, sex, social status, economic position or family origin. The state and local governments shall take measures to give financial assistance to those who have, in spite of their ability, difficulty in receiving education for economic reasons (cited in Tokyo Metropolitan Government 1979:53).

Access to tertiary education was hence legally granted to all groups, including women (Fugimura-Fanselow 1985:471).

Adherence to the Fundamental Law of Education waned when Japan regained sovereignty in 1952. Despite the equal opportunity clause, Japan's private tertiary institutions continued to raise their fees and government funding and student aid was minuscule. In the beginning of the 1960s, student protests and boycotts commenced, centring on proposed tuition increases. In order to nullify the disruption, private universities abandoned their proposed tuition increases, in the early 1960s, and elected to increase the amount of fees paid at the time of entrance, when students would be less militant. In 1967, the average entrance fee for private universities escalated to ¥200,000 (Michio 1971).

Student unrest coincided with mounting criticism of the inadequate resources of private tertiary institutions. In 1965 they received only 49.7 percent of total tertiary education funds, although they enrolled about 75 percent of the students. This led the government to provide ¥3,050 million of funding for research facilities at private universities in 1966. From 1970 a more systematic means of government support of private institutions was exercised. A Current Cost Subsidy was introduced to subsidise tuition at private tertiary institutions (Burn et al. 1971:250; Michio 1971:142-3; Woodhall 1989c:71).

In summary, Japan has had a long commitment to formal education, although from their establishment in 1877, Japanese universities catered exclusively to the aristocracy. With the advent of Second World War and the US occupation, the Japanese Scholarship Fund was introduced and government funding on tertiary education modestly increased. Tuition fees at private tertiary institutions escalated from the time Japan regained sovereignty until the early 1960s when there was mounting student unrest. As a consequence private institutions changed their charging practices. From 1966 until 1985 the government commenced a growing commitment to assist with the funding of private institutions, although the funding has never been predominant.

Contemporary Funding and Access Policies

There were 1,100 tertiary institutions in 1990, with a combined yearly enrolment in excess of 3 million equivalent full-time students (OECD 1995b). This comprised of approximately 430 universities (daigaku), 520 junior colleges (tanki-daigaku) which provide two to three year diploma courses and 65 higher technical schools (Koto-Senmongakko) which provide training for technicians (Tokyo Metropolitan Government 1979; Watanabe and Mackereth 1992). In addition there are numerous educational institutions known as special training schools (senshugakko) and miscellaneous schools (kakushugakko) which offer a variety of vocational programmes and preparatory courses (yobiko). The later provide preparatory education to those students who desire to pass the entrance examinations of the prestigious tertiary institutions (Tokyo Metropolitan Government 1979). However, Baba (1996:102) reports that only five percent of Japanese tertiary institutions maintain standards comparable to those of highly ranked academic institutions world-wide.

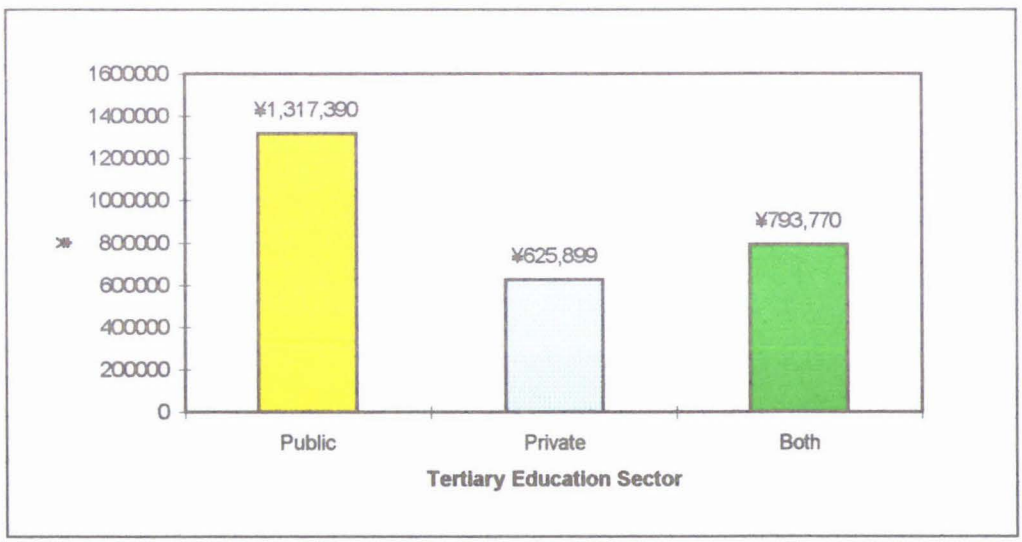
Demand is greatest at the longer-established and top ranked universities, such as Tokyo, Kyoto, Keio and Waseda, which may have 10 to 20 times as many applicants as places.[60]

[60] In order to obtain a high salary position at a top-ranking company or public service, it is necessary to graduate from a prestigious university (Watanabe and Mackereth 1992).

Selection is determined by means of competitive admission examinations, set by each institution, and secondary school results (Burn et al. 1971:239-40).[61] Almost half a million students each year do not succeed in their endeavours to gain entrance to these universities. However, candidates are able to re-sit entrance examinations as frequently as they wish. Repeat applicants are termed 'roonin' and in 1991, there were 470,000 individuals in this position. Roonin can expect to spend at least two years in gaining entry to the prestigious institutions, and periods from three to five years are not uncommon. (Watanabe and Mackereth 1992:56).

In Japan, about 78 percent of all tertiary students are in the private sector. However, in contrast to the USA, it is the 60 odd public universities which are most preferred by students. The average expenditure per student in public institutions is double that of the private universities, as shown in figure 3.22. However, the differentiation can partly be explained by differences in the areas of specialisation of the two sectors. Public institutions generally provide the most expensive subjects to the most able students (OECD 1990).

Figure 3.22: ***Expenditure per Student for Tertiary Education in 1992.***



Source: OECD (1995a:92).

Government Funding: In 1991, 39.2 percent of tertiary education funding was provided by government.[62] In 1987, 63 percent of the income of public universities came from

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[61] Many private institutions also run their own primary and secondary schools and attendees from these schools get preferential treatment (Watanabe and Mackereth 1992:56).

[62] National and local governments contribute to both public and private institutions.

government, as opposed to just 14 percent for private universities. Funding is primarily provided in the form of the Current Costs Subsidy, which is a formula-based grant, dependent on the number of student enrolments, course cost estimates and the priority attached by government to different subjects (OECD 1990; Williams 1992:127).[63] The Current Cost Subsidy has declined in real terms, and in the last few years tuition fees in both public and private universities have risen sharply (Woodhall 1989c:73).

Private sources: Private sources accounted for 45.5 percent of the funds for tertiary education in 1992 (OECD 1995a:111).[64] In that year, university fees ranged from ¥300,000 to ¥600,000 (UNESCO 1993b:695). Tuition fees are higher for students in private institutions, despite often receiving an inferior education.[65] In addition, students are required to pay for an entrance fee and other expenses, such as laboratory and equipment fees and student activities fees. Table 3.13 presents the average charges imposed on first year university students, by type of institution, in 1991.

Table 3.13: ***Average Cost of First Year of Study at Universities, by Type of Institution in 1991.***

Type of Institutions		Average Tuition	Range of Tuition Fees
Undergraduate	National Public	¥545,000	
	Local Public	¥752,000	
	Private		¥964,000 to ¥9,257,000
Post-graduate	National Public	¥545,000	
	Local Public		¥466,000 to ¥739,000
	Private		¥690,000 to ¥1,347,000

Source: Association of International Education, Japan (1991:19).

[63] Private institutions enrol many students in excess of their quotas (determined by Current Costs Subsidy formula) in order to optimise their income (Burn et al 1971:245).

[64] In 1987, tuition fees accounted for nine percent of the income of public universities and 63 percent of the total revenue of the private sector (OECD 1990:20).

[65] Nevertheless, these fees are not sufficient for private tertiary institutions to maintain a healthy balance sheet. Hence nearly all private institutions suffer overcrowded facilities, high staff-student ratios and low income expenditure per student (Michio 1971).

In addition to these charges, students and their families pay for private tuition, preparatory courses and admission examination fees. The examination fees are set by the individual institutions, but they were about ¥25,000 each in 1992. Many students attempt to improve their prospects of enrolment in a prestigious university by taking several examinations in the same year (Watanabe and Mackereth 1992:56).

Student Aid: The sizeable sum of money required to obtain a satisfactory tertiary education, is not compensated for in student aid. Between 73 and 84 percent of financial aid available to students is provided by the Japanese Scholarship Foundation in the form of loans to cover necessary educational expenses.[66] Two types of loans are administered: Category I loans, which are free of interest and Category II loans, which carry a relatively low rate of interest. Both types of loan are allocated on the basis of very strict means-test and scholastic achievements. Category I loans are intended only for students from the lower income families, but even Category II loans have very strict means-test parameters. In 1986, 11 percent of undergraduate students were receiving Category I loans in universities and four percent in junior colleges. For the same period three percent of undergraduate students were receiving Category II loans in universities and two percent in junior colleges. Repayment commences six months after completion of a student's studies, by instalments over a 20 year period (Tokyo Metropolitan Government 1979:171-2; OECD 1990:47-8; Ministerial Consultative Group 1994:215).

In 1983, there were about 3,000 other agencies that offered some form of financial aid. This included 1,200 local government agencies providing scholarship and loan programmes. Private industry and foundations provided seven percent of student aid expenditure and tertiary institutions also contributed a significant portion. Their aid was in the form of grants, loans or a mixture of both. Moreover, about 200 commercial lenders offer student loans at higher interest rates (OECD 1990:47; Ministerial Consultative Group 1994:215).

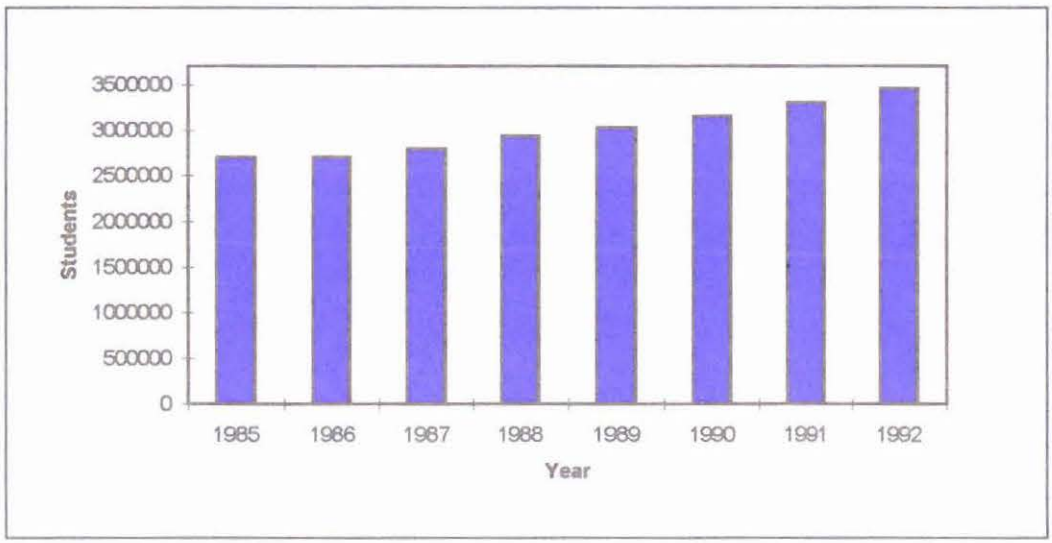
Overall Participation Rates

Despite the high financial cost of attendance, Japan has a very high rate of enrolments in tertiary education. In 1991, more than half of secondary school graduates entered tertiary education (OECD 1991:51). The growth in student numbers is presented in figure 3.23. In comparison with the level of growth internationally, since 1975, Japan has had a moderate

[66] The Japanese Scholarship Foundation is funded by the national government.

enhancement in student numbers, except for special training schools (senshugakko) (OECD 1991).[67] The establishment of tertiary institutions have not kept pace with the growing demand and applicants substantially exceed the number of vacancies available. Just over 34 percent of secondary school graduates are admitted to university, against 61 percent who apply (Watanabe and Mackereth 1992:55).

Figure 3.23: ***Equivalent Full-Time Enrolments in Tertiary Education from 1985 to 1992.***



Source: OECD (1995b:142).

Two factors characterise the participation rates in Japanese tertiary education. First, the number of part-time students is virtually non-existent. Only 0.6 percent of tertiary students were enrolled part-time in 1993 (OECD 1995a:126). Second, Japan has a very high success rate of students. Only nine percent drop out of tertiary studies and 85 to 90 percent of university and junior college students complete their first award in minimal time (OECD 1991). However, this success rate should be treated with caution as tertiary students are seldom failed (Watanabe and Mackereth 1992:21).

Lower Socio-Economic Groups

Yamaguchi (1993:17) stipulated that 80 percent of Japanese people can be seen as belonging to the middle socio-economic group. The limited, and dated, information available, on the impact of Japanese tertiary access policies on socio-economic groups, are controversial and contradictory. Burn et al. (1971:257) stipulated that in the early 1960s, 16

[67] Yet one wouldn't expect the same rate of increase in Japan, as it has a much higher base rate than most countries.

percent of upper secondary students proceeded to enrol in tertiary education. However, only 4.2 percent of upper secondary students, from families with an income of under ¥180,000 per annum entered tertiary education, whereas 26.6 percent from families with an annual income of over ¥900,000 did so. Moreover, Arai in 1989, determined that both income and socio-economic backgrounds were instrumental in explaining tertiary participation rates (cited in Maani 1995:12).

On the other hand, a survey by the Japanese Ministry of Education proclaimed that the share of students from the lower socio-economic groups had increased since 1970. As a consequence, the probability of attendance at a tertiary institution was almost equal for all income groups, apart from the highest. However, the validity of these findings has been disputed because of possible sample bias (OECD 1990:48).

Students from lower socio-economic backgrounds have the opportunity to attend the elite public universities, providing they have extreme scholastic ability. Nevertheless, even the families of these students dedicate a large share of their resources to enable their children to attend. A government study estimated that tertiary expenditure consumed, on average, more than 34 percent of a family's budget, during the peak years, when all children are engaged in secondary or tertiary education (Ministerial Consultative Group 1994:215). Frequently students supplement their income by tutoring other students (Burn et al. 1971:256).

Ethnic Minorities

Ninety-nine percent of the people in Japan are Japanese, however the Burakumin (Buraku people) are a significant ethnic minority, with a population of around 1,160,000 or about 0.9 percent of the total population. Although their living conditions have improved since 1903 they still remain under-represented in the higher levels of the education sector (Higuchi 1995). The Ainu people are also a disadvantaged ethnic group who survive in Hokkaido (Yamaguchi 1993:20). Unfortunately, no statistics are available on either the Burakumin or the Ainu tertiary participation levels.

Women

The number of women enrolling in tertiary education has increased since the Second World War, from less than ten percent to 42.4 percent of equivalent full-time students in 1992. However, most of the increase has taken place at the junior colleges (where 90 percent of students were women in 1986) and special training schools (where 60 percent of

attendees were women). These percentages remained almost unchanged since 1975. Junior colleges and special training schools specialise in humanities, languages and vocational courses, such as nursing and kindergarten teaching. Well over half of the junior colleges are for women only (Burn et al. 1971:231; Fugimura-Fanselow 1985; OECD 1991:34; Watanabe and Mackereth 1992:54; OECD 1995b).

Women are under-represented in both the university sector (women comprised just 24 percent of university students in 1986) and higher technical schools (where less than five percent were women)(OECD 1991:34). In 1991, approximately 25 percent of females, in Japan, had a university qualification, compared to about 31 percent for males (Statistics New Zealand 1995a:figure 8.4). Even among those women who enter universities, there is a tendency to specialise in literature, home economics and education faculties (Fugimura-Fanselow 1985:471).

