

Building Capacity through Cross-border Tertiary Education

by

Stéphan Vincent-Lancrin*
OECD, Centre for Educational Research and Innovation

Paper prepared for the Unesco/OECD Australia Forum on Trade in Educational Services

“Bridging the Divide – Building Capacity for Post-secondary Education through Cross-border Provision”

11-12 October 2004

Sydney, Australia

* The views expressed in this paper are the responsibility of the author and do not necessarily represent those of the Organisation for Economic Co-operation and Development or of its Member countries. The author is grateful to Kurt Larsen (OECD/CERI) for useful discussions, and to colleagues from the OECD (Directorates for Education, Trade, Development Co-Operation, Science, Technology and Industry and Development Centre), Unesco, IIEP, World Bank and ADEA who participated in a CERI Workshop on capacity building in May 2004 in Paris.

1. Introduction

Tertiary education has become increasingly international in the past decade as more and more students choose to study abroad, enrol in foreign educational programmes and institutions in their home country, or simply use the Internet to take courses at colleges or universities in other countries. The major form of cross-border higher education is students going abroad to study. But in the last decade, new forms of cross-border post-secondary education have emerged. Cross-border education not only includes international student mobility, but also the mobility of educational programmes and institutions across borders.

Cross-border tertiary education refers to situations where the students, teachers, programmes, institutions/providers or course materials cross national borders. It can take several forms, such as students (and teachers) travelling to study (teach) in foreign countries, educational institutions partnering with foreign institutions to offer joint educational programmes or degrees, educational institutions operating abroad, and educational courses being supplied across borders through e-learning or distance learning (OECD, 2004a; Knight, 2003; see Table 1). All forms of cross-border education are currently delivered under a variety of contractual arrangements: development aid, not-for-profit partnerships, and, increasingly, trade (OECD, 2004a).

The number of foreign students in OECD countries has doubled over the past 20 years to 1.8 million in 2002. OECD countries received around 85% of the world's foreign students in the mid-nineties, and probably more today. Conversely, about 57% of all foreign students studying in OECD countries were from outside the OECD area in 2002. Asia heads the list of regions sending students abroad for higher education, accounting for almost half (43%) of all international tertiary-level students in the OECD area. Europe is a close second, accounting for 35%, followed by Africa (12%), North America (7%), South America (3%) and Oceania (1%). The bulk of cross-border post-secondary education via programme and institution mobility occurs in the Asia-Pacific region. Singapore; Malaysia and Hong Kong China are probably the main receivers of cross-border education through institution mobility, which is also being developed in mainland China. From the late 1990s the Malaysian government has encouraged foreign universities to establish branch campuses on its soil. There are currently four branch campuses of foreign universities and over 600 private colleges offering both local and foreign qualifications. In Hong Kong, China, 150 foreign educational institutions and 40 foreign professional bodies offered 645 courses in 2001, alone or with local partners (Olsen, 2002). Finally, China has reported a nine-fold increase between 1995 and 2003 in foreign programmes (always bound to be offered in co-operation with local institutions). In early 2003, there were 712 such programmes, 37% of them post-secondary and higher education degree programmes.

This growth is the result of several different, but not mutually exclusive, driving forces in importing and exporting countries: a desire to promote mutual understanding; a need for migration of skilled workers in a knowledge economy; the desire to generate revenue for their higher education sector; or the need to build a more educated workforce in the home country of such students, generally an emerging economy.

Four different, but not mutually exclusive, policy approaches to cross-border higher education have emerged out of these forces.

Table 1. Types of cross-border education activities

Type	Main forms	Examples	Size
1. People			
Students/trainees	Student mobility	<ul style="list-style-type: none"> - Full study abroad for a foreign degree or qualification - Part of academic partnership for home degree or joint degree - Exchange programmes 	Probably the largest share of cross-border education
Professors/trainers	Academic/trainer mobility	<ul style="list-style-type: none"> - For professional development - As part of an academic partnership - Employment in a foreign university - To teach in a branch institution abroad 	An old tradition in the education sector, which should grow given the emphasis on mobility of professionals and internationalisation of education more generally
2. Programmes			
Educational programmes	Academic partnerships E-learning	<ul style="list-style-type: none"> - Joint course or programme with a foreign institution - E-learning programmes - Selling/franchising a course to a foreign institution 	Academic partnerships represent the largest share of these activities E-learning and franchising are small but rapidly growing activities
3. Institutions			
Universities Training centres Companies	Foreign campuses Foreign investments	<ul style="list-style-type: none"> - Opening of a foreign campus - Buying (part of) a foreign educational institution - Creation of an educational provider abroad 	A trend increasing very quickly from a modest starting point

Source: OECD (2004a), adapted from Knight (2003b).

The *mutual understanding approach* encompasses political, cultural, academic and development aid goals. It allows and encourages mobility of domestic as well as foreign students and staff through scholarship and academic exchange programmes and supports academic partnerships between educational institutions. This is the traditional approach to the internationalisation of tertiary education.

While sharing the objectives of the former approach, the three other approaches have a stronger economic drive. Two of them are mostly export approaches. The *skilled migration approach* gives stronger emphasis than the mutual understanding approach to the recruitment of selected international students and tries to attract talented students to work in the host country's knowledge economy, or render its higher education and research sectors more competitive. The *revenue-generating approach* shares the objectives of the mutual understanding and skilled migration approaches, but offers higher education services on a full-fee basis, without public subsidies. Compared to domestic students, foreign students generate additional income for institutions, which are encouraged to become entrepreneurial in the international education market. Under this strategy, governments tend to grant institutions considerable autonomy and seek to secure the reputation of their higher education sector and protect international students.

A final approach to the internationalisation of higher education, more prevalent in emerging economies, is the *capacity building* approach. This is an importer perspective that views cross-border education as a means to meet unmet demand as well as to help build capacity for quality higher education. This rationale is present in the mutual understanding approach too, and thus common to all countries, but it takes on greater importance in countries whose higher education system does not meet domestic demand in terms of quantity or quality. Indeed, some East and North Asian countries support imports of cross-border education services for capacity-building purposes. They

encourage both study abroad by domestic students and foreign programmes and institutions in their country. Malaysia provides extensive scholarships for postgraduate study or training of teachers, academics and public servants, mostly in the United Kingdom and Australia. It also has offices in certain countries to assist its citizens studying abroad. Thailand also provides scholarships for public officials and students. Students educated abroad are supposed to help build domestic capacity in higher education when they return home. However, given their cost, scholarship programmes are necessarily limited and capacity building also relies on foreign programmes and institution mobility. Indonesia; Malaysia; Singapore; Hong Kong, China; Vietnam and China encourage foreign academics and foreign programmes and institutions to come to their country. Policy statements from several countries note the capacity-building potential of programme and institution mobility. China wants to “attract high-quality educational resources from overseas” and to “introduce globally advanced curriculum and teaching materials which are in urgent need in China” (NCN, 2003). Indonesia has made legal provision for locally based co-operation with foreign universities to “improve and enhance the performance of higher education” and to “maintain, develop, empower and expand science, technology and/or arts” (DGHEI, 2000).

While several OECD countries compete to attract foreign students, these pioneering emerging economies show that a new deliberate import strategy of cross-border education can be part of a national capacity building strategy. Could this be a model developing countries could use to build capacity in tertiary education, and more generally, to accelerate their economic development? This paper will reply affirmatively: overall, employing cross-border education to build capacity can be an effective strategy, especially when it is accompanied by appropriate policies and regulatory frameworks.

Once they have opted for an overall capacity building strategy in education—as part of a national capacity building strategy—countries should examine how tertiary (and more broadly post-secondary) education fits into it. One subsequent question is whether cross-border tertiary education could play a role in this strategy, and, if yes, what role. To make this decision, governments in developing countries should examine a sequence of questions and clarify their objectives according to their local context:

1. Employing cross-border education can be worthwhile for the achievement of what objectives?
2. Are some forms of cross-border education more suitable to the achievement of these objectives? To which extent should they seek to facilitate each of them?
3. Are some contractual arrangements in the delivery of cross-border education more effective than others? For which objectives and in what circumstances?
4. What policies can help reap all the benefits of cross-border education and minimise its possible risks? Which are feasible in their local context?

