

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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*CENTRE FOR EDUCATIONAL RESEARCH AND INNOVATION*

**FINANCING AND EFFECTS OF INTERNATIONALISATION  
IN HIGHER EDUCATION**

**The Economic Costs and Benefits of International Student Flows**

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*The opinions expressed and arguments employed here are the responsibility of the author and do not necessarily represent those of the OECD.*

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## EXECUTIVE SUMMARY

Concern about the economic dimensions of higher education has been growing in most OECD countries in recent years as government budgets tighten and the financial performance of institutions comes under increasing scrutiny. This concern is evident, too, in the particular area of the internationalisation of teaching and learning. Universities and colleges contemplating their own internationalisation strategies are paying greater attention to the economic ramifications of these activities in their corporate planning. Governments in turn must be able to respond to legitimate questions being asked by the community: Are the resources required for implementation of internationalisation programmes available? How will their provision be financed? Will the ultimate social, cultural and labour market benefits be worth the costs?

This Report draws together the principal results from a major study of the financing and effects of internationalisation in higher education which has been carried out under the auspices of the OECD as part of a broader project on the internationalisation of teaching and learning. The study was focused on the foreign student question. It analysed the economic aspects of foreign students in higher education by asking the twin questions: Who benefits? Who pays? A methodology based in the familiar techniques of cost-benefit analysis was developed to address these questions, and the method was applied to four case-study countries: Australia, Germany, the Netherlands and Sweden, with supplementary results obtained for a fifth country, the United Kingdom.

The focus of this study on the foreign student issue mirrors the principal orientation of much of the research on international aspects of higher education that has taken place around the world over the past twenty years. Rapidly increasing numbers of foreign students, especially during the 1970s, have stimulated a certain amount of work on the economic impacts of these student flows over the years, but most studies of costs and benefits of foreign students have remained uncoordinated and incomplete. The present study represents one of the most substantial pieces of work that has been undertaken in this area to date.

In terms of trends in numbers of foreign students, the two or three decades after 1950 saw the most rapid increases in foreign student numbers, with aggregate enrolments across the main host countries increasing at a compound rate of about 8 per cent per year. Since about 1980 the aggregate growth rate has slowed somewhat, to around 4 per cent annually. Nevertheless, over most of the past 40 years the worldwide rates of growth in foreign student numbers have been generally somewhat faster than the expansion of higher education enrolments as a whole. In the past decade amongst the case study countries, foreign student numbers have grown more rapidly than all higher education enrolments in Germany, the Netherlands and Australia, with growth rates in Australia being amongst the highest in the world. Germany, Netherlands and Sweden now have significant numbers of both incoming and outgoing students; in the UK and Australia, the predominant movement is inwards.

Financing arrangements for foreign students differ widely between countries. In Australia and the UK full-cost fees are charged to incoming students (from outside Europe in the UK case). In the Netherlands there are in principle nominal fees for incoming foreign students, and in Germany

and Sweden no fees are levied; in these three countries substantial expenditures are made on support and services for both incoming and outgoing students, and there is a significant involvement in exchange programs, mainly within Europe.

An assessment of the costs and benefits of foreign study can be carried out from a number of different viewpoints, corresponding to the various stakeholders in the process of internationalisation of higher education. We identify four groups of stakeholders: individual students for whom the cost-benefit calculation relates to their personal financial commitments and expectations of increased future income; institutions, which have an interest in assessing the impacts of foreign student activities on overall financial and educational planning; educational systems, whose concern is with cost efficiency in administering foreign student services and policy development; and the nation or society as a whole, in which all citizens bear some part of the cost, and reap some of the benefit, flowing from the movement of students to and from their shores. In the remainder of the Report attention is concentrated on the institutional and national levels of assessment.

In evaluating costs and benefits it is essential to distinguish between purely financial flows, as reflected in accounts at any level of analysis, and true economic costs and benefits which generally require more detailed analysis.

At the institutional level, we can identify three broad categories of costs and benefits that are relevant to the accounting and decision making within a given university or college. These are the costs of establishing infrastructure to deliver foreign student services and programs, the ongoing costs of program delivery, and the time-stream of benefits that may accrue to the institution as a result of its internationalisation activities. Within these categories a listing of specific items is developed, of which the major components are the direct costs of service provision, including tuition, and revenue effects from fees, grants, exchange programs and so on.

At the national level, a separate itemisation of costs and benefits can be drawn up for host and sending countries, bearing in mind that some countries (e.g. Germany, Netherlands, Sweden) fall into both categories at any one time. In regard to host countries the principal items are the resources committed to tuition and provision of services for incoming students, and the economic impacts of financial inflows due to fees (if charged) and other expenditures of the students. Some external costs and benefits may also be relevant in particular instances. In the case of sending countries, the main cost items relate to the resource commitment made to support fees and expenses of outgoing students, together with opportunity costs, whilst the economic benefits are likely to be seen in terms of the students' increased productivity in the labour force on their return from study abroad.

The methods developed in this study were applied in the participating country studies. In this Report, illustrations of institutional impacts drawn from the four country reports are given for the following specific cases: Monash University (Australia), where substantial fee income is earned from incoming students and off-shore programs; the University of Hanover (Germany) which provides an extensive range of services for both incoming and outgoing students; the University of Amsterdam (Netherlands), where it is possible to identify funds devoted to mobile students deriving from central, faculty and external sources; and the University College of Mälardalen (Sweden), where there are relatively smaller student numbers but still significant resource commitments to both incoming and outgoing students. The studies indicate costs to institutions of internationalisation activities amounting to around \$US2 thousand per mobile student for the Dutch and Swedish institutions studied, and around \$US400-500 for the German and Australian case studies.

At the national level, detailed results are presented for Australia, Germany and the UK; for Netherlands and Sweden, data limitations mean that only some indicative figures of total resource commitments to internationalisation could be derived. Taking the three countries Australia, Germany and the UK, we find administrative costs of internationalisation activities ranging around \$US400-500 per student, tuition costs between about \$5,000 and \$7,500 per student, and the costs of providing food and accommodation probably at around \$7-8,000 per student for an academic year. Estimates of other expenditures and casual earnings appear to differ more widely; for example, the latter figure appears to be around \$3,000 annually per student for foreign students in Germany, about twice that for their counterparts in Australia. Likewise, the national financial inflows can be computed from the average fee levels (around \$7,500 to \$9,500 in Australia and the UK) and the data on non-education expenditures of students. We have shown that an approximate estimate of aggregate economic impacts from all of these sources can be found by grossing them up over all foreign students in the years to which they apply.

These calculations suggest that in both Australia and the UK the revenue from fee income and the costs of servicing foreign students do seem to be more or less in balance in the years studied, suggesting that neither country is making a significant surplus or deficit on its internationalisation activities in the higher education sector.

From the viewpoint of sending countries, the German and Swedish analyses indicate both costs and resource savings to countries sending their students abroad to study. These effects are quantified in the German case, indicating a net cost to the German economy through the direct costs of supporting these students, together with the indirect costs of forgone output, lost social service contributions and other effects. Speculations for Sweden suggest an overall balance in expenditures and savings arising from outgoing students, though these effects have yet to be quantified, and not all sources of real cost and benefit have been covered in this tentative assessment.

The Report concludes by observing that this study has shown both the potential and the problems in trying to evaluate the economic benefits and costs of foreign study. It has provided a comprehensive framework within which these effects can be assessed, and this framework has been successfully applied within the participating country studies. Useful results have been derived at both institutional and national levels. At the same time the study has illustrated the considerable variation between countries in the extent and quality of data available upon which assessments can be based, and has pointed the way towards further research needed in this field.

## **CHAPTER 1 INTRODUCTION**

### **1.1 Background**

Concern about the economic dimensions of higher education has been growing in most OECD countries in recent years as government budgets tighten and the financial performance of institutions comes under increasing scrutiny. This concern is evident, too, in the particular area of the internationalisation of teaching and learning. Universities and colleges contemplating their own internationalisation strategies are paying greater attention to the economic ramifications of these activities in their corporate planning, whether related to the significant economic impacts of the increased flows of foreign students to and from their campuses, or to the potential benefits for their own domestic students from the development of new internationalised curricula.

At the government level, where responsibility rests for higher education policy, similar concerns are evident. Governments must be able to respond to legitimate questions being asked by the community: Are the resources required for implementation of internationalisation programmes available? How will their provision be financed? Will the ultimate social, cultural and labour market benefits be worth the costs? In short, the internationalisation of teaching and learning has a number of significant economic and financial ramifications for all stakeholders: students, academic staff, institutions of higher education, employers and governments. Information about the size and nature of these economic effects is vital to informed planning and decision-making at all levels.

This Report draws together the principal results from a major study of the financing and effects of internationalisation in higher education which has been carried out under the auspices of the OECD as part of a broader project on the internationalisation of teaching and learning. The study analysed the economic aspects of internationalisation in higher education by asking the twin questions: Who benefits? Who pays? A methodology based in the familiar techniques of cost-benefit analysis was developed to address these questions, and the method was applied to four case-study countries: Australia, Germany, the Netherlands and Sweden, with supplementary results obtained for a fifth country, the United Kingdom. The four participating country studies have been published separately, as Baker, Creedy and Johnson (1996) for Australia; Schnitzer, Dohmen, and Schwensen (1996) for Germany; Bremer (1996) for the Netherlands; and Kälve mark and Lindström (1995) for Sweden.

### **1.2 Scope of this Study**

At its most general, the concept of internationalisation in higher education can be taken to embrace any aspect of the operation of higher education systems or institutions that reaches beyond national borders or that is influenced by or interacts with students, academic staff, administrators, institutions, systems, governments or other stakeholders in other countries. A significant stimulus to

interest in these issues has arisen over the years from the particular phenomenon of the international flows of third-level students, and the foreign student question is still a dominant component of this area of concern. But, consideration of internationalisation now extends well beyond student flows, and embraces matters such as exchange arrangements between academic staff, the international flow of research ideas and information, the influence of international trends within disciplines on curriculum development, the exchange of ideas between countries in matters of institutional and system management, and so on. In short, internationalisation in its broadest interpretation can be taken to encompass any aspect of the integration of higher education into a global environment. Such a “definition” is accepted for the purposes of the present Report.

Nevertheless, the scope of the present study is largely confined to the foreign student aspect of internationalisation, for several reasons. Firstly, foreign student flows are likely to dominate most other aspects of internationalisation of higher education, in terms of economic impacts. Secondly, in most countries foreign students, whether incoming, outgoing, or moving in accordance with exchange arrangements, are the aspect of internationalisation of most concern to governments, though their implications for both educational and economic policy. Finally, of all the dimensions of internationalisation in higher education, it is the movement of students between countries that is best documented and that is most readily amenable to measurement and economic analysis.

### **1.3 The Economics of Foreign Students**

The focus of this study on the foreign student issue mirrors the principal orientation of much of the existing research on international aspects of higher education that has been undertaken around the world. This work has dealt mainly with educational, social, cross-cultural and psychological adjustment issues, with comparatively little serious attention to economic aspects (Altbach 1991, p. 306). Some significant studies have been sponsored in the general field of foreign study by agencies involved in the area, such as the Institute for International Education in the US, the Overseas Students Trust in the UK, the European Institute of Education and Social Policy in Paris, and the OECD Centre for Educational Research and Innovation. Most of this work has looked at the “host” country or institution; comparatively little research has examined the problems and possibilities facing “sending” countries in this field.

Consideration of the specifically economic aspects of foreign student flows began with discussion of the phenomenon of the “brain drain” from poor to rich countries, that is, the process by which students from the developing world who have travelled to an advanced industrialised country for their higher education decide to stay there after completion of their degree, or to return there at a later date. The fact that migration of professional labour has clear economic consequences for both sending and receiving countries has stimulated a number of studies of movement of skilled professionals in a context of international labour market adjustment, including those by Myers (1972), Levy and Wadycki (1974), Sabot (1982) and Winkler and Agarwal (1984). There have been several efforts to weigh up costs and benefits of professional labour migration, such as the studies by Reubens (1975) and Fry (1984), though the quantification involved in such studies and their comprehensiveness in covering all sources of benefit and cost remain limited.

During the late 1970s and early 1980s, a major stimulus to interest in the economics of foreign students was provided by the rapidly increasing numbers of international students on the campuses of universities and colleges in the industrialised world, and by the recognition that these students were beginning to have economic impacts on institutions and on education systems that were

far from trivial. In several countries, such as the UK and Australia, the issue of increasing numbers also carried with it the important policy question of whether or not the historical pattern of subsidised tuition fees for overseas students in these countries should be allowed to continue (Woodhall 1991).