Fugimura-Fanselow (1985) highlighted several aspects that underlie the gender differentiation in tertiary participation, including cultural and economic factors. There exist traditional stereotypes about the roles women should occupy and hence what constitute appropriate disciplines to take part in. In addition, financial considerations may be impeding women's equal representation across the entire tertiary sector. It still remains unusual for women to be employed after they become married, or at most until they have a child. Furthermore, even after graduation, women do not obtain occupations with the same status and salary as males. Hence women can expect a lower return on their, or their families, investment in tertiary education. Parents are therefore less inclined to make financial sacrifices to send daughters to university. Instead, female students, and their families, tend to opt for shorter term courses, where they will be committed to about 50 percent of the cost.

With minimal government intervention, there is a high correlation between parental income and male and female patterns of tertiary participation. Data show that female students, at private universities, came from families with an average annual income substantially higher than that of their male counterparts (¥6,004,000 as opposed to ¥4,759,000 in 1976) or that of women enrolled in private junior colleges (¥4,695,000). Whereas male and female students at the national public universities, (where tuition is under half that charged at private universities), tended to originate from families with similar income levels (about ¥3,700,000)(Fugimura-Fanselow 1985:479).

Summary

In Japan, education is seen by the majority of people as the means of access to better jobs and an improved existence (Watanabe and Mackereth 1992:4). This philosophy is reflected in the high demand for tertiary education, so competition for places is very severe. Japan's education is efficient in that 85 to 90 percent of tertiary students obtain their awards in the minimum time. However, time and money are consumed by the common practice of roonin and private tutoring (Burn et al. 1971:262).

The assertion that all socio-economic groups are included in tertiary education is dubious. What is confirmed is that a significant proportion of a family's resources is committed to a child's tertiary education. The Japanese government's research concluded that on average, families outlay 34 percent of their household expenditure on tertiary education, once all children of the household are engaged in secondary or tertiary education (Ministerial Consultative Group 1994:215).

Although in 1992, females received an equal number of tertiary awards as males, they only comprised 28.4 percent of university graduates (OECD 1995b). This is because women are concentrated in junior colleges, particularly in the private sector. The junior colleges specialise in home economics and the humanities and are tailored towards females, and their parents, who are unable or unwilling to finance a 4-year university education (Fugimura-Fanselow 1985:476).

Conclusion

Material in this chapter and the chapter that preceded it on New Zealand, provided a descriptive account of tertiary access policies and participation trends for the six nations considered in this study. Chapter 4 will analyse the comparable information for each nation, to identify unique and common aspects of government funding of tertiary education, tuition fees and student aid policies. Moreover, participation patterns for key groups will be examined and compared. Judgements can then be produced on the effects of financial access policies on tertiary enrolments.

Chapter 4

COMPARATIVE ANALYSIS

The object of this chapter is to compare and evaluate the practices, and available figures, on tertiary funding and participation in New Zealand, Australia, the USA, the UK, Sweden and Japan. This will highlight international trends and assist with the evaluation of each country's performance, particularly the ranking of New Zealand's practices and participation rates. Furthermore, the experiences of other countries, can foster an evaluation of particular tertiary funding practices and student aid measures.

The initial variable considered in this chapter is the evolution of tertiary access policies. This will set the scene for contrasting the contemporary levels of government funding, tuition fees and student aid employed in each country considered in this study. Tertiary education participation patterns will then be analysed, with respect to the overall population, socio-economic groups, ethnic minorities and women. However, it must first be emphasised that the statistics, displayed in tables throughout this chapter, provide a somewhat rudimentary basis for comparison as (i) the values have been converted to New Zealand dollars utilising the data on page vii (ii) the dates from which the data is derived may differ (due to lack of data available) and (iii) prices need to be placed within context. Moreover, the qualities of the tertiary education institutions are precluded from the analysis.

Evolution of Tertiary Access Policies

The access policies employed in each country are not merely the aftermath of twentieth century reforms, but originate in times preceding the establishment of the first tertiary institutions.[68] Internationally, the preliminary stages of universities catered primarily to the privileged few. Even in New Zealand, which commenced with open entry to its universities (a legacy of its Scottish inheritance), only the higher socio-economic groups

[68] This occurred in 1869 in New Zealand, 1850 in Australia, 1636 in the USA, 1117 in the UK, 1477 in Sweden and 1872 in Japan.

could meet the expenses associated with attending university. Generally, governments internationally, provided minimal financial support to address equity and access issues until the Second World War. Sweden is an exception to this rule, as its student aid scheme dates back to 1918.

Between the Second World War and 1980, in all countries in this study, governments acquired an increasing financial obligation towards meeting tertiary education costs, largely as a result of direct assistance to tertiary institutions, tuition fees abolition and/or the introduction of student aid schemes. Many of these reforms were advocated, or supported, by commissions established to expand tertiary education and/or ensure more equal participation by different social groups. For most countries, the primary means of direct support to students was the introduction of student maintenance grants: in New Zealand (in 1974), Australia (in 1974), the USA (in 1972) and the UK (in 1962). Sweden abolished its tuition fees in 1958 and enhanced its student aid measures in 1964. As far as Japan is concerned, there were not any new student aid programmes introduced in the post-Second World War period, however the government substantially increased its financial contribution to private tertiary institutions.

Government funding and reforms were repressed in the 1970s, 1980s and early 1990s, stemming from government concerns about increasing costs (in times of fiscal restraint). As mentioned in chapter 2, New Zealand introduced tuition fees in the early 1990s (a flat fee of $1,250), targeted student maintenance grants (making student allowances dependent on student and family income) and introduced a student loan scheme. Although not identical to policies in Australia, the USA and the UK, New Zealand's access policies have often tended to coincide with, or follow, revisions made in those countries. As reported in chapter 3, in Australia, after abolishing tertiary fees in 1974, the government reintroduced fees in 1986, under the auspices of HECS and then instigated the Austudy/Abstudy Supplement Loans Scheme, in 1993. In 1988, the American government targeted its student loan scheme, eliminating the eligibility of students from middle socio-economic groups. Finally, the UK government introduced a student loan scheme, in 1990, to offset the declining values of the student maintenance grants.

Nevertheless, some of the policies implemented have not followed prevailing trends. New Zealand and Australia instituted a more generous system of student maintenance in 1989 and 1987 respectively, offsetting increased tuition fees. Moreover, Sweden increased the grant portion, and reduced the loan portion, of its student aid system in 1989. This

indicates that although economic circumstances and global trends ordinarily influence tertiary access policies, social policies also reflect the societal values from which the policies originate.[69] An evolutionary analysis also suggest that the most frequent strategy by governments, to address tertiary access, has been the employment of incremental modifications to existing tertiary funding arrangements and social programmes, rather than revolutionary changes. The need for such change being precipitated by the form of the economy, student disruptions or public and staff complaints.

Government Funding of Tertiary Institutions

The predominant practice amongst the countries examined, is the administration of a unified system of funding tertiary institutions. In other words, governments seek to fund all their tertiary institutions (university and other tertiary establishments) on a similar basis. This ensures that there is competition for government funds between the suppliers of tertiary education. In all the countries considered in this study, government funds are distributed directly to the tertiary institutions by government departments, although previously some countries had utilised an intermediary organisation (like the University Grants Committee in New Zealand and the UK). The government funding is, without exception, premised on formula-based grants, contingent on the number of student enrolments and course cost estimates. Additional performance measures are incorporated in several countries. For example, in the UK research achievements are accounted for and in Sweden student accomplishments are remunerated. Some countries, like Australia and to a lesser extent New Zealand and the UK, have equity provisions incorporated into their funding formulas. These tertiary funding formulas have been refined over time. The predominant criticism of the funding formulas, is the lack of certainty about the future funding levels, and hence tertiary institutions and students are unable to plan with confidence.

Despite the employment of comparable methods of distributing government funds, the levels of government funding vary significantly amidst the nations examined (see figure 4.1). As shown by figure 4.1, the UK and Swedish governments fund, for the greater part, the full operating costs of their tertiary institutions. At the other extreme are the USA and Japan, which are the only OECD countries where government funding is not

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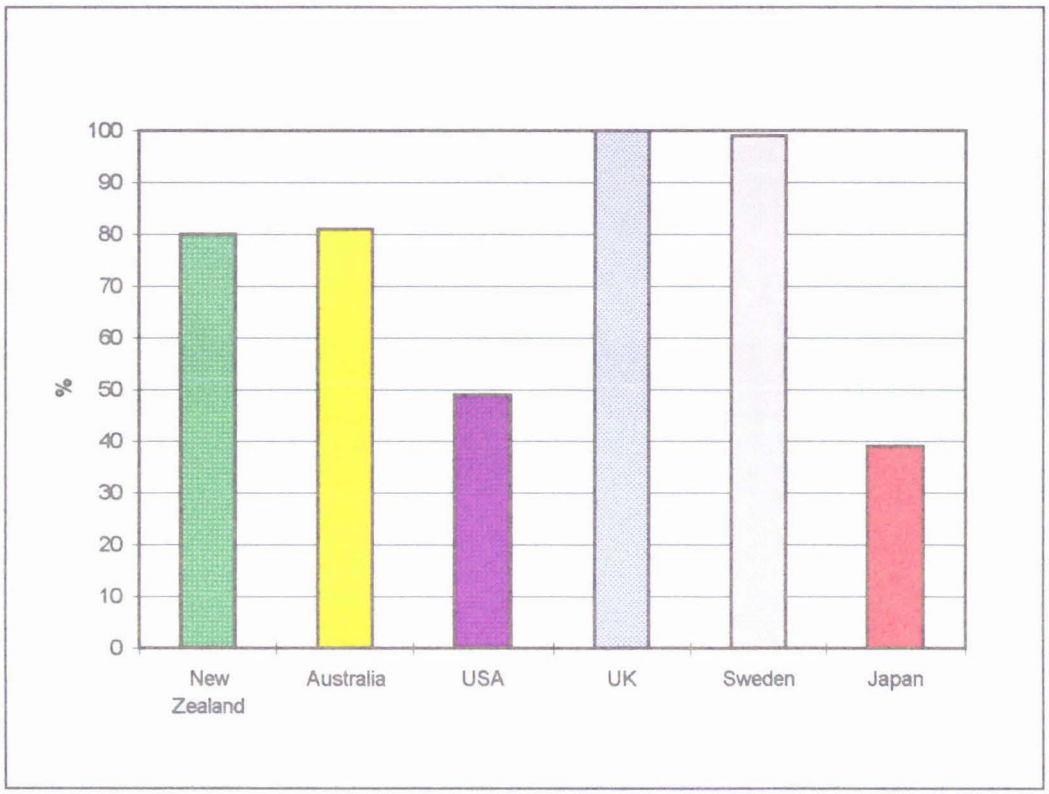
[69] Advocates of statism emphasise that public policies reflect not only the decision-making, coercive and adjudicative activities of a country, but the historical uniqueness of that country (Skocpol 1985 and Pierson 1991).

predominant. Yet even in these countries, there is a large discrepancy between the levels of government support for the public tertiary institutions and the private establishments.[70]

Figure 4.1: ***Government Funds as part of Total Tertiary Revenue in 1992.***

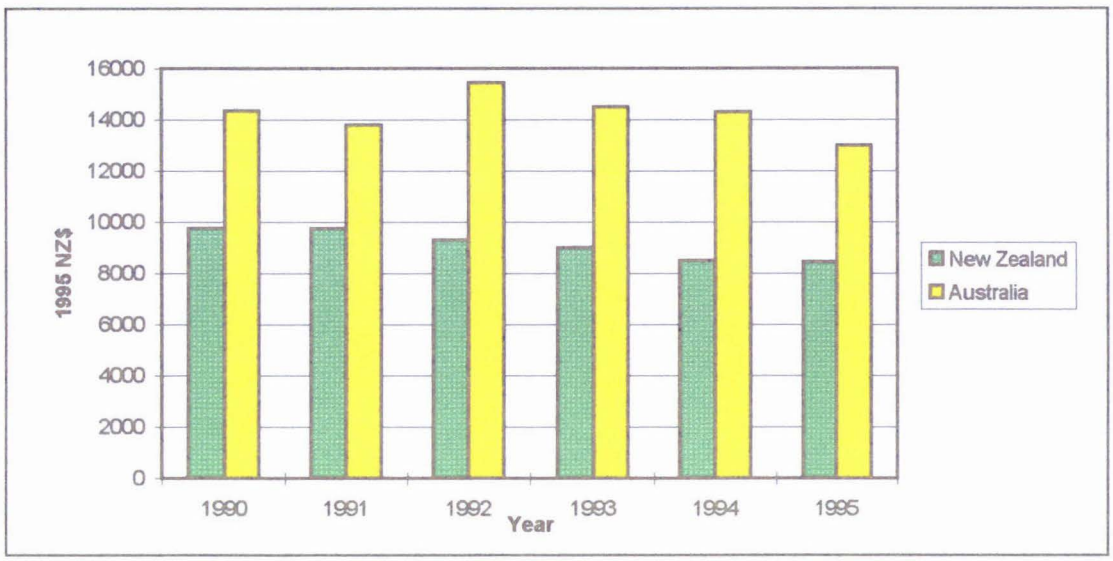


Source: OECD (1995b:48 and 49). **estimate for New Zealand*

New Zealand ranks alongside Australia, somewhat between these two extremes, with governments in both countries contributing approximately 80 percent of tertiary operation costs, in 1992. However, the level of government funding per equivalent full-time student has been far greater in Australia, as illustrated by figure 4.2. For example, in 1994, for the university sector only, the level of government funding per equivalent full-time student in Australia was almost 38 percent higher than in New Zealand (Public Tertiary Education Coalition 1996:9).

[70] In 1991, the US government contributed 53 percent of the revenue of public tertiary institutions, but only 18 percent of private institutions. In 1987, the Japanese government subsidised 63 percent of the costs of running the public tertiary institutions, but only 14 percent of private institutions.

Figure 4.2: ***Relative Government Funding of New Zealand and Australian Universities per Equivalent Full-Time Student from 1990 to 1995.***



Source: Public Tertiary Education Coalition (1996:9).

Tertiary access policies, in all countries considered in this study, have the goal of containing government expenditure on tertiary education. In New Zealand the National Government resolved in January 1995, to progressively reduce the state's contribution, from 80 percent to 75 percent of tertiary education costs, by the year 2000. (However as a result of the formation of a Coalition Government in December 1996 the policy position may change). Australia's new Coalition Government has announced that it wants to reduce operating funds in 1998 and 1999, after a year of reprieve. Furthermore, the UK government resolved to reduce government spending, by at least three percent per student annually, for the last few years.

Although governments emphasise increased expenditure levels, there has been a reduction per equivalent full-time student, due to the expansion in overall student numbers. This decline in government funding may lead to a degeneration in quality (as occurs in the private institutions of Japan) and/or it may force tertiary institutions to find other sources of income. Van Vught (1995) concluded that in many countries, tertiary institutions have been successful in increasing the share of funding from the commercial sector to supplement their budgets. However, commercial interests generally lie in areas of research and consultancy, rather than student education. Deficiencies in funding for this activity largely led to an increase in the students' share of tertiary costs, principally through tuition fees.

Tuition Fees

Kohn et al (cited in Maani 1995:9) concluded that tuition fees were at least five times more influential than commuting costs and twice as important as room and board costs. Table 4.1 presents the levels of tuition fees for all the nations considered in this study. Except for Japan, the statistics exclude other fees imposed by tertiary institutions, such as equipment fees or student union levies.[71] Unlike the data presented in previous chapters, the data here has been converted into New Zealand currency (as at 4 November 1996), for ease of correspondence. The dates in the parentheses signify the year the tuition fees were applicable.

