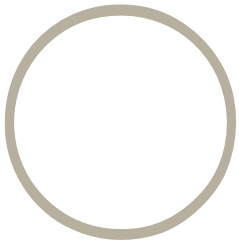




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APEC and international education



Prepared for Department of Education, Employment and Workplace

Relations



*Centre for International Economics
Canberra & Sydney*

January 2008

Prepared for the Department of Education Employment and Workplace Relations
by the Centre for International Economics (CIE)

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Executive summary

- Education is a fundamentally important economic activity. It is both large — accounting for around 6.7 per cent of GDP in APEC economies — and makes a crucial contribution to ongoing productivity and economic growth.
- Cross border exchange of education services is an increasingly important means of delivering the quantity, quality and diversity of education services that fit the needs for modern growing economies.
- All APEC economies are involved in cross border exchange to varying degrees. This exchange in all its modes of delivery — through the movement of students between economies or through the movement of provider or educators from one economy to another — has grown rapidly in APEC in recent years. This growth is expected to continue.
- There are significant benefits from this cross border exchange, including some unique benefits such as the rapid transfer of ideas and increases in cultural understanding that can only come from cross border exchange in education.
- Government policies of various kinds — but particularly those related to quality assurance, accreditation of providers and recognition of qualifications — can have a major influence on cross border exchange.
- There is considerable scope, therefore, for cooperation between APEC economies to improve understanding and enhance systems for quality assurance, accreditation, qualifications recognition and data collections to enhance policy development.
- Such cooperation would directly contribute to APEC's endeavours to improve economic outcomes for all its members.

1 Introduction

Background

Cross-border exchange in education – the movement of students or institutions between economies – is part of the exchange of goods and services that brings diverse economies together. It is an important component of the economic cooperation that defines APEC and APEC's endeavours to improve, through cooperation, economic outcomes for its member economies.

The strong economic dimension of exchange in education services is complemented by the broader cultural and social benefits of educational exchange, which in turn provide the foundations to further enhance economic outcomes for member economies.

Like the exchange of other goods and services, improving the efficiency and effectiveness with which educational services are exchanged between economies is an appropriate objective for the APEC forum, and one which is expected to result in improved economic outcomes and further regional cooperation and development.

This paper considers the ways in which education contributes to economic outcomes and the ways in which APEC wide cooperation in education exchange can enhance both educational outcomes and economic and social outcomes for all member economies.

The key ideas

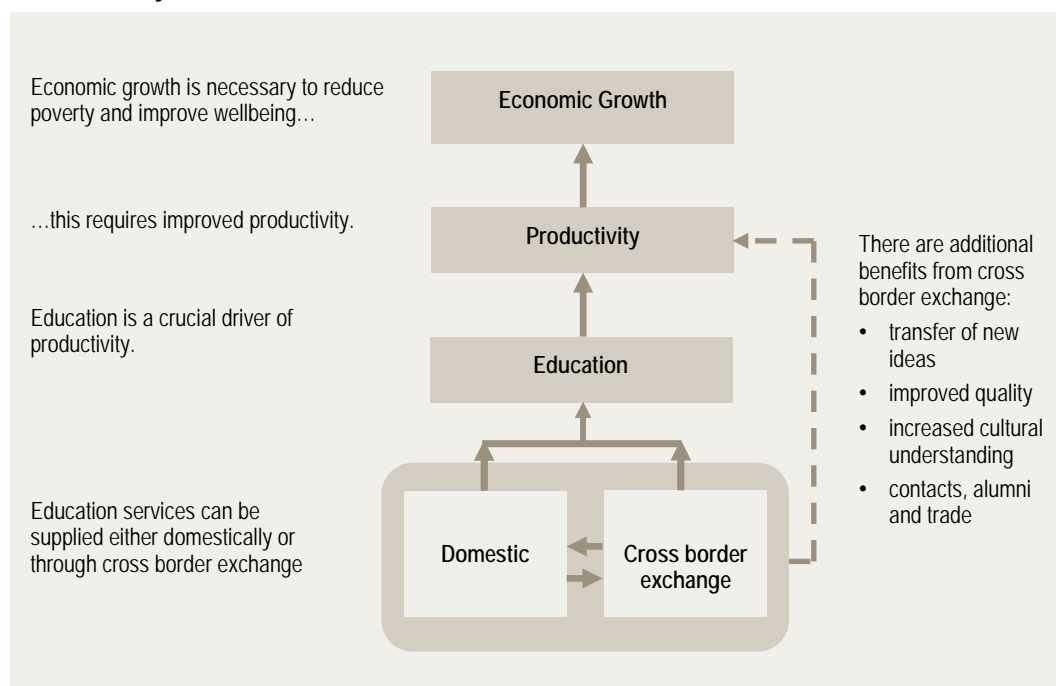
The key propositions that emerge from examining the recent developments in cross-border exchange of education are summarised in chart 1.1. It is increasingly well understood that an essential element of economic growth is ongoing improvements in productivity – that is, the efficiency with which the economy's resources are used to satisfy human needs and wants. While there are many factors that influence productivity, a major determinant is education, as it is through education that workers and managers discover how to continually improve productivity.

Education can be provided either domestically, or through cross border exchange. As with any exchange, there are a number of benefits that arise from the exchange of education services. In particular, such exchange effectively lowers the cost of education to economies, increasing education reach and effectively increases the

resources that can be devoted to education. There are also important ‘spill over’ benefits from education exchange including the transfer of ideas, increased cultural understanding and the development of international contacts.

Cross border exchange effectively increases the quantity, quality and diversity of education services available within each economy. At the same time, cross border exchange is influenced by government policies and regulatory settings. Cooperation to improve the nature and impact of these settings will directly lead to improved economic outcomes for economies within the region.

1.1 The key ideas



This paper

This paper elaborates these ideas through the following broad structure:

- chapter 2 summarises the broad economics of education, the sorts of resources that are devoted to it, the ways in which it contributes to economic growth and the challenges facing APEC economies in providing education for the future;
- chapter 3 considers the recent history of cross border exchange within APEC, looking at the broad flows of students between economies and considering the influence of policy on cross border exchange;
- chapter 4 looks in more detail at the ways in which economic benefits emerge from cross border exchange; and
- chapter 5 provides some recommendations for a work program in APEC to examine ways of improving policy.

2 *Some economics of education*

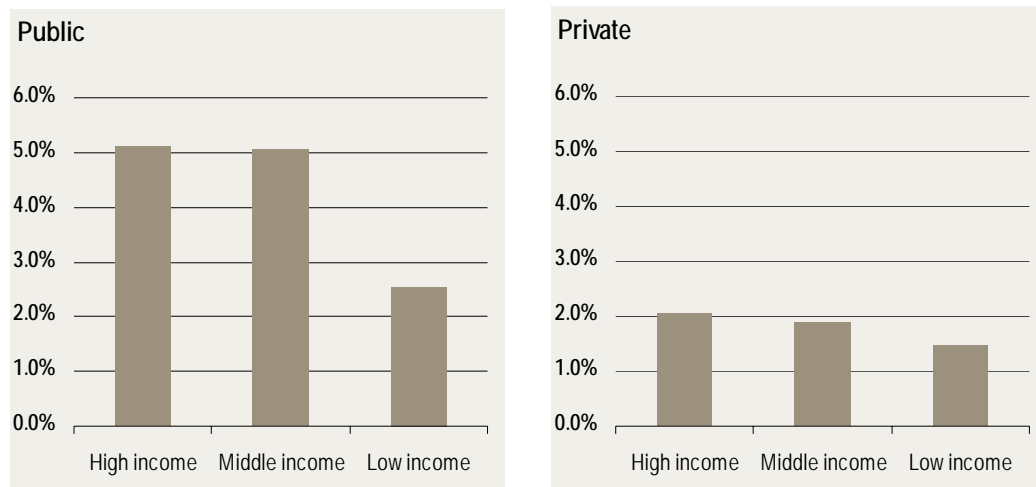
- Education involves the use of significant resources. In APEC economies, total spending on education is at least US\$1 600 billion a year. In total, around 500 million persons are enrolled in some form of education throughout APEC each year.
- This has a large payoff as education makes a major contribution to economic growth.
- Education needs are continually changing, and the total resources devoted to education must increase over time.
- Policies that promote the more efficient use of education resources — including exchange of education services — should be encouraged within APEC.

The resources involved

Education is a significant economic activity. In APEC economies, total expenditure on education comes to around 6.7 per cent of GDP, equivalent to around US\$ 1 600 billion. As chart 2.1 illustrates, most of this spending is through the public sector, with expenditure varying slightly by income level across APEC. (Tables A.2 to A.4 in the appendix provide a more detailed breakdown of this data).

Mobilising and managing this level of resources is clearly a major undertaking, particularly when considering that all of these resources have alternative uses — the provision of basic infrastructure (roads and so on) or basic health, for example. It is crucial, therefore, that the resources devoted to education are used as efficiently and effectively as possible.

2.1 Share of education expenditure^a in GDP, 2004^b



^a Private expenditure data is limited to expenditure on educational institutions and administration.