It was natural in this context that economists should pose the foreign student question in terms of the costs and benefits of international study, where costs and benefits might be assessed with respect to any of the groups of stakeholders: *students* themselves, in the spirit of the human capital model of educational decision-making; *institutions* aware of resource implications and potential fee income from the presence of foreign students on their campuses; or *host and sending country governments* interested in the aggregate net national benefits from international student flows to and from their shores. One of the earliest studies of the cost-benefit type, by Blaug (1981) for the UK, was firmly grounded in the “full-fee” questions that was a prominent policy issue in Britain at that time. Subsequent studies in Australia by Manning *et al.* (1984) and Throsby (1986a) were also couched in terms of setting appropriate centrally-determined tuition fees. These studies raised questions as to whether the subsidies implicit in existing fee structures in the countries concerned were having adverse efficiency and equity impacts, when judged in terms of national costs and benefits.

At the same time in the US, the broad economic costs and benefits of foreign students were examined in a series of studies, including those by Jenkins (1983), Chisti (1984), Solmon and Beddow (1984) and Winkler (1984). All these contributions tried in one way or another to list the range of likely costs and benefits that foreign students generate within institutions of study and to speculate about the aggregate national effects they create. Some, such as those by Chisti and Winkler, made an effort to quantify at least some of the relevant magnitudes, though all acknowledged that many of the costs and benefits involved are “intangible” and thus defy measurement.

More recent work in this field, such as the studies by Dresch (1987), Throsby (1991), Throsby and Heaton (1995) and Heaton and Throsby (1997) have refined, at least in theoretical terms, the analysis of financial impacts of foreign students in universities and colleges, embedding the study of specific effects of this readily identifiable group of students within the more general framework of production and cost analysis and decision-making at the institutional level, and paving the way for a more systematic assessment of national-level effects.

#### **1.4 Structure of this Report**

The layout of this Report is as follows. In Chapter 2 the international context is outlined with reference to trends in enrolments and financing of higher education, and the numbers and characteristics of foreign students, in the countries under study over the period since 1980. The identification of costs and benefits of foreign students is discussed in Chapter 3 with reference to the question of determining who are the stakeholders. The specific items of cost and benefit that should be recognised at institutional and national levels are discussed in Chapters 4 and 5 respectively. Case-study results for four institutions of higher education in the participating countries are presented in Chapter 6, and Chapter 7 contains national-level assessments for five countries. Finally, Chapter 8 draws together some conclusions.

## **CHAPTER 2**

### **THE INTERNATIONAL SETTING**

#### **2.1 Trends in Enrolments**

During the post-war period the numbers of students travelling abroad for the purposes of higher education have grown steadily. Improved international communications, decreasing real cost of air travel, a widening range of educational opportunities for foreign students, increased globalisation of labour markets, and many other factors, have combined to reduce obstacles and provide incentives to many students to pursue some aspect of their post-secondary education in another country. Associated with these trends, and closely connected with them, has been the rapid expansion of the university and college sector itself in most countries, as systems have moved from elite to mass higher education provision.

In terms of world trends, the two or three decades after 1950 saw the most rapid increases in foreign student numbers, with aggregate enrolments across the main host countries increasing at a compound rate of about 8 per cent per year. Since about 1980 the aggregate growth rate has slowed somewhat, to around 4 per cent annually. Nevertheless, over most of the past 40 years the worldwide rates of growth in foreign student numbers have been generally somewhat faster than the expansion of higher education enrolments as a whole.

These global trends are illustrated in Table 1. Taking the six largest host countries for foreign students at the present time (US, France, Germany, UK, Canada and Australia), we show enrolments at the third-level of foreign students and of all students over the forty year period from 1950. It can be seen that the total enrolment of foreign students in these countries in 1990 was 14 times greater than in 1950, compared with a growth in all higher education enrolments of about 7½ times over the same period. The proportion of foreign to total enrolments has fluctuated somewhat about a rising trend, increasing from 2.0 to 3.8 per cent over the forty years to 1990. In the current decade, foreign student numbers have continued to increase in all six countries, with particularly strong growth in Australia.

**Table 1: Third-level foreign student numbers and total higher education enrolments: six major host countries: 1950-1990**

	1950	1960	1970	1980	1990
Foreign student enrolments ('000)					
Australia	0.3	5.0	7.5	8.8	29.0
Canada	3.2	7.3	22.3	28.4	35.2
France	13.5	27.1	34.5	110.8	136.0
Germany <sup>(a)</sup>	2.1	21.7	27.8	61.8	107.0
United Kingdom	8.2	12.4	24.6	53.0	80.2
United States	29.8	53.1	144.7	311.9	407.5
Total	57.1	126.6	261.4	574.7	794.9
All higher education enrolments ('000)					
Australia	36	81	180	324	485
Canada	82	142	642	1,173	1,917
France	134	215	801	1,077	1,699
Germany <sup>(a)</sup>	151	265	504	1,223	1,799
United Kingdom	134	169	601	827	1,258
United States	2,297	3,583	8,498	12,097	13,710
Total	2,833	4,454	11,226	16,725	20,868
Foreign students as proportion of all students (%)					
	2.0	2.8	2.3	3.4	3.8

Note: (a)FRG only.

Source: UNESCO data. Note that the use of UNESCO data in this and subsequent tables is subject to qualifications concerning comparability of the coverage of statistics between countries; in some cases, for example, non-university higher education institutions are not systematically included, students in non-award programs may or may not be covered, and so on.

Turning now to the specific experience of the five case-study countries being considered in this Report, we can observe that numbers of students enrolled in universities and colleges have grown

steadily over the last two decades, reflecting increasing participation rates in post-secondary education in all of the countries under study. At the same time, enrolments of foreign students in these countries have risen too. Data for the period 1980 to 1991 shown in Table 2 indicate that in the UK, growth in foreign student numbers has kept pace with growth in overall tertiary enrolments, whereas in Germany, the Netherlands and Australia, numbers of foreign

**Table 2: Trends in third-level enrolments: foreign and all students: five case-study countries: 1980-1992**

	1980	1985	1990	1992
<b>Third-level foreign student enrolments (Index base 1980=100)</b>				
Australia	100	183	330	450
Germany <sup>(a)</sup>	100	128	173	188 <sup>(b)</sup>
Netherlands	100	138	215	276
Sweden	n.a.	n.a.	n.a.	n.a.
United Kingdom	100	101	151	180
<b>All third-level enrolments (Index base 1980=100)</b>				
Australia	100	114	150	173
Germany <sup>(a)</sup>	100	127	147	153 <sup>(b)</sup>
Netherlands	100	112	133	141
Sweden	100	107	112	132
United Kingdom	100	125	152	185
<b>Third-level foreign students as proportion of all third-level students (%)</b>				
Australia	2.7	4.3	6.0	7.1
Germany <sup>(a)</sup>	5.1	5.1	5.9	6.2 <sup>(b)</sup>
Netherlands	1.1	1.4	1.9	2.2
Sweden	n.a.	5.7	5.5	n.a.
United Kingdom	6.4	5.2	6.4	6.3

Notes: (a) FRG only.

(b) 1991.

Source: Calculated from data in UNESCO Statistical Yearbook (1995).

## 2.2 Characteristics of Foreign Students

From the viewpoint of a specific country, the international flow of third-level students is generally a two-way phenomenon, with foreign students coming in to study at universities and colleges within that country's educational system, and with domestic students going abroad to study elsewhere. In the foreign student market, some countries tend to be thought of as principally "host" countries, such as the major destinations like the US, the UK, France and Australia, whilst others, particularly those in the developing world, are labelled "sending" countries. But in fact few countries are exclusively one or the other. So, for example, the five case-study countries are generally

imagined as host countries, yet for two of them, Netherlands and Sweden, the outflow of students is almost as significant, both numerically and in policy terms, as is the inflow from other countries. Table 3 shows approximate data on the numbers of “incoming” and “outgoing” students in the five countries for the year 1991. It can be seen that the numbers “in” and “out” approximately balance up in the Netherlands<sup>1</sup>, and to a lesser extent in Sweden, but the numbers of foreign students coming in exceed the numbers going out in the other three countries; in Australia, there are about seven foreign students studying at Australian universities for every Australian student studying at a foreign university.

**Table 3: Foreign students enrolled and domestic students studying abroad: five case- study countries: 1991**

	Incoming students (’000)	Outgoing students (’000)	Ratio incoming/outgoing
Australia	34.4	5.0	6.9
Germany	116.5	40.0	2.9
Netherlands	10.4	9.6	1.1
Sweden	10.7	6.3	1.7
UK	88.1	20.8	4.2

Source: Calculated from UNESCO data; figures are only approximate.

In the European context a distinction is made between students who move as a part of a student exchange or other government sponsored program, and “free movers” or “freely mobile” students who travel abroad independently. In the Netherlands, for instance, approximate numbers of foreign students studying in the country in 1992-93 under various programs were:

1 Note, however, that the figure for incoming students in the Netherlands shown in Table 3 does not include those in the Institutes for International Education; these students numbered about 2,500 in 1992. Other difficulties in interpreting these data for the Netherlands also apply (see note to Table 1).

<b>Multilateral programs</b>	<b>(’000)</b>	<b>(%)</b>
ERASMUS	3.3	32
COMETT	0.4	4
TEMPUS	0.2	2
Subtotal	3.9	38
<b>Bilateral programs</b>		
Cultural agreements	0.3	3
ISEP/Fulbright	0.1	1
Subtotal	0.4	4
<b>Unilateral programs</b>	-	-
<b>Free-movers</b>	6.0	58
Total	10.3	100

In regard to Dutch students going abroad, the numbers in multilateral and bilateral programs matched those coming in in approximate terms, whilst the numbers going out under unilateral arrangements (supported by the Dutch government) were possibly somewhat larger than the numbers of incoming free-movers, indicating overall either a broad balance in and out as noted earlier, or perhaps some excess of outgoing over incoming students in that year.

In Germany, the numbers of incoming students includes a significant number of “domestic foreigners” consisting mainly of children of “guest workers”, some of whom are third-generation family members living in Germany. In the winter semester of 1992-93, for example, this group comprised almost 40 per cent of all foreign student numbers in Germany. As in other European countries, outgoing students consist of free-movers and those studying under exchange programs such as ERASMUS, SOCRATES, LINGUA and TEMPUS, or as part of exchange agreements between individual institutions of higher education in Germany and their counterparts abroad.

In Sweden, no exact figures exist for the numbers of foreign students studying in the country, and an estimate of around 11 thousand for the year 1988 is subject to a margin of error, though it appears consistent with the UNESCO data noted earlier. Better records exist for outgoing students because they are virtually all covered by some government program, either as “free-movers” (using their Swedish study loan to study abroad) or as exchange students. In 1993-94 there were about 13.7 thousand free-movers studying abroad, and 4 thousand in exchange programs studying mainly elsewhere in Europe. The latter figure includes about 1,800 students in ERASMUS and about 400 in the NORDPLUS program.

In the UK and Australia, data are readily available for incoming foreign students only. Comparative data for these two countries are shown in Table 4. It can be seen that, whilst the proportions of the student body made up by foreign students at the undergraduate level are roughly similar between the two countries (around 7 per cent), there is a strong concentration in the postgraduate area in the UK, reflecting that country’s important position in advanced-level training in world higher education.

**Table 4: Foreign student numbers: UK (1992-93) and Australia (1993)**

	UK	Australia
Foreign tertiary student enrolments ('000)		
Undergraduate		
Postgraduate	63.6	32.4
Total	32.4	10.2
	95.9	42.6
All tertiary student enrolments ('000)		
Undergraduate	852.8	462.0
Postgraduate	104.8	113.6
Total	957.6	575.6
Foreign students as proportion of total (%)		
Undergraduate	7.5	7.0
Postgraduate	30.9	9.0
Total	10.0	7.4

Sources: UK: Greenaway and Tuck (1995).

Australia: Data from Department of Employment, Education and Training.

Turning to the origins and destinations of incoming and outgoing students respectively, Table 5 shows the principal countries of origin and destination of mobile students for each of the five countries under study. In regard to incoming students, the majority of students coming to the Netherlands under exchange programs do so from countries of Western Europe (around 60 per cent), but these students are overshadowed in purely numerical terms by the numbers of “regular” foreign students, most of whom are of non-European origin. However, many of these, for example from Morocco, Turkey and Surinam, are effectively domestic students, being children of guest-workers or of former Netherlands citizens from Dutch colonial times. Similarly, in Germany, the high proportions of Turkish and Iranian students are explained by the fact that they are predominantly “domestic foreigners” as mentioned earlier; in more recent years, foreign student numbers in Germany have been boosted particularly by the inflow from Central and Eastern European countries. Incoming students in Sweden are, as noted earlier, difficult to track, particularly those from Nordic countries who may not show up in official statistics. In regard to UK and Australia, the ties of the British Commonwealth and (in the Australian case) regional proximity are reflected by the fact that in both cases Malaysia and Hong Kong are amongst the principal supplying countries. In terms of the countries of destination of outgoing students, the US is by far the dominant receiving country in the

case of four of the five countries under review, and in the other (Netherlands) it is the equal second most important destination (see Table 5).