Table 4.1: ***Tertiary Tuition Fees.***

Country	Type	Average Tuition Fee	Range
New Zealand	All	$2,500 (1996)	$1,700-17,000 (1996)
Australia	All	$2,743 "	N/A
USA	Public Private Public and Private	$2,486 (1993-94) $13,582 "	 $0-$36,472 (1995-96)
UK	Undergraduate - Lecture - Laboratory - Clinical Post-graduate	 *$3,023* (1995-96) *$6,442* " *$11,593* " *$5,256* "	 N/A " " "
Sweden	All	$0	N/A
Japan	Undergraduate - National Public - Local Public - Private Post-graduate - National Public - Local Public - Private	 $6,795 (1991) $9,376 " $6,795 "	 $12,020-$115,424 (1991) $5,810-$9,214 (1991) $8,603-$16,796 (1991)

Sources: Association of International Education, Japan (1991:19); Ministerial Consultative Group (1994:206); Commonwealth of Australia (1995a); Famighetti (1995:220-201); Robertson (1996); Lund University (1996).

[71] Unfortunately, the only available figures for Japan, amalgamated tuition fees with other attendance costs.

Japan has the highest tertiary tuition fees (on average), although there is a vast range. Tuition fees are least expensive in the public institutions, which prevail amidst the most prestigious tertiary institutions in Japan. However, academic competition for the limited number of vacancies is intense. Private institutions set their own tuition fees, with price, as a rule, reflecting the popularity and prestige of the institution and area of specialisation. The USA follows Japan, in terms of the most costly tertiary tuition fees (on average). However, once again, there is a wide discrepancy in the range of tariffs administered by tertiary institutions. The USA has some very cheap (or free) public tertiary institutions (run as community services), yet concurrently accommodate expensive and elite private institutions. Unlike Japan, the most prestigious institutions are all located within the private sector.

As depicted in table 4.1, New Zealand's average tertiary fee is of similar value to the flat fee administrated in Australia (HECS). However, New Zealand has a diverse range of tuition fees, which are largely contingent on the cost category of courses. The Australian Coalition Government elected in 1996 intends to co-ordinate tuition fees with areas of specialisation (although they only plan to have three tiers). Yet, in contrast to that proposed in Australia, New Zealand course fees are fixed by the tertiary institutions themselves.

Tertiary education is essentially free in both the UK and Sweden, as is typical in European countries (Ministerial Consultative Group 1994). Although the tertiary institutions in the UK do charge tuition fees (set by the state), British citizens are reimbursed by the government. Hence, as with the other countries analysed, tertiary fees have become an important source of revenue for tertiary institutions, but uniquely students are not burdened with the expense. Swedish tertiary students do not pay tuition fees, but pay a mandatory student union fee of about $65 per term.

Student Aid

As well as subsidising tuition costs by funding providers of tertiary education directly, all governments render financial assistance to students via student aid. Except for Japan, all countries studied provide a combination of student maintenance grants and loans to target disadvantaged groups. (The Japanese government only renders a student loan scheme.) For ease of analysis, the student maintenance grants and student loans will be segregated, although both are clearly mutually exclusive.

Student Maintenance Grants: Student maintenance grants are the provisions of financial support to tertiary students, through grants from government. The endowment(s) do not need to be repaid, either financially or by labour. Table 4.2 collates the available figures on each countries' student maintenance scheme(s). Once again, the data has been converted into New Zealand currency and the dates in parentheses depict the year the figures were applicable.

Table 4.2: ***Student Maintenance Scheme(s).***

Country	Programme	Maximum for 18yo residing with family	Family Income Test applied
New Zealand	Student Allowance	$3,599/year (1996)	Yes - $28,080 family threshold
Australia	Austudy	$3,486/year (1994)	Yes - $25,955 family threshold
USA	Pell Grant	$3,000/year (1996)	Yes
	Supplemental Educ Opportunity Grant	$5,128/year (1996)	Yes
UK	Maintenance Grant	$3,558/year (1995-96)	Yes - $36,070 family threshold
Sweden	Studiemedel	$3,695/year (1994)	No
Japan	N/A	N/A	N/A

Sources: Ministerial Consultative Group (1994:214-5); Swedish Institute (1994); Comerford (1995:4); Ministry of Education (1996); College Finders (1996); US Department of Education (1996).

It appears as though the USA has the most generous student maintenance scheme for tertiary students from impoverished families, particularly as both the Pell Grants and the Supplemental Educational Opportunity Grants can be combined. However there are strict personal and family income test imposed to limit the number of recipients. As table 3.5 shows, there were 976,300 Supplemental Educational Opportunity Grants in 1992, comprising of just under seven percent of tertiary students. Moreover, many of the recipients would not obtain the maximum allowance payable. Ranking behind the USA, is the student maintenance component of Studiemedel, employed in Sweden. Sweden's student maintenance scheme is more universal than the USA's programmes, as eligibility is not contingent on family income. The values of the student maintenance grants in New Zealand, Australia and the UK follow closely behind that of Sweden, with minor differentiation. Although New Zealand has the lowest family income threshold out of the Commonwealth countries.

Student Loans: Student loans are financing schemes in which financial assistance to students, renders the recipients liable to repay the amount, with or without interest. In all countries considered the government or commercial lenders (with the state as guarantor), do not impose conventional lending criteria or screens, which would exclude a large proportion of students, particularly those with the lowest credit ratings. The only concession is the PLUS loans in the USA, which are targeted at the parents of tertiary students. Table 4.3 assembles the available figures on student loan schemes in the different countries. Again the data has been converted into New Zealand currency and the year the data was valid is provided within parentheses.

Table 4.3: ***Student Loan Scheme(s).***

Country	Programme	Maximum Loan available to 18yo residing with family in intro. year	Family Income Tested	Interest	Repayment
New Zealand	Student Loan	$5,500/year (1996)	No	No	Income Contingent
Australia	Supplement	$7,865/year (1996)	Semi	"	"
USA	Stafford	$3,365/year (1996)	Yes	Low	Grace period
	Perkins	$3,846/year (1996)	Yes	Low	"
UK	Maintenance	$2,476/year (1995-96)	No	No	Income Contingent
Sweden	Studiemedel	$9,565/year (1994)	No	Low	"
Japan	Scholarship Foundation	Not Available	Yes	Low	Standard

Sources: Ministerial Consultative Group (1994:215); Swedish Institute (1994); Comerford (1995:4); Ministry of Education (1996), Australian Bureau of Statistics (1996:293), College Finders (1996), US Department of Education (1996).

In all countries examined, student loans are supplied at zero or low rates of interest. Furthermore, most countries provide exemptions from repayment obligations if a former student's income is below a certain threshold. In addition, there are different subsidiary criteria which ensure exemptions from repayment obligations for a limited, or indefinite, period.

The maximum annual student loan on offer to tertiary students is furnished by Sweden. Moreover, as with the grant portion of its student aid scheme, family income does not effect eligibility. Australia offers the second to largest advances to tertiary students, but recipients must forfeit, or trade in, some of their Austudy or Abstudy allowance. The loans are therefore only available to students in receipt of Austudy and Abstudy, which are both subject to personal and family income test (although some Abstudy allowances are exempt). New Zealand comes next, with the government enabling a maximum of $5,500 to be advanced to students. (A maximum of $1000 for tuition fees and associated academic costs and a maximum of $4,500 for living costs). As with Sweden and Australia, New Zealand's student loan scheme is not subject to personal or family income test.

Both of the national student loan schemes in the USA (the Stafford and Perkins loans) precede New Zealand. They are both targeted towards lower socio-economic groups, by income tests. The smallest available student loan is provided by the UK, however unlike its student maintenance grant, the loan is not subject to a family income test. No figures were available for Japan, however it was ascertained that the student loan programme was targeted to the gifted children of the underprivileged.

Work Study Programme: The USA supplements its student aid package by providing a work-study programme. In essence, the government subsidises the wages of students undertaking part-time employment. The tertiary institutions administer the work-study programme and arrange employment both within and outside the tertiary institutions. The programme is targeted by making eligibility dependent on personal and family income. The work-study programme is politically popular, reflecting the ethic of work and self-reliance associated with the belief that the USA is a land of opportunity for those who seek to improve themselves. Regardless, the government reduced its appropriation by 1.2 percent between 1991 and 1992, despite the dramatic increase in demand. New Zealand used to also subsidise the employment of tertiary students during the long vacation. However, no other country has adopted the same scale of programme as that operational in the USA.

Impact of Tertiary Access Policies

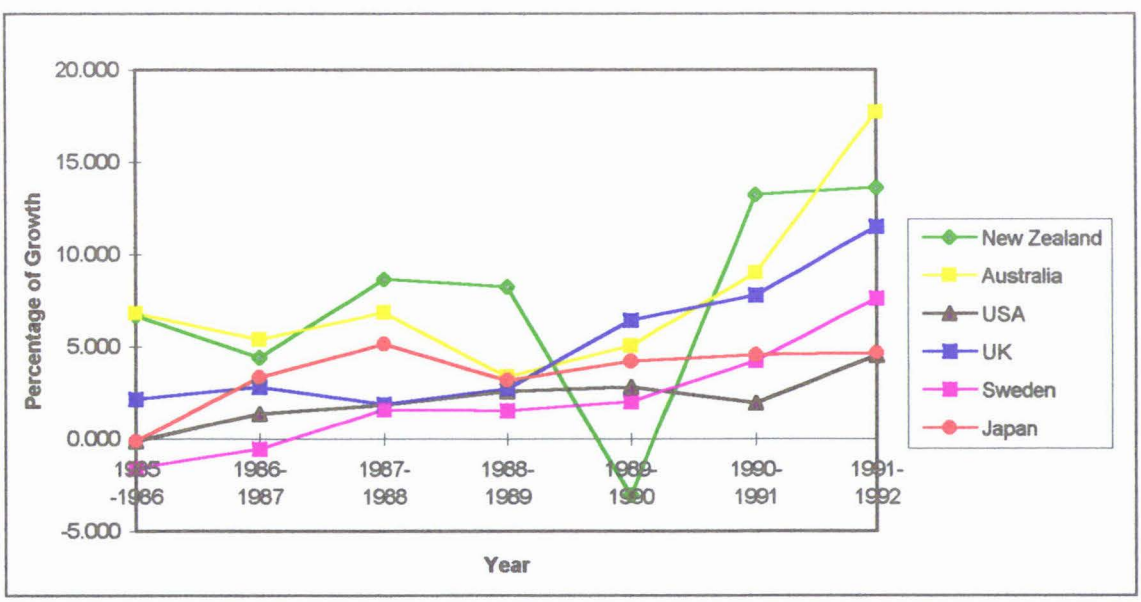
In order to ascertain which tertiary financing options and student aid measures have the premium impact on overall tertiary attendance and the participation of minority subgroups, it is imperative to study the tertiary participation trends. However, evaluating the effects on student composition from public policies, is fraught with complications, compounded by external variables which impinge on participation levels, like cultural

values, demographic variables, labour market forces, secondary school retention rates, peer group effects and family attitudes and education. However, tertiary funding, tuition fees and student aid programmes are influential catalysts for alterations in tertiary participation trends.

Overall Participation Rates

Throughout the 1980s and into the early 1990s, in all six countries under study, there was general growth in overall tertiary enrolments (see figure 4.3). Van Vught (1995), in a comparative study, demonstrated that the non-university sector had absorbed most of this growth. Thus, much of the expansion in tertiary education has taken place in institutes that are comparable to the polytechnics of New Zealand. However, as depicted in figure 4.3, there were some noticeable exceptions to the continued expansion of the tertiary education sectors. The UK experienced a trough in the growth of full-time equivalent students between 1987 and 1988. Australia and Japan experienced their trough between 1988 and 1989 and the USA experienced its trough between 1990 and 1991. New Zealand has experienced two troughs during the period analysed, the first in 1986 and 1987 and the second more dramatic decline between 1989 and 1990. However, the rates of growth in New Zealand, Australia, the USA, the UK and Japan did recover in subsequent years and one must be cautious in attributing the declines in tertiary participation solely to changes in tertiary access policies.

Figure 4.3: ***Percentage of Growth in Equivalent Full-Time Student Enrolments in Tertiary Education from 1985 to 1992.***

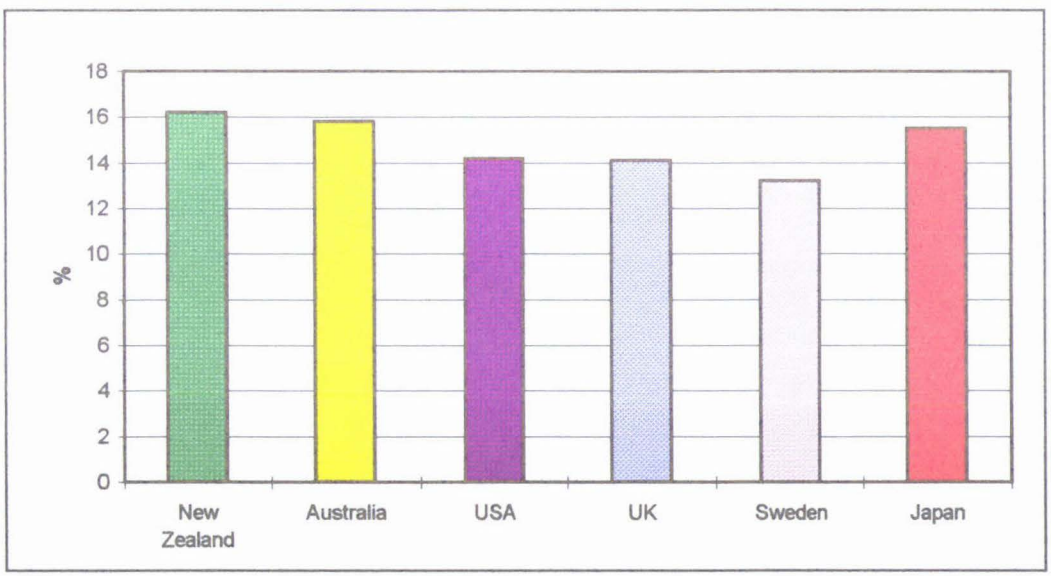


Source: OECD (1995b:142).

As mentioned in chapter one, Pellegrin (1974b) determined that demographic variables could account for a proportion of the growth in tertiary enrolments. Maani (1995:32) reported that, although there has been a decline in the proportion of people in the 18 to 24 year old age group, this must be balanced against the increased retention of secondary school students and the enhanced quota of mature students.

Figure 4.4 provides details of the proportion of 15 to 24 year old cohorts within each country studied, for the year of 1992. As can be seen, New Zealand had the highest proportion of youths aged 15 to 24 years, followed closely by Australia and Japan. The USA and the UK have comparable numbers of youths in this age category. However, Sweden is clearly hindmost. Hence, it is important, when comparing countries tertiary participation rates, to take into account the differing age distributions and contrast similar age cohorts.

Figure 4.4: ***Percentage of Persons in 15 to 24 year old Age Group in the Total Population in 1992.***



Source: OECD (1995a:25).

Youth unemployment levels and labour force participation rates also affect the tertiary participation rates, especially of young people. High rates of unemployment act as a disincentive to students leaving formal education, as there is the expectation of a prolonged job search and prospects are brighter for people with more skills or qualifications. The second row of table 4.4 provides the percentage of all persons in the 15 to 24 year old age group that was unemployed in 1993. However, this data needs to be treated with caution, as the definition of "unemployed" is incompatible between nations.

High rates of labour force participation may be reflective of societal expectations for youths to enter the workforce as soon as possible. The third row of table 4.4, therefore shows the percentage of all persons in the 15 to 24 year old age group that was in the labour force in 1993 (OECD 1995a:38-40).