^b 2001 data used for Malaysia, Philippines and Thailand; 2002 data used for Canada and Russia; 2003 data used for Indonesia
Data source: UNESCO

Notes: Data not available for Brunei Darussalam, China, Papua New Guinea, Singapore, Viet Nam, or Chinese Taipei

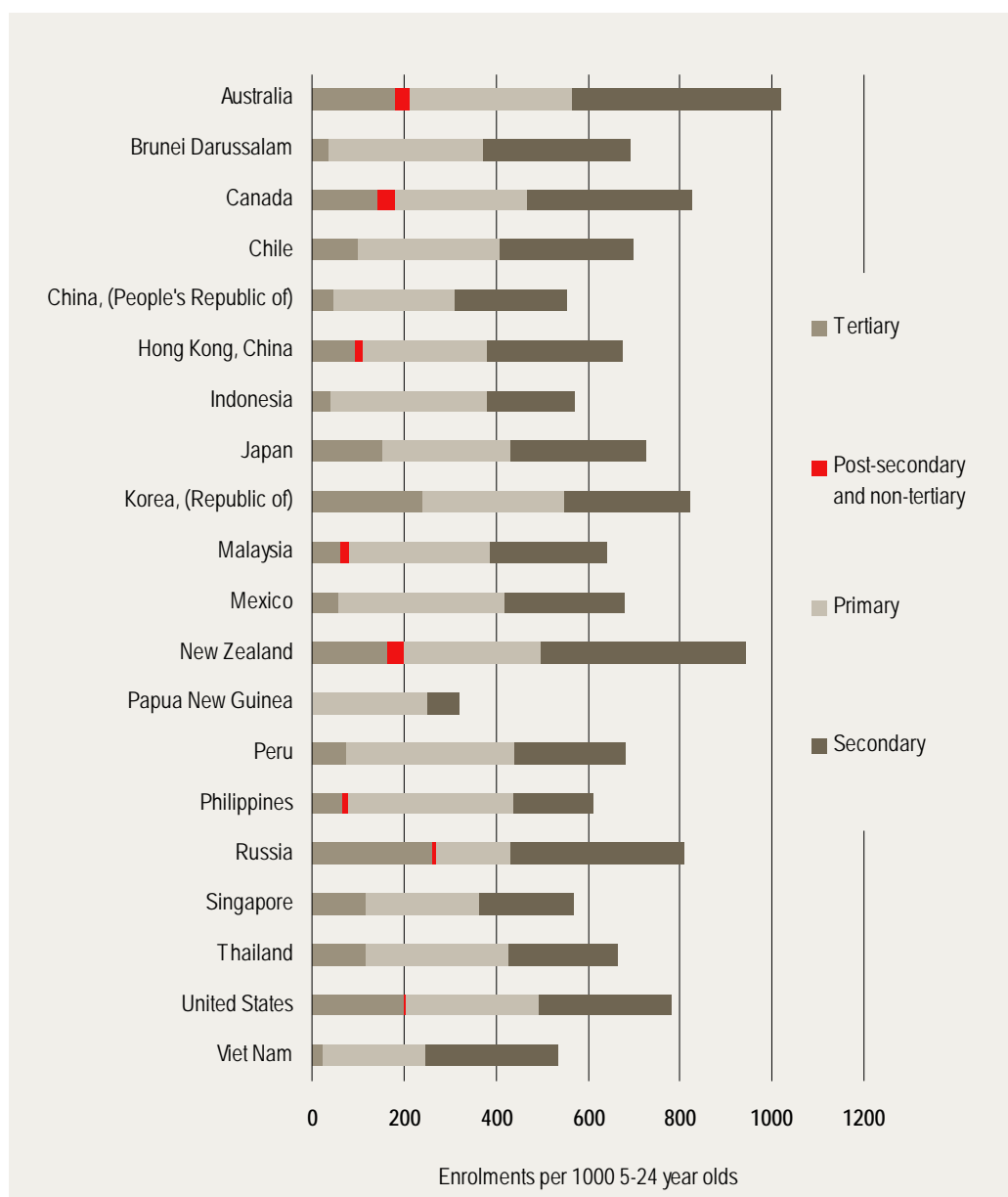
The education task

The resources devoted to education funds a significant number of people. In APEC as a whole, this spending covers 500 million people per year. Chart 2.2 summarises enrolments per 1000 people (in the 5-24 age group) for each of the APEC economies at each of the four main levels of education. Presenting the data in this form allows some broad comparisons between APEC economies. While the absolute numbers of students varies considerably between economies (the raw data underlying this chart is presented in Appendix table A.1), enrolments per 1000 people in the relevant cohort is considerably more uniform.

At the same time, chart 2.2 illustrates the diversity of APEC economies, with the overall structure and level of education varying between the economies. There is a broad tendency for provision to increase with income, although this is by no means a fixed relationship.

As the APEC economies continue to grow, resources devoted to education will necessarily increase. For example, the APEC region currently provides tertiary education to around 70 million students. This number has increased by around 4 million a year since around 2000, and between now and 2025, this is likely to increase by at least 2 million each year (Banks, Olsen and Pearce, 2007).

2.2 Enrolments per 1000 population (aged 5 to 24)



Data source: UNESCO

Private provision

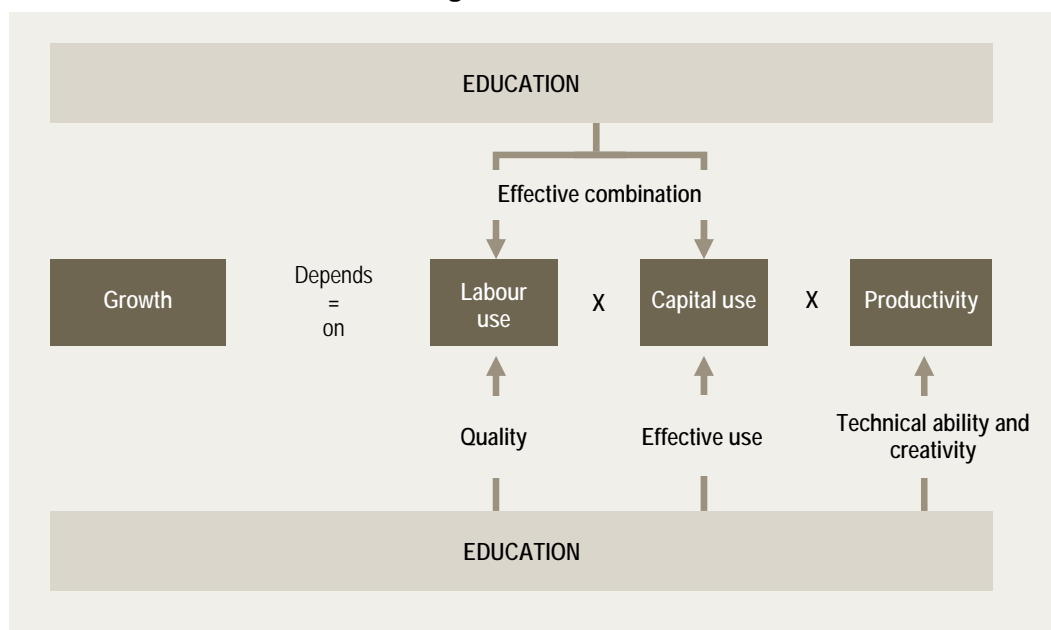
The extent of private provision at each level of education varies considerably across the APEC economies. Some economies, such as Indonesia, Japan, the Philippines and Korea have more than two thirds of tertiary education privately provided (see table A.5 in the appendix). Chile, Mexico and Peru also have well over one third of their tertiary enrolments privately funded. In contrast, economies such as Hong Kong, Australia and New Zealand have very low levels of private provision.

As will be noted further below, the nature of the education that must be provided also needs to continually change, so not only are resources needed to train the extra students, they are also required to develop new curricula and subject areas.

Education and economic growth

The economic importance of education goes well beyond dollar spending. Education makes an important direct and indirect contribution to economic growth. As chart 2.3 illustrates, the rate of economic growth can be thought of as being made up of labour growth, capital growth and improvements in overall productivity. Education in turn contributes to all three of these elements of growth. First, education provides the basic means to ensure that labour and capital are appropriately combined in producing income. This is essentially a management function, and good management in turn depends on good education.

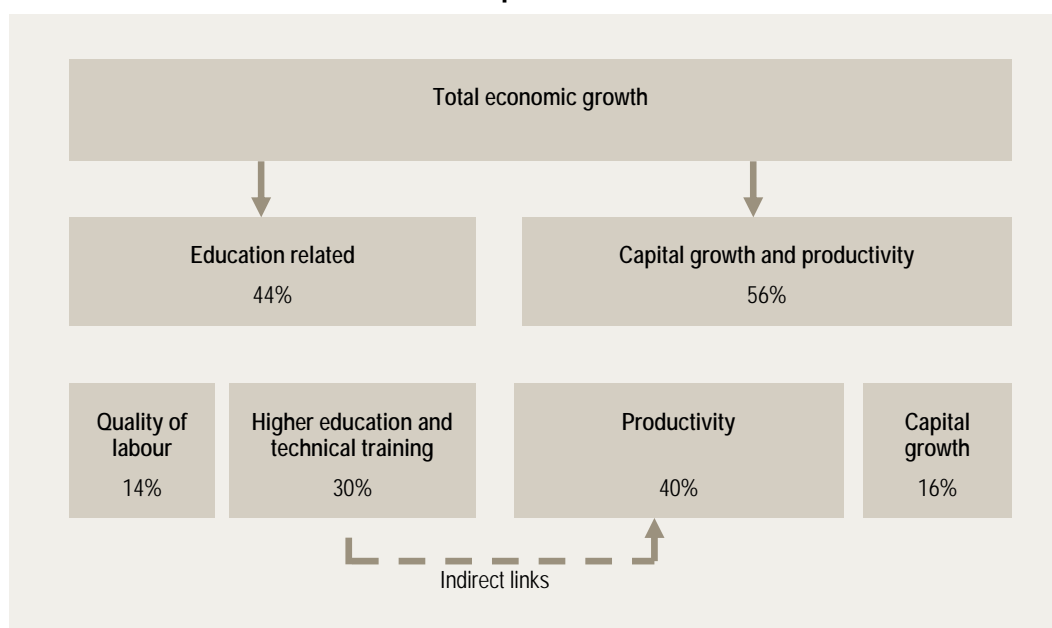
2.3 How education contributes to growth



Second, education contributes to ongoing enhancement of the quality of the labour force. While this is sometimes measured in the productivity variable, it is useful to think of this as a separate contribution to growth. Third, education contributes to the effective use of capital within an economy. The operations of complex and sophisticated capital markets require a high level of education to ensure they operate smoothly and productively. Finally, education directly contributes to the underlying skill and creativity base that is the source of increases in productivity (better ways of doing things). Without education, it would be almost impossible to build on past achievements and past knowledge in order to continually increase productivity.

The exact amount by which education contributes to economic growth will vary from economy to economy. Chart 2.4 presents some illustrative results that have been generated from Australian data. The results show that each unit of growth is made up of factors relating to education (44 per cent) and factors relating to capital and productivity (56 per cent). Within the education factors, 14 per cent of growth is due to improvements in the quality of labour, and 30 per cent of growth is due to the provision of technical and higher education. On the other side, 40 per cent of growth is due to productivity improvements and 16 per cent is due to capital growth.