This paper does not offer definitive answers to all these questions, as the answers must indeed be specific to each country and its local context. It explores the possible answers and tries to shed some light on the mechanisms that may link cross-border education to capacity building.

The remainder of the paper is organised as follows. The next section defines capacity building and shows that it refers to principles whose validity goes beyond a development assistance context. The third section shows the centrality of education and tertiary education in any capacity building strategy, highlighting a natural privilege of education in capacity

building. The fourth section recalls the main arguments explaining why education and tertiary education could lead to economic development and points to some questions and choices a developing country is facing in its education capacity building strategy. The paper then concentrates on the opportunities and challenges of cross-border tertiary education for capacity building in tertiary education. Section 5 shows the reasons why cross-border education could help build capacity in tertiary education; section 6 examines the benefits and drawbacks of the different modes of delivery of cross-border education; section 7 discusses the growth of commercial provision of cross-border education and its positive and negative impacts in developing countries; finally, section 8 points to some of the policies that may help reap the benefits of cross-border education while minimising its risks.

2. What is capacity building?

The concept of *capacity building* or *capacity development*¹ appeared in the late 1980s and has become the buzzword of development in the 1990s. Rather than capturing a brand new idea, it embodies the critics of development assistance by stressing the need to base development on indigenous capacities, ownership and leadership and by bringing human resources development to the fore. While the 1980s are typically described as the “stabilisation and structural adjustment” decade, the 1990s placed a strong emphasis on the building of human capital following advances in the endogenous growth theory (Thorbecke, 2000; Adelman, 2000). The shift from traditional development aid to capacity building is clearly illustrated by the well-known proverb: “give someone a fish and he eats for a day; teach someone to fish, and he can feed himself for a lifetime”. The concept of capacity building signals a shift from *assistance* to a less dependent “help yourself” attitude in the development community. It appeared in a context marked by a widespread (and possibly exaggerated) dissatisfaction with technical co-operation (Arndt, 2000) and, more generally, with aid effectiveness—the so-called “aid fatigue” of the 1990s.

The United Nations Development Programme (UNDP) defines capacity and capacity development as follows:

Capacity is the ability of individuals, organisations and societies to perform functions, solve problems, and set and achieve goals. Capacity development entails the sustainable creation, utilisation and retention of that capacity, in order to reduce poverty, enhance self-reliance, and improve people's lives. [...] Capacity development builds on and harnesses rather than replaces indigenous capacity. It is about promoting learning, boosting empowerment, building social capital, creating enabling environments, integrating cultures, and orientating personal and societal behaviour. (<http://www.undp.org/capacity/>)

Capacity building is thus based on learning, on skills and resources acquisition among individuals and organisation. Skills acquisition should be seen as opposed to technology transfer or technical assistance, which have not always lead to individual and organisational learning in the developing countries. While it certainly relies on some imported capacity, this foreign capacity should be used as a knowledge sharing device

1. In this paper, we consider the two terms as synonymous: although they are sometimes used with slightly differing meanings, this is how most people treat the two notions. “Capacity building” is often used in the African context as well as in relation to trade and private sector development, whereas “capacity development” is more commonly used in aid development agencies. There is actually no clearcut distinction and both terms refer to the same idea and convey the same connotations.

allowing strengthening and developing local capacity (Figure 1). Capacity building is committed to sustainable development, to a long rather than short term perspective, and tries to overcome the shortcomings of traditional donor-led projects—typically criticised for being too short-term, one-shot rather than sustainable, and not always relevant to the recipients’ needs. Capacity development gives responsibility to developing countries for the identification of their needs, and to design and implement the best suitable development strategy in their local context. It aims at rendering developing countries less aid-dependent. As a process, it relies on monitoring and evaluation in order to identify the existing capacities, its deficiencies and the progress and achievements in its development.

Boxes 1 and 2 give two sets of guiding principles defining the process of a capacity development. One comes from the donor community (the OECD Development Aid Committee) and the other from a multilateral development organisation (the UN Development Program): they offer two differing entries on a common philosophy. Capacity development principles correspond to a transfer of ownership of development projects from the donor to the recipient community and mirror recent aid effectiveness principles². For this reason, capacity development does not necessarily refer to aid development but can depict countries’ efforts towards their development goals regardless of development assistance.

One important dimension of capacity building lies in its systemic or multi-level approach to development: capacity building acknowledges the need to consider several levels of interventions and understand their interdependence for a coherent and sustainable development policy. Building on Bolger (2000), we consider five levels of capacity in this paper: the individual, organisational, sector/network society and global levels.³

At the individual level, capacity building refers to the acquisition of skills, through formal education and all other forms of learning. Although skills and knowledge can be acquired in various settings, education systems play a paramount role in this respect.

At the organisational level, capacity building focuses on infrastructure and institution building, on the availability of resources, on the effectiveness of processes and management to achieve effective and quality results within existing infrastructures. In education, this level corresponds to the improvement to the domestic educational institutions, e.g. universities, through more resources and a better use of available resources.

At the sector/network level, capacity building seeks to the improvement of the consistence of sector policies and a better coordination among organisations. In education, capacity building could for example aim at improving the linkages between vocational and formal educational institutions, between research-intensive and teaching institutions or to the coordination between institutions to cover the different academic fields. But it could as well try to enhance knowledge spillovers through partnerships and university networks.

-
2. Namely that foreign aid depends more on what the donor can provide than on what the recipient needs ; that foreign aid through foreign technical expertise is often unsustainable once the foreign experts are gone ; that aid should be managed by the recipient country and untied ; etc.
 3. These levels can however be conceived differently according to one’s topics and perspectives. Ranging from 3 to 5 layers, other distinctions of capacity levels are: individual, organisational, sector-network, enabling environment levels (Bolger, 2000); public, civil society and private (OECD, 2001); individual, organisational and systemic (UNDP/GEF, 2003); individual, institutional, societal, global (UNDP, 2003); human resources, organisational, task network, public sector institutional context and action environment (Hildebrand and Grindle, 1995).

The society level refers to the broad human institutions (conventions, habits, values, regulatory frameworks, political regimes, policies, etc.) within which development takes place. The society level can be either enabling or constraining for development. Gender inequality, racial discrimination, corruption, lack of security, lack of commitment to development, inability to raise taxes, etc., typically constrain development. Stability of the political and economic environments, commitment, sound policies, etc., typically facilitate development. Capacity development can sometimes try to transform attitudes and values that hinder development: this can be through the fight against corruption, criminality and insecurity, or other policies challenging socially unproductive behaviours, like the promotion of gender equality. But changing society is a slow and uneasy task. Notwithstanding changes at this level, capacity development activities build on it, whether as a constraint or as an asset for change. Consideration for this society level corresponds to the need to harness capacity development on the local situation: one size does not fit all.

Finally, capacity development needs to take into account the global level, that is the international context in which the country operates. This relates to multilateral agreements, international laws, but also to geo-strategic considerations. At this level, capacity development seeks to improve countries participation in multilateral organisations, treaties and agreements and to their use to its best advantage.

Box 1. The Donors' perspective: DAC Guiding principles for sustainable development strategies

Strategy formulation

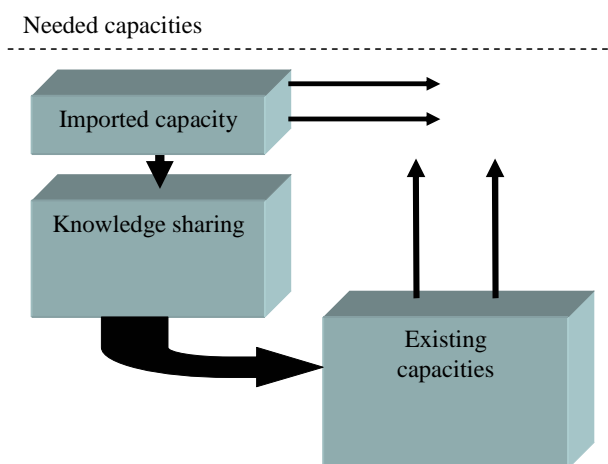
- Country ownership and participation, leadership and initiative in developing their strategies.
- Broad consultation, including particularly with the poor and with civil society, to open up debate on new ideas and information, expose issues to be addressed, and build consensus and political support on action.
- Ensuring sustained beneficial impacts on disadvantaged and marginalised groups and on future generations.
- Building on existing strategies and processes, rather than adding additional ones, to enable convergence and coherence.
- A solid analytical basis, taking account also of relevant regional issues, including a comprehensive review of the present situation and forecasts of trends and risks.
- Integration of economic, social and environmental objectives through mutually supportive policies and practices and the management of tradeoffs.
- Realistic targets with clear budgetary priorities.