Table 4.4: ***Youth Unemployment Levels and Labour Force Participation Rates (in 1993).***

Country	Percentage of 15 to 24 year olds Registered as Unemployed	Percentage of 15 to 24 year olds in the Labour Force
New Zealand	11.2	62.6
Australia	12.5	68.2
USA	8.9	63.0
UK	11.2	72.5
Sweden	6.3	58.5
Japan	2.0	46.4

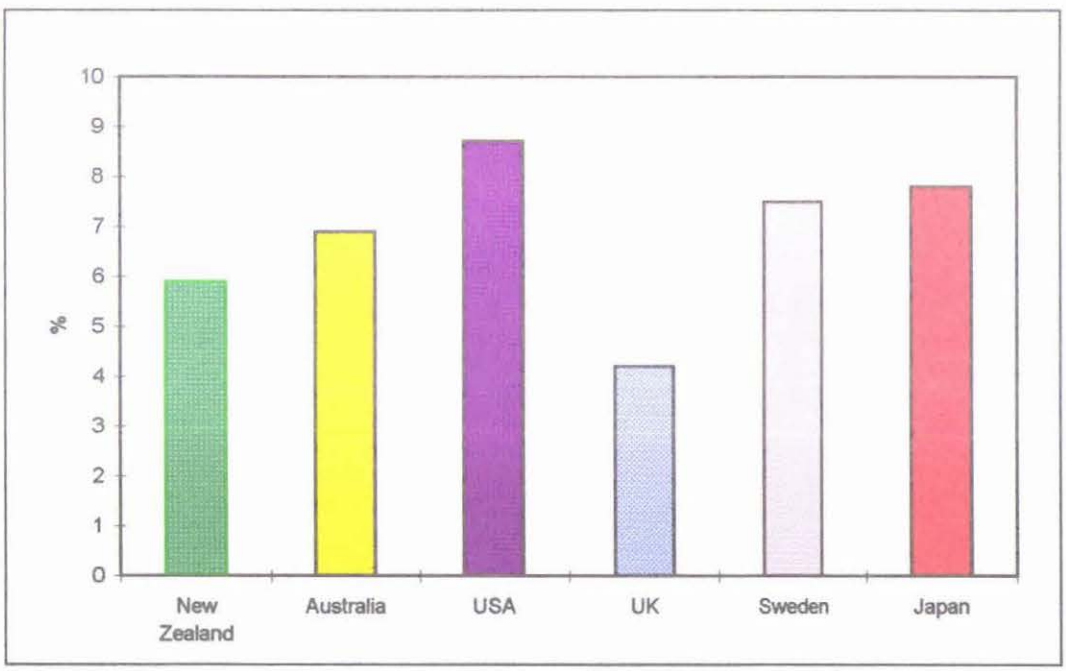
Source: OECD (1995a:38-40).

New Zealand, Australia and the UK have a low commitment to full employment, but provide social security payments to youths registered as unemployed. The USA also has a low commitment to full employment, but its social security system is very restricted. Sweden has a strong commitment to full employment and also provides social security payments to those unable to secure employment. Japan has very low social entitlements, but is committed to securing full employment (Pierson 1991:186). Just by considering unemployment rates and levels of assistance, one could anticipate high rates of tertiary participation in Japan and the USA and moderate participation levels in New Zealand, Australia and the UK, followed closely by Sweden. Hence, unemployment rates and level of assistance for those seeking employment, may also bias the link between tertiary access policies and participation levels.

Figure 4.5 presents the actual percentage of the general population, aged from 15 to 29 years, engaged in full-time tertiary education. As anticipated, it demonstrates that of the six countries studied, the USA has the highest proportion of people undertake tertiary education, particularly in the universities. Japan has the next highest number of people engaged in full-time tertiary education, but Japan has a very low percentage of part-time and extramural students and growth has appeared to have plateaued (OECD 1991).

Sweden proceeds the USA and Japan, in the proportion of full-time tertiary students, but it also has a very high percentage of part-time and extramural students. The tertiary participation rates of Sweden contradict the assertion by James (1988:10) that a government is able to render generous financial support, only if the country has a low tertiary participation rate. Australia is positioned fourth but, as with Sweden, it does have a high percentage of part-time and extramural students. In 1992, 17 percent of 15 to 29 year olds were undertaking tertiary education part-time or extramurally (OECD 1995a:126). New Zealand is placed second to last, with 5.9 percent of the 15 to 29 year old population undertaking full-time tertiary education in 1992. In addition, 5.1 percent of 15 to 29 year olds were studying at a tertiary institution part-time or extramurally (OECD 1995a:126). The UK has a low percentage of its population engaged in tertiary education, both full-time and part-time.

Figure 4.5: ***Percentage of Persons in 15 to 29 year old Age Group undertaking Full-Time Tertiary Education in 1992.***



Source: OECD (1995b:142).

Based on data shown in figure 4.5 on participation rates of 15 to 29 year olds in full-time tertiary education, it can be argued that there is a positive relationship between tertiary costs to students and participation. For example, the USA and Japan have the highest participation rates, despite the level of government contributions being the lowest in these two countries. However, the American and Japanese cultures have historically placed a great deal of importance on higher education. Hence, a number of other variables, in

addition to price, have led to the variances in aggregate tertiary enrolment levels. The phenomenon, whereby an unspecified variable or process may be responsible for the correlation, is known as the third-variable problem. Examples include cultural factors, the distribution of income and wealth, expected rates of return on education, unemployment levels and social security assistance.

Effects of tertiary funding and student aid on overall tertiary participation

Two trends may challenge further financial support for tertiary education from governments. The first has already been addressed: a cross-sectional international comparison, discloses no connection between levels of government funding of tertiary education and overall participation rates. As already explained, perturbations need to be taken into account in order to obtain an accurate portrayal of actual practice. The second trend is that tertiary enrolments have continued to grow, despite rises in tertiary prices. In addition to countervailing forces, (like increased unemployment levels, changes in preferences and demographic factors), Leslie and Brinkman reason that this may be explained by the fact that students have negated price increases by moving to lower cost institutions, with the result that overall participation rates remain high. Furthermore, prices in real terms have increased modestly, when compared to the opportunity cost of foregone earnings (Leslie and Brinkman 1987:200).

Many studies have been conducted in the USA, attempting to measure the impact of tertiary prices on overall participation levels. As stipulated in chapter 3, American studies (Jackson [in 1975]; McPherson [in 1978]; Manskie and Wise [in 1983]) have suggested that overall enrolments are negatively correlated with prices charged students and positively correlated with student aid measures. Of the 25 studies reviewed by Leslie and Brinkman (all attempting to ascertain the effects of a US$100 increase in tuition cost), 23 showed that it would have a detrimental impact on tertiary participation, although some of the figures may not have been statistically significant (Leslie and Brinkman 1987).[72] These findings were also supported by the Australian study (conducted by the Department of Employment Education and Training in 1990) which calculated that the HECS levy had deterred 10.9 percent of potential university students (Juddery 1996b).

[72] The years of data collection ranged from 1927 to 1976 and included cross-sectional and longitudinal studies (Leslie and Brinkman 1987:Table 1).

Disadvantaged Groups

Overall participation trends may conceal the effects of tertiary funding and student aid measures on subgroups within the national population. Only by examining the particular patterns of participation, can a comprehensive evaluation be made and the implications arising from policy changes be ascertained. Hence, the tertiary participation levels of lower socio-economic groups, ethnic minorities and women must be examined separately.

Lower Socio-Economic Groups

Cross-country comparisons of the participation rates of different socio-economic groups are impractical due to lack of data and differences in definition and measurement. Nevertheless, there have been some consistent developments observed when analysing each country's socio-economic groups' participation levels. Governments in each country studied, have tried to mitigate financial restraints prohibiting the scholastically adept from attending tertiary education. For example, all the countries have academic scholarships, along with student aid provisions. Even Japan, which has a modest student aid programme, subsidises the public tertiary institutions, which cater to the most scholastically able students.

The preceding chapters have also shown that there is, and always has been, an imbalance in the tertiary participation rates of the highest and lowest socio-economic groups. A disproportionate number of students come from higher socio-economic backgrounds. New Zealand, serves as an example: 64.9 percent of polytechnic students and 73.2 percent of university students, aged 18 to 19 years, came from households with a net income of over $35,568, compared with 44 percent of all 18 to 19 year olds. In contrast, 26.8 percent of polytechnic students and 16.5 percent of university students, aged 18 to 19 years, came from households with a net income of under $26,624, compared with 41 percent of their cohorts (Ministerial Consultative Group 1994:15).

Not only is the socio-economic bias of the tertiary student population clearly entrenched, but empirical evidence confirms that students from lower socio-economic backgrounds tend to be concentrated in low cost institutions and disciplines. As mentioned in chapter 3, Barr (1989) reported that students that attended Oxford and Cambridge University, in the UK, were predominantly from the highest socio-economic groups. Moreover, Levin (1982) and Svensson (cited in Jones 1985:37), of Sweden, concluded that higher socio-economic groups were even more dominant in the prestigious disciplines.

Effects of tertiary funding and student aid on tertiary participation by socio-economic status

Unsurprisingly, many of the recipients of student aid provisions (particularly targeted provisions) are from lower socio-economic groups. An American study by Stampen and Cabrera (cited in James 1988) determined that students from lower socio-economic backgrounds are the major recipients of student maintenance grants, while student loans go more heavily to the middle socio-economic groups. Therefore policies which are heavily based on student loans will deter lower socio-economic groups.

Nevertheless, despite all the reforms in tertiary funding and student aid, no country appears to have sustained dramatic improvements to the proportion of tertiary students from lower socio-economic groups. Many critics have utilised this to challenge government support of tertiary institutions and student aid programmes, as outlined in chapter one. However, the socio-economic bias could have been more pronounced if it had not been for government intervention. Moreover, the lack of results may not be evidence of the pointlessness of government intervention, but indicative that the level of intervention was not sufficient.

Jones (1985:37) stipulated that it is very natural that higher socio-economic groups predominate tertiary education enrolments, as parents who have already benefited from education will encourage and financially support their children to emulate or exceed their achievements. Moreover, Papadakis and Taylor-Gooby (1987:101) stipulate if tertiary education was abolished, privileged groups would develop other means of protecting their interests.

Nevertheless, student aid has enabled many people to undertake tertiary education, from all socio-economic groups, who would not otherwise have had the opportunity to study at this level. Student aid has also probably widened the options for students of lower socio-economic status, enabling them to attend more expensive courses, distant courses and attend full-time rather than part-time (Gladieux 1983:76).

As preceding chapters have indicated, numerous studies have attempted to quantify the effects of tertiary prices and student aid provisions on the participation rates of lower socio-economic groups, although all are predominantly American based. Bishop (1977) identified several studies that have endorsed the hypothesis that youths from lower socio-

economic backgrounds are more influenced by the price of tertiary education.[73] A study by Hansen, in 1983, did assert that enhanced student aid had failed to induce a greater social mix of tertiary students. However, when McPherson and Schapiro in 1978 (cited in Maani 1995) made some methodological improvements and extended the time-frame considered by Hansen, their findings contradicted those of Hansen's.

Other American studies, mentioned in chapter 3, have also supported the hypothesis that lower socio-economic groups are principally effected by amendments to tertiary policies. Astin and Inouye (cited in James 1988:3) and Manskie and Wise (cited in Maani 1995:9) determined that student aid had increased the enrolments of students from lower socio-economic backgrounds. Moreover, McPherson and Schapiro (1991) concluded that increases in tertiary costs for students, have a negative, and statistically significant, effect on enrolments for Caucasian students from lower socio-economic groups.[74] McPherson and Schapiro highlighted that these findings would have been obscured in an analysis that aggregated all socio-economic groups, as no evidence was found that increases in tertiary cost inhibited enrolments of more affluent students.

Swedish researchers, Reuterberg and Svensson, also conducted a series of investigations into the effects of student aid on tertiary participation by lower socio-economic groups in Sweden. As reported in chapter 3, Reuterberg and Svensson (1983) conducted a questionnaire, in 1980, on the importance of student aid on the decision to enter tertiary education. Forty percent of students with parents employed as farmers or labourers reported that they would probably not have entered tertiary education without student aid. This contrasted with 12 percent of students with parents from higher socio-economic groups with tertiary education and 27 percent of students with parents from higher socio-economic groups with no tertiary education. Reuterberg and Svensson (1983:89) concluded "the class bias [in tertiary education] would have been far greater if it had not been for the national financial aid system." These findings were echoed by Svensson (cited in Morris 1989) in a subsequent study which determined that financial concerns and aversion to

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[73] The following references were cited by Bishop as supporting the hypothesis that lower socio-economic groups have higher elasticities of demand: (i) Corazzini, A.J.; Dugan, D.J. and Grabowski, H.G. (1972) 'Determination and Distributional Aspects of Enrolment in US Higher Education, *Journal of Human Resources*, Vol 7, Winter 1979, pp 39-59; (ii) Hoenack, S. (1967) *Private Demand for Higher Education in California*, University of California: Berkeley and (iii) Radner, R. and Miller, L. (1970) 'Demand and Supply in US Higher Education', *American Economic Review*, Vol 60, May 1970, pp 326-34.

[74] The sample from other ethnic groups was too small to draw conclusions on their disposition to tuition fee increases (McPherson and Schapiro 1991).

debt, were identified most frequently by those students coming from lower middle and lower socio-economic groups.

Ethnic Minorities

Ethnic minorities (other than Asian immigrants) are under-represented in the tertiary populace in all countries studied. Maori comprised 14 percent of the New Zealand population, but just 10.4 percent of New Zealand tertiary students, in 1993. In the same year, people with Pacific Island origins accounted for 4.7 percent of the New Zealand population, but only 2.4 percent of New Zealand tertiary students. Similar patterns of ethnic participation are found abroad. Nearly five percent of the Australian population were engaged in tertiary education in 1990, compared with 3.5 percent for Aboriginal and Torres Strait Islander people. In 1993, Blacks accounted for 18 percent of the American population but only 11 percent of the tertiary populace. Hispanics comprised 19 percent of the American population and just seven percent of tertiary enrolments. Although no official statistics were available, similar trends were found for West Indians in the UK and the Burakumin of Japan (Craft and Craft 1983; Higuchi 1995).

Ethnic minorities tend to be less likely to continue into tertiary education directly from secondary school, making participation differentials most marked at the core age groups (eighteen to twenty-four years). For example, over 50 percent of Maori women attending university were over 25 years of age (Davies and Nicholl 1993). Similarly, in 1992, about 45 percent of American Blacks attended tertiary education within 12 months after graduating from secondary school, compared with 63 percent of their Caucasian cohorts. Although New Zealand students with Pacific Island backgrounds did not accede to this principle.

In New Zealand, the proportion of tertiary students with Maori and Pacific Island origins has expanded, albeit slowly, since 1990. However, one must be careful not to infer that Maori and Pacific Island students have been immune to reforms to tertiary funding policies. A number of variables could have negated declines to participation rates, such as ethnic minorities becoming an increasing percentage of the population, the improved secondary school retention rates, affirmative action policies and support groups set up in tertiary institutions. In the USA, since 1980 the proportion of tertiary students from ethnic minorities has remained steady, or may have even declined, which coincided with the emphasis by government on curbing tertiary costs. Cronin and Simmons (1987) and Hansen (1989) noted that many critics accredited the increasing reliance on loan financing

as contributing to the regression. However, further research is necessary to account for any perturbations.

Even when students from ethnic minorities undertake tertiary education, they are more likely to attend non-university institutions of tertiary education. Maori students comprised over 11 percent of the non-university tertiary populace, but only 8.8 percent of university enrolments (Statistics New Zealand 1995b:241). By the same token, a UK study, established that none of the West Indian sample of sixth form students, proceeded to study at a university in the following year, although 44 percent pursued further or higher education (Craft and Craft 1983).