Considering finally the subject areas favoured by students travelling internationally, we note that the most popular fields amongst incoming students studying in Australia are business, administration and economics (35 per cent), engineering/surveying (18 per cent) and life and physical sciences (12 per cent), whilst foreign students in Germany are to be found predominantly in linguistics, languages, humanities, sport and art (30 per cent), engineering (25 per cent), and law, economics, business and social sciences (22 per cent). For these countries no data are available on the areas of study of outgoing students. For the Netherlands and Sweden, on the other hand, information on subject area is available only for outgoing students. Outgoing students on mobility programs from the Netherlands studying economics and business comprise the largest group (29 per cent of such students), followed by technical science/engineering (17 per cent). Outgoing “free-movers” from Sweden are overwhelmingly concentrated in the humanities and the arts (around 50 per cent), with about 15 per cent in business and administration. In the case of the UK, the spread of subjects of incoming foreign students is quite wide, the largest groups being in engineering and technology (19 per cent), business and finance (16 per cent) and social sciences (15 per cent).

### **2.3 Trends in Financing Higher Education**

In order to consider the financial aspects of the student flows described above, it is necessary to place the analysis in the context of trends in the financing of higher education as a whole. In the case study countries over the last decade, the picture has been mixed. All of the countries under study have been subject to fiscal restraint of greater or lesser severity, leading to pressures on educational sectors to contain expenditures, to promote efficiency and to seek additional sources of revenue. At the same time, the increases in student numbers noted above have kept up the pressure for expansion of aggregate tertiary education budgets. The outcome has been a steady rise in total public expenditure on education at the third level in current prices, as indicated in the top section of Table 6. However, after allowance for inflation, and expressing expenditures in per capita terms, we find that real public current expenditure per student has shown a different pattern over time in each of the five countries, as can be seen in the two lower sections of Table 6. Real expenditure per student has risen in Sweden, fallen in the UK, and fluctuated in the other three countries.

**Table 5: Principal countries of origin and destination for incoming and outgoing third-level students: five case-study countries, various years**

	Countries of origin of incoming students	Countries of destination of outgoing students
Australia	<i>1993</i>	<i>1991-93</i>
	Malaysia (18.5%)	United States (44%)
	Hong Kong (16.0%)	New Zealand (12%)
	Singapore (12.7%)	United Kingdom (12%)
	Indonesia (6.4%)	China (10%)
Germany	<i>1991</i>	<i>1991-93</i>
	Turkey (14.5%)	United States (20%)
	Iran (9.2%)	United Kingdom (17%)
	Greece (6.1%)	France (14%)
	China (5.4%)	Switzerland (14%)
Netherlands	<i>1992</i>	<i>1991-93</i>
	Germany (15.4%)	Germany (25%)
	Surinam (11.5%)	Belgium (20%)
	Turkey (11.2%)	United States (20%)
	Morocco (7.2%)	United Kingdom (14%)
Sweden	<i>1988</i>	<i>1991-93</i>
	Finland (23.6%)	United States (42%)
	Iran (13.7%)	Norway (11%)
	Norway (8.4%)	France (10%)
	Germany (4.5%)	Germany (8%)
United Kingdom	<i>1992</i>	<i>1991-93</i>
	Malaysia (8.9%)	United States (36%)
	Germany (7.4%)	France (19%)
	Ireland (7.1%)	Germany (11%)
	Hong Kong (6.9%)	Canada (6%)

Source: Calculated from UNESCO data; percentages in the second column are only approximate.

**Table 6: Trends in public current expenditure on tertiary education: five case-study countries: 1980-1991**

	1980	1985	1990	1991
<b>Aggregate nominal public current educational expenditure at the third-level</b>				
Australia (\$A million)	1559	3614	5725	5600
Germany <sup>(a)</sup> (DM million)	9144	15718	19824	23049
Netherlands (Gld.million)	6347	6546	9311	9644
Sweden (Sw.Kr.million)	3802	7559	12287	16713 <sup>(b)</sup>
United Kingdom (£ million)	2709	3319	4962	5805
<b>Real public current expenditure per student (1990 prices)</b>				
Australia (\$A'000)	10.0	13.7	11.8	10.3
Germany <sup>(a)</sup> (DM '000)	9.9	11.4	11.0	11.9
Netherlands (Gld.'000)	21.9	16.7	19.4	19.0
Sweden (Sw.Kr.'000)	46.6	57.6	63.8	67.4 <sup>(b)</sup>
United Kingdom (£'000)	6.0	4.2	3.9	3.9
<b>Real public current expenditure per student (Index base 1980=100)</b>				
Australia	100	137	118	102
Germany <sup>(a)</sup>	100	116	112	120
Netherlands	100	76	89	87
Sweden	100	124	137	145 <sup>(b)</sup>
United Kingdom	100	70	66	66

Notes: (a) FRG only.  
(b) 1992.

Source: Calculated from data in UNESCO Statistical Yearbook (1995); real expenditures calculated using GDP deflator from IMF International Financial Statistics Yearbook (1995).

Broad comparisons across countries can be made for a single year, here chosen as 1990 (see Table 7). Public current expenditure at the third level expressed per third-level student is shown in US dollars in the first row of this Table. Netherlands and Sweden head the list, with budget allocations of just over \$US10 thousand per student, with Australia at just under this figure, and the UK and Germany significantly lower still. These data reflect rather different relative levels of importance of higher education budgets in total government expenditures in the different countries, as can be seen in the next two rows of the Table. Remaining figures in Table 7 indicate that higher education expenditure accounts for between about 2 and 6 per cent of total government outlays in the five countries under review, and between about 1 and 2 per cent of GDP.

**Table 7: Public current expenditure on third-level education: five case-study countries: 1990**

	Australia	Germany	Netherlands	Sweden	UK
	(\$US'000)	(\$US'000)	(\$US'000)	(\$US'000)	(\$US'000)
Public current expenditure per third-level student	9.2	6.8	10.7	10.8	7.0
Public current expenditure at tertiary level as proportion of:	(%)	(%)	(%)	(%)	(%)
- total current expenditure on education	32.0	22.4	32.1	13.2	19.6
- total educational expenditure	29.6	20.1	28.9	12.1	18.6
- total government outlays	6.1	2.8	3.5	2.2	2.4
- GDP	1.5	0.8	1.8	0.9	0.9

Source: Calculated from data in UNESCO Statistical Yearbook (1995) and IMF, International Financial Statistics Yearbook (1995).

## 2.4 Financing Arrangements for Foreign Students

We now consider the methods of financing of foreign student enrolments in the five countries, against a background of the overall student financing arrangements that are in operation in each case.

### *(i) Australia*

The financing of higher education in Australia has undergone dramatic restructuring in recent years, with consequent implications for the financial arrangements for foreign students. In 1988, the former “binary” system of universities and colleges was replaced by a “unified national system” comprising institutions whose “educational profiles” have to be negotiated annually with the federal government (Wilson, 1993). In the new system, funding allocations are based on agreed levels of student numbers, taking account of the relative costs of different degree programs. Students are subject to fees<sup>2</sup> which may be paid at the time of enrolment, or deferred and repaid out of taxation when the student’s subsequent earnings reach a certain specified level. Some students may also qualify for a government living allowance grant, subject to eligibility criteria based principally on family income.

Overseas students pay full-cost fees which are set by institutions and which vary according to a variety of factors including level and duration of course, subject area, and institutional circumstances. Given the expanding mission of most universities in Australia in developing their internationalisation activities, and given the pressures on them to diversify their funding sources and to diminish their reliance on centralised financing, the prospect of expanding enrolments of foreign students has been attractive to many institutions, and substantial resources have been devoted to marketing educational programs amongst potential students in overseas countries, mainly in South-East Asia.

As in the UK, the introduction of full-cost fees for overseas students in Australia was accompanied by a shift away from a system of implicit subsidies to all incoming students, towards a more targeted program of foreign aid provided through higher education. Students studying under such arrangements generally have their tuition fees paid for them, and are given a living allowance; the costs of these assistance programs accrue to the foreign aid budget.

### *(ii) Germany*

The German higher education system comprises a range of public and state-certified institutions including universities and colleges, and the Fachhochschulen (specialised, often technical, colleges). Most of the public financing of higher education is provided through the various Länder governments (89 per cent of total expenditure), with only a relatively small amount (9 per cent) coming from the federal government, and a negligible amount (2 per cent) from private sources.

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2 In the Australian context these student charges are not referred to as “fees” but as “contributions” when they are levied through the Higher Education Contribution Scheme (HECS).

Neither domestic nor foreign students pay fees in Germany, though there is currently some discussion concerning the possible introduction of tuition or administration fees, brought about by increasing pressure on public budgets. Already in some areas some fees are beginning to be introduced; for example in Berlin an administration fee of 100DM was brought in in 1996/97. Domestic students in need may receive government assistance to help defray living expenses, and such financial aid is also available to “domestic foreigners”; as noted earlier, these students form quite a significant proportion of the total foreign student body in Germany.

The German government provides financial support for specific programs of internationalisation in higher education through the German Academic Exchange Service (DAAD), which receives its funds from the Foreign Office, the Federal Ministries for Education, Science, Research and Technology, and Economic Cooperation. These funds are used to support both foreign students coming to Germany and domestic students going abroad, including especially those on exchange arrangements.

### *(iii) Netherlands*

Early funding models for Dutch higher education dating from the 1960s generated a budget based on numbers of students (and volume of research) multiplied by an estimate of costs (Hazeu and Lourens, 1993). Such models were essentially input-oriented. Since 1993, a new procedure has been used, changing from the “claim” models of the past to a distribution model oriented towards outputs. The Ministry of Education now allocates lump-sum grants to institutions calculated on the basis of degrees awarded and student numbers. An additional item in the public sector budget is the cost of student living allowances or State grants, which include a component for free public transportation. Within this environment, the internationalisation of higher education has proceeded, stimulated by funds provided both through the Ministry of Education, such as the STIR program launched in 1988, and through European programs such as ERASMUS. More recently, institutions have recognised the value of allocating some internal funds to promotion of international education as a means of improving their educational profile. Student exchanges have been the main focus for internationalisation activities, but there has also been increased staff mobility, as well as numerous efforts in the area of internationalisation of curricula. Whilst the quantitative expansion in numbers has occurred, institutions have also recognised the need to support internationalisation programs in qualitative terms, with increased emphasis on improving the quality of the educational experience gained during study abroad. In regard to fees in regular study programs, students from other EU member states cannot be charged higher fees than domestic students, whereas students from other countries can be charged full-cost fees. In the case of study programs specifically developed for foreign students, usually taught in English, and offered outside the framework of the regular curriculum, full-cost fees can be and often are charged.

### *(iv) Sweden*

Like the Netherlands, the year 1993 marked for Sweden a change in the means of financing higher education. The gradual decentralisation of decision-making that had been occurring during the 1980s was formalised in a new resource allocation system for undergraduate education introduced in 1993. Institutional appropriations are now calculated on the basis of student numbers and the number of credit points earned, with about 40 per cent of the government grant being related to full-time-equivalent student numbers and 60 per cent to credit point results. The maximum amounts payable to a university or college are contained in an “education task contract” covering a three-year period.

Students do not pay fees, and indeed it is a basic tenet of Swedish higher education policy that all students needing assistance to pursue their studies should receive financial support from the government. This support is provided in the form of an allowance to each student, about 30 per cent of which comes in the form of a grant, with the remainder being provided as a loan repayable out of future income at a concessional rate of interest.

More than in most countries, internationalisation of higher education in Sweden emphasises the benefits to domestic students from studying abroad as well as those accruing to and from foreign students studying in Sweden. Swedish students who have qualified for government assistance may utilise their loan to study abroad, and indeed may receive additional assistance to cover tuition fees and higher costs in the foreign country in which they choose to study. The resource savings within the Swedish educational system on account of domestic students being educated abroad rather than in Sweden are offset by the fact that tuition costs of incoming foreign students must be met by the system. The net financial outcome in any assessment of the overall financial impacts of internationalisation of higher education in Sweden will depend on balancing up these various effects (see further below).

#### *(v) United Kingdom*

Higher education in the UK is financed through a variety of mechanisms, including direct government grants to institutions, research grants, fees paid by both domestic and overseas students, and contributions from industry and other sources. In 1988-89, 53 per cent of universities' income was derived from exchequer grants and 12 per cent from fees levied on domestic and overseas students (Williams, 1992). The current system of allocation of government funds is based on contractual arrangements between institutions and government whereby funds are provided in exchange for specific teaching and research services, assessed according to given qualitative and quantitative criteria.

Foreign students from countries outside the EU pay "full-cost" fees at UK institutions of higher education, with EU students paying fees at the same levels as domestic students. Universities and colleges have devoted considerable efforts to the marketing and promotion of programs for foreign students, since foreign fee income has become an increasingly significant component of institutional revenues over the past decade. There has been concern that the entrepreneurial emphasis in marketing higher education to foreign students may have jeopardised standards in some cases, and policies of "responsible recruitment" of foreign students by universities and colleges have been promulgated.