Capacity development

- Strengthening and building on existing country capacity—public, civil society, and private—as part of the strategy process.
- Linking national and local levels, including supporting devolution, in all stages of strategy development and implementation.
- Establishing continuous monitoring and evaluation systems based on clear indicators to track and steer progress.

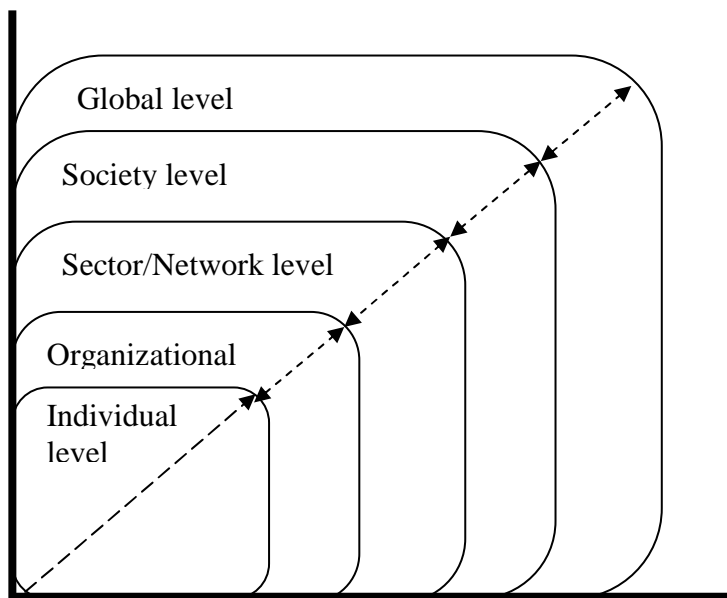
Source: OECD, 2001a.

Figure 1. Capacity Development



Source: OECD (inspired by UNDP, 2003)

Figure 2. Capacity Development: a multi-level conceptual framework



Source: OECD (adapted from Bolger, 2000)

Box 2. A multilateral aid agency's perspective: 10 default principles for capacity development

1. Don't rush

Capacity development is a long-term process. It eludes delivery pressures, quick fixes and the search for short-term results.

2. Respect the value system and foster self-esteem

The imposition of alien values can undermine confidence. Capacity development builds upon respect and self-esteem.

3. Scan locally and globally; reinvent locally

There are no blueprints. Capacity development draws upon voluntary learning, with genuine commitment and interest. Knowledge cannot be transferred; it needs to be acquired.

4. Challenge mindsets and power differentials

Capacity development is not power neutral, and challenging mindsets and vested interests is difficult. Frank dialogue and a collective culture of transparency are essential steps.

5. Think and act in terms of sustainable capacity outcomes

Capacity is at the core of development; any course of action needs to promote this end. Responsible leaders will inspire their institutions and societies to work accordingly.

6. Establish positive incentives

Motives and incentives need to be aligned with the objective of capacity development, including through governance systems that respect fundamental rights. Public sector employment is one particular area where distortions throw up major obstacles.

7. Integrate external inputs into national priorities, processes and systems

External inputs need to correspond to real demand and be flexible enough to respond to national needs and agendas. Where national systems are not strong enough, they should be reformed and strengthened, not bypassed.

8. Build on existing capacities rather than creating new ones

This implies the primary use of national expertise, resuscitation and strengthening of national institutions, as well as protection of social and cultural capital.

9. Stay engaged under difficult circumstances

The weaker the capacity, the greater the need. Low capacities are not an argument for withdrawal or for driving external agendas. People should not be held hostage to irresponsible governance.

10. Remain accountable to ultimate beneficiaries

Any responsible government is answerable to its people, and should foster transparency as the foremost instrument of public accountability. Where governance is unsatisfactory it is even more important to anchor development firmly in stakeholder participation and to maintain pressure points for an inclusive accountability system.

Source : UNDP, 2003

3. The centrality of education and higher education in any capacity building strategy

In general, education, and the higher education sector play a significant role in any capacity building strategy. The ultimate goal of national capacity development strategy is to achieve progress and development, *inter alia* by becoming a developed high-income economy. According to their natural assets and constraints, to their already existing capacities, to their possible competitive advantages, and to their priorities, countries need develop differing national development strategies. National development strategies build on a variety of complementary sectoral capacity development strategies. A country may need and want to develop capacity in education, in trade, in health, in engineering, in agriculture, etc., each sector contributing to growth and to its development goals in a different manner.

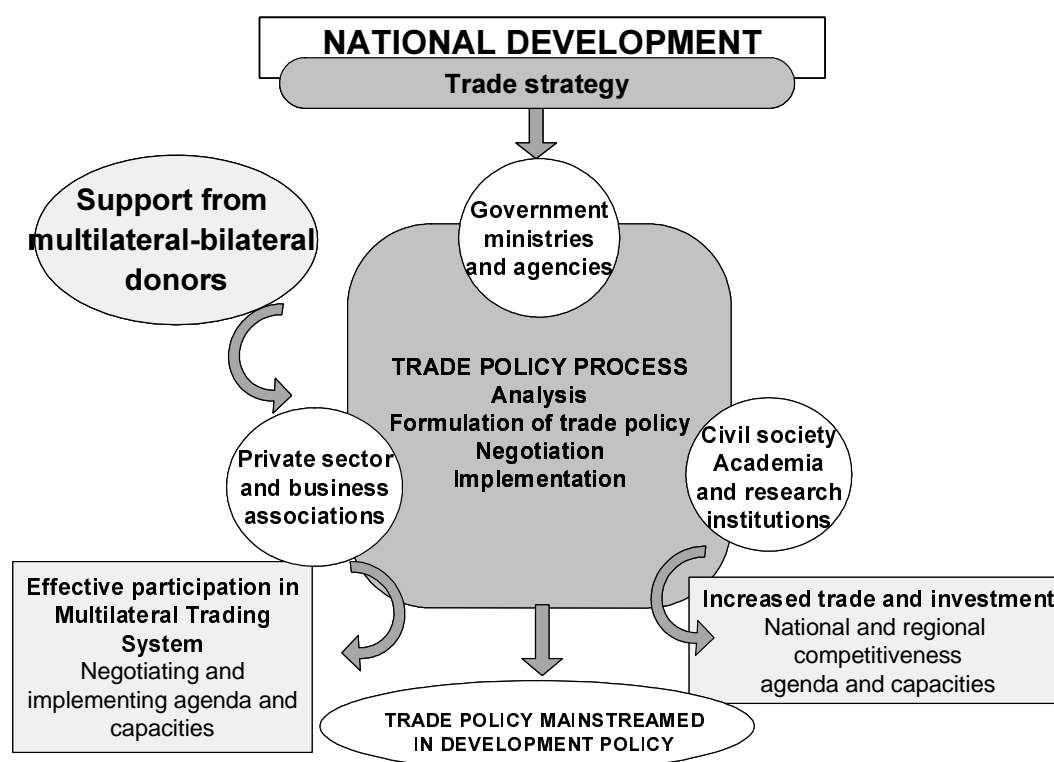
It is noteworthy that some sectors like education, health or trade are cross-sectional or horizontal in the sense that they impact on all sectors in the economy. Even if agriculture is the main priority in a developing country's strategy, it should not neglect the horizontal sectors as its agricultural sector will be more competitive if it has a healthy labour force (health), if its peasants know and use the latest agricultural techniques (education), and, possibly, if he can trade them effectively on the world market (trade).