Ethnic minorities may also be concentrated in a narrow range of disciplines and low level (and low cost) tertiary courses. In New Zealand, Maori students are over-represented in undergraduate diplomas and certificates (Davies and Nicholl 1993:90). Ethnic minorities are also under-represented in post-graduate studies in the USA. For example, in 1994 3.4 percent of Blacks, in the USA, and 2.9 percent of Hispanics, have a post-graduate award, as opposed to 7.9 percent of US Caucasians (US Department of Commerce 1995:figure 240).

Effects of tertiary funding and student aid on tertiary participation by ethnic minority

Only three countries (New Zealand, Australia and the USA) collate information required for drawing conclusions about the impact of tertiary funding practices and student aid on tertiary participation by ethnic groups. A New Zealand survey determined that tuition costs were more influential in determining Maori and Pacific Island students' choice of study (Greenslade and Lamb 1992:63). Also examination of the effects of New Zealand's tertiary access policies, validated that Maori and Pacific Island people are major recipients of all student aid programmes. Maori and Pacific Island tertiary students have had very high uptakes of student loans. Yet statistical evidence indicates these ethnic minorities will receive a lower financial return, on average, on their educational investment.

In Australia, although inequities persist, there has been a rapid expansion in the number of Aboriginal and Torres Strait Islanders participating in tertiary education. This may be a result of the concerted efforts by the Australian government to improve access to Aboriginal and Torres Strait Islander people. The Australian government provides a specific form of financial aid to Aboriginal and Torres Strait Islander people, namely

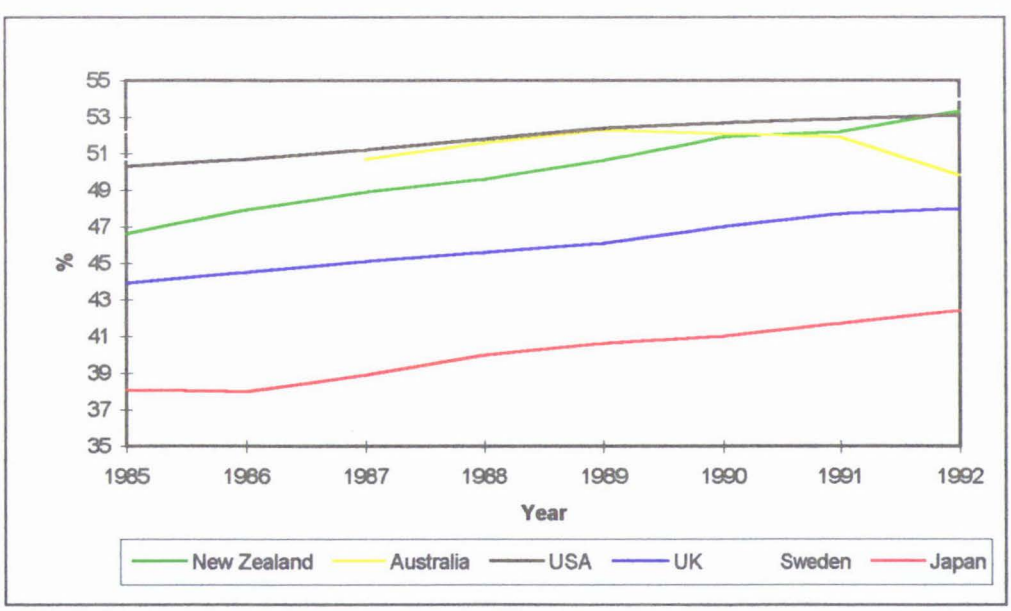
Abstudy, as well as providing financial incentives directly to tertiary institutions for the purposes of improving tertiary access.

In the USA, student aid has been credited with assisting ethnic minorities into tertiary education. However, the decline in the levels of student aid, has corresponded with a decline in the proportion of ethnic minorities. (Although, further research is required to determine if there is a direct causal relationship.) The decision to pay for the increasing share of tertiary education costs, and acquire student loans, is influenced by expectations about future financial returns. Yet despite equivalent qualifications, ethnic minorities in the USA obtain lower salaries on average.

Women

As figure 4.6 exhibits, there has been a world-wide increase in the proportion of women partaking in tertiary education. In most countries, the increase has meant that the proportion of women students in tertiary education corresponds to male students. As of 1992, Sweden had the highest percentage of women engaged in tertiary education, followed by New Zealand, the USA, Australia and the UK. Japan is a distant last, with women comprising just 42.4 percent of the equivalent full-time tertiary enrolments (OECD 1995b:143). Cultural preferences account for a large portion of the growth in female tertiary participation and the differences between countries.

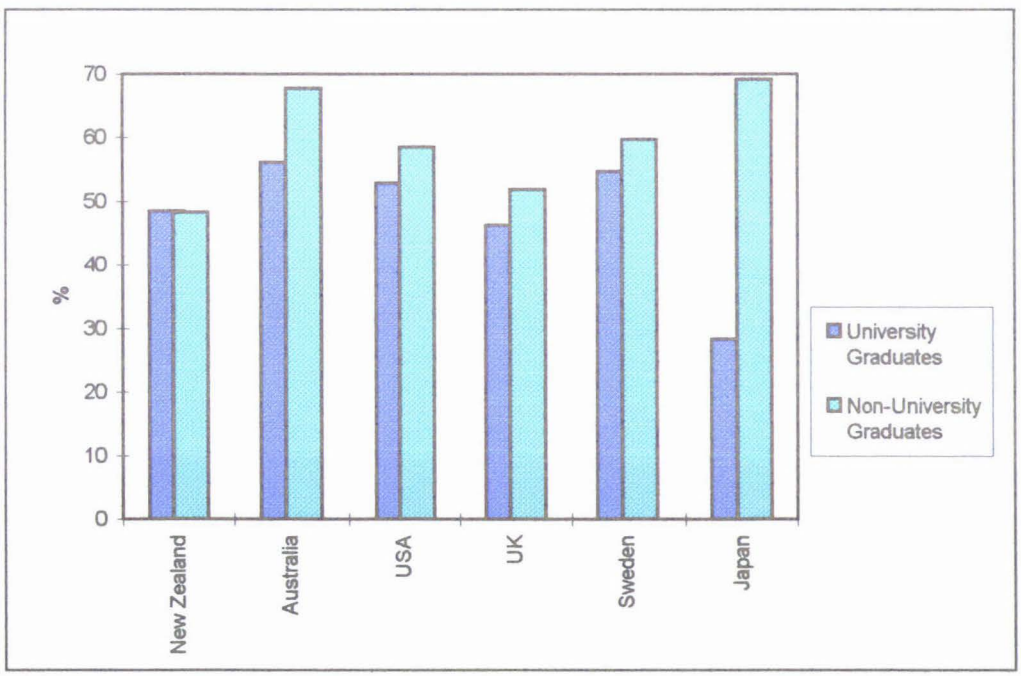
Figure 4.6: ***Percentage of Women Enrolments in Tertiary Education (EFTS) from 1985 to 1992.***



Source: OECD (1995b:143). **No data available for Australia in 1985 and 1986*

Closer examination of tertiary participation patterns reveals that women remain disadvantaged in many regards. Women tend to be disproportionately enrolled in non-university institutions of tertiary education. Figure 4.7 displays the proportion of women graduates from university and non-university tertiary institutions, for each country considered in this study. In 1992, New Zealand had approximately 48 percent of women graduate from both the university and the non-university sector. In the same year, Australia, Sweden and the USA had a higher proportion of women graduate from both the university and non-university sector. The UK had a comparable number of women graduate from universities to that of New Zealand, but a slightly higher proportion of women graduated from non-university tertiary institutions. Japan had a very low proportion of women graduate from universities, but a high proportion of women graduated from non-university tertiary establishments.

Figure 4.7: ***Percentage of Women University and Non-University Graduates in 1992.***



Source: OECD (1995b:175 and 183).

A gender disparity is apparent not only within the different types of tertiary institutions, but also within the various courses of study. A breakdown of enrolments by discipline produces a skewed distribution of women tertiary students. Women are over-represented in the arts, education and social sciences. However, these fields of study correspond poorly

with lucrative careers.[75] At the same time, few women are engaged in the fields of architecture, engineering, commerce and computing, although some progress has been made.

Women are modestly over-represented amongst part-time and extramural tertiary students. In New Zealand, in 1993, 27 percent of university attendees were female students undertaking part-time study. In contrast, 23 percent of university attendees were males studying part-time (Statistics New Zealand 1995a). In the USA, in 1993, 38.9 percent of females were studying part-time, compared with 30.6 percent of male students (US Department of Commerce 1995: figure 280). A contributing factor explaining women's predomination in part-time and extramural studies, can be attributed to caregiving responsibilities.

Women are also under-represented amongst those undertaking post-graduate studies. In New Zealand, only 45.5 percent of masterates awarded, and 34.7 percent of doctorates, were awarded to females in 1993 (Statistics New Zealand 1995b). Similarly in Australia and the UK, where tertiary institutions are sanctioned to charge tuition fees for post-graduate courses, women are under-represented. The price of studying may deter some women from pursuing a second degree or taking a post-graduate qualification.

Effects of tertiary funding and student aid on tertiary participation by gender

Governmental decisions to more heavily subsidise disciplines that concur with high demand areas in the labour market, will under-value and under-resource many of the subjects in which women predominate. There is an argument for challenging the ghettoisation of females in certain disciplines, however redirecting resources away from the arts, education and social sciences will have the greatest impact on the quality of the courses in which women predominate. The overseas practices of staggering prices to influence students' choice of discipline, have not been successful in redirecting a significant number of women into male dominated disciplines. The rebuff of some male dominated courses by female students are a result of sex role stereotyping and other gender barriers, which can not be resolved simply by financial incentives. However, Sutherland (1991:135) reports some women have exhibited a willingness to change their choice of discipline.

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[75] Kelly and Slaughter (1991:6) wrote "opening the tertiary sector to women has for the most part meant providing women with education but few skills to negotiate in a highly competitive labour force".

The practice of tuition fees reflecting the operating cost of the course of study (as is the practice in New Zealand, the USA and Japan and being proposed by the Coalition Government of Australia) may therefore have some negative implications for those female tertiary students (few as they might be) that are willing to change their choice of discipline to study. The low cost of attending courses in the arts, education and social sciences, in comparison to medicine, veterinary science and dentistry, may influence a students' choice of specialisation. Price differences therefore may give greater impetus to the gender imbalance in certain disciplines.

Empirical evidence indicates that tuition fees have an impact on the number of part-time and extramural enrolments, for which women predominate. Figure 2.4 shows that the introduction of tuition fees in New Zealand, resulted in a dramatic decline in the number of extramural tertiary students (although there was rapid recovery in enrolments in subsequent years). The slump was slightly more pronounced for female students. This may indicate that female students are more susceptible to price increases - the expenses being unable to be justified to themselves or their family. Particularly as many women are engaged in part-time and extramural studies for personal development rather than for career advancement.

Student aid provisions have been credited with bringing more women into tertiary education. Although, the student maintenance grants, rather than student loan schemes, have proven to be most advantageous to women. Empirical evidence indicates that women have more of an aversion to taking up student loans. In both New Zealand and Australia (no data was available for the other countries), female students have a lower uptake of loans than their male counterparts. The aversion to take up student loans, or even the election not to pursue tertiary education, may be, in part, a response to realistic expectations about the possible dividends of a tertiary education (Fugimura-Fanselow 1985). Women may elect, or be forced, to discontinue employment at various points in their lives. Moreover, women's rates of pay are significantly less than that of males, despite the attainment of equal qualifications. These idiosyncrasies lead women to anticipate lower economic returns on their investment, and this expectation, to a degree, causes women to be less likely than males to pursue tertiary education, or borrow money via student loans. This is ratified by the fact that Sweden has the smallest earnings gap (in terms of male and

female pay rates), and it also has the highest proportion of women engaged in tertiary education (Bryson 1993).[76]

[76] In Sweden, the women's hourly rate of pay is 90 percent of that of men's (Bryson 1993).

Chapter 5

CONCLUSION AND RECOMMENDATIONS

This chapter summarises the research findings of this thesis and explains the implications for New Zealand's policies on tertiary funding and student aid. It first reviews the evolution of tertiary access policies for the six nations considered in this study. It then continues to report the major findings for each specific country analysed. The third part of this thesis is a synopsis of the four contrasted variables considered in this study: government funding of tertiary institutions, tuition fees, student aid and participation patterns. As mentioned in chapter one, this study endeavours to identify what tertiary funding practices, tuition fees and student aid programmes will secure the greatest access to tertiary education, particularly for students from lower socio-economic groups, ethnic minorities and women. The final part of this chapter, therefore, makes explicit the ramifications for New Zealand's policies on tertiary funding, tuition fees and student aid provisions.

Evolution of Tertiary Policies

The evolution of the tertiary sector internationally can be divided into a number of phases. Without exception, the first tertiary institutions within each country catered principally to the elite during their preliminary periods. The financing of tertiary education by governments was largely aimed at growth in the tertiary sector prior to the Second World War. The post Second World War period until the early 1970s was characterised by expanded government support and concern for access to educational opportunities, leading to various student aid programmes being instigated.

From the early 1970s, all governments have expressed concerns about the increasing costs of the tertiary sector (during a period of fiscal restraint). Some governments (like New Zealand, Australia and the UK) have reduced the level of tertiary funding per equivalent full-time student. In addition, governments in New Zealand and Australia introduced, or re-introduced, tuition fees, requiring students to pay a percentage of their education costs. Moreover, most of the student maintenance grants have been targeted exclusively to those

able to demonstrate financial need. Finally, student loans have been introduced, in New Zealand, Australia and the UK, to secure a greater contribution from recipients of a tertiary education. However, remarkably the levels of government funding, and most of the student aid programmes, have largely been sustained, incurring minor reforms rather than revolutionary changes.

Countries have also deviated from international tendencies. As mentioned in chapter 4, New Zealand (in 1989) and Australia (in 1987) introduced a more generous system of student maintenance, to offset increased tuition fees. Moreover, Sweden increased the grant portion, and reduced the loan portion, of its student aid system in 1989. Furthermore, the Japanese government has extended its funding of private tertiary institutions (yet they still apply very stringent funding formulas, in comparison to the other countries analysed).

In essence, there has been some international diffusion of ideas. However, despite all the countries considered having similar tertiary policy objectives and comparable economies (all post-industrial nations, ranked in the top 20 countries for international competitiveness), they all have unique historical and contemporary tertiary policies. The lessons learned from each specific country therefore deserve respectful attention.

Key Findings of Specific Countries

New Zealand: As stipulated in chapter 2, the New Zealand government contributed approximately 80 percent of the operating costs of the tertiary sector in 1996. Tertiary students, for the most part, contributed the remaining 20 percent of tertiary operating costs through tuition fees (although there was a substantial differentiation between courses). With reduced government expenditure per equivalent full-time student, the percentage of education costs met by students has increased dramatically over the last few years.

Given the lack of data and the difficulty in isolating variables in comparative policy analysis (acknowledging that trends in tertiary participation rates may be affected by a range of variables), it is difficult to assess the influence of New Zealand's reforms to tertiary policies on participation trends. Further research is necessary to assess the exact relationship between New Zealand's tertiary funding policies and New Zealand's participation levels. It was ascertained that New Zealand's participation rates remain relatively low compared to most of the countries studied. Furthermore, some sub-groups within New Zealand appear

to have been the major victims of the reforms. As mentioned in chapter 2, the proportion of tertiary students from lower socio-economic groups may have declined, as a smaller percentage of tertiary students received targeted student aid between 1992 and 1995, despite the eligibility criteria remaining the same. No obvious impediment was noted for the tertiary participation of Maori and Pacific Island people, but extraneous variables, as depicted in chapter 4, need to be accounted for. Although there are slightly more females enrolled in tertiary education, women remain concentrated in courses that are less likely to bear the highest economic returns and hence will experience the most difficulty in repaying student loans. Furthermore, the proportion of part-time and extramural students (of which women predominate) appear to have been impeded by the introduction of substantial tuition fees.