2.4 Growth and education — an example

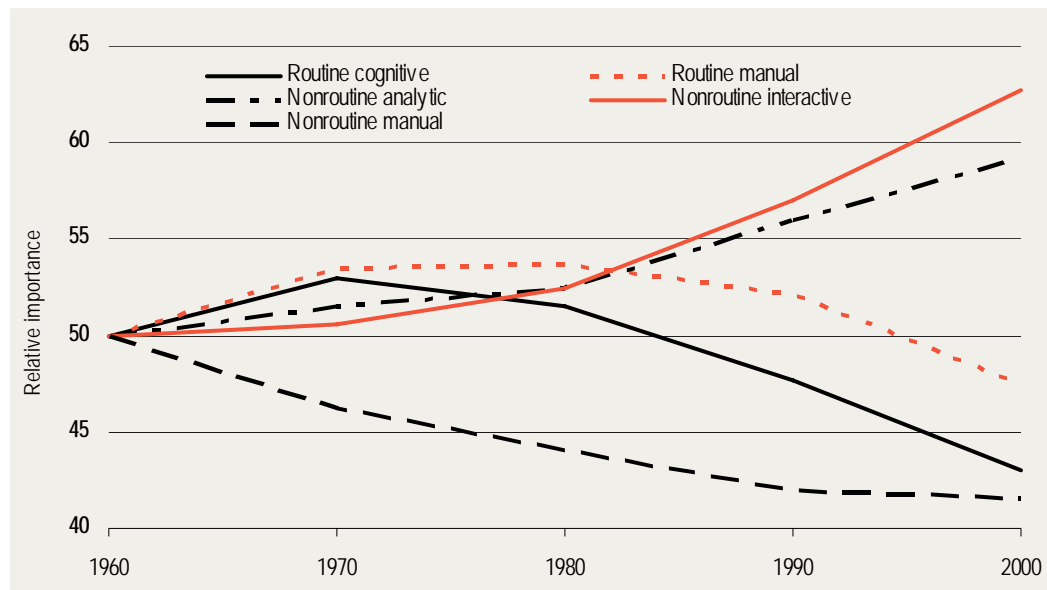


Data source: Matsushita et al (2006)

Education is an ongoing and changing task

As the economy changes, so too must the nature of education. Education therefore requires continual effort and ongoing resources to ensure that it meets the needs of a growing and changing economy. Chart 2.5 illustrates this point by showing the nature of broad skills needs in the US economy over time. The chart shows that the strongest growing needs have been in non-routine interactive and analytic tasks. In contrast, the need for manual or routine cognitive tasks has declined sharply. Clearly, the education needs of these tasks that are growing in importance are considerably different to those that are declining. While this transformation has happened historically for the US, it could reasonably be expected that similar transformations will occur in all APEC economies in the future.

2.5 The changing skills needs of the economy



Data source: OECD (2007)

One implication of this is that further increments to economic growth will require ongoing educational developments. While the nature of and form of education may change, the importance of education for economic growth is likely to increase. The challenge for all APEC economies will be to ensure that these needs are met.

The education challenge

A major challenge facing APEC economies and their governments is to ensure that education services available to the population – funded either by governments or by private sources – continue to respond to the changing needs of the population and the environment within which they work.

As well as maintaining the quantity of education services, APEC economies will need to ensure that the quality and diversity of services remain appropriate to a changing world economy. One of the major ways in which these three aspects of education can be addressed within APEC is through cross border exchange of education services.

3 *Cross border education exchange in APEC*

- The available data for some of the modes of cross border exchange indicate strong growth within APEC in recent years.
- While data for modes of exchange not involving the movement of students are limited, there is evidence that these modes have also grown strongly.
- Cross border exchange is a rapidly growing area, with many new providers emerging to take advantage of opportunities.
- Government policies can have a major influence on cross border exchange.

Types of cross border exchange

Cross border exchange between economies can take place in a number of ways. These different methods of exchange often have different terminologies in different publications. Table 3.1 summarises the main ways of describing the different modes of exchange.

3.1 Modes of cross border exchange

<i>World Trade Organisation: General Agreement on Trade in Services (GATS) mode</i>	<i>Description</i>	<i>Other terminology</i>
Mode 1: Cross border supply	There is no physical movement of the provider or the student, but the education services themselves are traded. Examples include distance education or internet services.	Often simply referred to as 'distance' or 'online' education.
Mode 2: Consumption abroad	The student physically travels from one economy to another in order to receive education.	This is often referred to in summary as 'international education'. UNESCO refers to 'internationally mobile students'
Mode 3: Commercial presence	Education services are provided by establishing a physical and legal presence in another economy. This includes establishing an offshore campus in the host economy.	This form of exchange is often referred to as 'transnational' education.
Mode 4: Presence of natural persons	Educators (teachers) travel to the host economy to provide services to students who do not move from the home economy.	

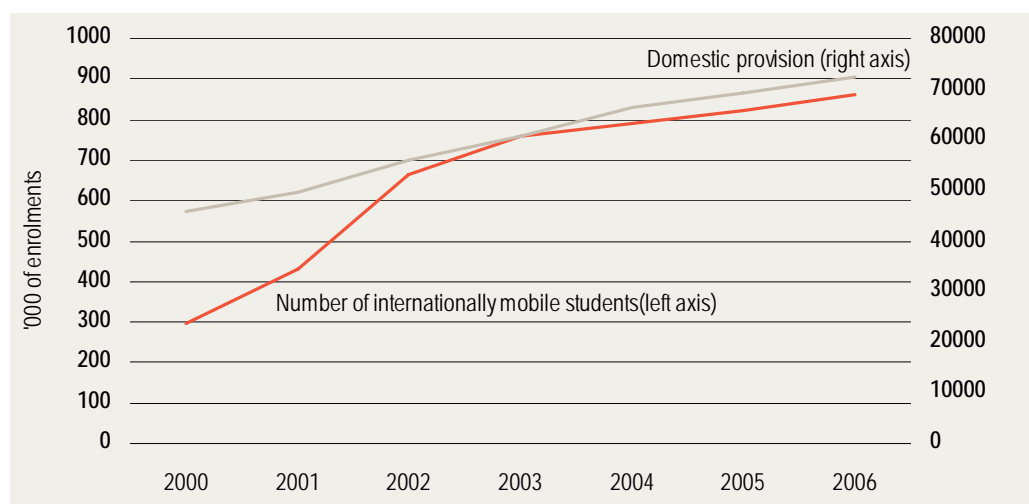
Data availability

The availability of information on the different modes of cross border exchange is very mixed. By far the best information is available for mode 2: the movement of students between economies. This also appears to be the most significant form of exchange to date. Mode 3 is also important, although there are no official data collections on the extent of this.

Recent growth in mode 2: consumption abroad

The international mobility of students, particularly in higher education, has grown strongly in recent years. Chart 3.2 illustrates the recent growth in the number of internationally mobile APEC economy students (in higher education since 2000), compared with domestically provided higher education. Cross border exchange in this mode (in tertiary education) has grown at around 18 per cent a year since 2000.

3.2 Number of internationally mobile students versus domestic education, APEC



Data source: UNESCO data applied to APEC economies.

This strong growth is expected to continue, although there is some evidence that this mode of provision is starting to mature. The latest available forecasts suggest that international student flows from APEC economies will grow at around 4 per cent a year to 2010, then at around 3 per cent a year to 2015, and then at around 2 per cent a year to 2020. On a global basis, demand for international higher education is projected to grow to 3.72 million by 2025 (Banks, Olsen and Pearce 2007).

The pattern of mode 2 exchange in APEC – higher education

Chart 3.3 presents part of the overall picture of the movement of students between APEC economies for higher education. (Charts A.6, A.7 and A.8 in the appendix present the same information in a slightly different form). All APEC economies are

involved in cross border exchange, although the overall intensity of international education (relative to domestic provision) varies from economy to economy (chart A.9 in the appendix). While there are a number of flows within the region, overall trade is dominated by a number of economies.

China is the largest source of students, with the majority going (in order of importance) to United States, Japan and Australia.

The United States is the most important destination economy for students from APEC member economies. The largest inflow is from China, followed by Korea, Japan and Canada. Japan is also an important destination economy for students from China.

While the United States is the most important destination economy in the APEC region, Australia is relatively important in the South-East Asia region. Australia has large inflows from China, as well as Malaysia and Singapore.

The flow of students from developing and transitional economies reflects the importance of trade in education services as a means of obtaining higher quality education services without having to first develop the infrastructure domestically. The flow of students from developed economies may reflect the relative quality of education between the source and destination economies, the pursuit of subject or discipline specialisations, or the cultural experience of travelling for study.