However, education has a unique privilege as a built-in feature of any capacity development strategy. Whatever the sector, capacity building relies on the strengthening of individual capacity through training and learning, in order to raise the domestic stock of human capital in a specific field. This can be done by setting up specific educational programmes in the formal education system or by other forms of learning. Although some of the necessary skills would typically be acquired on-the-job or through learning-by-doing, developing countries characterised by less efficient organisations of work or by obsolete technologies might need to rely more on formal vocational education and training. What level of education (primary, secondary or tertiary) is required to achieve this goal depends on the kind of competence to be built. Post-secondary education, including degree-granting tertiary education, is certainly important for developing capacity in some fields.

Moreover, the higher education sector, including research, also plays a specific role in any capacity development strategy. First, domestic researchers and academics should help design the national development strategy by exploring the costs and benefits as well as the feasibility of alternative policies. Second, an essential feature of capacity building strategies lies in the establishment of continuous monitoring and evaluation systems based on clear indicators to track and steer progress (see Box 2). Here again, academics and researchers are well equipped to contribute to this task, as it is the case in many developed countries. When it is carried out in the higher education sector, this evaluation benefits from an open and contradictory scientific debate and allows for shedding light on many possible consequences of the policy. But even if it is carried out outside the academic sector, this policy assessment requires a highly educated workforce people, typically domestic tertiary-level graduates. For example, according to Schultz (1999), there lacks an information base to set human resource priorities for Africa and allocate on a firm foundation public resources among human capital resource development programmes. Foreign scholars and academics can help a developing country to build this capacity, but this imported capacity is generally insufficient and not in the best position to gather data and design an evaluation framework.

The importance of education and higher education can be quickly highlighted with one example: trade capacity building. Trade capacity building encompasses several distinct and complementary activities: developing the domestic capacity for the design and implementation of a coherent trade strategy; developing the capacity of domestic firms and others to engage in international trade; enhancing the collection, dissemination and analysis of trade-related information; developing the capacity to understand and negotiate trade agreements and to enter the multilateral trading system (see Figure 3 and OECD, 2001b, for more details).

Figure 3. An example of capacity building strategy: trade capacity building



Source : OECD, 2001b

All of these activities involve education, understood as teaching, learning and acquiring new skills. Some of this learning may best occur via learning by doing, although might also contribute helpfully: this is for example the case for the actual participation in international trade or for negotiating trade agreements. Some of these activities, like the analysis of trade-related information or the design of a coherent trade strategy, can definitely gain from academic and research institutions, as acknowledged in Figure 3. Moreover, cross-border education is a very effective and widely used means to help developing countries build capacity, especially via the training of a handful of indigenous civil servants and lead stakeholders that are meant to train or teach others in their country: external technical assistance is currently the most widely used form of development-oriented cross-border education. The growth of formal cross-border education may significantly complement this limited effort, for example (in the case of trade) with foreign business administration, international relations or international

economics programmes as far as general education is concerned, but also with other related vocational and training programmes.

4. Why build capacity in tertiary education in developing countries?

Why invest and develop capacity in tertiary education? Often affected by severe fiscal and budgetary constraints, developing countries face difficult priority choices in the design of their national and sectoral capacity building strategies. Before considering the possible role of cross-border provision to build capacity in tertiary (or, more broadly, post-secondary) education, they must first consider what role tertiary education should have in their education capacity building strategy. Before focusing on cross-border provision, this section recalls the main reasons to invest in tertiary education and argues that all developing countries should devote some effort to build capacity in this area—although it does not say what the level of this investment should be.

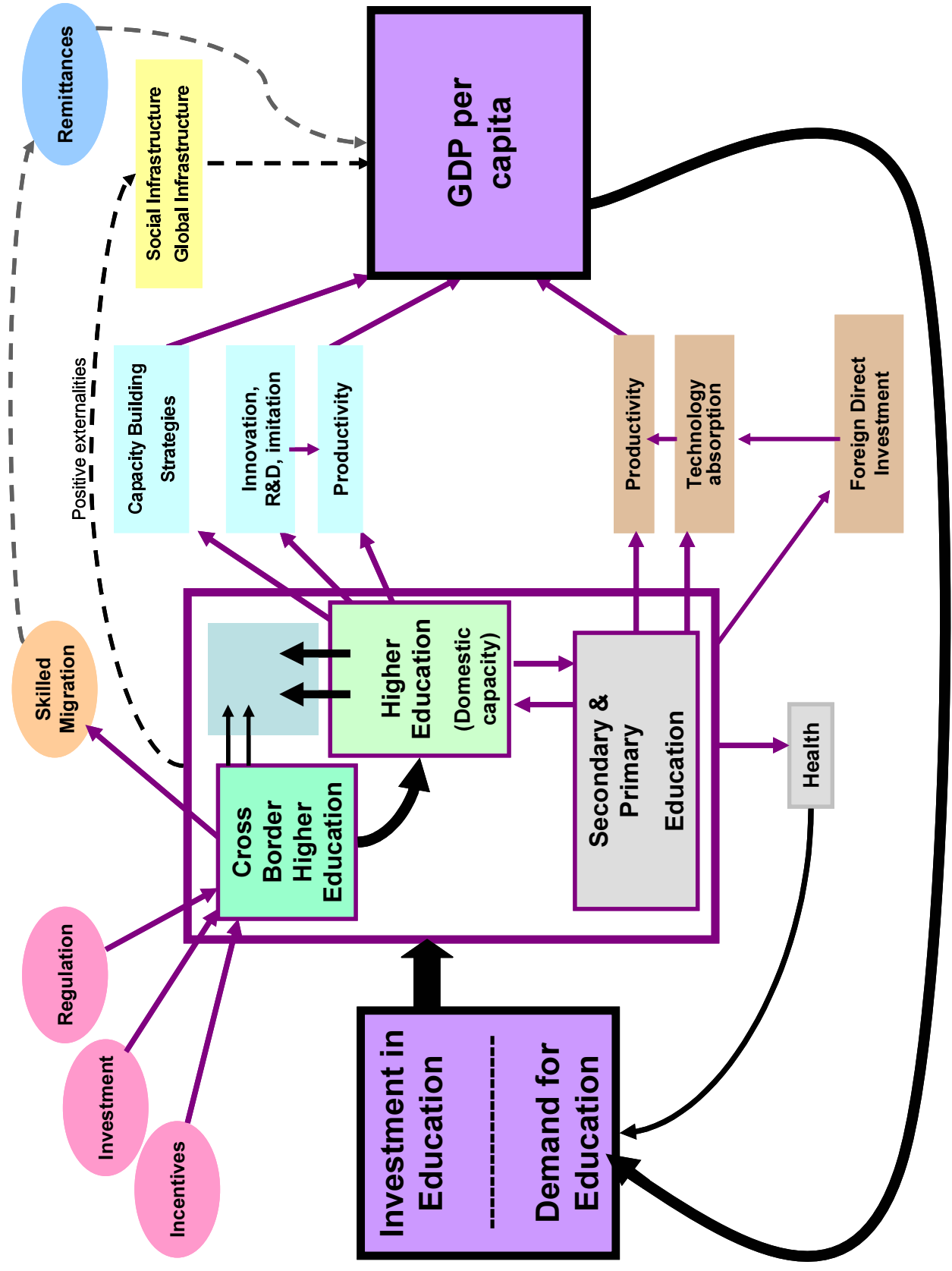
One consequence of the former section is that some capacity in tertiary education is necessary in any country to contribute to the design of its capacity building strategies and to the construction of an information base for monitoring its progress. But others reasons relate to the support of the primary and secondary education system as well as to the contribution of tertiary education to economic growth and development.

The contribution of tertiary education to economic growth

As education has been recognised as a human right by the international community and “basic education for all” is one of the internationally agreed Millennium Development Goals, the importance of education for development hardly needs discussion. Education is widely seen as a good in itself and one of the “primary goods” all people are entitled to in democratic societies. Understood as a road to freedom, development policies can certainly not neglect education and treat it as a luxury in the context of developing countries as it enhances people’s “personal capabilities” which are seen as fundamental objective of development (Sen, 2001; Sen and Williams, 1982). A host of basic ethical, humanistic and political reasons justify investment in education in all countries in the world.