Australia: As reported in chapter 3, Australia's funding arrangements of tertiary institutions and student aid programmes approximate that of New Zealand. However, the government appropriations per equivalent full-time student far exceed that available in New Zealand. In Australia, there has been a rapid expansion in aggregate student enrolments. However the growth in tertiary education may have been more pronounced, but for the introduction of the centrally administered HECS fee (which was A$2,442 for the year of 1996).[77] Of particular interest, is that although tertiary participation rates of Aboriginal and Torres Strait Islander people remain inferior to those of the general population, there have been sustained improvements. This may be a positive reflection of the Australian access policies targeted at the Aboriginal and Torres Strait Islander people, namely the Higher Education Equity Programme and Abstudy.

The USA: As shown in chapter 3, the funding of tertiary education and student aid in the USA is large and heterogeneous. The result is a large disparity in tuition fees between institutions and courses, particularly between the private and the public sectors.[78] Some public tertiary institutions ensure cheap and accessible admission, however students that wish to enter high quality and prestigious institutions must pay considerable tuition fees. These tuition fees inhibit all but privileged students from accessing the prestigious private tertiary institutions, unless people from disadvantaged groups obtain some form of scholarship. Student aid provisions would not be sufficient to meet the expenses associated

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[77] This was validated by the research by the Department of Employment Education and Training, which calculated that HECS had deterred 10.9 percent of potential university students (Juddery 1996a).

[78] Tuition fees approximated $2,486 in public institutions and $13,582 in private institutions, in 1993-94 (Famighetti 1995:220).

with attending one of America's elite institutions. Disadvantaged groups are concentrated in the heavily subsidised public institutions.

As also indicated in chapter 3, the student aid provisions in the USA are dependent on the socio-economic status of students and their families, the tertiary tuition costs and the availability of student aid resources in the tertiary institution they chose to attend. Hence, students in identical situations may not receive the same levels of payment. The 'package' of student aid available (two maintenance grant schemes, a work-study programme and three loan programmes), enables some flexibility in allocating funds to students, but the complexity of administering the programmes and ensuring those eligible receive their entitlements, should deter any form of duplication in this country.

As far as participation patterns, the USA does have a high proportion of the population undertake tertiary education. However, the educational opportunities do not extend to all sectors of its population. As reported in chapter 3, when demographic growth is controlled for, there has only been a slight improvement in the participation rates of Blacks and Hispanics. The position has deteriorated since the US government has instigated policies to restrict government expenditure on tertiary education, yet perturbations could explain this phenomenon. Although, overall male and female tertiary participation rates are comparable, marked gender differences exist between the types of institutions and disciplines attended. Of particular concern is the high default rate on student loans for female recipients.

The UK: Two aspects of the UK's tertiary policies warrant reflection. First, the tertiary funding formulas are not only dependent on student numbers, but also research achievements. Second, although students pay tuition fees to the tertiary institutions, British citizens are reimbursed by government. Although the student maintenance grants are targeted to students from lower socio-economic groups, the reimbursement of tuition fees and student loans are not subject to student or family income test. Yet, the UK has the smallest proportion of its population enrol in tertiary education. Lack of information means that it is unclear what impact up-front tuition fees have had on participation rates, despite fees being reimbursed.

As stated in chapter 3, Shattock (1981) integrated the results of different studies to conclude that the participation rates of lower socio-economic groups improved, albeit slowly, in the post Second World War period until 1970 when growth declined. The early

1970s corresponds to the period when the UK government exclaimed that it wanted to reduce government funding on tertiary education. The participation rates of ethnic minorities in the UK's tertiary sector have not received substantial appraisal. However, Craft and Craft (1983) corroborated West Indian people were less likely to participate in tertiary education, particularly in the universities. As for the gender balance, the proportion of women undertaking tertiary education has improved, but the UK still has the second to lowest level of female participation.

Sweden: Sweden has a reputation for striving to expand and improve tertiary access. In some ways this reputation is befitting. As reported in chapter 3, numerous reforms have been implemented in Sweden to improve equality of access to tertiary institutions. For example, concerns over the negative impact of student loans on the participation rates of lower socio-economic groups, led the Swedish government to increase the grant component of its student aid scheme (studiemedel) in 1989. Swedish tertiary institutions have also never charged students tuition fees. Furthermore, the student aid scheme incorporates the leading student maintenance grant and student loan, which uniquely are not subject to family income tests.

Consequently, Sweden has a high proportion of its overall population undertake tertiary education and the growth in student enrolments has continued. Even though there remains a predominance of students from higher socio-economic groups, especially in the prestigious disciplines, studiemedel has had a socially levelling effect. Swedes tend to perceive universities as accessible places of study rather than as elitist establishments. Sweden also has the highest proportion of women enrol in tertiary education. Hence, on the whole the Swedish student aid system has much to commend it. As Reuterberg and Svensson (1983:99) conclude "[Studiemedel] has been the most important source of funding for students and it has had an equalising effect on access to higher education, even if there still are considerable differences between social strata."

Japan: As stipulated in chapter 3, the Japanese government only renders generous subsides towards the operating costs of the high quality public institutions, but demand for admission into these institutions is intense (entry being determined by academic merit). The predominant number of students pay significant fees to private tertiary institutions, many of which are overcrowded and of poor standard. This tends to refute claims made by Morgan (1996) that privatisation of the tertiary sector and competition between the suppliers of education would lead to quality improvements.

In Japan, tertiary students, or their families, make significant financial sacrifices in order to attend a high quality prestigious tertiary establishment, incurring the costs associated with preparatory tuition for the entrance examinations, examination fees, entrance fees and tuition fees. (Repeat applicants, denominated as "roonin", may spend many years in full-time study preparing to pass the entrance examinations of the prestigious establishments.) Moreover, the only student aid scheme provided by the national government (the Japanese Scholarship Foundation) is a competitive student loan scheme based on both financial need and academic merit. Unfortunately the paucity of information on Japanese participation trends has made the evaluation of Japan's tertiary policies difficult.

What was ascertained during this research is that Japan has always valued formal education. As of 1992, Japan maintained second position, behind the USA, as to the proportion of the overall population that studied full-time at a tertiary institution. However, Japan has a low percentage of part-time and extramural students and enrolment growth has been limited to particular tertiary establishments (senshugakko and kakushugakko).[79] Of the countries studied, Japan has the lowest proportion of women enrol in tertiary education. The gender imbalance is particularly pronounced in universities and higher technical schools (Koto-Senmongakko). The rationale for this is complicated and controversial, but the prolonged duration and high expenses associated with these establishments, must be seen as contributing elements.

Comparative Analysis

As mentioned above, all six nations considered in this study have unique and common aspects to their tertiary social policies. The analysis of specific policy areas is helpful in: (i) determining the nature and range of practices that are conceivable within New Zealand and (ii) aiding the evaluation of particular practices. The primary focus of attention in this research was four specific variables: government funding of tertiary institutions, tuition fees, student aid and participation trends. The following is an overview of the range of practices among the countries studied and an appraisal of the specific policy area, based on the analysis and comparison of these four variables.

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[79] Senshugakko and kakushugakko primarily provide vocational programmes and preparatory courses for the universities' entrance examinations.

Government funding of tertiary institutions

In all the countries considered in this study, state funding to tertiary institutions is premised on formula based grants, conditional on student numbers and course costs estimates. Other criterion are also incorporated within the funding formulas in several countries. In the UK research achievements are included, and in Sweden tertiary institutions are remunerated for the attainments of students. Some countries like Australia, and to a lesser extent New Zealand and the UK, have equity provisions incorporated in their funding formulas. Internationally, governments have expressed their apprehension about the resources required by tertiary institutions. Accordingly, budgets per equivalent full-time student have been reduced systematically in New Zealand, the USA and the UK. The Australian Coalition Government has also announced that it wants to reduce tertiary funding in 1998 and 1999.

These policies have largely been founded on ideological premises, rather than empirical investigation. International experience informs us that lack of funding can result in the dissolution of courses or even tertiary institutions. Many tertiary institutions in the USA and Japan go bankrupt every year, having an impact on prevailing students. Moreover, inadequate funding may threaten quality provision of tertiary courses, as exemplified, by some of the educational establishments in Japan.

A quotation from the vice-chancellor of Waikato University brings matters closer to home.

> That public institutions are by definition inefficient ... need not be demonstrated, you simply deal with it ... by cutting their budgets systematically and in a cumulative fashion ... [public institutions] have no option but to go on and on ... but sooner or later, something happens, a Cave Creek happens. And ... doing more with less suddenly seems not so obviously beneficial (Gould 1996:3).

Tuition fees

Analysis of the six countries considered in this study suggest it is unlikely that the commercial sector will be willing to invest substantial resources into tertiary education, other than modest contributions to research and consultancy.[80] The dollars will have to come, as they always have, from somewhere else (Crossland 1983). Predominantly, the

[80] The contributions from the commercial sector have never represented more than a very small fraction of the total revenue of tertiary institutions (Crossland 1983).

remaining tertiary revenue has stemmed from student tuition fees. However, there are large discrepancies between the countries studied. In New Zealand, the USA and Japan, tertiary institutions set their own tuition fees, with price as a rule reflecting the quality and prestige of the tertiary setting and course. In Australia, in 1996, the uniform tuition fee is set and administered by government, but it is planned to raise and tier fees in 1997, to make tuition fees reflective of course operating cost and anticipated graduate earnings. The UK government controls a national system of tied tertiary tuition fees, but the government reimburses British citizens. Finally in Sweden, tertiary students are generally charged no tuition fees providing they are Swedish citizens.

As mentioned in chapter 3 and 4, the review of tuition policies in Australia (by the Department of Employment Education and Training [in 1990] (cited in Juddery 1996a) and the USA (by Bishop 1977; McPherson [in 1978] (cited in Maani 1995:8; Leslie and Brinkman 1987; McPherson and Schapiro 1991), shows that tuition fees attributed to the greatest detrimental effect on participation rates. Maani (1995:9) stated that the rationale for the larger response to tuition fees, relative to other educational expenses, is that tuition fees are the most publicised costs of education and payment is seldom discretionary.

As also mentioned in chapter 3, Allport (1996) reported that the introduction of a standard tuition fee of A$250 per annum in Australia, in 1987, resulted in a clear decline in the tertiary enrolments of certain disadvantaged groups. Furthermore, escalating tuition fees are found to deter disadvantaged students from studying in expensive institutions and courses. Tuition fees may also restrict disadvantaged students from pursuing a second degree or post-graduate qualification.

Student aid

Tuition fees are somewhat negated by the presence of student aid programmes. It has been considered a democratic principle that access to higher education should be independent of the financial or socio-economic situation of the student, thus justifying the provision of student aid (Sutherland 1991:133). Except for Japan, which only renders a national student loan scheme, all the countries in this study have implemented student maintenance grants and student loan programmes in combination. Most countries have means-tested student maintenance grants, leaving Sweden as the only remaining country with a uniform student maintenance grant.

Student maintenance grants have been credited with advancing the proportion of lower socio-economic groups, ethnic minorities and women into tertiary education. Empirical evidence reveals that these groups are major recipients of student maintenance provisions, particularly targeted provisions. Furthermore, as mentioned in chapter 3, Sweden enhanced its student maintenance grant provisions in 1989, to advance the participation of tertiary students from lower socio-economic groups.

Nevertheless, with economic pressures, the predominant practice has been to introduce or develop the provision of student loans, where students repay the debts incurred during the course of their studies. In all six countries considered in this study, the student loans schemes are administered by the state or are government-guaranteed, with no or low rates of interest, but there are considerable differences in the permissible arrears, repayment obligations and means-tests applied.

Student loans are being sanctioned world-wide for two reasons. The first is that student loans are a means of reducing the level of government expenditure on tertiary education. However, there are significant fiscal costs associated with a student loan scheme. These include administrative costs associated with its operation, the interest rate subsidy built into the scheme and student loan defaults or exemptions. Perrings (1988:40) reported that Sweden, Japan and the USA (all the countries that have had a student loan scheme prior to 1990) experienced excessive administration costs and high default rates with their respective student loan schemes. Moreover, there is a risk that high repayment obligations could generate inflationary pressures as former students try to secure returns on their financial investment from the labour market (Boston 1990:177).[81]

The second benefit espoused, is that students have the opportunity to attend tertiary institutions, without needing to pay off debts until they reap the financial rewards and hence are in a better position to pay. The inherent problem with such a scheme is that students drop out of tertiary courses and students may not obtain the average financial returns (OECD 1990; Juddery 1996d).[82] As depicted in chapter 2 and 3, in New Zealand, Australia and the USA there are marked differences in graduate earning, between ethnic

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[81] Student loans could drive up graduate salaries and professionals could pass on their loan repayment costs to clients or consumers.

[82] In the USA, a high proportion of former students that had defaulted on their loans, dropped out of their courses (OECD 1990).

groups and male and females, despite the attainment of equivalent qualifications. Furthermore, there is no parity with alternative government schemes. Social security recipients are not expected to repay their benefits, once they have secured employment. Moreover, people investing in physical capital are able to obtain tax rebates for the costs of borrowing (Boston 1988).

Empirical evidence found on the uptake of student loans by different social groups is concerning. Maori and Pacific Island students have exceptional uptakes of student loans, yet statistics suggest that despite equivalent qualifications, ethnic minorities obtain lower average rates of pay, than that of their Caucasian counterparts. Moreover, women have exhibited more of an aversion to student debt in New Zealand and Australia (no data was available for the other countries studied). The differences in the uptake of student loans, may be attributable to the under- or over- confidence in anticipated financial returns between groups. As mentioned in chapter 2, James (1988) stipulates that this phenomenon is cause for re-examination of the public policies.

Interestingly, the US government is the only government to furnish an alternative means of student financial aid to that of student maintenance grants and loans. The programme, titled "work-study", arranges and subsidises part-time employment for targeted students. However, part-time employment reduces the quality of study, illustrated by the higher failure rate and drop out rate of part-time students (Boston 1988:88). Hence, the academic progress of the targeted students would be disproportionately impaired. Of notable interest, is that Stampen, Reeves and Hansen have disclosed that disadvantaged students, who work part-time, earn less and therefore still have greater remaining financial need than privileged students (cited in James 1988:9).

Participation trends

The effects of changes to government funding of tertiary education, tuition fees and student aid measures, must be evaluated in terms of the social consequences of the reforms, as well as the short term economic benefits. The analysis of tertiary participation patterns can facilitate an understanding of the likely repercussions of tertiary access policies. International experiences and research reviewed in this paper suggest some important findings.

Since the Second World War, there has been continued growth in overall tertiary enrolments. This trend has been referred to as the massification of tertiary education.