It should be noted, too, that there is a foreign aid aspect to the financial arrangements for foreign students in the UK. When full-cost fees were introduced in 1980, the effective subsidy to all overseas students was replaced by a targeted program of assistance to deserving students from specific countries in the developing world where the British aid program was to be concentrated. As in the Australian case noted earlier, the direct costs of these students to the UK economy are contained in foreign aid appropriations.

## **CHAPTER 3**

### **IDENTIFICATION OF THE COSTS AND BENEFITS OF FOREIGN STUDENTS**

#### **3.1 Identification of Stakeholders**

An assessment of the costs and benefits of foreign study can be carried out from a number of different viewpoints, corresponding to the various stakeholders in the process of internationalisation of higher education. Such stakeholders include individual students, universities and colleges, employers, higher education systems, and the national and international community. The nature of the costs and benefits that are important to each of these groups of stakeholders will of course differ. In this section we outline briefly the main dimensions of the evaluation problem confronting the major levels of analysis: students, institutions, educational systems and society as a whole.

##### *(i) Individual students*

In the economic model of human capital formation, the purchase of education by a student is seen as an investment, the benefits of which accrue to the individual in tangible and intangible ways over his or her lifetime. This model can thus be readily interpreted in cost-benefit terms, and decisions as to how much and what sort of education to undertake can be analysed using the familiar economic techniques of cost-benefit analysis. Of course a mechanistic application of the numerical cost-benefit calculus to such fundamental personal decisions is hardly likely to be decisive in individual cases, but the model does at least provide a view of economically rational decision-making in this area that helps to explain aggregate behaviour.

In the more specific context of foreign study, the same general principles can be applied. Individual students who are contemplating study abroad, whether at undergraduate or postgraduate level, whether as exchange students or free movers, whether to gain an award or simply to acquire one or two credits for an existing home-based program, can identify clear costs that they themselves must incur, and benefits that they hope to enjoy, as a result of their decision. The costs will include tuition fees (if relevant), travel costs, differential costs of accommodation and sustenance, and so on. The benefits to them are likely to include the higher incomes that they might hope to earn, perhaps throughout their entire career, as a result of a foreign component in their overall educational profile, and a wide range of non-pecuniary benefits such as enjoyment of the study period itself, improved language skills, greater social and cultural awareness, and so on.

Typically, the student contemplating study abroad will face decisions involving choices between different programs in different countries, where the basis for comparison may be a corresponding program at a domestic institution that does not involve foreign study at all. Although it can be stated as a theoretical proposition that the optimal choice will be that yielding the greatest net

present value of benefits over costs, it need hardly be added that a practical assessment in individual cases is likely to be much more problematical, since it will involve many elements that are difficult to quantify, and a great deal of uncertainty surrounding many of the measurable magnitudes, particularly on the benefit side.

### *(ii) Institutions*

At the institutional level, interest centres on the processes of decision-making by autonomous universities and colleges, which take place through the usual processes of academic and financial planning. Such processes presuppose some clear statement of institutional mission or objectives; decisions may then be evaluated in terms of their contribution to such objectives, both quantitative and qualitative, subject to financial constraints. Thus in the present context we might be interested in the extent to which the presence of foreign students on the campus, or an active program of encouraging the institution's own domestic students to study abroad, contributes to institutional objectives, and at what cost.

The usefulness of cost-benefit analysis methods at the institutional level might be in their application to particular initiatives relating to foreign study, such as assessing the economic ramifications of special programs to cater for foreign enrolments, the financial consequences of establishing split-site or off-shore programs, the desirability of entering into new exchange agreements, and so on. Alternatively, or in addition, a university or college might have an interest simply in knowing the economic impacts of the existing cohort of foreign student enrolments, and whether the resources devoted to the education of such students are seen to be justified by the institutional benefits that accrue. We return to these issues below.

### *(iii) Educational systems*

The tertiary education "system" can be defined as the administrative structure at regional or national level which is responsible for implementing regional or national government policy with regard to higher education. Its functions are therefore the allocation of funds to institutions, administration of regulations, coordination, monitoring and evaluation, and so on. We do not regard the "system" as the collection of universities and colleges, private and public, that comprise the higher education sector; that interpretation of "system", with emphasis on aggregate resource flows taken across the whole sector, is appropriate to our national level of evaluation treated below.

At the system level, then, the concern is essentially with the budgetary consequences of programs and strategies for internationalisation that education authorities might initiate, coordinate, implement or monitor in the tertiary education sector. An educational administrative system at regional (sub-national) or national level is primarily concerned with service delivery, the beneficiaries being "others": students, institutions, the general public and so on. Hence, the appropriate mode of analysis at the system level is likely to be cost-effectiveness evaluation rather than conventional cost-benefit analysis. That is, systems are concerned with the most efficient way of achieving certain administrative ends within an overall policy framework, where the benefits, to whomever they accrue, are taken as given. There is therefore an emphasis here on administrative efficiency, and on regional (sub-national) or national fiscal policy, which addresses the raising of revenue and the allocation of expenditures to achieve agreed educational policy goals relating to foreign student movements, both in and out, affecting the system as a whole.

#### *(iv) The national economy*

The entire community, in both sending and host countries, can be seen as an economic stakeholder in the foreign student issue, insofar as the economic costs and benefits of foreign students, when aggregated together, are borne by or enjoyed by society as a whole. The resources committed by sending countries to supporting their students in travelling abroad, and by host countries in providing tuition and other services for incoming students, all have opportunity costs to the respective national economies. Likewise the economic benefits of foreign study, both short- and long-term, may accrue to the entire economies of host countries through, for example, increased export earnings, or to those of sending countries, through the improved productivity of returning students.

Thus at the national level an analysis of the costs and benefits of foreign students can be undertaken by evaluating costs in terms of aggregate resource commitments to such students, and benefits in terms of projected increases in revenues generated, together with an assessment of intangible or nonpecuniary effects. Assessment of all these costs and benefits may be carried out using the techniques of social cost-benefit analysis. These techniques are well-known through their widespread use in public investment appraisal across a variety of sectors in many countries. They may be applied in the foreign student context in both sending and host countries to find out whether such students yield a net social benefit, or incur a net social cost, through their aggregate impact on the national economy.

### **3.2 Interpretation of Costs and Benefits**

At any of the levels discussed in the previous section, we can identify two broad ways of interpreting the costs and benefits of foreign study that might be considered in any assessment.

#### *(i) Accounting costs and benefits*

The most obvious and readily measurable economic impacts of foreign study for an individual, or of the presence of foreign students for an institution, a system or a nation, are the financial flows generated. At the individual level, these effects are seen in the direct costs of fees, travel etc. that have to be found immediately from the student's personal financial sources, and in the increased monetary income that may accrue to the student personally in due course as a result of having spent a period of study abroad. At more aggregate levels of analysis - the institution, the region, the nation - the movements of foreign students show up in the financial accounts at the various levels: in the income and expenditure statements and the balance sheets of institutions, or in the public accounts at sectoral, regional or national levels. These financial flows, at whatever level, are an important first step in assessing the economic impacts of foreign study.

#### *(ii) Economic costs and benefits*

It has to be remembered, however, that accounting revenues and expenditures may not always measure the true economic costs and benefits of foreign study. For an individual, for example, a significant cost of full-time study, whether at home or abroad, is the opportunity cost of time spent as a student, that is, the income forgone from not being in paid employment for this period. This same opportunity cost is also borne by society as a whole through the forgone value of the output that the student would have produced, had he or she been in the productive workforce instead of

studying. In other words, assessment of economic costs and benefits goes beyond purely accounting measures and attempts to measure the full economic value of the resources committed or the outputs produced in comparison with the alternatives available. At the national level it is these “social” costs and benefits that form the basis of a social cost-benefit analysis, and their proper and comprehensive measurement is essential if this sort of analysis is to be useful in informing policy decision-making.

Not all of these direct economic costs and benefits are tangible, in the sense of having a direct monetary value attached to them. Nevertheless, the nonpecuniary nature of these effects does not make them any less significant in an individual’s, an institution’s, or society’s decision-making. For example, educational and cultural benefits of various kinds accrue directly to individuals, to institutions, and to society as a result of the internationalisation of higher education; most of these benefits could be described as “intangible”, yet they do clearly impact on decision-making processes at all of these levels. In principle at least, some of them may be able to be valued in financial terms, for example in terms of what the individual, the institution, or society would be willing to pay in order to secure those benefits. But the problems of measurement here, whatever the level of analysis, can be daunting, and in empirical work these intangible effects are often regarded as lying beyond the reach of the evaluation.

In addition to these *direct* tangible and intangible economic effects, foreign study may also give rise to *indirect* effects in the form of positive and negative externalities. External benefits or costs are unintentional and uncompensated by-products or spillovers from some economic activity. When they arise, they accrue to or are borne by everyone within range, and no market exists whereby those who give rise to or who experience such effects can be compensated or rewarded. So, for example, if the presence of foreign students on a university campus promotes beneficial cultural interchange, this can be seen as an external benefit, a valuable spillover from the process of foreign study that accrues to all students on the campus, and more generally to the community or society as a whole. Alternatively, or in addition, if the presence of foreign students on a campus causes congestion in the use of teaching facilities, etc., this is an external cost borne by all students and the institution.

For completeness in any economic analysis of costs and benefits, externalities should be identified, even if they cannot immediately be measured. We draw attention to some specific external effects relating to foreign students at institutional and national levels in later Chapters of this Report.

## CHAPTER 4 COSTS AND BENEFITS OF FOREIGN STUDENTS TO INSTITUTIONS

### 4.1 Introduction

In the previous Chapter, we identified students, institutions, educational systems, and society as a whole as the major stakeholders in the internationalisation of higher education, and we drew attention to the differences between accounting and economic measures of the costs and benefits that affect them. The scope of the present study does not extend to carrying out assessments of costs and benefits at all four of these levels; instead attention is focused on just two of them: the institutional and national levels. Thus in this Chapter and the next one we outline a classification of the specific items of cost and benefit that need to be taken into account at these two levels. In the present Chapter we consider the specific costs and benefits that are likely to be important to an individual university or college, and in the next (Chapter 5) we discuss the specific elements that will affect the assessment for the national economy as a whole. These discussions will set the scene for the case-study applications at these two levels contained in later Chapters of this Report.

Thus, the question to be addressed in the present Chapter may be stated as follows: How can a higher education institution assess the economic costs and benefits of its foreign student activities, both in terms of the immediate institutional budgetary impacts, and in terms of the wider contribution the institution hopes to make to society in general?

### 4.2. Types of Costs and Benefits

In evaluating the financial impacts of foreign students at the institutional level, we can identify three types of costs and benefits:

(a) *Infrastructure establishment costs.* These cover the costs of putting in place the administrative or operational systems necessary to support an ongoing program, such as the establishment of a foreign students services unit within a university, or the setting up of a course program catering particularly for foreign students.

(b) *Program delivery costs.* These comprise the recurrent costs of delivery of services provided by the program over the course of its life. In some cases, a program might be uniquely devoted to internationalisation objectives (e.g. a course mounted specifically and only for foreign students); in such a case it is likely that its delivery costs could be readily isolated from other institutional expenditures, although some allocation to the program of shared costs such as central administrative costs might be required. In other cases, where a “program” comprises simply some international component grafted onto an existing activity (e.g. accepting some foreign students into

existing courses), delivery costs may be thought of as incremental costs over those that would be incurred by the core activity in the absence of the program.

(c) *Time-streams of net benefits.* These comprise an evaluation of the ongoing streams of financial or other benefits to the institutions that are attributable to the program, net of any recurrent costs not otherwise accounted for, and cumulated over the life of the program.

In some cases, the concept of a specific “investment” cost may not be relevant; rather, a particular foreign student activity may be simply an on-going function incurring recurrent costs but without any identifiable establishment capital having been required. In such cases, only the second and third types of costs and benefit listed above would be relevant to the assessment, and the evaluation could be made simply in terms of annual financial flows.

### **4.3 Specific Items of Cost and Benefit**

Given the types of economic effects as identified in the previous section, the particular items of cost and benefit that might be taken into account in evaluating a specific internationalisation activity within an institution begin to take shape. Let us use the evaluation of incoming foreign student programs within a university as an illustration. Here we refer to the enrolment of foreign students by the university, whether the students are independent free-movers or whether they come as part of an exchange program. It should be noted that institutional parameters vary widely between countries and between types of institution; for example, some universities charge fees, others do not, some receive formula funding from government, others do not, and so on. The discussion below is kept as general as possible to facilitate wide interpretation.

Under the three headings introduced above, we can identify specific cost and benefit items relating to incoming foreign students as shown in Table 8. Some explanation is needed for some of these items. In the case of both (a) and (b), the individual elements should be reasonably self-explanatory. It should be borne in mind, however, that the costing process is affected by the distinction between programs that are discrete and self-contained (tailored specifically for foreign students), and those that are part of the general teaching activities of the university. Full costing is appropriate to the former, whilst incremental costing is appropriate to the latter, with a proper allocation of shared or joint costs in both cases.