While the importance of education goes well beyond economic considerations, there is also a host of economic and social reasons for developing capacity in education. Education is widely considered as a significant engine of economic growth. The estimated long-run effect of one additional year of education in the OECD area generally falls between 3% and 6% (OECD, 2004c). What role does tertiary education play in the development process? The few economic studies which attempted to weigh the impact of different levels of education on economic development have shown that the impact of education differs according to countries’ stages of development, although explanations of the differences differ (Pritchett, 2001; Hall and Jones, 1999; Hanushek and Kimko, 2000; Krueger and Lindahl, 2001). According to Gemmell (1996), tertiary education is more important in OECD countries, while secondary and primary education contribute the most to growth in the intermediate and poorest countries, respectively. This does not imply, however, that tertiary education does not play a role in developing countries.

Figure 4. Cross-border Education in Capacity Building



First, individuals get important private returns from tertiary education: generally, the higher their educational attainment the higher their wages and their likelihood to be employed. Individual returns are typically much higher in developing countries than in OECD countries where primary and secondary educational are very high. In the former, the wage difference between someone with tertiary and secondary educational attainment is generally much higher than in the former—that is, more than twice higher in developing countries whereas it is higher 30 to 80% more in OECD countries. (Unesco/OECD, 2002; OECD, 2004c). Private returns from education mainly benefit individuals and gives them incentives to invest education.

At the macro level, recent advances in the growth theory have brought human capital to the fore. Two main mechanisms explain how the stock and/or growth of human capital can impact o growth and economic development (Aghion and Howitt, 1998; Sianesi and Van Reenen, 2003; de la Fuente and Ciccone, 2002).

First, a rise in education could have a once and for all impact on economic growth: it would lead to a rise in the level of output of the economy (Lucas, 1988; Mankiw and al., 1992). The output growth is then proportional to the growth of education. A developing economy could thus develop by increasing its quantity of human capital, defined e.g. as the educational attainment of its population. All other things remaining the same, a developing country would then catch up with developed countries once it has accumulated the same amount of human capital. Additional education would indeed raise the overall productivity, which corresponds to the micro-evidence of a positive correlation between higher educational attainment and higher wage (and thus, in principle, marginal productivity). Here, tertiary education plays the same role as any other levels, except that it is easier for a developing country to raise its primary and secondary educational attainment than its tertiary educational attainment in the short and medium run. This could also be more effective as primary and secondary education might be more attuned to the economic structure of the country (the usefulness of skills in an economy depends on the demand for these skills).

Second, a rise of human capital could have a permanent effect on economic growth. Human capital is seen as a determinant of the *growth rate* of the economy rather than just a determinant of its growth (or level of GDP). This implies that human capital allows developed countries to grow more rapidly than developing countries and that the gap between them could continue to widen if developing countries were not to catch up in terms of human capital. The underlying mechanism is the following: growth is driven by physical capital investment, which is in turn driven by innovation, by investment in research and development (R&D) generating ideas for new designs or goods (Romer, 1990, 1993; Aghion and Howitt, 1998). For this to happen, a country needs a population with different levels of education, but tertiary educational attainment is particularly important. Researchers and highly skilled workers drive innovation, and possibly technology transfer, but an educated workforce with lower educational attainment is also necessary to absorb the new technologies. Another close explanation views education (and more broadly human capital) as a facilitator of transfer technology from “innovating countries” to “imitating countries”. The larger the stock of educated labour countries with lagging technological capacity would have, the more easy for them to catch up on the more effective technologies and develop (Barro, 1991; Benhabib and Spiegel, 1994). Although basic and secondary education improves the returns of R&D activities, tertiary education and R&D activities are crucial in economic development. In line with this view, the World Bank has recently highlighted the role of tertiary education in developing countries to construct knowledge societies and create local innovation networks (World Bank, 2003).

Third, education (including tertiary education) can have positive social externalities modifying the country at society level: it contributes to *social* capital as well as *human* capital (OECD, 2000). Education contributes to better health, higher life expectancy, lower crime, better parenting, better governance, enhanced trust, etc. (World Bank, 2003).

Supporting primary and secondary education

Tertiary education is also important in an education capacity building strategy because it supports the primary and secondary levels of education. The training of teachers and school principals, the curriculum design and reform, the educational research and innovation, are primarily the responsibility of tertiary education. A strong tertiary education is thus necessary for quality primary and secondary education sectors.

Figure 4 summarises the role of education and tertiary education in a national development strategy and anticipates on the possible role of cross-border provision in a country's capacity building strategy for tertiary education.

5. Why resort to cross-border education as part of a capacity building strategy?

Three main reasons can lead developing countries to resort to cross-border education as part of a capacity building strategy: increase the *quantity*, the *quality*, or the *variety* and *relevance* of their domestic tertiary educational provision. In many cases, cross-border education may be a means to achieve the three goals at once.

Expanding access to tertiary education

Many developing countries lack of domestic capacity in tertiary education and face a problem of unmet demand. In the case of emerging economies, which are generally middle-income countries, a rapid economic growth has made national capacity insufficient to cope with the growing demand from a growing middle class for tertiary (or post-secondary) education. This can also be the case in low income developing countries which managed to increase their participation in primary and secondary education significantly over the past decades, especially through an increase in female participation.

While levels of participation in tertiary education are uneven among OECD countries, almost every second young person (45%) in the OECD area will enter general higher education programmes during his/her lifetime, assuming that current entry rates continue, compared to 26% in the 12 non-OECD countries participating in the World Education Indicators programme⁴ for which information is available. On average in OECD countries, a 17-year old can expect to receive 2.6 years of tertiary education, as compared to 1.2 years on average in the 19 countries participating in the WEI programme. Although considerable progress has been achieved in participation in and access to education in developing countries, it remains limited, especially at the upper secondary and tertiary levels that are ultimately crucial for economic development (World Bank, 2002).

As Table 2 shows, further increases are needed before developing countries approach the stock of human capital available in OECD countries (UNESCO /OECD, 2002; OECD, 2000). While the growth of enrolment rates at tertiary level has been similar across countries (except for lower middle income countries where it has been slower),

4. Nineteen countries participate in the OECD/UNESCO World Education Indicators (WEI) programme: Argentina, Brazil, Chile, China, Egypt, India, Indonesia, Israel, Jamaica, Jordan, Malaysia, Paraguay, Peru, Philippines, Russian Federation, Thailand, Tunisia, Uruguay and Zimbabwe.

there is still an important gap between high income and low income countries in terms of participation in tertiary education: about 45% of the corresponding age group participated in tertiary education in high income countries, against 8% in low income countries (and 24% and 32% in lower and upper middle income countries, respectively).

In this respect, cross-border post-secondary education appears as a means to increase *rapidly* access of domestic students to post-secondary education. Education (and, more generally, human capital) requires human capital to be produced. The less human capital in a country, the less it is able to produce new human capital. The less people with tertiary educational attainment in a country, the less it is able to raise the tertiary educational attainment of its population. Developing countries with a low stock of tertiary-level graduates may not be able to develop their tertiary education system as quickly as needed in order to catch up with developed countries, even when they have the financial resources to do so. They can thus use cross-border tertiary education to train their workforce for the economy but also for their domestic tertiary education system, which would thus develop more rapidly.

Increasing the variety and relevance of tertiary education

Cross-border education may also offer students a wider range of study opportunities than those available in their home country in domestic educational institutions. Notwithstanding the increase in the variety of offerings for domestic students, cross-border education may also help to adjust rapidly the relevance of the domestic tertiary educational provision, especially in the fields identified as the most important for the overall national capacity development strategy.

Small countries or countries with small tertiary education systems cannot always afford to offer the whole range of fields domestically. Small OECD countries like Luxembourg or Iceland have (for example) traditionally used cross-border mobility to complement domestic capacity in specific fields.