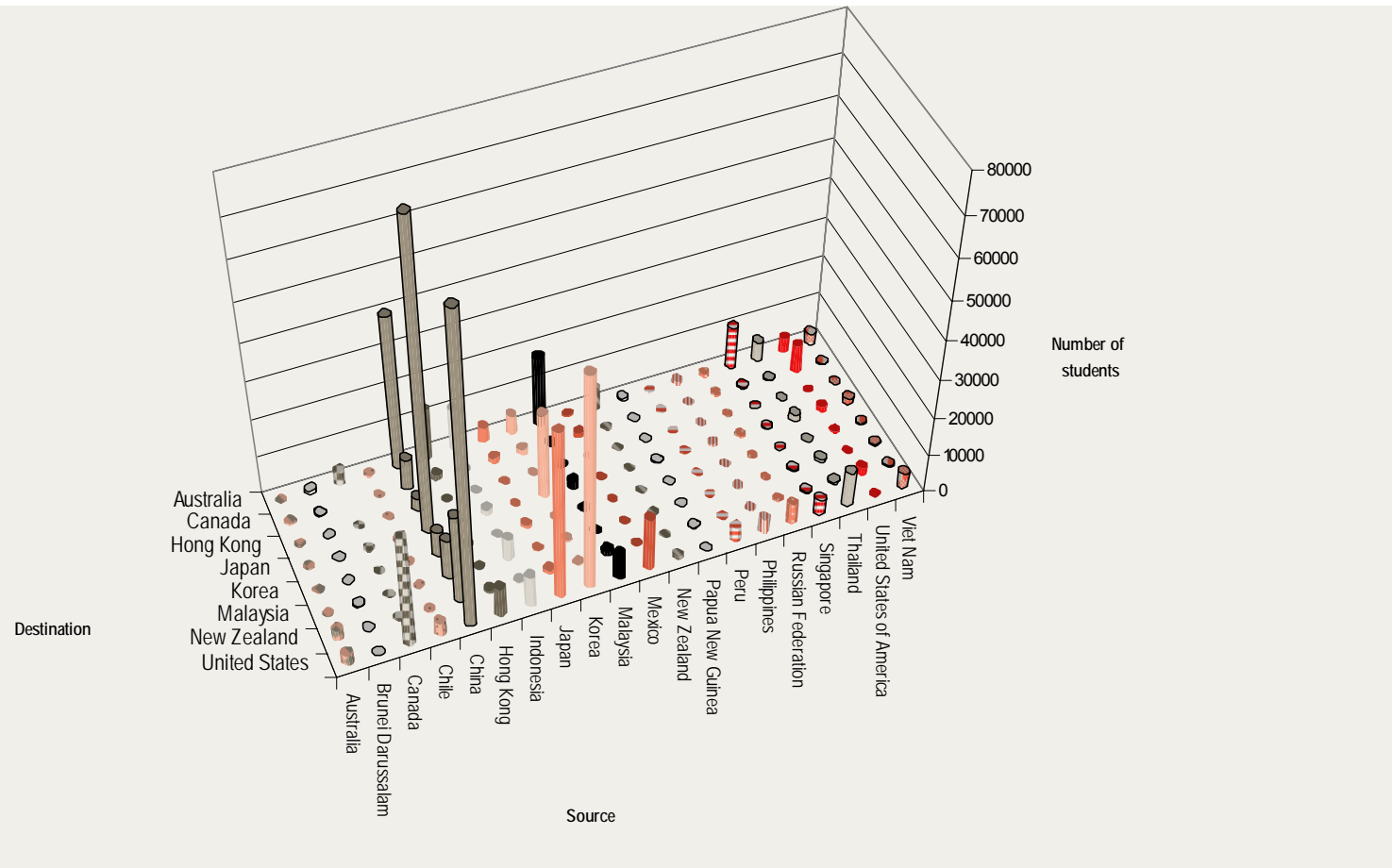
Emerging destinations

The data in chart 3.3 is based on official reporting to UNESCO, and does not fully capture all of the flows within APEC. In particular, there is a growing trend for Malaysia, Singapore and China to become destination economies. These economies have declared their ambitions to be destination economies, and have allocated funds to the development of world-class higher education system (Verbik and Lasanowski 2007). This illustrates a point made further below, that cross border exchange provides impetus for an improvement in education quality.

Recent estimates suggest that China is host to over 140 000 tertiary students, mostly coming from South Korea and Japan, but also from Indonesia, Thailand, Japan, Vietnam, the US and Russia (Verbik and Lasanowski 2007).

These newly emerging destinations illustrate the ongoing maturation of the international student market while indicating the importance of establishing a comprehensive policy framework for dealing with cross border exchange.

3.3 Key flows of students between APEC member economies, 2005^a



^a 2002 data used for Canada and Thailand, 2003 data used for Malaysia; 2004 data used for Indonesia.

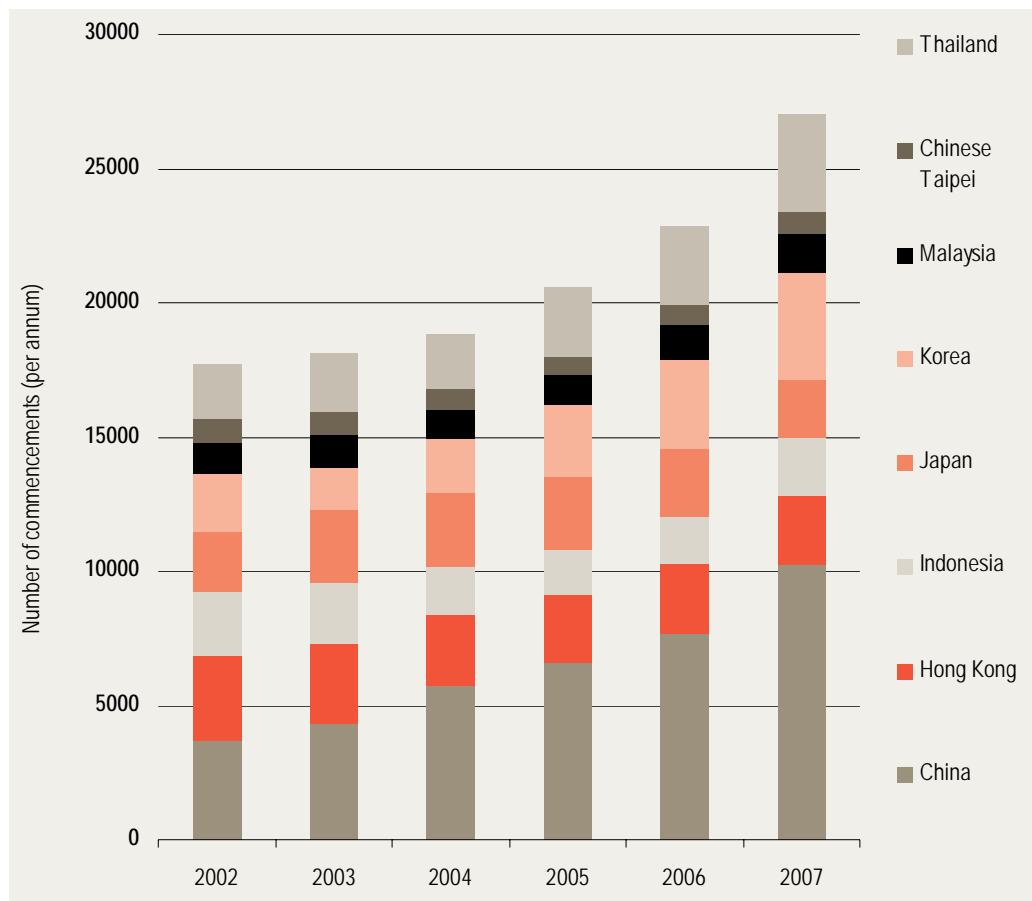
Data source: UNESCO

Notes: Only selected economies for destination of students is included to enable clearer display of information

Mode 2 exchange: other sectors

Data on the flow of students between economies is readily available for higher education, but is considerably less complete for other sectors. However, the growth and diversity of flows is evident from the Australian data. Chart 3.4 illustrates VET sector commencements for students coming to Australia. As in the case of higher education, the data shows strong growth, with a significant proportion of students coming from China.

3.4 VET commencements for selected APEC member economies^a in Australia



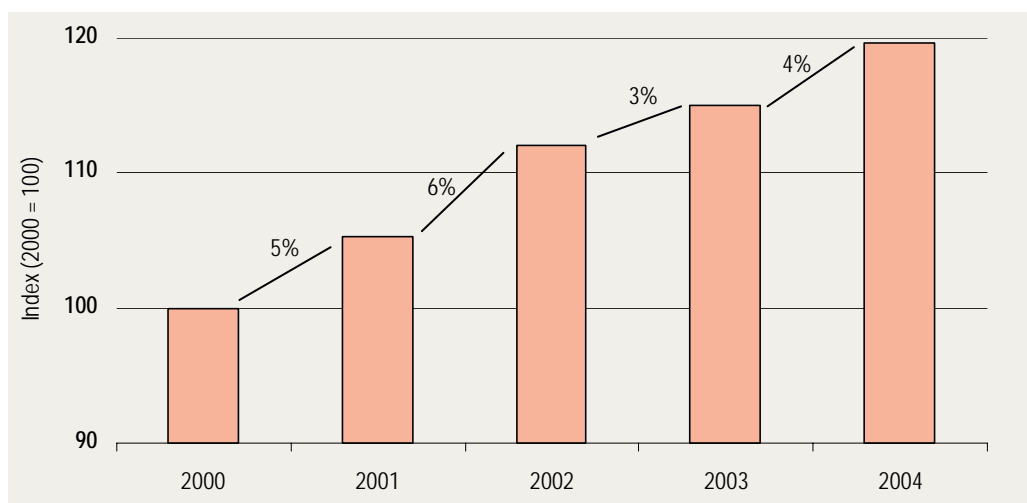
^a Selected economies comprise 89% of all commencements
 Data source: Department of Education, Employment and Workplace Relations

Mode 3 exchange: commercial presence

There is very limited data on student enrolments in transnational programs, that is, in enrolments under mode 3 exchange. It is clear, however, that these programs are significant, and growing. Chart 3.4 presents unofficial estimates of the growth in mode 3 enrolments in recent years. These enrolments are growing strongly, but not

as strongly as for mode 2 exchange. Growth has been between 3 and 5 per cent a year since 2000.

3.5 Growth in mode 3 provision in APEC economies



Data source: Based on data underlying Banks, Olsen and Pearce (2007).

The evidence suggests that the strongest growth is for Vietnam and Indonesia (greater than 20 per cent a year), followed by China, Malaysia and Thailand (around 7 per cent a year), and followed by Singapore and Hong Kong (around 2 to 3 per cent a year).

In absolute terms, mode 3 exchange is smaller than for mode 2 (probably around 10 to 15 percent at the moment). However, the importance of this mode is likely to increase in years to come as mode 2 flows start to mature. This depends crucially on government policies within APEC.

Government involvement in cross-border exchange

Government policies of various kinds can have a significant effect on cross border exchange of education services. General regulation surrounding education may also affect the different modes of cross border exchange in different ways. Some of these Government regulatory measures are put in place to achieve important public policy objectives (eg. regulatory requirements for quality assurance purposes or consumer protection). However, when measures are more restrictive than necessary to achieve a specific policy outcome, they tend to have adverse impacts such as increasing costs and creating uncertainty for providers, students and employers. Table 3.6 summarises some broad categories of government involvement in cross border exchange.

Most governments are involved in the process of deciding who can provide education services, the sorts of content of those services and the accreditation and recognition of the finished result. Governments vary considerably, however, on the

extent to which they have specific policies relating to cross border exchange or where these policies are the indirect result of broader policy settings.