**Table 8: Costs and Benefits to Institutions of Incoming Foreign Students**

**(a) Infrastructure establishment costs**

1. Establishment costs of units etc. to provide:
  - special academic programs for foreign students
  - special support services for foreign students.
2. Incremental capital costs due to foreign students for facilities for:
  - teaching (classrooms, laboratories, etc.)
  - academic support services
  - student support services
  - student housing (on-campus college accommodation, etc.).

**(b) Program delivery costs**

1. Recurrent costs of:
  - special academic programs for foreign students
  - special support services for foreign students.
2. Incremental recurrent costs attributable to foreign students for staff, materials and facilities for:
  - tuition and supervision
  - general student academic services (library, computing, etc.)
  - general student administrative services
  - student accommodation.
3. Marketing costs of programs for foreign students.

**(c) Net benefits**

1. Revenue from fees paid by foreign students and retained by the institution for:
  - tuition
  - accommodation.
2. Proportion of grant income from central authority attributable to foreign students.
3. External funds received by the institution on account of student exchange programs.
4. Economies of scale or scope.
5. Net value of research output contributed by foreign students.
6. Net beneficial spillovers from foreign students to domestic students.
7. Alumnus effect

In regard to the net benefits identified under (c), the immediate effects of foreign students on the revenues of the institution (fees paid and funding allocations received) are the major items. In addition, the presence of additional numbers of students in the institution may enable scale economies in service provision, lowering average costs across all students, and could lead to economies of scope if a wider product range can be offered.<sup>3</sup> Furthermore, the university may benefit from the contribution that graduate research students make to the research output of the university; if so, and if the value of this contribution can be estimated, it should be included.<sup>4</sup> Of possibly greater importance, if only because it derives from all foreign students and not just a subset of them, is the potential external benefit accruing to the institution, its staff and its student body from the presence of foreign students on the campus. Positive outcomes from the social and cultural interaction between foreign students and host institutions have been seen as one of the most important qualitative benefits of internationalisation of higher education (Goldring Committee, 1984). Although it should be acknowledged that in some circumstances these externalities could be negative, the evidence strongly suggests that they will generally be positive on balance. Finally, we point to the possibility of the so-called “alumnus effect”, i.e. benefits accruing to a host institution over the lifetimes of its former students who make donations and support their alma mater in various other ways.

As noted, the above impacts are specified for incoming foreign students. Similar classifications might be used to analyse the impacts of outgoing students, and of other aspects of internationalisation programs such as curriculum development initiatives. In all these cases, the establishment costs of administrative units set up to deal with these matters might be distinguishable, and the ongoing program delivery costs and benefits, at least in terms of financial outflows and inflows, should be able to be determined. In practice in many cases, an institution’s budget for internationalisation activities will cover *all* such activities undertaken by the institution, and the calculation of cost and benefit in respect of particular aspects such as support for incoming and outgoing students, staff exchanges, and so on, may require judgement as to the allocation of specific items to particular functions and the sharing of joint expenditures.

#### **4.4. Measurement Issues**

It should be noted that the above listing of items of cost and benefit is to some extent an idealised picture. In reality, not all items will be able to be measured and included in any particular assessment. Nevertheless, it is useful to have the full picture in mind as a working framework within which we must do the best we can.

In regard to the sources of data to quantify a specific empirical investigation, we may observe that a university or college can be seen as an autonomous self-contained organisation with certain objectives, generally related to numbers of students, quality of graduates, volume and quality of research and scholarship produced, etc., that are pursued subject to a constraint that its revenues and expenditures must be in balance over some defined period. Thus, a university’s accounts, together with its statistical records of student numbers, staff numbers, resources available, output achieved and so on will generally provide a ready source of information for a number of the items listed above.

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3 In some cases additional numbers could produce diseconomies of scale or scope, reducing rather than augmenting the overall net benefits.

4 The size and importance of this item has been a matter for some speculation; see, for example, Blaug (1981).

In evaluating the economic effects of foreign student programs, the costs of tuition are likely to emerge as the most significant resource costs incurred. When international programs are discrete and self-contained within the university, the identification of these costs should in principle be straightforward. When such programs are simply incremental to “normal” activities, the tuition component will comprise the marginal cost of adding a student to the university’s existing teaching load (whether that student is “foreign” or “domestic”). In some cases these marginal costs might be quite small, especially if some excess capacity exists within the institution. They may be derived from an estimated cost function (showing costs as a function of student numbers, controlled for influences such as level of study, subject area, etc.). Estimates of marginal costs per student thus obtained may have to be reduced to allow for the research component of costs. When this has been done, the “teaching only” marginal costs per student can be applied to the total numbers of foreign students enrolled by degree level and/or subject area, to obtain an estimate of aggregate impacts.

If reliable estimates of marginal costs of tuition cannot be obtained, or if the numbers of foreign students are so large relative to total student numbers that their impact can no longer be described as “marginal”, it may be necessary or appropriate to rely on average costs, which tend to be easier to calculate. Data on total costs of delivery of academic services and on student numbers can be used to derive average costs per student, again adjusting for the research component of the university’s output. The resulting quantities expressed on a per student basis can be used to estimate aggregate financial effects when combined with student numbers, as described above.

Overall, it has to be recognised that most applications will necessarily involve a lot of guesswork and will contain a number of gaps. Nevertheless, if some general “feel” can be obtained for the orders of magnitude involved, the sensitivity of results to errors and omissions in the data may be able to be assessed, enabling broadly robust conclusions to be drawn.

## **CHAPTER 5**

### **COSTS AND BENEFITS OF FOREIGN STUDENTS TO THE NATIONAL ECONOMY**

#### **5.1 Introduction**

An evaluation of the overall social costs and benefits of foreign students takes the nation as a whole as the basis for analysis, and attempts to aggregate the identifiable costs and benefits across all affected parties in the economy. In host countries, foreign students spend most of their time and have their primary economic impacts on the campuses of the universities or colleges at which they are studying. Thus an important component of any social assessment could be provided by the estimates of institutional impacts discussed in the previous Chapter. In addition, foreign students have economic impacts beyond the institutions in which they are enrolled: they spend money on food, entertainment and recreation in the cities and towns in which they are for the time being resident, they engage in travel and tourism within the host country, and so on. Thus a national-level evaluation of host-country effects needs to cast the net widely, to draw in all the impacts of foreign students, wherever they occur.

Similarly, an evaluation from the viewpoint of a sending country must try to identify all the sources of cost and benefit within the sending country's economy. When individual students or their parents contribute to financing the student's education abroad, the costs involved are borne by the whole of the sending country's economy, since the pool of domestic savings is correspondingly reduced. Likewise the tax cost of public contributions to supporting students to go elsewhere to study comprises an opportunity cost for the economy of the sending country as a whole. Again, a complete analysis should try to measure as many of these effects as possible, to gain a picture of the aggregate social cost and benefit.

In this Chapter we identify the major specific items of cost and benefit that should be accounted for in an aggregate national level assessment of the economic impacts of foreign students. We look in turn at the perspectives of the host and the sending country, remembering that most countries will fall to some extent into both categories at any one time.

#### **5.2 Costs and Benefits to Host Countries**

There are various ways in which the items of cost and benefit of foreign students to host countries might be classified and added up. A reasonably comprehensive itemisation is provided in Table 9. Some explanation of elements in this Table is warranted.

**Table 9: Costs and Benefits of Foreign Students to Host Countries**

<ol style="list-style-type: none"><li>1. Resource costs borne by institutions for provision of:<ul style="list-style-type: none"><li>- tuition and supervision</li><li>- academic support services</li><li>- student support services</li><li>- student housing and sustenance</li><li>- marketing of programs.</li></ul></li> <li>2. Administrative and other costs borne by government:<ul style="list-style-type: none"><li>- administration of foreign student programs</li><li>- financial support for incoming students (e.g. aid-related assistance).</li></ul></li> <li>3. Direct economic benefits:<ul style="list-style-type: none"><li>- revenue from tuition fees and other charges</li><li>- revenue from external grants etc. on account of student exchange programs</li><li>- value of research output produced by graduate students</li><li>- value attaching to casual work undertaken</li><li>- value attaching to student expenditures on other goods and services.</li></ul></li> <li>4. External effects:<ul style="list-style-type: none"><li>- congestion costs</li><li>- costs attaching to displacement of domestic students</li><li>- cultural interactions and links</li><li>- alumnus links and stimulus to future trade.</li></ul></li></ol>
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On the cost side the major items are likely to be the resource cost to the host economy of providing tuition and support services for incoming foreign students. These are contained in items 1 and 2 in the Table, and are offset by revenues, listed under item 3, that are obtained from students if tuition fees and other charges are levied on them. The living costs of students are also included here, to the extent that foreign students live in college or dormitory or other accommodation provided by institutions or public authorities; these costs are also offset if students themselves contribute payments for such services. Estimates of many of the items amongst these immediate financial impacts could be derived from the sort of institutional-level cost-benefit analysis described in the previous Chapter if they could be aggregated over all institutions. In practice, however, comprehensive assessments for all institutions, or even for a sample of them, are unlikely to be available, and it will be generally more practicable to make cost estimates on a per-student basis and to aggregate them across all foreign students studying in the host country at a particular point in time. This approach is illustrated amongst the case-study applications in Chapter 7 below.

Amongst the other items of direct economic benefit to the host country shown in item 3 of Table 9, the value of research output has been discussed already, although it has to be noted that placing a monetary value on such output raises the problems involved in measuring the value of research as a public good where no immediate market for the output exists. The inclusion of a value attaching to casual work undertaken depends on the state of the host economy. If there are labour shortages in particular sectors or regions in the economy, such that the availability of foreign students as casual workers enables otherwise unemployed resources to be brought into production, then the

value of additional output created by the students' labour could be seen as a net benefit to the host economy. However, at the present time in most countries around the world there is a sufficiently large pool of unemployed labour in existence to mean that foreign students undertaking casual work will simply displace local workers who might have taken the same job; in these circumstances from the standpoint of the host economy no net benefit can be counted from the students' labour. Indeed foreign students taking casual work may impose additional costs on the host economy, for example if government welfare payments were greater than they would otherwise have been because foreign students have taken jobs which would otherwise have been filled by the domestic unemployed, or if foreign students were to remit their earnings abroad. It is for reasons such as these that temporary immigrants such as foreign students are often prohibited from taking paid employment in the host country.

Somewhat similar principles relate to the valuation, if any, that can be placed on the expenditures by foreign students on goods and services in the host country, including any spending on accommodation and meals not accounted for earlier, i.e. if they live outside the university or college where they are studying. Whilst these expenditures, to the extent that they are financed from abroad, constitute export earnings for the host country, the resources used to produce the goods and services supplied must be paid for. If these goods and services are priced at their opportunity costs, if only normal profits are earned in supplying them, and assuming no distortions in pricing through tax/transfer arrangements, there is no net benefit to the host country from this spending. An exception might be made if there were a premium attaching to the earning of foreign exchange, for example if the host economy were in serious balance of payments deficit. In these circumstances, the inflow of funds to finance foreign students' current consumption could be seen to have some value attached to it, but otherwise, under the conditions noted above, no such benefit could reasonably be counted. Likewise, attaching a value to the multiplier effects of foreign students' expenditures (i.e. increased incomes arising through successive rounds of respending through the economy) could only be contemplated under similarly restricted conditions.

Table 9 lists externalities at item 4. The potential magnitude of these effects and the scope for evaluating them are matters of some uncertainty in empirical analysis. In regard to external costs, it may be that foreign students lead to local congestion in access to lectures, tutorials, library and laboratory facilities and other student services. Furthermore, where student places are rationed, for example through formula funding by government, there may be circumstances in some countries where an additional foreign student displaces a potential domestic student; if so, the host country may bear a cost through having to forgo the benefits it would have enjoyed over the long term had that domestic student been granted the tertiary place. Clearly these are difficult issues that would need to be brought into account if it were apparent that the costs in particular cases were likely to be significant.

The other external effects listed under item 4 of Table 9 are primarily beneficial in nature. Although there may be occasional instances where negative social and cultural interactions occur between foreign students and their host communities, the opportunities for cultural exchange and understanding that arise through the presence of students from other countries are almost always regarded as beneficial, and empirical evidence supports this view. Placing a monetary value on such benefits is, however, a formidable problem and thus these effects can rarely if ever be included in an empirical cost-benefit assessment. Similarly, the links between students and their host institutions and countries after they return home, links that may foster trade and other exchanges, are also difficult to identify and quantify, even though there is evidence that such beneficial relationships do exist and that they can be regarded as a long-term benefit of foreign student flows.

### 5.3 Costs and Benefits to Sending Countries

A classification of national-level economic costs and benefits of foreign students to the sending country is contained in Table 10. Most of these items are either self-explanatory or have already been discussed above. It remains only to explain the benefits accruing after students return home (item 4) and externalities (item 5).