Because of their history, some countries may have the capacity to enrol all its domestic students, but not in fields that are the most relevant to their economy or capacity building strategy. They may thus lack capacity in some fields, e.g. agriculture, business or engineering. As shown above, the lack of capacity in a specific field is often mirrored by a lack of education capacity in this field; setting up new educational programmes to build human capital in this field is always one component of a capacity development strategy in this field. For the reasons mentioned above, cross-border education can help to build domestic educational capacity more rapidly than if the country were to rely on its (low) stock of human capital in this field. As noted above, training enough people able to contribute to the country's capacity development strategy, to establish systems of monitoring and evaluation to steer progress is an important aim of any tertiary education system, which often lack those of developing countries.

Improving the quality of tertiary education

In some cases, developing countries do not face a problem of quantity but of quality of their domestic tertiary educational provision. Although there is little evidence on the relative quality of tertiary education systems, many experts that the quality of tertiary education needs significant improvement in developing countries (World Bank, 2002). The underlying reasons are manifold: developing countries may not draw on a large enough critical mass of researchers and tertiary educated people; they have insufficient financial resources to attract and retain the best academics; they lack resources to offer

Table 2. Participation in education by country's level of income: Gross enrolment rates

	Primary 2002	Secondary 2002	Tertiary 1980	Tertiary 1990	Tertiary 2002		Primary 2002	Secondary 2002	Tertiary 1980	Tertiary 1990	Tertiary 2002
Lower-Income						Lower-Middle Income					
Afghanistan	23	12	-	2	-	Albania	-	-	5	7	-
Angola	-	19	0	1	-	Algeria	108	72	6	11	-
Bangladesh	98	47	3	4	6	Armenia	96	87	-	20	26
Benin	104	26	1	3	-	Azerbaijan	93	80	24	24	23
Bhutan	-	-	-	-	-	Belarus	110	84	39	48	62
Burkina Faso	44	-	0	1	-	Bolivia	114	84	15	21	39
Burundi	71	11	0	1	2	Bosnia/ Herzegovina	-	-	-	15	-
Cambodia	123	22	0	1	3	Brazil*	148	108	11	11	31
Cameroon	107	33	2	3	5	Bulgaria	99	94	16	31	-
Central African Republic	66	-	1	2	-	Cape Verde	123	66	-	-	4
Chad	73	-	-	1	-	China	-	-	2	3	-
Comoros	90	28	-	0	-	Colombia	110	65	9	13	24
Congo, Dem. Rep.	-	-	1	2	-	Cuba	100	89	17	21	27
Congo, Rep.	86	32	5	5	4	Djibouti	40	20	-	-	1
Cote d'Ivoire	80	-	3	3	-	Dominican Republic	126	67	-	20	-
Equatorial Guinea	126	30	-	-	-	Ecuador	117	59	35	20	-
Eritrea	61	28	-	-	2	Egypt, Arab Rep.	-	-	16	16	-
Ethiopia	64	19	0	1	2	El Salvador	112	56	9	16	17
Gambia, The	79	34	-	-	-	Fiji	109	80	2	8	-
Ghana	81	38	2	1	3	Georgia	92	79	30	37	36
Guinea	77	-	5	1	-	Guatemala	103	33	8	8	-
Guinea-Bissau	-	-	-	1	-	Guyana	-	-	3	6	-
Haiti	-	-	1	1	-	Honduras	106	-	7	9	14
India	-	-	5	6	-	Indonesia*	111	58	4	9	12
Kenya	96	32	1	2	4	Iran, Islamic Rep.	92	81	-	10	19
Korea, Dem. Rep.	-	-	-	-	-	Iraq	-	-	9	13	14
Kyrgyz Republic	102	85	16	14	44	Jamaica	101	84	7	7	17
Lao PDR	115	41	0	1	4	Jordan	99	86	13	16	31
Lesotho	124	34	1	1	2	Kazakhstan	99	89	34	40	39
Liberia	-	-	-	3	-	Kiribati	-	-	-	-	-
Madagascar	104	-	3	3	2	Macedonia, FYR	-	-	28	17	-
Malawi	-	-	0	1	-	Maldives	125	66	-	-	-
Mali	-	-	1	1	2	Marshall Islands	-	-	-	-	-
Mauritania	86	22	-	3	3	Micronesia, Fed. Sts.	-	-	-	-	-
Moldova	85	72	30	36	29	Morocco	107	-	6	11	10
Mongolia	99	76	22	14	35	Namibia	106	61	-	-	7
Mozambique	99	13	0	0	-	Paraguay*	112	64	9	8	m
Myanmar	90	39	5	4	11	Peru	-	-	17	30	-
Nepal	122	44	3	5	5	Philippines*	112	82	24	28	52
Nicaragua	105	57	12	8	-	Romania	-	-	12	10	-
Niger	40	6	0	1	1	Russian Federation	114	92	46	52	68
Nigeria	96	-	3	4	-	Samoa	103	75	-	5	7
Pakistan	-	-	-	3	-	Serbia/ Montenegro	-	-	-	18	-
Papua New Guinea	77	23	2	3	-	South Africa	105	86	-	13	15
Rwanda	117	14	0	1	-	Sri Lanka	110	81	3	5	-
Sao Tome and Principe	126	39	-	-	1	Suriname	126	74	-	-	12
Senegal	75	19	3	3	-	Swaziland	100	45	4	4	5
Sierra Leone	-	-	1	1	2	Syrian Arab Republic	112	45	17	18	-
Solomon Islands	-	-	-	-	-	Thailand*	98	-	15	17	47
Somalia	-	-	-	3	-	Tonga	112	100	-	-	3
Sudan	59	32	2	3	-	Tunisia*	112	79	5	9	28
Tajikistan	107	82	24	22	15	Turkey*	94	76	5	13	20
Tanzania	70	-	0	0	-	Turkmenistan	-	-	22	22	-
Timor-Leste	143	35	-	-	-	Ukraine	90	97	42	47	57
Togo	124	-	2	3	-	Vanuatu	112	29	-	-	4
Uganda	136	-	1	1	3	West Bank and Gaza	-	-	-	-	-
Uzbekistan	103	99	28	30	9	Lower middle income	106	73	15	17	24
Vietnam	103	70	2	2	10						
Yemen, Rep.	81	-	-	4	-						
Zambia	79	-	1	2	-						
Zimbabwe	99	43	1	5	4						
Low Income	92	38	4	4	8						

	Primary 2002	Secondary 2002	Tertiary 1980	Tertiary 1990	Tertiary 2001		Primary 2002	Secondary 2002	Tertiary 1980	Tertiary 1990	Tertiary 2001
Upper-Middle Income						High Income					
American Samoa	-	-	-	-	-	Andorra	-	-	-	-	-
Antigua and Barbuda	-	-	-	-	-	Aruba	115	101	-	-	29
Argentina*	120	100	22	39	59	Australia*	102	154	25	35	65
Barbados	108	103	15	27	39	Austria*	103	99	22	35	35
Belize	-	-	-	1	-	Bahamas, The	92	91	17	19	-
Botswana	103	73	1	3	5	Bahrain	98	95	5	18	-
Chile*	103	85	12	21	43	Belgium*	105	154	26	40	32
Costa Rica	108	67	21	27	21	Bermuda	-	-	-	-	-
Croatia	96	88	19	24	36	Brunei	106	88	1	4	13
Czech Republic*	104	95	17	16	30	Canada*	100	106	57	95	m
Dominica	-	-	-	-	-	Cayman Islands	-	-	-	-	-
Estonia	103	110	25	26	-	Channel Islands	-	-	-	-	-
Gabon	134	51	-	-	-	Cyprus	-	-	4	13	-
Grenada	-	-	-	-	-	Denmark*	102	128	28	36	44
Hungary*	102	98	14	14	56	Faeroe Islands	-	-	-	-	-
Latvia	99	93	24	25	-	Finland*	102	126	32	49	72
Lebanon	103	77	30	29	45	France*	105	108	25	40	37
Libya	114	105	8	15	58	French Polynesia	-	-	0	1	-
Lithuania	104	98	35	34	-	Germany*	103	99	-	34	32
Malaysia	95	70	4	7	26	Greece*	97	96	17	36	m
Mauritius	106	80	1	4	11	Greenland	-	-	-	-	-
Mayotte	-	-	-	-	-	Guam	-	-	-	-	-
Mexico*	110	73	14	15	26	Hong Kong, China	-	-	10	19	-
Northern Mariana Islands	-	-	-	-	-	Iceland*	-	-	20	25	61
Oman	83	79	0	4	7	Ireland*	119	-	18	29	38
Palau	-	-	-	-	-	Isle of Man	-	-	-	-	-
Panama	110	69	21	21	-	Israel*	114	93	29	34	50
Poland*	100	101	18	22	67	Italy*	101	96	27	32	44
Saudi Arabia	67	69	7	12	22	Japan*	101	102	31	30	41
Seychelles	116	110	-	-	-	Korea, Rep.*	100	94	15	39	49
Slovak Republic*	103	87	-	19	40	Kuwait	94	85	11	-	-
St. Kitts and Nevis	-	-	-	-	-	Liechtenstein	-	-	-	-	-
St. Lucia	111	86	-	-	-	Luxembourg*	-	-	3	6	m
St. Vincent	101	72	-	-	-	Macao, China	104	87	-	25	66
Trinidad and Tobago	105	70	4	7	7	Malta	-	-	3	13	-
Uruguay*	108	101	17	30	30	Monaco	-	-	-	-	-
Venezuela, RB	106	69	21	29	18	Netherlands*	108	124	29	40	54
Upper middle income	104	85	15	19	32	Netherlands Antilles	104	73	-	-	14
						New Caledonia	-	-	-	6	-
						New Zealand*	99	113	27	40	76
						Norway*	101	115	25	42	62
						Portugal*	121	114	11	23	m
						Puerto Rico	-	-	42	45	-
						Qatar	106	90	10	27	23
						San Marino	-	-	-	-	-
						Singapore	-	-	8	19	-
						Slovenia	100	106	20	24	-
						Spain*	107	114	23	37	48
						Sweden*	110	149	31	32	69
						Switzerland*	107	100	18	26	33
						United Arab Emirates	92	79	3	9	-
						United Kingdom*	101	158	19	30	45
						United States*	100	94	56	75	42
						Virgin Islands (U.S.)	-	-	-	-	-
						High income	104	107	20	30	45