3.6 Broad categories of government involvement in cross border exchange

	<i>General business regulations</i>	<i>Education regulations</i>	<i>Regulation of movement of persons</i>	<i>Other regulation</i>
Mode 1: Cross border supply.	Restrictions on trade in particular printed or other materials.	Broad recognition of qualifications, particularly for employment purposes.	NA.	Protection of intellectual property.
Mode 2: Consumption abroad.	In the host economy, consumer protection measures.	Recognition of qualifications (obtained abroad). In the host economy, restrictions on fee paying students and rules regarding accreditation, registration and quality assurance of providers.	In the host economy: migration and visa requirements, including ability to work while studying.	Regulations on currency exchange. Labour market regulations.
Mode 3: Commercial presence.	Rules regarding the establishment and operation of foreign businesses, including foreign ownership restrictions.	Rules relating to accreditation, registration and quality assurance. In the host economy, rules regarding the provision offshore of accredited courses.	Visa restrictions on foreign nationals that may be part of the transnational operation.	General labour market regulations relating to employment of nationals.
Mode 4: Presence of natural persons.	NA.	Rules relating to accreditation, registration and quality assurance for enterprises that employ foreign nationals.	Migration and visa requirements. Taxation treaties obligations..	General labour market regulations relating to employment of foreign nationals.

Broadly, government regulations can affect cross border education exchange by influencing:

- the ways in which businesses in general are established and operate;
- the ways in which educational enterprises in particular are regulated;
- the ways in which the movements of people are regulated; or
- indirectly, other ways that businesses or individuals engaged in education must operate.

The operation of these various regulations is likely to have a variety of effects on cross border exchange. Table 3.7 summarises the effect of regulation on each of the modes of exchange in terms of:

- the effective price of education (that is, the overall costs of education services to the economy);
- the quality of education;
- the employment prospects of students having received an education; and
- the attractiveness of a particular economy to education providers.

3.7 Broad effects of government involvement in cross border exchange

	<i>Effective price of education</i>	<i>Quality of education</i>	<i>Employment prospects</i>	<i>Attractiveness to providers</i>
Mode 1: Cross border supply.	Restrictions on transfer of printed or other material will tend to increase price.	Poor quality assurance will reduce the quality of education.	Quality assurance and qualifications recognition for cross border supply will affect employment prospects.	Restrictions on transfer of printed or internet based material will reduce attractiveness to providers.
Mode 2: Consumption abroad.	Visa restrictions or restrictions on employment while studying will effectively increase the price of education.	Poor quality assurance will reduce the quality of education.	Quality assurance, qualifications recognition and accreditation processes will have a significant influence on the employment prospects of the individual obtaining the education.	Restrictions in the host economy will affect the willingness of providers to provide international education.
Mode 3: Commercial presence.	Costly business registration procedures and unclear registration and accreditation processes will increase the cost of education.	Unclear or poor quality assurance for foreign providers may reduce the quality of education.	Quality assurance, qualifications recognition and accreditation processes will have a significant influence on the employment prospects of the individual obtaining the education.	Unnecessarily harsh or unclear requirements for foreign providers will make the exchange of services more expensive.
Mode 4: Presence of natural persons.	Restrictions on the movement or recognition of appropriate educators will effectively increase the price of education.	Restrictions on the movement or recognition of appropriate educators may also affect the quality of the services provided.	Quality of the educators' contribution may indirectly affect employment prospects.	Extensive restrictions on the use of foreign educators will reduce the attractiveness of this model of exchange.

It could be argued that given the rapid emergence of cross border exchange in recent years (particularly in modes 2 and 3) government policies do not seem to have provided a major limitation to the market to date. It would be extremely dangerous

to be complacent about policy settings, however. Given the large potential impact that policies can have on cross border exchange, and given the need for increases in the quantity, quality and diversity of education services in the future, it is important to set the groundwork for a commonly understood and transparent regulatory regime for the provision of cross border education services.

4 *The benefits of cross border exchange*

- Like all forms of education, cross border exchange in education leads to productivity and growth benefits.
- In addition, international education provides benefits not available from domestic education alone.

Cross border exchange brings important benefits

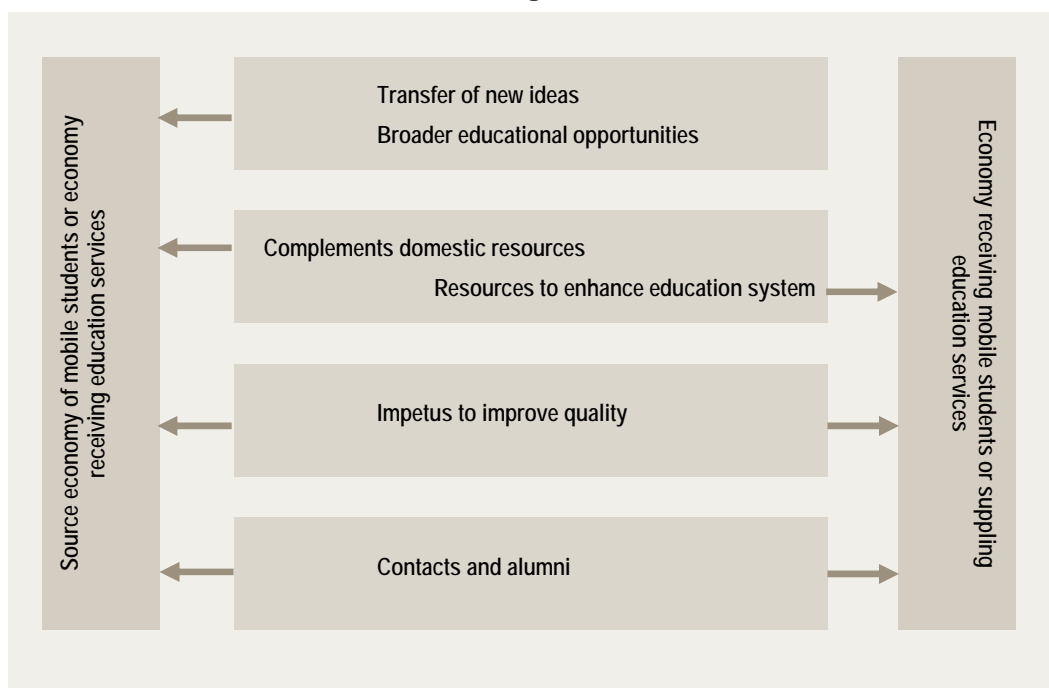
The recent rapid growth of cross border education exchange clearly illustrates that it should be considered as an integral part of education policies for all APEC economies. As well as providing a source of educational services (effectively increasing the *quantity* of education services available within a particular economy), cross border exchange of education services also provides additional benefits that arise because of its main mode of delivery – the movement of individuals or organisations between economies. This has the effect of increasing the *diversity* of available education services, and will tend to increase the *quality* of those services over time.

Exchange benefits both sides

Chart 4.1 illustrates the ways in which education exchange brings benefits to both sides – the ‘origin’ and ‘destination’ economies. The benefits are of four main types:

- the transfer of ideas and of educational opportunities – increasing the diversity of available education opportunities;
- an effective increase in resources available for education – increasing the quantity of education services (or, equivalently, reducing their price);
- the impetus that exchange provides to improve quality; and
- the long run benefits of contacts and cultural understanding that result from international education.

4.1 Benefits to both sides of the exchange



Ideas and opportunities – increasing diversity

Education exchange is in effect a form of very close economic integration between economies. While there is significant exchange of ideas as a result of trade and capital flows, education provides a very direct and immediate transfer of ideas. In particular disciplinary areas, for example, education is often provided by leaders in the field. Students directly absorb the latest ideas which they then take to their home economy to implement throughout their careers.

Related to this is the fact that specialisation in the modern fields of ideas mean that it is impossible for institutions within a single economy to be at the cutting edge of all fields of endeavour. Cross border education exchange therefore increases the opportunity for students to be exposed to ideas that they may not otherwise be exposed to in their home economies.

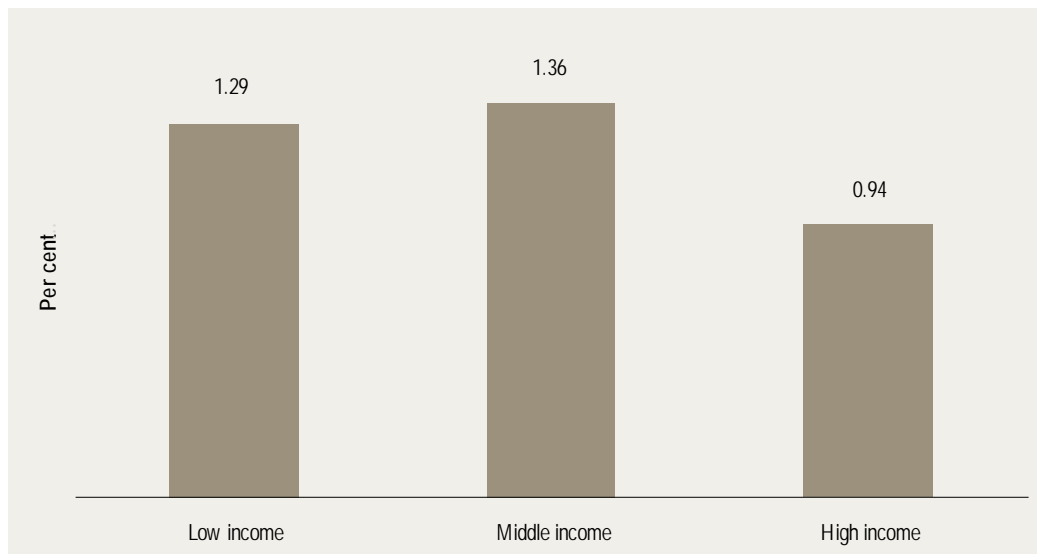
By taking advantage of knowledge developments in economies around the world, cross border exchange provides access to more diversity than could ever be cost effectively provided domestically.

Enhancement of resources – increasing the quantity of education

From the perspective of the recipient economy, cross border exchange effectively provides additional resources to complement the domestic resources devoted to education. The international specialisation of ideas means that it is very likely that cross border exchange will result in lower cost than attempting to provide all

education domestically. As an illustration for mode 2 exchange, chart 4.2 illustrates the effective increase in resources to higher education that has resulted from cross border exchange within APEC. It shows, for example, that low income economies have effectively increased their tertiary education coverage by 1.3 per cent as a result of cross border exchange.