When students return home after studying abroad, they bring with them the additional human capital that they have acquired while they have been away. It is likely that their stock of personal capital will have been increased not only through the formal education they have received but also in countless ways through cultural, intellectual, social, personal and other sorts of experiences they have undergone. This increased stock of human capital can be expected to yield a variety of benefits, the most prominent of which, at least in economic terms, might be the increase in the students' labour productivity throughout their subsequent careers, compared to the productivity path they would have followed if they had not gone away. Whilst the links between education and productivity, and between productivity and level of earnings, are contentious matters amongst labour economists, it is customary to take the increase in expected incomes as at least some sort of proxy to the individual and social benefit that education produces. Thus, in the present context a reasonable measure of the major long-term economic benefit to a sending country that is yielded by its returning students might be obtained if the earnings differential between foreign-educated and non-foreign-educated graduates could be estimated. Such an estimate can only be made if sufficient data are available (e.g. from tracer studies, detailed earnings function estimates etc.) to identify relative earnings of workers with different levels and qualities of education in the sending country's labour market.

**Table 10: Costs and Benefits of Foreign Students to Sending Countries**

<ol style="list-style-type: none"><li>1. Resource costs borne by students and financed out of domestic savings:<ul style="list-style-type: none"><li>- tuition fees and other charges paid</li><li>- costs of materials, textbooks etc.</li><li>- costs of accommodation and sustenance</li><li>- costs of travel.</li></ul></li><li>2. Opportunity costs:<ul style="list-style-type: none"><li>- value of output forgone through students' absence from the workforce.</li></ul></li><li>3. Costs borne by government:<ul style="list-style-type: none"><li>- net costs of financial support for students travelling abroad</li><li>- administrative costs of outgoing student programs.</li></ul></li><li>4. Direct benefits from returning students:<ul style="list-style-type: none"><li>- increased lifetime productivity leading to additional value of output</li><li>- improved job flexibility, language skills, etc.</li></ul></li><li>5. External effects<ul style="list-style-type: none"><li>- social and cultural spillovers from returning students</li><li>- improved contribution of educated students to economic growth</li><li>- slowing of sending country's progress towards third-level educational self-sufficiency</li></ul></li></ol>
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In regard to external effects, one might expect a variety of beneficial spillovers to arise as a result of the presence of returned students in the community and in the workforce, including social and cultural benefits, and perhaps an enhanced contribution to economic growth through the greater job flexibility and adaptive capacity that might be evidenced by foreign-educated students in the face of structural change in the home economy. At the same time, there may be some negative spillover effects, for example the sending of students abroad for their higher education might inhibit progress in the sending country towards developing its own educational capacity at that level. This is the familiar “make or buy” problem which particularly faces developing countries, where in the short run it may be cheaper for them to buy educational services abroad rather than to make them at home, but in the long run the development of domestic educational capacity might be in the country’s best interests.

Finally, it should be noted that the above discussion of benefits accruing to sending countries is predicated on the assumption that the students who go abroad do in fact return home at the completion of their studies, and stay there at least long enough to generate significant benefits to the home economy. In practice, of course, there is always some leakage; for example students, especially coming from the Third World, may hope to take up permanent residence in the foreign country in which they have pursued their studies. Indeed foreign student movements have over time contained significant elements of emigration and immigration. When foreign students do not return home, but remain in the host country, or migrate to a third country, the incidence of national-level costs and benefits is clearly shifted from the standard analyses depicted above.

## **CHAPTER 6**

### **CASE STUDIES OF INSTITUTIONAL IMPACTS**

#### **6.1 Introduction**

During the conduct of this project in the participating countries, data have been assembled for a number of higher education institutions that are very revealing of the micro-level economic impacts of internationalisation on universities and colleges. In this Chapter some indicative results at the institutional level are discussed. First, however, the overall problem of accounting for the financial effects of internationalisation at the institutional level must be recognised. In most of the universities and colleges in the countries under study where internationalisation activities occur, there are administrative units at central and/or at decentralised levels dealing specifically with this aspect of the institution's operations - an Office of International Relations, for example, which might be responsible for administering exchange programs, providing assistance and support services for incoming and outgoing students, overseeing marketing, promotion and recruitment activities for foreign student programs, etc. Generally the costs of running such units are identifiable within an institution's overall budget, although the ways in which accounts are constructed and expenditure items are classified are likely to differ markedly from case to case, even within a country, let alone between countries. Nevertheless, it is generally possible to measure such costs, including the often complex financial arrangements governing student exchange programs, and to express them on a per-mobile-student basis, distinguishing if feasible between the differential costs applying to incoming and outgoing students respectively.

However, it is also true that many aspects of internationalisation in these institutions are simply integral components of their general operations, such as the teaching of foreign students in course programs mounted primarily for domestic students. The costs of these activities with respect to foreign students are contained in the overall costs of running the institutions, and the resource impacts of these aspects of internationalisation may therefore only be able to be evaluated in proportional terms, for example by taking the proportion of foreign to total full-time-equivalent students in an institution's enrolment.

The present study has highlighted the difficulties of gathering data from institutions on a comparable basis. Nevertheless, to illustrate the orders of magnitude involved in different systems, results for four case-study institutions, one each in Australia, Germany, Netherlands and Sweden are briefly outlined below. Further details of these analyses may be obtained from the respective country reports.

## 6.2 Case Studies of Institutional Impacts

### (i) *Monash University (Australia)*

As noted earlier, the major concentration of internationalisation activities within institutions in the Australian higher education system is in the recruitment and enrolment of foreign students, who are either independent free-movers or studying in Australia under aid-related government assistance schemes. Student exchange programs are of little importance, and universities provide little or no assistance to outgoing Australian students, the great majority of whom go abroad to study as independently mobile students. Some universities maintain administrative units to take care of the marketing, recruitment, enrolment and support of foreign students, or at least have staff dedicated to these purposes. In some institutional budgets, the costs of these administrative services can be separately identified, but in many cases they are simply absorbed in the general operational expenditures of the institution.

Monash University in Melbourne is one of the most active of the Australian universities in the international arena, showing spectacular growth in foreign student numbers since 1988, the first year in which the Australian government permitted universities to charge fees to overseas students. In 1988 there were 245 international students on the Monash campuses (about 2 per cent of total student enrolments); by 1993 this number had grown to 3,385 (about 9 per cent of total student numbers), with a further 794 being taught in off-shore programs (Logan, 1994). An International Office was established to deal with student selection, admission, support services, study abroad and exchange programs, and marketing. Since 1994 the administration arrangements for overseas students at Monash have been handled by Monash International, a wholly owned company of the University. This unit recruits students, assists in fee collection, provides reception and other ongoing services for incoming students, coordinates offshore activities, and so on.

The 1994 International Programs and Development budget for Monash University provides an illustrative example of the costs of operating an international program in the Australian context. Details are shown in Table 11. Assuming a total enrolment of 4,500 international students in 1994, the costs of administering and operating the international student program at Monash in that year was about \$US450 per student. This estimate, as noted above, covers all services provided specifically for foreign students, but does not include tuition costs and provision of general academic and support services which all students enjoy. An approximate estimate of the marginal costs of tuition for an Australian university of the size of Monash derived from Throsby and Heaton (1995) would place the “teaching-only” cost per student at around \$US2,600 for undergraduates and \$US5,000 for postgraduate coursework students in 1994.

These estimates can be placed in context by considering the fee income from foreign students on the Monash campus. In the year in question, Monash University budgeted for revenue from fees from full-fee-paying international students of around \$US26.6 million, at an average of around \$US7,000 per student.

**Table 11: Internationalisation expenditures at the institutional level (not including tuition costs): (i) Monash University (Australia): 1994**

	(\$A'000)	(\$US'000)
<b>General administration</b>		
(salary overhead, general non-salary and infrastructure costs)	510	370
<b>Student support</b>		
(sponsorship of incoming student groups and programs)	128	90
<b>International links and cooperation</b>		
(student scholarships, exchange programs etc.)	235	170
<b>Recruitment</b>		
(marketing, market development)	1,698	1,220
<b>Overseas graduations</b>		
(hire and use of facilities, travel etc.)	<u>230</u>	<u>160</u>
TOTAL	2,801	2,010

Source: Calculated from data in Logan (1994).

**(ii) University of Hanover (Germany)**

Student enrolments at the University of Hanover have grown rapidly in recent years, rising from about 20 thousand in 1980 to over 32 thousand in the mid-1990s. Over the same period, numbers of foreign students have doubled to about 2,000, or just over 6 per cent of the total student body. Of these about 65 per cent, or 1,200, are “come-to-study” foreigners, the remainder being “domestic foreigners” as defined earlier. At the same time the University now accounts for about 500 outgoing students per year.

The major administrative unit responsible for both outgoing and incoming foreign student activities in the University of Hanover is the International Office, which provides advice for German students who wish to study abroad, and assists foreign students on arrival at the University and during their stay. In addition, for incoming students, the University contributes to the costs of the *Studienkolleg*, which provides a preparatory course for foreign applicants seeking admission to all institutions of higher education in Lower Saxony. The other major item of expenditure by the University affecting foreign students is on language instruction. The Centre for Applied Linguistics and Special Languages teaches foreign languages to German students wishing to study abroad

(mainly English and French) and to a lesser extent provides German courses for incoming students. In addition to these administrative and teaching functions, foreign students also benefit from several other services provided by the University, through its European Liaison Office, the Psychotherapeutic Student Counselling Centre and the Central Student Advisory Service.

Schnitzer, Dohmen and Schwensen (1996) have undertaken a detailed cost analysis for these various sources of expenditure for 1994-95. Their results are summarised in Table 12. Given numbers of approximately 1,200 incoming and 500 outgoing students in the relevant year, these figures suggest that the administrative and service costs for incoming students in 1994-95 amounted to approximately \$US440 per student, and for outgoing students about \$US240 per student, yielding an average across all mobile students of \$US380.

**Table 12: Internationalisation expenditures at the institutional level (not including tuition costs) (ii) University of Hanover (Germany): 1994-95**

	(DM'000)	(\$US'000)
<b>Costs for incoming students</b>	338.5	211.6
International Office	311.0	194.4
Studienkolleg	45.3	28.3
Centre for Applied Linguistics and Special Languages	12.5	7.8
European Liaison Office	12.4	7.7
Psychotherapeutic Student Counselling Centre	59.6	37.3
Central Student Advisory Service	<b><u>61.9</u></b>	<b><u>38.7</u></b>
Other costs		
<i>Subtotal</i>	841.3	525.8
<b>Costs for outgoing students</b>		
International Office	146.4	91.5
Centre for Applied Linguistics and Special Languages	<b><u>45.3</u></b>	<b><u>28.3</u></b>
<i>Subtotal</i>	191.7	119.8
<b>TOTAL</b>	1,033.0	645.6

Source: Calculated from data in Schnitzer, Dohmen and Schwensen (1996).

A further analysis of average instruction costs per student at Hanover (net of research expenditures) provides an estimate of \$US3,880 per student, to which should be added an amount of \$US70 per foreign student to cover the net subsidy on student services (*Studentenwerk*). When combined with the earlier estimate of administrative and service costs attributable to incoming students, we obtain a figure of around \$US4,400 per student for the aggregate cost impact of incoming foreign students in the University of Hanover.

**(iii) University of Amsterdam (Netherlands)**

The University of Amsterdam is the largest of the Netherlands' thirteen universities, with over 27,000 students in 1992, and a staff of about 5,000 including academic and administrative staff. It has large numbers of mobile students and networks, and a large Office of Foreign Relations with a staff of about 20 at the present time. The Report for the Netherlands study in the present project (Bremer, 1996) describes the activities of this office as follows:

“The activities of the Office of Foreign Relations include developing and implementing the internationalisation policy of the University, advising the board of the University, administering central funds for mobility and cooperation projects with certain countries, counselling for both incoming and outgoing students, subsidising internationalised curricula, and administering a separate fund for development cooperation. The Office has financial responsibility for the accounts of the external grant programmes and disseminates information about these programmes to the faculties. The responsibilities of the Office also include administering a budget for grants to and salaries of political refugees.” (p. 38) The Office has an identifiable central budget which it uses to discharge the above functions. At the faculty level within the University, internationalisation activities are absorbed into the autonomous budgets of the respective faculties (of which there are sixteen), and these costs must therefore be estimated separately.

There are thus three avenues of expenditure on internationalisation activities that can be accounted for: expenditure from central funds via the Office of Foreign Relations, expenditure from faculty funds, and expenditure from external sources coming in to the University on account of exchange and other externally-financed programs. A summary of these expenditures in 1992 is given in Table 13. In 1992 there were about 915 incoming students and about 640 outgoing students moving to and from the University of Amsterdam. It might be expected that the per student costs for incoming students would have been somewhat greater than those for outgoing students. However, it is not possible from the given data to separate out those expenditures relating specifically to each group and those shared by both. Thus a per student estimate is only possible averaged over all mobile students in that year. The total expenditures of around \$US3.4 million represent a cost of about \$US2,200 per mobile student, though it should be noted that this figure overstates the costs relating to students themselves, since it includes also some costs of staff mobility. No estimate is available for tuition costs at this institution.