Note: OECD data correspond to net rather than gross entry rates. These ratio are typically slightly lower than gross ratios but more precise. The gross enrolment rate is the ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. The net enrolments rate only considers the enrolment of children of the official school age.

Source: Unesco Institute for Statistics; *OECD Education database for tertiary enrolment rates in 2002, see *Education at a Glance 2003*

competitive teaching and research facilities; they are less taking part in international networks of knowledge than developed countries; they generally have a shorter academic tradition and thus less accumulated learning experience; finally, they might use less efficiently their human capital in tertiary education than developed countries, as it seems to be the case at the economy level.

How can developing countries improve the quality level of their academia? Cross-border education may offer a partial answer, via the mobility of people, but also increasingly the mobility of programmes and institutions.

Here again, a critical mass of quality academics is required to raise the level of quality in tertiary education: when it is not available domestically, quality cross-border educational provision can help reach this goal. Domestic academics and graduate students can go abroad to receive an education of better quality or develop their competences before coming back to work as an academic in their country. Foreign academic staff can also be encouraged to come to teach and possibly research in one's country. Some developing countries may however lack the assets to attract good academics if they have an insufficient national research capacity. Academic exchanges geared to improving or maintaining quality in tertiary education and research are common practice within the OECD area.

Mexico is one example of countries using academic mobility to improve the quality of its higher education. Between 1996 and 2002, the share of the Mexican full-time academic staff holding a degree rose from 30% to 65%. Universities have achieved this increase through an Institutional Enhancement Integral Programme (PIFI) aiming *inter alie* at improving the quality and qualifications of the faculty through new recruitments and in-service training. The latter included the possibility to study abroad, especially at doctorate level⁵.

Cross-border education via programme and institution mobility can be another way to improve the quality of domestic educational provision. Foreign programmes delivered at local institutions or foreign institutions operating in the student's country can give a better quality education or training than domestic programmes in specific fields. At their best, these programmes can give developing countries contact with the most recent knowledge by international standards and thus help train an effective workforce for the economy and a quality faculty for the domestic tertiary education system. Moreover, domestic educational institutions can benefit from foreign programmes and institutions through spillovers: partnerships or foreign programmes may help them to build capacity for more efficient teaching and research—but also for a more effective and cost-efficient organisation of their higher education institutions and sector.

6. How can different forms of cross-border education contribute to building capacity in higher education?

Once they have identified what they expect from cross-border education, developing countries should ask themselves what are the possible costs and benefits of the different forms of cross-border education, which forms they would like to promote in which context, what benefits they may expect from them—and what risks they might incur. It is therefore important to first examine the different risks and benefits associated with these forms.

5. Cf. Mexican presentation at the OECD/Norway forum on educational services

Student and academic mobility

Student and academic mobility is a good way to build capacity in tertiary education at the individual level. Mobile students and academics can access better quality courses and research facilities and come back with newly acquired skills and experience in their country. Encouraging and supporting domestic students to study abroad is probably the best way to get a well-trained international workforce which could improve the quality and quantity of human capital in the economy as well as in the domestic education sector. This is true for academics too, who can thus access international networks of knowledge in which many developing countries do not participate much. This allows them to be at the top of their profession. Moreover, mobility enables a cultural experience that may lead them to look at their country in a different way, especially at the society level; it may give better linguistic skills than cross-border education without people mobility; finally, mobility is more likely to lead to the creation of an international network of elites relying on personal ties between professionals. In principle, arguments for the development of student and academic mobility thus abound. Similar reasons explain why many developing countries show a strong interest in the worldwide facilitation the temporary mobility of persons to supply services (OECD/World Bank/IOM, 2004d).

One limitation of student and academic mobility lies in its cost, which may be unaffordable for students from developing countries. Access to student mobility partly depends on the receiving country's fee policy and standard of living, but it generally represents a very expensive investment. Given their limited income, government can only support a handful of students. Most students self-finance their mobility, but this possibility is limited to a small number of families. Differences between the cost of living and studying in the country of origin and in the host country (most likely an OECD country) probably make families' economic backgrounds decisive. Low- or even average-income families cannot afford cross-border student mobility in most cases. While gross national income (GNI) per capita (*i.e.* average income per person) in 2001 was USD 890 in China and USD 460 in India, the yearly median cost of living and studying for a bachelor's of business degree amounted to about USD 12 300 in Australia, USD 13 800 in Canada, USD 19 000 in the United Kingdom and between USD 20 200 (public institutions) and USD 34 300 (private institutions) in the United States (IDP Education Australia and AEI, 2001). Even in countries where international students do not pay any tuition fee (e.g. Norway or Germany) or just a small one (e.g. France and Spain), the cost of living makes the access to their higher education system difficult for a student coming from a developing country's middle-income family.

The other main drawback of student and academic mobility is the possible risk of brain drain. An underlying assumption of the reasoning is that mobility is temporary rather than permanent, and that the experience and skills acquired abroad will eventually feed the developing country's faculty and economy. However, this may not be the case, especially in a context where an increasing number of developed countries try to attract and retain skilled students, academics, and, more generally, skilled professionals to work in their economy (OECD, 2004a). Moreover, in countries where education is largely publicly funded, the non-return of highly educated students and academics to their country of origin represents a loss on investment, with the country of origin covering the cost of their education and the country of destination reaping the benefits. It is difficult to evaluate the real cost of skilled emigration given that skilled diasporas may generate economic changes in their home country through investment and business links. Would emigrants with tertiary educational attainment have contributed more to the economic and academic development of their home country by returning or by staying abroad?

Developing countries have different attitudes towards those migration patterns: while some countries like India, China, Philippines or Malaysia, encourage the temporary emigration of their professionals, others (e.g. Caribbean and African countries) consider brain drain as a major issue for their economic development.

Programme and institution mobility

An increasing number of students are being offered, and taking advantage of, a new option – taking a degree or other post-secondary course offered by a foreign university without leaving their home country. This can be in the form of a particular programme offered, for example by e-learning, or where the foreign institution is physically present in the student's country, such as a US university opening up a campus in Asia. Programme and institution mobility has grown over the past decade and is likely to meet a growing demand in the future. In the degree-granting sector, the growth of for-profit cross-border education through programme and institution mobility is mostly driven by “traditional” public or private not-for-profit educational institutions that increasingly offer private provision. Although such services might not offer students the same cultural and linguistic experiences as foreign study, they involve lower personal costs than studying abroad and can lead to beneficial spillovers in the receiving country's higher education sector.