4.2 Effective increase in higher education resources from international education



Data source: CIE calculations based on UNESCO statistics

From the perspective of the destination economy, the revenue from fee paying international students provides resources that can be used to enhance educational facilities and to provide ongoing improvements in education.

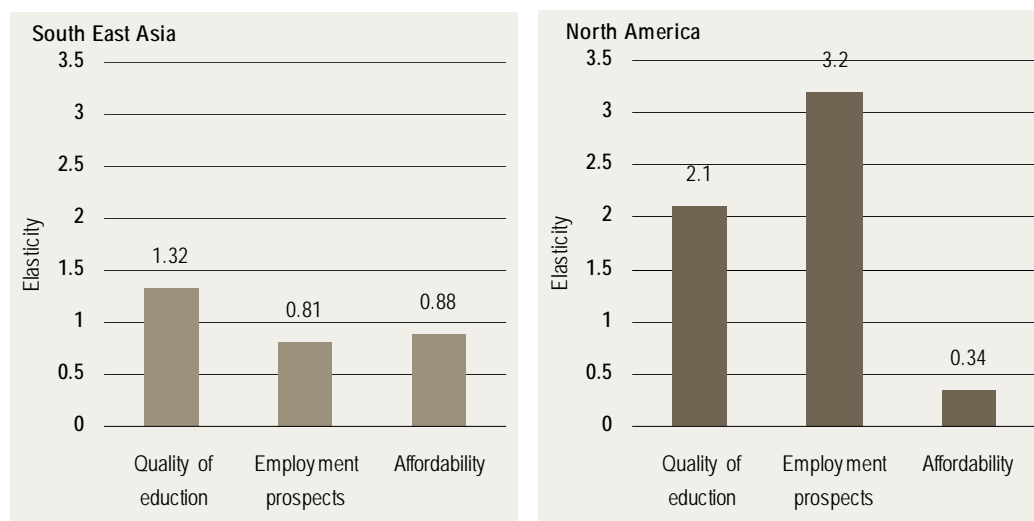
Impetus to improve quality

There is good reason to believe that the cross border exchange in education services provides impetus to improve the quality of education over time. Available empirical evidence suggests that quality of education is one of the major factors driving demand for international education from a particular destination economy.

Chart 4.3 illustrates some recent empirical research. It shows (in the case of South East Asia and North America) the responsiveness of demand to a change in three particular attributes: quality of education, employment prospects as a result of the education and affordability (or price) of the education.

The results are clear, the quality dimensions (the quality of the course, and the quality as perceived by future employers) are considerably more important than the affordability dimension. In a market where institutions compete for students, this will result in competition around quality, and hence an ongoing improvement in the quality of education provided.

4.3 Factors driving demand for international education



Data source: CIE calculations based on Bohm et al (2004) and IDP (2003).

Contacts and alumni

While hard to quantify, international education clearly results in a range of contacts that would not otherwise have emerged if education had been solely domestic.

One of the major ways that this has an influence on economic outcomes is through its indirect effect on trade and investment flows within the APEC region. While existing trade and investment links are likely to create demand for international education, it is also the case that the range of contacts established through international education, and the benefits of a common educational background, is likely to lead to further opportunities for trade and investment.

Increasing the benefits from exchange

Cross border exchange, through its contributions to the quality and quantity of education is clearly likely to increase economic growth in the region above what it would have been in the absence of cross border exchange. While there are no formal statistical estimates of this effect, a broad indication of the order of magnitude can be derived from the information in charts 2.4 and 4.2.

Cross border exchange in mode 2 of tertiary education has increased the quantity of tertiary education by around 1 per cent (chart 4.2). From the data in chart 2.4, this would be expected to increase economic activity (as measured by gross domestic product, say) by around 0.3 per cent. Applied to APEC-wide GDP, this comes to an annual benefit of around US\$200 billion. That is, the current level of cross border exchange in tertiary education contributes around US\$200 billion to APEC economies.

There are, therefore, considerable benefits potentially available from increasing the total amount of cross border exchange within APEC.

Within the APEC forum, cooperation to establish an appropriate regulatory framework for cross border exchange is clearly an activity with significant potential pay offs.

5 *Implications for APEC cooperation*

The above discussion indicates that there are considerable benefits from cross border exchange in education. While cross border exchange has been increasing rapidly recently, it remains subject to a variety of government policy settings. In order to ensure that future benefits from cross border exchange are maximised, it is important to have a common understanding of what constitutes good policy in this area, and to work cooperatively to increase this understanding.

APEC economies are diverse – in terms of the structure of their education systems, their current involvement in cross border exchange and their current patterns of regulation involving the various modes of cross border provision. This means that the needs for ongoing policy development will also vary by economy. This also means, however, that there is considerable scope for a work program within APEC to carefully examine and cooperate on policy issues as they emerge relating to cross border exchange of education services.

In general, government policy needs to set a broad framework within which the various forces of demand for education services, and the supply of those services, can operate. In broad terms, the policy framework needs to establish:

- quality assurance including
 - who is allowed to provide education services – the question of the rules governing registration, accreditation and the daily operations of providers;
 - what services should be provided and in what form – the question of the rules determining the balance of content and its mode of delivery, in particular the flexibility of content and delivery, of the education services provided;
- how the resulting product (degree or diploma etc) will be judged and interpreted by students, governments and employers – questions surrounding qualifications recognition; and
- how progress in educational outcomes will be measured, and how the ability to undertake effective policy analysis will be enhanced – the question of how to collect and use appropriate data on education, in particular involving cross border exchange.

Table 5.1 summarises the broad policy areas that have a significant influence on cross border exchange and the overall objective for cooperation in each of these policy areas within APEC.

5.1 Policy areas, their influence and objectives for cooperation

<i>Policy area</i>	<i>Influence</i>	<i>Objective for cooperation</i>
Quality assurance	Quality assurance frameworks influence both the demand for education and the outcomes of the education process.	A common understanding of the elements that make up both quality in education and effective quality assurance systems.
	The policy framework may indirectly discriminate between different potential sources of supply.	A commonly understood framework for both students and employers to be able to interpret the outcomes of education.
Registration and accreditation	Policy framework can influence the balance of provision by domestic and international sources.	Students have access to the best education providers from any economy within APEC.
	The policy framework may indirectly discriminate between different potential sources of supply.	Transparent and uniform rules for the registration of domestic and foreign services providers. Transparent rules on foreign ownership of education providers.
Content and delivery	Policy framework can influence both the content of the services — in terms of subject areas covered — as well as the means by which there are delivered, in particular delivery through new means such as the internet.	Students have access to flexible content and delivery system reflecting changing educational needs.
		Understanding of the impact of different policies on the mix of provision.
Qualifications recognition	Understanding of the nature of a particular qualification affects both the demand for education by students and the ways in which employers interpret and are able to use employees with particular qualifications.	A common understanding of effective approaches to qualifications recognition.
	If not common across all sources of supply, the policy framework may indirectly discriminate between different potential sources of supply.	Working with employers and professional bodies across the region to understand the best frameworks for recognition.
Data collection	Appropriate data on cross border exchange of education services and associated outcomes can have a significant influence on	A common framework for enhanced data collection, particular for modes of cross border exchange other than consumption abroad.

Quality assurance and qualifications recognition

A major concern in domestic and cross border provision of education services is ensuring that the quality of those services meets a minimum standard (regardless of where the services is provided) as well as ensuring that the quality is appropriate to the education needs of the economy. In this sense, quality assurance is closely related to systems of qualification recognition, as recognition systems contain a strong quality component.

With increased demand for cross border provision, systems of quality assurance and qualifications recognition will become increasingly important in ensuring the efficient provision of education services.

On the one hand, students and employers need to have confidence in the nature and quality of particular qualifications, and regulatory systems need to ensure that students receive appropriate information about the services they are to use.

On the other hand, it is important that quality assurance and qualifications recognition systems do not discriminate between alternative sources of education services, and that cross border provision is treated on an equal footing with domestic provision.

The purpose of an APEC work program in this area would be to:

- understand the ways in which current systems may discriminate between alternative sources of education services, particularly where there are perceived quality differences between domestic and international services;
- come to a common understanding of the dimensions of quality that are relevant and can be compared between domestic and international sources of education services. As different economies may have different definitions of quality, moves towards a common understanding will be very important to enhance cross border exchange;
- work with employers groups and professional bodies throughout APEC to understand the dimensions of various education services that are relevant for qualifications recognition in different professions and industries; and
- come to an understanding of a common approach to qualifications recognition that would be appropriate for the region as a whole and that would enhance the possibilities for cross border exchange of education services.

Registration and accreditation

A major influence on cross border education exchange – in particular through mode 3, commercial presence – are the various rules relating to who is able to register and be accredited for providing education services within an economy.

It is particularly important that these regulations do not discriminate between domestic and overseas sources of education. Put another way, it is important that these rules treat domestic and foreign sources of services on the same basis.

The purpose of an APEC work program in this area would be to:

- understand the ways in which current policies may discriminate between domestic and international education providers; and

- derive a common understanding of best practice registration systems to ensure that the best available education providers are available to students within each APEC economy.

Forms of content and service provision

Rapidly changing education needs in modern economies demand considerable flexibility from education systems – both in terms of the content of that education and the various technologies through which education is delivered. At the same time, modern technologies such as online provision allow the opportunity to increase the reach of education services well beyond what may be feasible through traditional methods.

It is highly likely that for many APEC economies, forms of online provision will be supplied by foreign providers. It is important that regulations relating to education services within each APEC economy do not discriminate between different forms of provision but allow the most effective forms to emerge.

The purpose of an APEC work program in this area would be to:

- understand the ways in which current policies may discriminate between alternative forms of provision, particularly if some of the more innovative forms are provided through cross border exchange;
- derive a common understanding of likely future developments in delivery systems and the ways in which these are likely to influence the demand for cross border provision, particularly through mode 1, direct cross border exchange; and
- link this analysis to the work on registration and qualifications recognition.