Minor alterations to tertiary access policies (such as government funding, tuition fees and student aid), have had modest impact on the advancement of overall tertiary participation rates. In this study, no accord was identified by cross-country comparisons between levels of government funding and overall participation rates.[83] (For example, the USA and Japan had high tertiary participation rates despite tuition fees being high in these two countries. Moreover, the UK had the lowest tertiary participation rates despite tuition fees being reimbursed.) Furthermore, no dramatic decline, or expansion, in a nation's overall full-time enrolments was noted, following the introduction of reforms to tertiary access policies.[84]

Other related studies have reached conflicting conclusions on the effects of tertiary access policies on overall participation rates. As reported previously, an American study, by Hansen (1983), noted the absence of any obvious differences in national enrolment trends in response to changes in tertiary access policies. However, more rigorous research has drawn contrary conclusions. Ninety-two percent of the American studies, reviewed by Leslie and Brinkman, found that increased tuition costs had, or would have, negative implications for overall tertiary participation rates, although some of these findings may not have been statistically significant (Leslie and Brinkman 1987). Other studies, included in this thesis, which support the correlation between tertiary access policies and overall tertiary enrolments, include Jackson in 1975 (cited in James 1988) , Bishop (1977) and the Australian Department of Employment Education and Training (cited in Juddery 1996b).

However, studies of the overall population may obscure sectoral distinctions. This analysis has exposed the continuing inferior status of disadvantaged groups in tertiary education, even if in some respects these disadvantages have diminished. Much of the expansion in tertiary participation by disadvantaged groups has taken place in the less prestigious universities and non-university institutions. Furthermore, a substantial proportion of the growth in tertiary attendance by disadvantaged groups, has been confined to a limited number of disciplines and lower levels of study. These courses tend to correspond poorly with high financial returns.

Socio-economic groups: A common finding among studies is that demand for tertiary education is more contingent on the levels of tertiary tuition fees and student aid, for lower socio-economic groups. Numerous American studies have determined that lower socio-

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[83] Although the access policies were paradoxical and perturbations (like demographic factors, labour market changes and cultural influences) could be acknowledge, but not controlled for.

[84] Although noticeable changes were noted for part-time and extramural students and there was a lack of recent statistics.

economic groups are especially responsive to changes in tuition prices or student aid provisions. Examples cited in this thesis include Astin and Inouye (cited in James 1988:3), Manskie and Wise (cited in Maani 1995:9), McPherson and Schapiro (1991), and Bishop (1977) reviewed several other studies. As mentioned in chapter 3, Reuterberg and Svensson, of Sweden (Reuterberg and Svensson 1983 and cited in Morris 1989), have also conducted a series of investigations which supported the hypothesis that tertiary costs and student aid measures, were more influential on Swedish tertiary students coming from lower middle and lower socio-economic groups.

Ethnic minorities: The impact of New Zealand's reforms of tertiary access policies, on Maori and Pacific Island people, needs further research to control for perturbations. However, as mentioned in earlier chapters, a survey by Greenslade and Lamb (1992:63) concluded that tuition fees had a stronger influence on course choice for Maori and Pacific Island students. In Australia, as mentioned above, the targeting of funding towards Aboriginal and Torres Strait Islander people is credited with advancing the representation of indigenous Australians in the tertiary sector. Finally, in the USA, student aid has been credited with enhancing the tertiary participation of ethnic minorities. The demise in the levels of student aid from the 1980s, coincided with a decline in the proportion of ethnic minorities, yet perturbations need to be acknowledged.

Gender: No significant differences were identified between male and female equivalent full-time student numbers, in response to reforms to tertiary access policies. However, the introduction of tuition fees in New Zealand in 1990 resulted in a more pronounced slump in female extramural tertiary students (although the numbers did recover in subsequent years). The major disadvantage to women appears to be related to lower earnings following tertiary education, hence the problems associated with loan repayments.

In essence, government subsidies of tuition costs, and government funding of student allowances, have helped encourage the recruitment of individuals from disadvantaged groups, who would not otherwise have had the opportunity to study at the tertiary level. In addition, government support has probably widened the options for students from disadvantaged groups, enabling them to attend more expensive courses, distant courses and attend full-time rather than part-time (Gladieux 1983:76).

From the comparative analysis, it is clear that student aid provisions have reached the disadvantaged groups for which they were intended. Most of the recipients of student aid

provisions are from disadvantaged groups, particularly targeted provisions. This finding supports the American study by Jackson (published in 1975), which demonstrated that student aid was more likely for tertiary students from lower socio-economic backgrounds (cited in James 1988:2). Furthermore, as mentioned in chapter 3, Reuterberg and Svensson (1983:97) concluded that although the Swedish national system of student aid (studiemedel) had been important to most students, students from lower socio-economic groups and female students were able to finance their studies to a larger extent through this system.

Nevertheless, the different student aid programmes have produced somewhat divergent outcomes. As stipulated in chapter 4, a study by Stampen and Cabrera (cited in James 1988) concluded that students from lower socio-economic backgrounds are the major recipients of student maintenance grants, while middle socio-economic groups benefit more by student loans. Student maintenance grants, rather than student loan schemes, have also proven to be most advantageous to women. As mentioned above, the literature suggest that women have more of an aversion to taking up student loans. This appears to be supported by empirical evidence, as in both New Zealand and Australia, female students have a lower uptake of loans than their male counterparts. As also mentioned, Maori and Pacific Island people have a high uptake of student loans. This warrants further research, to determine whether the debt levels are excessive. What is apparent from this comparative study, is that many of those that do default on their student loans, or whom receive exemptions, are from disadvantaged groups, as a result of differing pay scales and employment interruptions.

The final conclusion drawn from this research is that student decisions about which tertiary course and institution to attend are moderately influenced by the relative prices of the alternatives. McPherson and Schapiro (1991) reported that although studies differed in data sources and estimation techniques, they tended to agree that decisions about which tertiary institutions to attend responded nontrivially to changes in the relative prices of educational alternatives. Disadvantaged students are less likely to attend high cost disciplines and courses. Although the UK experiment with staggering prices to orient students' choice of discipline, did not act as a catalyst for redirecting a significant number of women into male dominated disciplines, Sutherland reports some women exhibited a disposition to change their choice of discipline (Sutherland 1991:135). Leslie and Brinkman (1987:198) highlight that student price sensitivity should be greatest in the lowest cost and least selective institutions and courses (which tend to have a heavy concentration of

disadvantaged students), as price alterations will be proportionately greater in these settings.

As indicated throughout this thesis, further data collection and research is needed on the impacts of reforms to tertiary funding, tuition fees and student aid. This will enable policy to be derived from empirical evidence rather than ideology alone. Governments and various groups will need to collect and collate more statistics, for example on lower socio-economic groups, in order to accurately ascertain trends. Furthermore, future research is needed to identify the specific relationships between tertiary access policies and participation patterns, with perturbations controlled for. Only if these two conditions are met will more specific judgements be available on the impact of tertiary access policies on lower socio-economic groups, ethnic minorities and women. The last section of this thesis offers some general recommendations from the completion of this study.

Prognosis for Reform

Prior to determining what tertiary education policies should be employed in New Zealand, it must first be determined that tertiary education is an appropriate focus of government expenditure. On the one hand tertiary education leads to greater competition for occupations and justifies the selection, for prestigious and high paying positions, of Caucasian males from higher socio-economic groups. However on the other hand, for disadvantaged groups, tertiary education offers the possibility of greater occupational mobility, and related to this, improved financial prospects.[85] In essence, tertiary education has many benefits to bestow on those able to take advantage of it, however access needs to be extended so that a wider cross-section of the population are able to benefit from it.

The evidence presented in this study has some implications for the policies New Zealand should employ, in order to remove barriers to the participation of disadvantaged groups in tertiary education. However, at the outset pie-in the sky transformations must be rejected. The capitalist mode of production sets wide but definite limits to the possibilities of change. It excludes serious consideration of policies that might fundamentally challenge the existing economic order. In part this is because tertiary education funding is reclaimed from the revenue derived from the capital accumulation process. However, the limitations

[85] In addition, tertiary education develops people's literacy, intellectualisation, critical thinking and may enhance personal growth and social respect (Levitas 1974; Bowles and Gintis 1976:240).

are also embedded in people's everyday assumptions about what reforms are practical and even thinkable (Hargreaves 1984:19).

Government funding of tertiary education

Tertiary education is expensive, and unless government provides financial assistance, many people will be unable to take advantage of it. Evidence presented in this study indicates that the commercial sector will only make minor contributions to tertiary education voluntarily, hence the universal practice is that governments substantially fund tertiary education. As mentioned in chapter one, there are numerous rationales for government funding of tertiary education, including arguments based on externalities, lack of information and equity concerns. Externalities, or public benefits of tertiary education that accrue to society, rather than the students, include a more adaptable and skilled labour force, the generation of more revenue from taxation and enhanced social responsibility. Lack of information refers to the fact that individuals do not know the exact benefits of their education, and may hence under-invest or over-invest in tertiary education. The focus of this study has however focused on equity, or more precisely equality of educational opportunity.

As reported in this thesis, government assistance has primarily taken two forms: (i) through direct financial assistance to tertiary institutions or (ii) via student aid provisions. Student aid provisions will be addressed later in this thesis. Government funding of tertiary institutions and their impact on disadvantaged groups is a difficult phenomenon to compare internationally. However, analysis of national trends suggest that government funding of tertiary institutions has equalised tertiary access. For example, as figure 3.11 indicates, in the USA ethnic minorities have primarily permeated the public tertiary institutions, which are more heavily subsidised by the government.

To advance the representation of tertiary students from lower socio-economic groups, Maori and Pacific Island origins and women, additional resources will need to be provided by government. As declared by Woodhall (1989a:18) "There is confusion about the objectives of student support ... A scheme designed to widen access and increase participation will not save taxpayer's money. A scheme designed to reduce public expenditure will not increase participation."

Brian Easton has argued that the simplest and fairest way of paying for tertiary education is by way of public expenditure, funded through increasing the top marginal tax rate. Easton proclaims that this could be justified on a number of grounds:

(1) The majority of people who pay the top marginal tax rate have received a tertiary education (or have children who will).

(2) Tertiary institutions would be paid on the basis of output, not input.

(3) Funding would largely derive from past generations of beneficiaries rather than just contemporary students.

(4) The system of collecting and paying tertiary funds would have lower implementation cost.

(5) The system will have redistributional consequences for society (cited in St John 1990).

If financial incentives are determined to induce institutional efficiencies, then government funding formulas can be adjusted to shape the supply of tertiary education. These funding formulas will need to be transparent, stable and predictable, so that providers of tertiary education, potential students and their families, can plan with confidence. The funding formulas can be influenced by the experiences of other countries, but need to simultaneously value New Zealand's unique position (for example, New Zealand's commitment to the Treaty of Waitangi/ te Tiriti). Hence, there is a preference for a body consisting of students, academic staff, community groups and workers' organisations, to examine prevailing information, and pursue co-operative decisions and rationally resolve conflicts in all aspects of tertiary education policy, including the funding formulas. Of primary importance is to invite Maori people to participate in a partnership as depicted in the Treaty of Waitangi/te Tiriti.

A comprehension of the experiences of other countries can help gain a deeper understanding of the range of tertiary funding policies and their likely implications. For example, many countries have focused government funds to high priority areas. A primary rationale for more liberal funding has been to advance the economy of their country. For example, Japan and the UK experimented with showing favouritism to technological courses or to disciplines that counteracted labour shortages. This was in order to encourage more students to obtain marketable skills. However, as mentioned previously, disadvantaged groups may suffer by governmental decisions to favour and expand studies predominated by privileged students. Moreover, the experience of the UK indicates that these policies have negligible impact on participation trends (even if the skills required for the future could be predicted with certainty). Hence, a preferred practice is to fund courses

on the basis of student numbers, course operating cost and the attainment of specified goals. Sweden, for example, remunerates tertiary institutions for their student accomplishments.

The other primary motive for prioritising government funding has centred on egalitarian interests. This is illustrated by the Higher Education Equity Programme in Australia, whereby the funding formula positively discriminates towards certain groups of people. *The Auditor-General: Audit Report* credits Australia's equity programme with improving the tertiary participation of Aboriginal and Torres Strait Islander people (Australian National Audit Office 1993). It is therefore recommended that specific provisions for Maori must be incorporated within New Zealand's funding formulas.

In essence, the government needs to recommit to its obligation to invest in tertiary education in order to maximise tertiary participation from all sectors of the population. The process for the distribution of government funds to tertiary institutions can be developed and experimented with. There appears to be scope for both the adaptations of international practices and innovation.[86] However, tertiary funding policies must be constantly appraised to determine the implications for disadvantaged groups of people.

Tuition Fees

The review of the relevant research in Australia and the USA, shows that tuition fees attributed to the greatest detrimental effect on participation rates. If the goal of equality of educational opportunity is taken seriously, then no tertiary fees should be imposed, as is the practice in Sweden. This would therefore remove the serious disincentive which tuition fees have on young people, from lower socio-economic groups, ethnic minorities and women. The abolition of tuition fees is preferred to the practice of reimbursing fees, which is the practice in the UK, as students do not have to pay up-front fees which pose a clear barrier to participation on the part of those unable to pay, even if the fees are reimbursed. Furthermore, the UK practice of reimbursing student's tuition fees has large administration costs.

If minimal tuition fees are to be imposed, the rate should be uniform across all tertiary institutions and disciplines, as was the practice in Australia in 1996. If course fees vary greatly, then students from disadvantaged backgrounds (or with frugal parents) may be

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[86] For example, alternative means to attaining efficiency gains, accountability and equity through market incentives could be explored.

discouraged from attending expensive courses such as dentistry, medicine and veterinary science. This would exacerbate the concentration of disadvantaged groups in lower quality, or prestigious, tertiary courses. Furthermore, this predicament would not be overcome by student maintenance grants.[87]

Private benefits of tertiary education, such as higher lifetime earnings, have been used as a rationale to argue for greater tuition fees (for example New Zealand Treasury 1987a, Hawke 1988 and Ministerial Consultative Group 1994:116), however, usually graduates make substantial remuneration for their tertiary education costs, through higher income tax. The more progressive the taxation system, the more likely that benefactors of a tertiary education will repay a substantial share of the financial rewards of their tertiary education.

Student Aid

While it is unfortunately the case that the quantitative data and research on the effects of student aid is limited, the available material allows some conclusions to be drawn.

Student maintenance grants: International experience indicates that to secure the greatest proportion of tertiary students from disadvantaged groups, it is imperative that at least some students have access to sizeable student maintenance grants. Research findings signify that disadvantaged groups are the major recipients and benefactors of student maintenance grants. Furthermore, research has determined that student maintenance grants have significant effects on the participation rates of disadvantaged groups of people. This is one of the reasons why all the countries considered in this study, except for Japan, have maintained their national student maintenance grant scheme(s).

Nevertheless, it should not be inferred that student loan schemes should be abolished and replaced with a comprehensive student maintenance grant. The evaluation of student loans requires intense examination itself. However, the evidence indicates that substitution of student maintenance grants, with student loans schemes, has had a deleterious impact on the participation of students from disadvantaged backgrounds. The Swedish experience indicates that increased reliance on student loans, as the principal source of student

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[87] People have proposed that courses that lead to positions of paramount public service, for example social workers, nurses and teachers, should receive special financial privileges, in the hope that students will be substantially subsidised. However, an alternative strategy to aid both the recruitment and retention of personnel is to increase the pay rates of these professions.

financing, coincided with declining tertiary participation by lower socio-economic groups. Consequently, Sweden enhanced the student maintenance grant component of its student aid programme in 1989, with the explicit aim of rectifying the under-representation of tertiary students from lower socio-economic backgrounds.

Student loans: The continued utilisation of a student loan scheme is supported, but as a supplement to the student maintenance grant. To compensate for tax-concessions, the government needs to guarantee universal loans to tertiary students and to pay interest subsidies that would hold down repayment obligations (Kramer 1983:64). To negate disadvantaged students being deterred by excessive debt obligations, or the risk of bankruptcy, after they complete their tertiary studies, repayment obligations should be both flexible and accommodating.