**Table 13: Internationalisation expenditures at the institutional level (not including tuition costs): (iii) University of Amsterdam (the Netherlands): 1992**

	(GLD'000)	(\$US'000)
<b>Expenditure from central funds</b>		
Stimulation of internationalisation, information/materials, subsidies to international programs, etc.	1442	820
Subsidy for guest housing		
Subtotal	850	483
	2292	1303
<b>Expenditure from faculty funds</b>		
International relations staff costs	665	378
Mobility	218	124
Projects	69	39
Estimate of staff time input <sup>(a)</sup>	268	152
Subtotal	1219	693
<b>Expenditure from external funds</b>		
Mobility	1145	651
Projects	1244	707
Subtotal	2389	1358
<b>TOTAL</b>	<b>5900</b>	<b>3354</b>

Note: (a)Not including teaching input.

Source: Calculated from data in Bremer (1996).

***(iv) University College of Mälardalen (Sweden)***

In Swedish universities and colleges, the major part of the financing of internationalisation activities comes from the regular government grants to higher education institutions which comprise their main source of income. In addition, funds for internationalisation come from the European Union (on account of programs such as ERASMUS, SOCRATES and TEMPUS), the Nordic Council of Ministers (on account of the NORDPLUS program), the Swedish International Development Authority (SIDA), the National Board of Health and Welfare (on account of Eastern European programs), local and regional authorities, and elsewhere. Most higher education institutions in Sweden are now involved in student exchange programs, especially within the ERASMUS and NORDPLUS framework, and many are actively cooperating with the Baltic countries and other countries in Eastern and Central Europe. In addition to the country's major universities, there are seventeen small and medium-sized university colleges in Sweden spread throughout the country, all of which regard internationalisation as a high priority, employing up to six full-time staff in this area. Most organise introductory courses in the Swedish language, culture and society for incoming foreign students, and they offer a number of regular courses in English for both Swedish and foreign students. An example of such an institution with an active program of internationalisation is the University College of Mälardalen.

The budget for the International Secretariat of the University College of Mälardalen in 1994-95 is shown in Table 14. In that year the College had 25 incoming and 65 outgoing students, making a total of 90 mobile students in all. Allocating the specific costs shown in the table for incoming and outgoing students to these two groups respectively, and sharing the general

administrative costs *pro rata* (not including “Other Costs”), enables us to approximate the expenditures per student for incoming and outgoing students as follows:

Incoming students	\$US5,000 per student
Outgoing students	<u>\$US1,300 per student</u>
Overall average	\$US2,300 per student

Note that this average cost of internationalisation activities per mobile student is broadly consistent with that determined for the University of Amsterdam above. As before, it does not include the costs of general tuition of incoming students.

**Table 14: Internationalisation expenditures at the institutional level (not including tuition costs): (iv) University College of Mälardalen (Sweden): 1994-95**

	(Sw.Kr.'000)	(\$US'000)
<b>General administration</b>		
Administrative costs	205	28
Travel and conferences	255	34
Subtotal	460	62
<b>Cost relating to incoming students</b>		
Travel and expenses for short stays	100	14
Scholarships to guest students	250	34
Assistance to guest students	50	7
Introduction courses	100	14
Housing, contributions to living expenses	300	41
Subtotal	800	108
<b>Cost relating to outgoing students</b>		
Contribution to travel and expenses	100	14
Tuition fees for universities in USA	150	20
Other administrative costs	50	7
Subtotal	300	41
<b>Other costs</b>		
International Summer University	400	54
Travel, living expenses for staff	100	14
Subtotal	500	68
<b>TOTAL</b>	<b>2060</b>	<b>278</b>

Source: Calculated from data in Kälve mark and Lindström (1995).

### 6.3 Conclusions

Comparisons between estimates of cost impacts of foreign students for different institutions are difficult because of substantial differences in record keeping, administrative arrangements, and accounting procedures between countries and between individual institutions within a country that we drew attention to at the beginning of this chapter. Nevertheless, some broad observations may be drawn concerning the cost estimates for the four institutions discussed in this chapter.

The costs of just over \$US2 thousand per mobile student for the Dutch and Swedish cases indicate substantial resource commitments to internationalisation in both countries. In the Swedish

case, the relatively higher average costs possible also reflect on the small size of the institution concerned. In both cases, the estimates obtained would appear to include some items (e.g. staff exchanges, and perhaps some other elements) that are not included in the figures for the other two institutions, and hence should be seen as possibly overstating the financial impacts of foreign students alone.

The results for the Australian and German examples show somewhat lower per-student amounts spent on foreign students in these institutions. In the Australian case the estimates doubtless reflect scale economies enabled by the very substantial student numbers involved. Furthermore casual observation suggests that Australian universities generally devote proportionately fewer resources to internationalisation activities than their European counterparts; this may be due in part to the fact that non-Anglophone institutions in Europe have to commit considerable resources to either language courses for foreign students in the host-country language, or to translation of course materials and English language instruction for staff. The results for the German university studied here suggest somewhat lower expenditures per foreign student than in the other European examples considered. It should be remembered that the University of Hanover case study represents by far the most detailed cost analysis of the four; it is likely that it contains the most accurate assessment of costs pertaining specifically to foreign students, and is largely free of the potential for overstatement noted in the other European cases. The tuition costs derived for the Australian and German cases are broadly comparable, bearing in mind that the Hanover estimates are average costs, whereas the Monash figures are marginal costs.

## **CHAPTER 7**

### **CASE STUDIES OF NATIONAL-LEVEL IMPACTS**

#### **7.1 Introduction**

In Chapter 5 we noted that compilation of the aggregate economic impacts of foreign students on the national economy could proceed by building up from per-student or per-institution base figures to reach an estimate of total magnitudes for the whole economy in a given year. It was also noted that it would be unlikely in any empirical application that all the items listed in Chapter 5 for either host or sending countries could be quantified, and that as a result estimates would be of necessity for a subset of elements only. Nevertheless, if it could be reasonably assumed that the major items had been captured, then aggregate figures could be seen to have at least some indicative value.

In the present study, estimates of aggregate financial impacts were only possible in two of the participating countries, Australia and Germany, to which can be added some calculations for the UK taken from the independent study by Greenaway and Tuck (1995). Data limitations in the other two participating countries, Netherlands and Sweden, prevented final estimates from being reached, though some orders of magnitude can be brought forward from analyses in these countries' reports.

In this Chapter we set the scene at first by comparing the costs to students themselves of studying as a foreign undergraduate student in each of the five countries under discussion. We then consider the available data on national-level impacts for each of the countries in turn.

#### **7.2 Costs per student**

In Table 15 we draw together some available current data on undergraduate tuition fees by subject area, and estimates of accommodation costs and living expenses (food, transport, etc.). The full-cost fees charged in Australia and the UK clearly represent a significant expenditure item facing students contemplating study in those countries, although students from other EU countries wishing to study in Britain are exempted from paying full-cost fees. The zero or nominal tuition costs in Germany and the Netherlands, and their relatively low living costs, make them the cheapest of the countries under study. The somewhat higher living costs in Sweden are offset to some extent by the lack of tuition fees. For a student from outside Europe, the UK is the costliest destination amongst this group, with substantially higher combined fees and living costs than in the other host countries.

These data are of some use in contributing towards an aggregate national assessment of economic impacts of foreign students in host countries, since they could be used to estimate fee revenues accruing across all institutions and gross expenditures on accommodation and sustenance across all foreign students for a given year, under reasonable assumptions as to cost movements over time. At the same time these data might inform a corresponding analysis for sending countries, since

they show something of the extent to which a typical mobile undergraduate student would need to commit his or her resources on an annual basis to studying abroad in each of the destinations listed.

**Table 15: Comparative annual tuition fees and living costs for foreign undergraduate students: 1995 (\$US per student per year)**

	Tuition fees			Accom. + Living Costs
	Arts	Science	Med	
	(\$)	(\$)	(\$)	(\$)
Australia	5,500-9,700	5,500-11,600	14,800-18,700	7,900
Germany	nil	nil	nil	7,700
Netherlands	1,400	1,400	1,400	7,100
Sweden	nil	nil	nil	11,700 <sup>(a)</sup>
UK	8,100-11,500 <sup>(b)</sup>	8,100-14,800 <sup>(b)</sup>	22,300-24,300 <sup>(b)</sup>	9,700

Notes: (a)1990-91; these costs will have fallen following the devaluation of the currency.

(b)Non-EU students.

Sources: Australia and UK: data from IDP Education Australia (1995);

Germany and Sweden: based on Baligant et al. (1994), assuming 9-month academic year;

Netherlands: based on Bremer (1996) p. 60, assuming a 9-month academic year.

### 7.3 Case Studies of National-Level Impacts

#### (i) *Australia*

Initial calculations for Australia for the year 1991 indicate an average fee for an incoming undergraduate student in that year of around \$US7,000, with a somewhat higher amount for postgraduates, giving an overall average of possibly \$US7,500-8,000. Tuition costs can be estimated from the cost function referred to earlier which was derived from cross-section data covering most Australian universities in that year and reported in Throsby and Heaton (1995). This function provides estimates of marginal costs per student at different levels. The estimated “all-inclusive” marginal costs per student according to degree level derived from this function are:

#### **\$US'000 per student**

Undergraduate	4.8
Postgraduate coursework	9.3
Postgraduate research	61.6

Weighting these by the proportions of overseas students in each of these categories in 1991 gives a weighted mean of \$US11,000 per student. Reducing this by 0.67 to reach an approximation to “teaching only” marginal costs yields an estimate of \$US7,400 per student. To this must be added an

amount to cover the institution-level administrative costs associated specifically with incoming foreign students. No overall data are available on which to estimate this figure, though the amount of \$US450 per student for Monash University calculated in the previous chapter might be taken as a guide.

Within the broad range of approximations on which these calculations are based, it can be concluded that the net outcome for Australian institutions in the year in question was one of approximate balance between fee revenue from incoming foreign students and the tuition and service costs imposed. Such a conclusion is supported by the further analysis contained in Baker, Creedy and Johnson (1996). Using the same cost function but more precise estimates of fee income, these authors find an aggregate fee income from incoming foreign students in 1995 prices across all institutions of about \$US430 million, and an aggregate tuition cost of around \$US425 million. These figures represent averages across all foreign students of \$US8,300 in fees and \$US8,200 in tuition costs per student in 1995, results that are very similar in real terms to those noted above for the year 1991.

Of the other aggregate economic impacts that can be quantified for Australia, the expenditure of students on other goods and services apart from tuition fees is the major item. Estimates of student expenditures can be obtained from a survey of international students in 1992 by Harris and Rhall (1993), and their figures have been further developed by Baker, Robertson, Taylor and Doube (1996). These data suggest a gross annual average expenditure per student of about \$US10,700 in 1994; if the figures in Table 15 above are accepted, around three quarters of this amount would appear to have gone on accommodation and living costs. These same authors also provide a figure of around \$US12,500 per student as the net average annual expenditure by foreign students on all items including fees in 1994. This figure accounts for the earnings of students at casual work, including scholarship earnings. Assuming an average fee expenditure of \$US8,000 in that year, and putting all these estimates together, we can derive the following highly speculative amounts for Australia for 1994:

**\$US per foreign student**

Tuition fees	8,000
Accommodation and living expenses	7,900
Other expenses	2,800
Total expenditure	18,700
Less earnings	6,200
Net expenditure	12,500

It must be stressed that these figures are very broad-brush in nature, but do probably provide a reasonable first approximation to the orders of magnitude involved. When aggregated over all foreign students in that year, the final figure provides an estimate of about \$US770 million as the annual net expenditure on education and noneducation items by foreign students in the Australian economy in 1994.

**(ii) Germany**

In the German report produced as part of this study (Schnitzer, Dohmen and Schwensen, 1996), the authors undertake what they call a “first attempt” to bring together their findings from two

case study universities (the University of Hanover discussed in Chapter 6 above, and the Free University of Berlin) and to extrapolate them to Germany as a whole. In their detailed analysis they allow for the different categories of students in different types of institution and arrive at estimates of aggregate costs of instruction, provision of student services, expenditures on other goods and services, and other items.

Expressing the major components of their final results in per student terms measured for the year 1993-94, we find a “teaching only” average cost (calculated across all students but weighted by institution type) of just under \$US5,200 per student. To this can be added an estimate of the cost of services provided through International Offices on university campuses that lies somewhere between \$US400 and 500 per student, yielding a total institutional cost of, say, \$US5,600 per student. Aggregated over all “come-to-study” foreign students in Germany in that year, these impacts on the German economy amount to about \$US425 million.