Data collection

Currently, comprehensive data collections on cross border exchange of education services are limited. While relatively good data is available for mode 2 (consumption abroad), there is very limited data for the other modes. This is a particular limitation in the case of mode 3 (commercial presence) as this is likely to be an increasingly important form of exchange in coming years. Similarly, aspects of mode 1, particularly those involving the internet, have no comprehensive data collections even though these are likely to become increasingly important over time.

Ongoing policy development and analysis clearly requires a solid base in data, both to plan the policies and to evaluate their outcomes. Cooperation on data collection in cross border exchange is clearly an area with considerable scope within APEC.

The purpose of an APEC program in this area would be to:

- come to a common understanding of the data needs for policy development, particularly in regards to the work programs suggested above;

- work with national statistical agencies to understand existing data collections that may be useful in understanding cross border exchange of education services; and
- propose new data collection protocols and methodologies to allow a common data collection framework within the region.

A Background data

A.1 Teaching task – enrolments by level of education

<i>APEC member economy</i>	<i>Level of education</i>			
	<i>Primary</i>	<i>Secondary</i>	<i>Post-secondary non-tertiary</i>	<i>Tertiary</i>
Australia	1 934 941	2 496 917	180 352	1 002 998
Brunei Darussalam	46 012	43 900	55	4 917
Canada	2 389 188	2 999 244	298 071	1 192 570
Chile	1 720 951	1 630 099	0	567 114
China	108 925 227	101 000 000	610 513	19 417 044
Hong Kong , China	451 171	498 354	30 587	155 761
Indonesia	29 149 746	15 993 187	0	3 441 429
Japan	7 231 854	7 710 439	14 398	4 031 604
Korea (Republic of)	4 125 423	3 692 513	0	3 223 431
Malaysia	3 159 376	2 583 993	172 783	632 309
Mexico	14 700 005	10 564 404	0	2 236 791
New Zealand	352 845	526 152	41 923	195 511
Papua New Guinea	680 786	190 321	...	10 800
Peru	4 077 361	2 691 311	...	831 345
Philippines	13 083 744	6 352 482	452 223	2 427 211
Russian Federation	5 308 605	12 433 155	234 174	8 622 097
Singapore	290 261	241 964	0	140 000
Thailand	5 974 615	4 533 173	17 302	2 251 453
United States	24 454 602	24 431 934	423 316	16 900 471
Viet Nam	7 773 484	9 939 319	0	845 313

Source: UNESCO, *Global Education Digest* Tables 3, 5, 6 and 8

A.2 Public expenditure on education as a % of GDP, 2004^a

<i>APEC member economy</i>	
Australia	4.61
Canada	5.23
Chile	3.66
Hong Kong, China	4.59
Indonesia	0.96
Japan	3.66
Korea (Republic of)	4.63
Malaysia	6.24
Mexico	5.41
New Zealand	6.76
Peru	2.84
Philippines	2.71
Russian Federation	3.84
Thailand	4.24
United States	5.60

^a 2001 data used for Malaysia, Philippines and Thailand; 2002 data used for Canada and Russia; 2003 data used for Indonesia

Notes: Data not available for Brunei Darussalam, China, Papua New Guinea, Singapore, Viet Nam, or Chinese Taipei

Data source: UNESCO database

A.3 Private expenditure on educational institutions and administration as a % of GDP, 2004^a

<i>APEC member economy</i>	
Australia	1.61
Canada	1.41
Chile	3.23
Indonesia	0.52
Japan	1.23
Korea (Republic of)	2.85
Malaysia	0.00
Mexico	1.24
New Zealand	1.16
Peru	0.93
Philippines	2.22
Thailand	1.85
United States	2.46

^a 2001 data used for Malaysia and Philippines; 2002 data used for Canada; 2003 data used for Indonesia.

Notes: Data not available for Brunei Darussalam, China, Papua New Guinea, Singapore, Viet Nam, Chinese Taipei, Russian Federation or Hong Kong.

Source: UNESCO database

A.4 Expenditure on educational institutions and educational administration as a % of GDP, 2004^a

<i>APEC member economy</i>	<i>Public</i>					<i>Private</i>				
	Pre-primary	Primary	Secondary & post secondary	Tertiary	Total	Pre-primary	Primary	Secondary & post secondary	Tertiary	Total
Australia	0.1	1.6	1.9	0.8	4.3	-	0.2	0.5	0.8	1.5
Canada										1.4 ^a
Chile	0.4	1.6	1.6	0.4	4.0	0.1	0.6	0.7	1.8	3.3
Hong Kong	X	X	X	X	4.4	...	...	...	...	...
Indonesia	-	0.4	0.4	0.3	1.0	...	...	...	...	...
Japan	X	X	X	X	3.5	0.1	-	0.2	0.6	1.2
Korea	X	X	X	X	4.1	0.1	0.3	0.7	1.9	2.9
Malaysia	0.1	2.5	2.8	2.6	8.0	...	...	...	...	0
Mexico	0.5	2.0	1.4	1.0	5.1	0.1	0.3	0.4	0.4	1.2
New Zealand	0.2	1.7	2.7	0.9	5.6	0.1	0.1	0.3	...	...
Peru	X	X	X	X	3.0	...	...	...	...	0.9
Philippines	0.0	1.8	0.8	0.4	3.1	X	X	X	X	2.2
Russia	0.6	X	X	0.7	3.8	...	...	...	...	...
Thailand	X	X	X	X	3.8	...	...	...	...	1.9
United States	0.4	1.9	2.0	1.2	5.5	0.1	0.2	0.2	1.5	1.9

^a 2001 data used Malaysia, Philippines, and Thailand; 2002 data used for Canada,

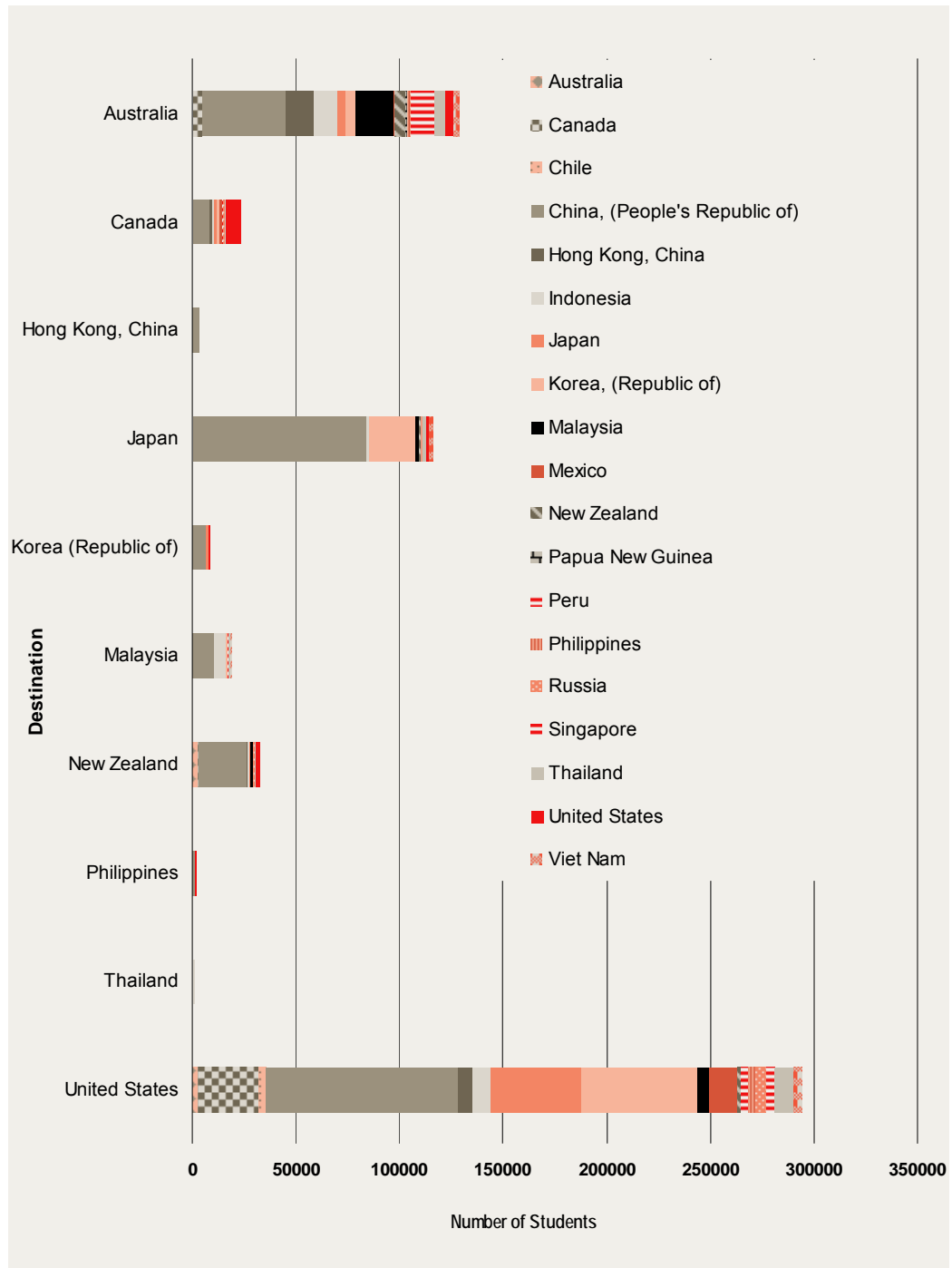
Notes: Data not available for Brunei Darussalam, China, Papua New Guinea, Singapore, Viet Nam and Chinese Taipei. Gaps within the GED data source have been filled for private expenditure using data from the UNESCO database

A.5 Share of private provision (Per cent of total enrolments)

<i>APEC member economy</i>	<i>Level of education</i>		
	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
Australia	28	30	1
Brunei Darussalam	36	13	-
Canada	6	6	-
Chile	-	-	74
China	-	-	-
Hong Kong	93	90	3
Indonesia	16	43	61
Japan	1	19	77
Korea (Republic of)	1	36	81
Malaysia	1	3	32
Mexico	8	16	33
New Zealand	2	10	7
Papua New Guinea	-	-	-
Peru	14	17	47
Philippines	7	20	66
Russian Federation	-	-	11
Singapore	-	-	-
Thailand	15	9	18
United States	11	9	24
Viet Nam	-	-	-