Work-study Programme: The USA is the only country that operates a supplementary student aid scheme (which is administered nationally by the government). The work-study programme has much to commend it. The scheme provides an income, or earnings, for targeted students without the "charitable" ramifications of targeted student maintenance schemes. For this reason the work-study programme has been politically popular. The primary criticism of the work-study programme is that the recipients may be compelled to bisect their attention between study and part-time wage employment. This will act as a further handicap to the academic merit of disadvantaged students. Moreover, there are high implementation costs associated with a work-study programme. Finally, tertiary students may contest for jobs that would be accessible to others seeking employment, like the unemployed or primary caregivers. On balance, the negative aspects of the USA work-study programme would render it undeserving of imitation in this country.

Targeting

Whether social policies (such as the student aid schemes) should be targeted, and the criteria utilised for the targeting, has received a lot of attention in the literature and much debate (for example, Royal Commission on Social Policy (1988); Shipley (1991); Upton (1991); Boston and Dalziel (1992)). Briefly, evidence can be found to support both the selectivity and universality of student provisions. The more rigid the student aid targeting, the less government tends to expend on tertiary education (with the exception of implementation costs). This is illustrated by the Ministerial Consultative Group (1994) when they calculated the cost of lowering the age from which family means-testing ceased to apply to 20 years, would cost $150 million, and reducing it to 18 years would involve an

additional $300 million in government expenditure. Targeting of assistance can also mitigate against "middle class capture". If the object of the access policies is simply to enhance the proportion of students from disadvantaged backgrounds, the most efficient means may be to target student aid provisions towards non-traditional groups of students.[88]

However, the social stigma attached to targeted aid may continue to inhibit the disadvantaged groups from availing themselves of educational opportunities. In addition, a means-tested system makes incorrect assumptions that families are willing to support their children in tertiary education. A 1984-1985 survey by the New Zealand University Student Association on income and expenditure patterns of tertiary students, showed that intra-family transfers to students did not vary significantly with the income of student's families (Perrings 1988:37). Furthermore, positive discrimination to some sectors of the population, may incite countervailing responses from those excluded from the provisions (Anderson and Vervoorn 1983:175).

Outgrowth

Adequate government funding of tertiary education, minimal tuition fees and student aid alone will not bring about equal access to all sectors of the population. By any standards, government funding of tertiary education and student aid have enhanced the participation of disadvantaged groups internationally, but changes have been moderate rather than revolutionary. If tertiary education is to be accessible to the entire population, then tertiary institutions will need to negate socio-economic bias and institutional sexism and racism. All tertiary courses and institutions (especially those with highly competitive entry requirements) should examine and undertake significant experiments with positive discrimination, supportive networks and pluralistic provisions (Fulton 1981). Improvements will also need to be sustained in the other educational sectors, so that more secondary students from disadvantaged circumstances attain the necessary academic pre-requisites for tertiary study. Even still, tertiary education cannot be equalised unless changes are made to elements outside of the educational domain. For example, cultural attitudes, or stereotypes, need to be challenged. However, it is better to make some

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[88] Predominantly student grant programmes and many student loan schemes are targeted at lower socio-economic groups. However, student aid can also be targeted on non-financial criteria. Australia targets one of its national student maintenance grants programmes (Abstudy) at Aboriginal and Torres Strait Islander people only and this scheme is credited with advancing the proportion of Aboriginal and Torres Strait Islander people significantly.

calculated progress, for instance by reforming the funding of tertiary education and student aid, than be immobilised by the perplexity and scale of the problem.

Summary

This comparative analysis suggest that tertiary access policies, and expected rates of return, are influential determinants on tertiary participation patterns.[89] Although the adoption of minor reforms to government funding, tuition fees and student aid, appear to have modest manifestations on the overall tertiary participation rates (although research findings on the exact degree are inconsistent), disadvantaged groups of people have been particularly affected by revisions to tertiary access policies internationally.

Data suggest, lower socio-economic groups, ethnic minorities and women, will be further disadvantaged if market approaches to tertiary education are further advanced. If the goal of increased access to tertiary education is to be realised, a comprehensive package is required, including extended government funding, minimal and uniform tuition fees and enhanced student aid (especially student maintenance grants), funded through the taxation system.[90] The benefits of these reforms will become increasingly apparent as more representatives of disadvantaged groups get to the point where tertiary education is viable (Anderson and Vervoorn 1983:175). The continued monitoring and evaluating of these policies are also pivotal, including a measure of the effects on specific categories of people. Employing these strategies will aid the extension of educational opportunities to all sectors of the population, and in so doing, make greater use of the immense reserves of talent in this country.

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[89] Comparison of statistical trends did not provide this conclusion, as variables that impact on enrolment trends could not be controlled for, but a study of the relevant research in each country provided some insights. Further collection of data by nations, and more research in this area, would have rendered a far greater comprehension of the impact of tertiary access policies.

[90] Coincidentally, these recommendations are in accordance with the United Nations International Convent on Economic, Social and Cultural Rights. Article 13.2 (c) of which stipulates that "Higher Education shall be made equally accessible to all on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education" (Boston 1990:176).

APPENDIX I

The USA Regional Summary - Population of State, Students Numbers, Tuition Fees, National Government expenditure and average State expenditure on EFTS attending a Public Institution.

State	Population 1990	Tertiary Enrolments Fall 1889		Tuition cost US$ 1989-90 4yr tertiary institution		National Gov Funding 1988	State Funding per Public EFTS
	Thousands	Public	Private	Public	Private	US$ (1000)	US$ 1988-89
Alabama	3984.4	187575	20987	1522	5484	249118	3581
Alaska	545.8	26274	2353	1280	5078	23955	9879
Arizona	3619	239314	13300	1362	4127	186707	3882
Arkansas	2337.4	76416	12156	1376	3715	84001	3497
California	29279	1534209	210670	1123	9489	3420059	5131
Colorado	3272.4	175850	25264	1830	9188	230633	2941
Connecticut	3227	109697	59741	2017	11268	231478	6343
Delaware	658	33037	7525	2768	5388	27618	4649
DC	574.8	12439	67361	664	9489	307405	7695
Florida	12774.6	480869	92843	n.a.	7153	358838	4723
Georgia	6386.9	186776	52432	1631	7076	299505	4235
Hawaii	1095	43644	10544	1293	4008	58779	7458
Idaho	1003.6	38447	10522	1119	6669	39011	4416
Illinois	11325	536643	173294	2370	8281	958145	3595
Indiana	5498.7	216433	59388	1975	8267	219804	3893
Iowa	2766.7	116889	53012	1823	7945	217027	4073
Kansas	2467.8	145134	13363	1467	5460	113502	3725
Kentucky	3665	138297	28717	1316	4689	124882	3436
Louisiana	4180.8	151733	28194	1768	9257	199174	2598
Maine	1218	40511	17719	1980	10425	38712	5207
Maryland	4732.9	217562	37764	2120	9914	761456	4011
Massachusetts	5928	187772	238704	2052	11450	1110075	5273
Michigan	9179.7	479714	80606	2484	6520	433177	3766
Minnesota	4358.9	198610	54487	2063	8776	248301	4231
Mississippi	2534.8	103035	13335	1858	4828	146500	3343
Missouri	5079	192322	86183	1532	7170	254409	4017
Montana	794	33197	4463	1535	5034	34262	3502
Nebraska	1572	91337	17507	1519	6442	74875	3632
Nevada	1193	56184	287	1100	5400	20986	4085
New Hampshire	1103	32889	25711	2196	10299	57324	2782
New Jersey	7617	253544	60547	2511	9398	306764	6052
New Mexico	1490	79359	1991	1326	7335	710830	4574
New York	17626.6	600587	417543	1460	9517	1587867	6309
North Carolina	6552.9	277062	68339	1015	7373	412890	4242
North Dakota	634	37501	2849	1604	5149	54401	2803
Ohio	10777.5	412073	138656	2432	8019	412776	3423
Oklahoma	3124	151410	24445	1309	5133	127973	3698

Continued from previous page

Oregon	2828	141311	20511	1738	8656	181597	3786
Pennsylvania	11764	335101	275256	3210	9430	741860	4068
Rhode Island	988.6	40604	35899	2281	10143	77967	4671
South Carolina	3407	118639	27091	2162	5914	126927	3790
South Dakota	693	25075	7591	1718	6224	35883	3138
Tennessee	4822	167056	51810	1406	6530	254186	4396
Texas	16824.7	782495	95364	959	6047	720480	2953
Utah	1711	79623	35192	1429	1975	163120	4017
Vermont	560	20925	15021	3641	10928	62477	2337
Virginia	6127.7	287624	56660	2532	7238	276943	3876
Washington	4826.7	221362	34398	1710	8096	333978	4274
West Virginia	1783	72478	9977	1591	7197	98065	2918
Wisconsin	4869.6	245968	44704	1861	7615	303706	4028
Wyoming	450	28553	606	1003	n.a.	21554	6028
	Total	Total	Total	Average	Average	Total	Average
	245,837 ,000	10,461, 159	2,942, 882	1761	7324	17,541, 962	4294

** Source: Fonseca and Andrews (1993: Tables 1.2, 2.4, 2.5, 8.3, 8.4, 9.1 and 9.4).*

Appendix I provides a summary of data for the individual states of the USA. This enables some comprehension of the fifty distinct systems that make up USA's tertiary education system. It provides details of the enrolment rates, average tuition fees and government expenditure.

In brief, in 1988-89 government funding per equivalent full-time student interstate (in public institutions) averaged US$4,294, ranging from under US$3,000 (in Colorado, Louisiana, New Hampshire, North Dakota, Texas and West Virginia) to over US$6,000 (in Alaska, Connecticut, DC, Hawaii, New Jersey, New York and Wyoming). Student tuition costs (in 1989-90) in 4-year public tertiary institutions averaged US$1,761 interstate with a standard deviation of US$575. For private 4-year tertiary institutions the average was US$9,324 interstate, with a standard deviation of US$2,162.

Tertiary enrolments in 1989 largely reflected the size of the population within each state., however there were some incongruities. About 3.7 percent of the state's population were engaged in tertiary education in Arkansas and Georgia, whereas over seven percent did likewise in Massachusetts, DC and Rhode Island.

APPENDIX II

The USA Regional Summary Continued - Full-Time Enrolment Majority (male or female), Black and Hispanic proportion of Total Population and Tertiary Population.

State	Full-time Enrolment Majority Male or Female -Fall 1989	Black			Hispanic		
		% of Total Population	% of Tertiary Enrolments	% of Difference	% of Total Population	% of Tertiary Enrolments	% of Difference
Alabama	9952 F	25.3	19.5	77.1	0.6	0.5	83.3
Alaska	844 F	4.1	3.6	87.8	3.2	2.1	65.6
Arizona	4607 M	3.0	2.9	96.7	18.8	11.2	59.6
Arkansas	5463 F	15.9	13.5	84.9	0.8	0.5	62.5
California	9379 F	7.4	6.5	87.8	25.8	12.6	48.8
Colorado	821 M	4.0	3.0	75.0	12.9	7.5	58.1
Connecticut	3010 F	8.3	5.9	71.1	6.5	3.3	50.8
Delaware	2646 F	16.9	11.2	66.3	2.4	1.3	54.2
DC	3854 F	65.9	30.7	46.6	5.4	3.0	55.6
Florida	4757 F	13.6	9.9	72.8	12.2	10.9	89.3
Georgia	5489 F	27.0	19.5	72.2	1.7	1.1	64.7
Hawaii	1390 F	2.5	2.7	108.0	7.3	1.9	26.0
Idaho	871 F	0.3	0.6	200.0	5.3	1.9	35.8
Illinois	56 F	14.8	12.2	82.4	7.9	6.7	84.8
Indiana	273 M	7.8	5.4	69.2	1.8	1.5	83.3
Iowa	2616 M	1.7	2.4	141.2	1.2	0.9	75.0
Kansas	1496 M	5.8	4.2	72.4	3.8	2.2	57.9
Kentucky	8749 F	7.1	5.9	83.1	0.6	0.4	66.7
Louisiana	9320 F	30.8	24.0	77.9	2.2	1.8	81.8
Maine	1112 F	0.4	0.5	125.0	0.6	0.3	50.0
Maryland	4583 F	24.9	16.8	67.5	2.6	1.9	73.1
Massachusetts	13504 F	5.0	4.4	88.0	4.8	3.0	62.5
Michigan	10878 F	13.9	10.0	71.9	2.2	1.6	72.7
Minnesota	4781 F	2.2	1.6	72.7	1.2	0.8	66.7
Mississippi	7477 F	35.6	27.4	77.0	0.6	0.3	50.0
Missouri	2352 F	10.7	8.0	74.8	1.2	1.2	100.0
Montana	383 F	0.3	0.3	100.0	1.5	0.8	53.3
Nebraska	315 F	3.6	2.4	66.7	2.3	1.4	60.9
New Mexico	554 F	2.0	2.5	125.0	38.2	27.6	72.3
New York	31074 F	15.9	10.8	67.9	12.3	7.2	58.5
North Carolina	17351 F	22.0	17.6	80.0	1.2	0.7	58.3
North Dakota	1933 M	0.6	0.6	100.0	0.7	0.5	71.4
Ohio	8973 F	10.6	8.1	76.4	1.3	1.0	76.9
Oklahoma	728 M	7.4	6.8	91.9	2.7	1.5	55.6
Oregon	157 M	1.6	1.3	81.3	4.0	1.8	45.0
Pennsylvania	4934 F	9.2	7.3	79.3	2.0	1.3	65.0
Rhode Island	818 F	3.9	3.3	84.6	4.6	2.1	45.7
South Carolina	5757 F	29.8	19.6	65.8	0.9	0.6	66.7
South Dakota	741 F	0.5	0.7	140.0	0.8	0.3	37.5
Tennessee	7089 F	16.0	13.8	86.3	0.7	0.6	85.7
Texas	2179 F	11.9	8.9	74.8	25.5	16.5	64.7

Continued from previous page

Utah	3514 M	0.7	0.5	71.4	4.9	1.8	36.7
Vermont	726 F	0.3	1.0	333.3	0.7	1.2	171.4
Virginia	13560 F	18.8	14.0	74.5	2.6	1.4	53.8
Washington	4951 F	3.1	2.8	90.3	4.4	2.3	52.3
West Virginia	985 F	3.1	3.7	119.4	0.5	1.6	320.0
Wisconsin	6738 F	5.0	3.6	72.0	1.9	0.4	21.1
Wyoming	585 M	0.8	0.9	112.5	5.7	2.9	50.9
Average		10.6	7.8	73.5	5.4	3.3	61.6

** Source: Fonseca and Andrews (1993:Tables 1.4, 1.5, 2.11, 4.2 and 4.4).*

Appendix II provides a summary of data for the individual states of the USA. This enables some comprehension of the fifty distinct systems that make up USA's tertiary education system. It provides data on ethnic and gender participation rates.

In brief, it shows the average state populace incorporated 10.6 percent Blacks and 5.4 percent Hispanics, but they only comprised 7.8 percent and 3.3 percent of the average tertiary population respectively.[91] As for the gender balance, in 80 percent of the states - females outnumbered males in full-time enrolments in 1989. Nevertheless the range was from females being outnumbered by males by 4,607 in Arizona to females outnumbering males by 31,074 in New York. Overall, no correlation was observed between the level of government funding per equivalent full-time student, in each state, and the representation of the general population, ethnic minorities and women, in the tertiary sector (Fonseca and Andrews 1993).

[91] There were disparities in the participation rates of the ethnic minorities between the states. From those states with more than ten percent of their population Black, the difference between Blacks in the state population and Blacks in the tertiary sector ranged from 46.6 percent in DC to 86.3 percent in Tennessee. From those states with more than ten percent of their population Hispanic, the difference between Hispanics in the state population and Hispanics in the tertiary sector ranged from 48.8 percent in California to 89.3 percent in Florida (Fonseca and Andrews 1993).

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