An alternative approach to estimating aggregate effects is to look at overall impacts on public sector revenues and outlays and on national accounts. The above-mentioned authors examine these questions, again for the year 1993-94, in respect of both outgoing and incoming students. Looking first at outgoing students, they identify living costs of about \$US7,600 per student spent abroad, and lost net income at home of about \$US9,700 per student, for each period abroad. As a result they estimate that the state loses about \$US130 million in forgone tax and social service contributions. The direct costs of these students to the state (through financial aid, scholarships, etc.) are calculated at about \$US140 million, or about \$3,500 per outgoing student in 1993-94.

In the case of incoming students, the direct costs in terms of financial assistance, scholarships and services amount to about \$US150 million, or just under \$US2,000 per student. These students contributed gross expenditures of about \$US460 million (about \$US6,000 per student); after allowance for the earnings of these students (including scholarship income) estimated at about \$US3,300 per head, their net expenditures on goods and services amounted to about \$US200 million, or \$US2,700 per head.

A final analysis would require a merging of the above estimates of teaching and service costs with the financial impacts on public sector accounts in such a way as to avoid double counting, in order to arrive at a true social assessment. The authors of the German study draw the conclusion that outgoing students clearly impose a net cost on the economy, against which must be set the (unquantified) benefits their foreign study brings. In regard to incoming students, the lack of any student fees means that the costs of tuition of foreign students have to be met from domestic German resources, thus imposing a significant cost on the German economy. Furthermore, although the spending of these students provides a substantial stimulus to the Germany economy, raising gross export income by several hundred million dollars annually, there remains a question over the size of the net national benefits from this source.

### *(iii) Netherlands*

In the Netherlands study it was not possible to derive comprehensive cost estimates relating to incoming and outgoing students such that aggregate national effects could be calculated. Instead, the analysis was limited to the overall costs of internationalisation programs themselves.

In the Netherlands the direct costs that can be attributed to internationalisation programs comprise the budgets for multilateral, bilateral and unilateral inter-nationalisation programs, for

student and staff mobility, and for projects. In 1992-93 the total budgets, expressed in \$US, were as shown in Table 16. In per-student terms, the student mobility budget averaged about \$1,000 per outgoing student in that year. Detailed analysis of the costs of ERASMUS and the STIR programs confirms a figure of about \$1-2,000 per student (based on a full academic year of 9 months) for these programs. Further analysis will be required to integrate these estimates with institutional expenditures.

As in the case of the Netherlands above, insufficient data were available to enable a full analysis of the aggregate costs relating to foreign student movements in and out of Sweden, and we are limited to some general observations.

In Sweden, a total of about \$US125 million was provided in grants and loans for studies abroad in 1993-94, an amount of about \$19 thousand per outgoing student. This is a greater amount per student than is paid to students studying at home because

a student going abroad borrows about 50 per cent more than one living in Sweden, to cover the supplementary costs of tuition fees and higher living costs in foreign countries.

It may in due course be possible in the Swedish case to calculate the net fiscal impact of incoming and outgoing students. Incoming students imposed an average cost of about \$US5,500 in 1993-94 for tuition and other services. Outgoing students, on the other hand, allowed resource savings within the Swedish educational system because they did not enter Swedish universities. On the basis of plausible assumptions, these cost savings are estimated at about \$US5,000 per full-time-equivalent student for that year. Thus if the government incurred no additional costs for outgoing students, an equal number of students moving in and out would approximately balance the costs and savings in fiscal terms. However, there are some costs associated with outgoing students, including an amount paid to the home institutions of Swedish students on exchange programs, and of course the student grants and loans that mobile students carry with them. But the latter amounts are not relevant to a calculation of overall social cost since the grant would have been paid anyway if the student had studied at home, and the loan is simply an intertemporal transfer. Further analysis is needed to refine these estimates and arrive at a realistic assessment of the net effect.

**Table 16: Internationalisation budgets: Netherlands: 1992-93 (\$US million)**

	Mobility		Projects	Total
	Students	Staff		
	(\$m)	(\$m)	(\$m)	(\$m)
Multilateral programs	4.7	-	1.6	6.3
Bilateral programs	2.2	0.7	-	2.8
Unilateral programs	5.2	0.8	3.7	9.8
<b>TOTAL</b>	<b>12.1</b>	<b>1.5</b>	<b>5.3</b>	<b>18.9</b>

Source: Bremer (1996)

(v) *United Kingdom*

As in the Australian case, the analysis for the UK is somewhat more straightforward than for the other European countries considered, because the major economic effects arise from incoming independent full-fee-paying students. Hence, the immediate and most important impacts can be assessed directly with respect to revenue from fees and living expenditures on the one hand, and the costs of tuition on the other.

In the UK, data for the year 1992-93 assembled by Greenaway and Tuck (1995) enable an initial assessment of these aggregate effects to be made. Fee income from the “old” universities (those existing as universities prior to 1992) from non-EU foreign students can be aggregated and reduced to a per student estimate of the average revenue from these students in that year. In approximate terms this average fee was about \$US9,500, and within a reasonable range this figure could be taken as approximating the marginal revenue as well. On the cost side, the absence of a well-defined fitted cost function for British universities at the present time makes estimation of marginal costs problematical, and the only practicable approach for the time being is to use an evaluation of average cost per student. Aggregating departmental and central costs across the same group of institutions, where departmental costs include academic and support staff, maintenance costs etc., and central costs include central administration, libraries, computers, student services, etc., Greenaway and Tuck arrive at an average cost per full-time-equivalent student of just under \$US10,000 for the year 1992-93, suggesting a small negative margin per student. However, it is recognised that these estimated costs include the costs of research; if they are reduced so as to represent “teaching only” costs, the resulting cost per full-time-equivalent student is reduced to about \$US6,600, suggesting a positive surplus per student at the institutional level of about \$US2,700. However, the estimated average costs over all students conceal some higher costs of recruitment and support for international students; furthermore, they also do not allow for the fact that there is a concentration of foreign students at the postgraduate level which is likely to incur higher tuition costs, especially for those enrolled for research degrees. Hence, it might be concluded that the net aggregate impact of incoming non-EU international students in UK institutions in 1992-93 was likely to be such that revenues and costs approximately balanced up.

As discussed above, these institutional revenue and cost estimates, when grossed up over all students, could be taken as a first approximation to the corresponding national-level effects if it can be assumed that the institutional cost estimates used represent the real resource costs of the activities in question. In addition, the economy receives an annual injection of funds from the living expenses of these students, to the extent that those expenditures are financed from abroad. Accommodation and living costs per student in the UK were listed in Table 15 above as being \$US9,700 in 1995; the corresponding figure for the earlier period covered by the Greenaway and Tuck study is just under \$US8,000. These authors aggregate the estimates of fee income and direct expenditures over all incoming international students for the year 1992-93 to arrive at a total “contribution to exports” from this source of about \$US1.15 billion in that year. As in the previous cases considered, this amount, or some part of it, could only be considered a net social benefit, as distinct from a gross economic impact, under fairly restrictive assumptions.

## 7.4 Conclusions

In Chapter 5, in considering the nature of the national-level costs and benefits from foreign students to both host and sending countries, we identified a reasonably comprehensive list of items

that would need to be taken into account if the full social costs and benefits of such students were to be accounted for (see Tables 9 and 10). In the case-study applications discussed in the present Chapter, only a limited number from the full list of items could be measured in particular cases, but there are grounds for believing that in at least two of the studies (Australia and Germany) the major measurable items have been captured.

Because of differences between countries in the manner of collecting and presenting data, comparisons of overall economic impacts are difficult. Nevertheless, we can make some broad comparative observations, especially with regard to Australia and Germany where the most detailed analyses were possible. In regard to incoming students in these countries, for example, it is possible to identify in broad terms at a national level the costs per student of administering foreign student programs and the average or marginal costs of tuition per student, together with average living costs and other expenses incurred by students. These estimates enable an assessment of the aggregate commitment of resources to foreign students in these host countries. These resource costs are offset by fee payments (where relevant) and the net expenditures on other goods and services that are financed from external sources.

Taking the three countries Australia, Germany and the UK, we can observe administrative costs of internationalisation activities ranging around \$US400-500 per student, tuition costs between about \$5,000 and \$7,500 per student, and the costs of providing food and accommodation probably at around \$7-8,000 per student for an academic year. Estimates of other expenditures and casual earnings appear to differ more widely; for example, the latter figure appears to be around \$3,000 annually per student for foreign students in Germany, about twice that for their counterparts in Australia. Likewise, the national financial inflows can be computed from the average fee levels (around \$7,500 to \$9,500 in Australia and the UK) and the data on non-education expenditures of students. We have shown that an approximate estimate of aggregate economic impacts from all of these sources can be found by grossing them up over all foreign students in the years to which they apply.

These calculations suggest that in both Australia and the UK the revenue from fee income and the costs of servicing foreign students do seem to be more or less in balance in the years studied, suggesting that neither country makes a significant surplus or deficit on its internationalisation activities in the higher education sector.

From the viewpoint of sending countries, the German and Swedish analyses indicate both costs and resource savings to countries sending their students abroad to study. These effects are quantified in the German case, indicating a net cost to the German economy through the direct costs of supporting these students, together with the indirect costs of forgone output, lost social service contributions and other effects. Speculations for Sweden suggest an overall balance in expenditures and savings arising from outgoing students, though these effects have yet to be quantified, and not all sources of real cost and benefit have been covered in this tentative assessment.

## **CHAPTER 8 CONCLUSIONS**

Every year increasing numbers of third-level students are travelling abroad to study. Some go as independent free-movers, some on exchange arrangements in bilateral or multilateral programs. Universities and colleges are becoming more involved in supplying tuition and support services to international students or in encouraging their own students to travel abroad. Governments in some countries are encouraging the inflow of students because of the export revenue they generate; in other countries governments provide financial support to outgoing students in the expectation of the economic and educational benefits those students will bring back with them on completion of their studies. It is clear that there is an economic dimension to the decision-making of all these stakeholders - students, institutions, educational systems, host-country and sending-country governments - and it is equally clear that an understanding of the size and nature of these economic effects will be important if the best decisions are to be made.

This Report has focused attention on the economic aspects of internationalisation, especially on the economics of foreign student flows and their impacts on institutions and on society. The results of the national studies carried out in participating countries under the auspices of this project provide a first look at the magnitude of some of the economic impacts of foreign students, and illustrate both the possibilities and problems of work in this field. We now consider some general conclusions that can be drawn from this project.

Firstly, at a theoretical and methodological level some progress has been made in providing a sensible conceptual framework within which analysis of the economic effects of foreign students can take place. Adopting a broad cost-benefit approach, we have been able to identify the principal items of cost and benefit that may be relevant for different stakeholders, with particular reference to institutions and to society as a whole. It is very important in both of these contexts to distinguish between financial flows, which may be depicted in institutional or national accounts, and broader concepts of opportunity costs, which allow a proper valuation of the net impacts of student movements. Whilst both of these types of information are important, decisions at any level should ultimately be guided by an assessment of the true economic and social costs and benefits, as far as they can be quantified, rather than by purely financial magnitudes.

Secondly, the empirical work in this project has shown that orders of magnitude for at least the major economic impacts can be assessed, building up an aggregate picture from various sources of information including institutional data and official statistics. At the same time, the work has highlighted the substantial variation in the quality and extent of data available between the countries under study. In some cases neither institutional nor government records were sufficient to enable measurement of aggregate financial flows relating to incoming and outgoing students, and assessments had to be limited to some specific institutional cases and some general speculations as to wider effects. In other cases it was possible, using appropriate assumptions where necessary, to put together a reasonably accurate picture of both typical institutional effects and aggregate magnitudes,

although in no case was it possible to quantify every item appearing on our comprehensive list of effects.

In regard to national and international data concerning student numbers, it can be pointed out that mapping the movements of foreign students and classifying them by level of study, length of stay, field of study, and so on is an important first step in building up a national and international profile of foreign student movements that can serve as a basis for more detailed work. Although existing data sources such as UNESCO statistics on third-level foreign students by country of origin and destination are extremely useful in this regard, there is still much scope at national levels to systematise and harmonise the type of statistics collected and their tabulation.

Likewise, the financial data available at institutional and national levels shows a wide range of variation; although the scope for educational administrations to impose reporting requirements on independent universities and colleges is somewhat limited, experience in some countries (e.g. recently in Australia) suggests that some progress can be made in standardising the supply of data from across the higher education sector. As such procedures become more widespread, the possibilities will expand for putting together more accurate assessments of the economic impacts of foreign students at all levels.

Finally, an obvious and important conclusion to be drawn from this work is that we are much less well equipped to measure benefits than costs. Of course assessment of costs is a vital step in understanding the economic implications of foreign students at the various levels of analysis. Nevertheless, these costs must be justified, and if evaluation of benefits is incomplete or nonexistent, that process of justification becomes difficult. One clear area for further research arising from this work is the valuation of the wide range of benefits to all stakeholders arising from foreign study, in particular the longer-term career benefits to students from internationalisation of higher education.

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