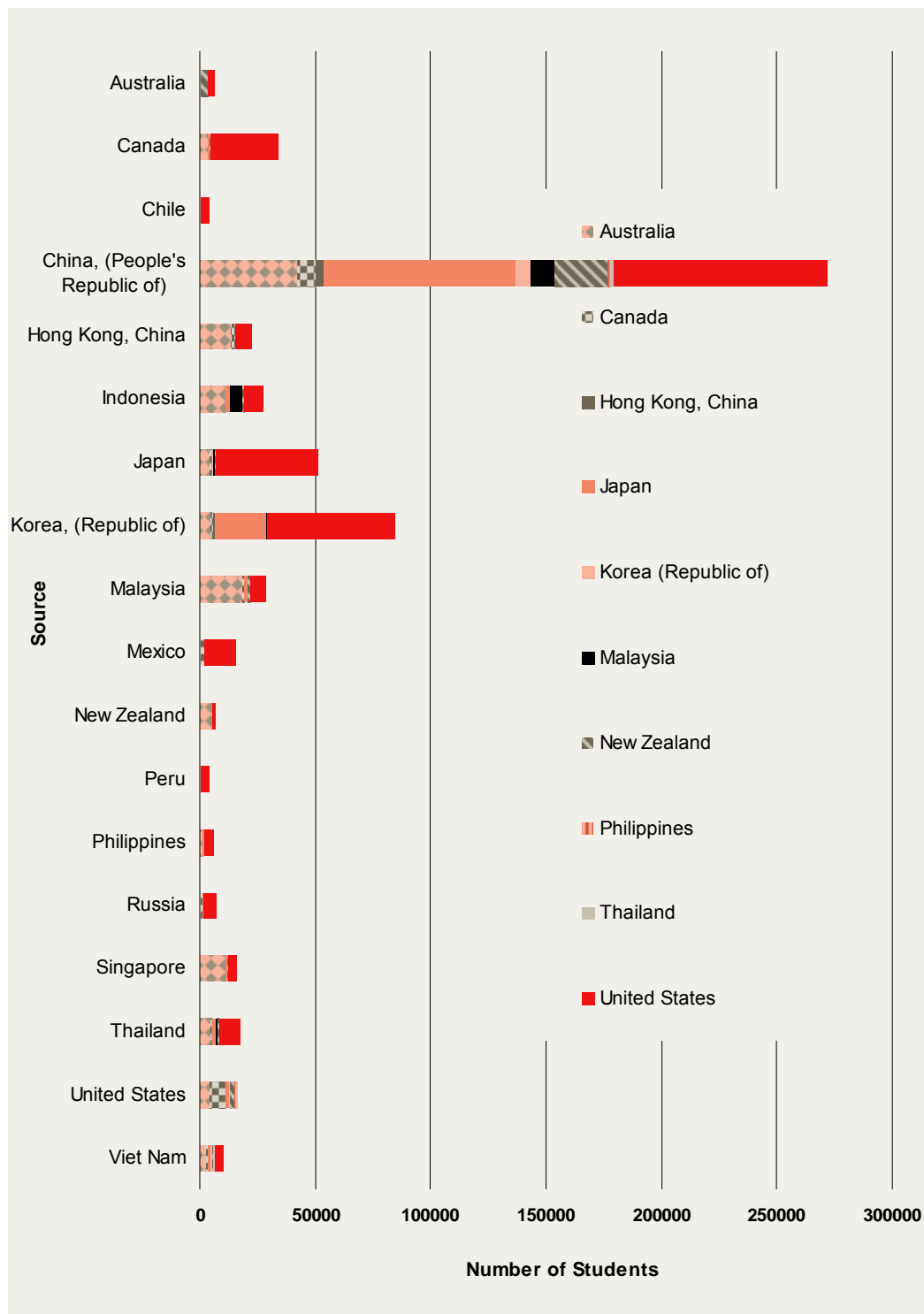
Source UNESCO, *Global Education Digest*

A.6 Flow of students for APEC economies^a – by destination 2005^b



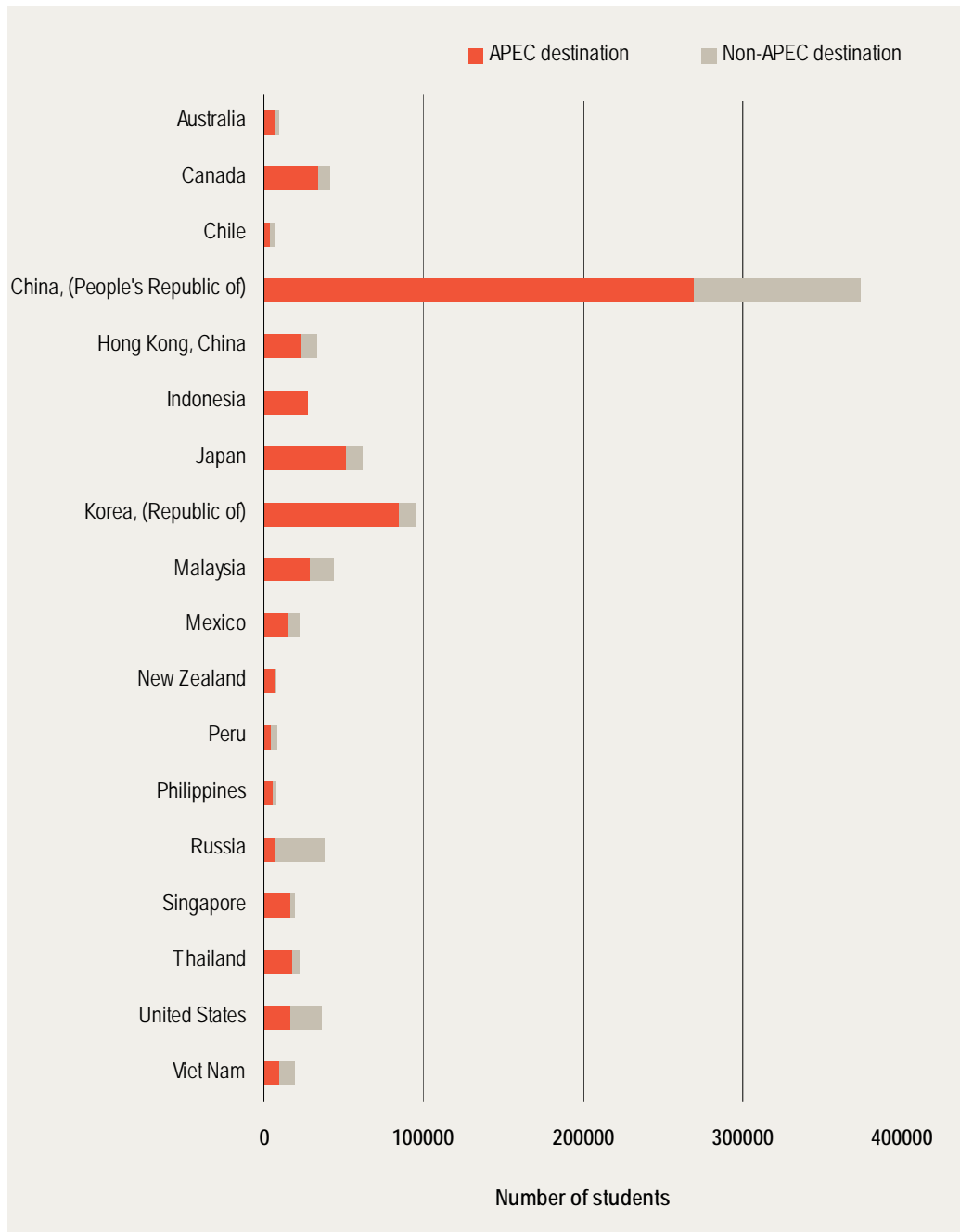
^a Destination data not available for China, Chinese Taipei, Mexico, Papua New Guinea, Peru, Singapore
^b 2002 data used for Canada and Thailand, 2003 data used for Malaysia; 2004 data used for Indonesia.
 Data source: UNESCO

A.7 Flow of students for APEC member economies^a – by source



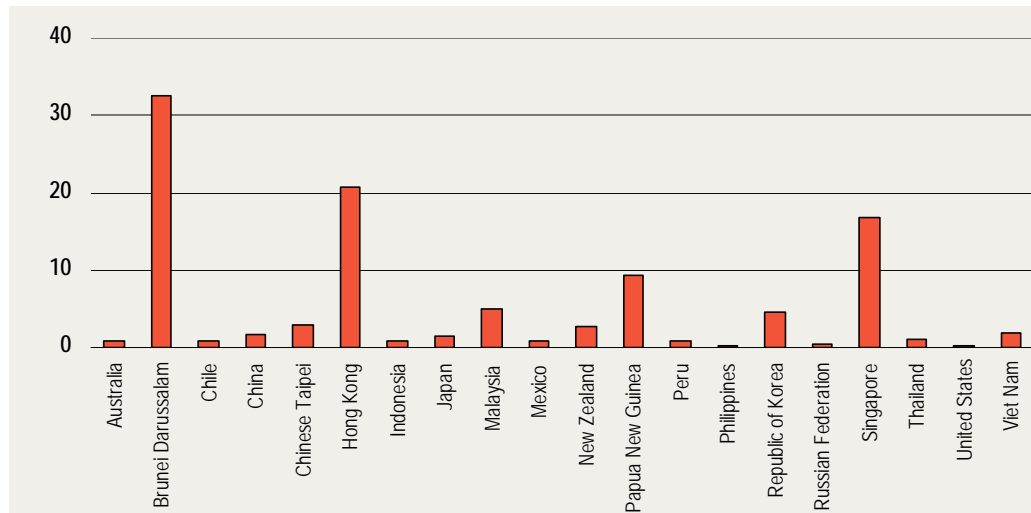
^a Destination data not available for Chinese Taipei, Mexico, Papua New Guinea, Peru, Singapore
^b 2002 data used for Canada and Thailand, 2003 data used for Malaysia; 2004 data used for Indonesia.
 Data source: UNESCO

A.8 Flow of students for APEC member economies to APEC and non-APEC destinations



Data source: UNESCO

A.9 International enrolments (mobile tertiary students) as a proportion of domestic enrolments Per cent



Data source: CIE estimates based on UNESCO data

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