Programme mobility is currently the second most common form of cross-border higher education after student mobility. It involves cross-border distance education, including e-learning, generally supplemented by face-to-face teaching in local partner institutions, but mainly takes the form of traditional face-to-face teaching offered via a partner institution abroad. The relationships between foreign and local institutions are regulated under a variety of arrangements, from development assistance to for-profit arrangements. Commercial arrangements are becoming prominent in the Asia-Pacific region, mainly through franchises and twinning arrangements. Under a franchise arrangement, a local provider is typically licensed by a foreign institution to offer whole or part of a foreign educational programme (generally leading to a foreign degree) under stipulated contractual conditions. Franchise arrangements do however take many other forms. Under a twinning programme, students are enrolled with a foreign provider and are taught a foreign syllabus; they carry out part of the course in the home country and complete it in the home country of the foreign institution. This form of cross-border education typically involves both student and programme mobility.

Institution mobility is still limited in scale, possibly because it involves more entrepreneurial risk, but it has become an increasingly important feature of cross-border education: it corresponds to foreign direct investment by educational institutions or companies. The typical form of institution mobility is the opening of foreign campuses by universities and of foreign learning centres by educational providers. It may also involve the establishment of a distinctly new rather than affiliated educational institution or the takeover of all or part of a foreign educational institution.

Programme and institution mobility represents an interesting opportunity for developing countries, which are generally the recipients of developed countries' educational programmes and institutions (although programme and institution mobility between developing countries also occurs).

First, this form of cross-border education is much cheaper than student mobility for students as well as for governments willing to support them. Potentially, they can allow a larger number of domestic students to participate in tertiary education, including working

people. When they are provided for-profit, foreign educational programmes are generally more expensive than private domestic programmes, so that they may still involve some inequitable distribution; however, they remain much cheaper than student mobility (generally involving large living costs and higher tuition fees).

Second, programme and institution mobility can alleviate the risk of brain drain because students do not leave their country (or do so for a short planned period of time). Moreover, the business of teaching foreign programmes can give new job opportunities for students who studied abroad (and are interested in a faculty position) and for mobile academics, and thus facilitate their return.

Third, programme and institution mobility can lead to beneficial spillovers in the receiving country's higher education sector because they can involve a close collaboration between higher education institutions from developed and developing countries. Foreign programmes are often taught in local higher education institutions and thus require a partnership that can help the receiving institution to build capacity in teaching and curriculum design. Foreign institutions opening campuses in developing countries are sometimes obliged to partner with local institutions in order to generate spillovers or/and to enrol some local staff. These spillovers are not only channelled through organisational learning but also through sectoral competition and learning since other domestic providers have to adjust to this new provision.

Fourth, when it involves research in the host country, institutions mobility can contribute to the development of a research capacity in the country. Even when they have an established tertiary education system, many developing countries lack a sufficient research infrastructure (e.g. Indonesia: see OECD, 2004a). Arguably, research in those foreign institutions represent an openness to international research and augment the critical mass of researchers and of research in the country—which are both important for a strong academic research and to foster innovations conducive to growth. Moreover, like domestic higher education institutions, they may contribute to regional development through links with local industry.

However, all these benefits cannot be regarded as automatic consequences of programme and institution mobility.

Being generally more expensive than domestic private education, foreign programmes can raise inequity issues, whereas a good distribution of human capital (and wealth) across the population is important for social reasons as well as for economic development. Moreover, while possibly alleviating the risk of brain drain, programme and institution mobility does not remove it altogether: getting more affordable foreign degrees at home could allow more graduates to emigrate subsequent to their studies, and thus contribute to a possible “brain drain” if this emigration is permanent rather than temporary. Here again, developing countries have different strategies in this respect: some countries regard the emigration of their professionals (e.g. nurses in Philippines) as brain circulation rather than drain while others (e.g. nurses in Jamaica) view and experience it as a net loss to their economy.

Finally, foreign programmes and institutions may in some cases not lead to any positive quality enhancement or spillovers in the host country. Many possible reasons could account for such a situation. At an institutional level, institutions may not maintain their quality of education when they operate abroad; local providers may not deliver the foreign programmes properly; rogue providers could disguise themselves as “foreign” institutions and programmes and take advantage of the lack of transparency about tertiary

institutions (and tertiary education systems) worldwide. At sector level, foreign programmes may also have adverse quality effects on the quality level of domestic provision, especially where foreign education tends to enjoy a good quality reputation in developing countries. In all these cases, foreign programmes and institutions would induce little quality improvement in the developing country's stock of human capital. What matters here is the relative quality of foreign programmes compared to domestic programmes in the developing country (rather than to the quality of similar programmes when they are delivered in the foreign country of origin). Spillovers and organisational learning may be more limited than one would expect, for example because institutions do not partner or also because partnerships are formal rather than effective.

7. The raise of commercial provision in cross-border education: good or bad?

Student, programme and institution mobility can be carried out under different arrangements: development assistance; academic partnerships and linkages; and trade. Under development assistance arrangements, institutions or students receive funding to deliver or undertake cross-border education. Academic partnerships are co-operative arrangements between educational institutions undertaking joint academic activities; international academic partnerships generally involve cross-border mobility of students, academics or programmes on a non-commercial basis⁶. But cross-border post-secondary education is also increasingly delivered for profit or through commercial partnerships: trade has become a major and increasingly prevalent feature of cross-border higher education in the last decade, especially outside Europe.

International students pay full tuition fees (including a small profit) in some OECD and non-OECD countries: student mobility is then governed by a commercial arrangement. As for programme and institution mobility, it is increasingly governed by commercial arrangements, especially in Asia. Many public universities operate as for-profit ventures once they cross their jurisdictional borders, so that foreign branch campuses mainly operate for-profit. In programme mobility, the relationships between foreign and local institutions are regulated under a variety of arrangements, from development assistance to for-profit arrangements. Commercial arrangements are becoming prominent in the Asia-Pacific region, mainly through franchises and twinning arrangements. Under a franchise arrangement, a local provider is typically licensed by a foreign institution to offer whole or part of a foreign educational programme (generally leading to a foreign degree) under stipulated contractual conditions. Franchise arrangements do however take many other forms. Under a twinning programme, students are enrolled with a foreign provider and are taught a foreign syllabus; they carry out part of the course in the home country and complete it in the home country of the foreign institution. This form of cross-border education typically involves both student and programme mobility.

Possible benefits of commercial provision of cross-border education

Commercial provision of cross-border post-secondary education can represent an opportunity for developing countries because it allows them to build capacity much more

6. In this paper, "academic partnerships" refer to non-commercial partnerships between educational institutions, in line with the common understanding of the term; however, "partnerships" (as opposed to *academic* partnerships) may refer to commercial arrangements between institutions. While commercial partnerships between education institutions may cover the same activities as "academic partnerships", the distinction reflects the conventional understanding of "academic partnerships" in the education community in most countries.

quickly than they could do with their limited domestic resources and/or with the help of development assistance, which tends to be limited and erratic (Table 2). All the benefits of cross-border education highlighted in the previous section can happen regardless of the contractual arrangement governing the educational provision.

Some education stakeholders consider the growing role of trade in cross-border higher education as a possible threat for developing countries. Given that educational institutions in developed countries often have a major comparative advantage over most institutions in emerging economies and developing countries in terms of quality, it is often argued that their presence might jeopardise the development of national university systems. This risk is much greater if cross-border education is delivered commercially as higher education institutions from developed countries get financial incentives to enter the developing countries' markets that are absent (or at least weaker) in academic partnerships and development assistance projects. The underlying assumption is that developing countries would end up with a higher education system dominated by foreign institutions and educational programmes, which could be problematic for cultural and political reasons. However, this will not necessarily be the case. While it may unsettle national systems, except for the local elite institutions, in the short term, recourse to foreign educational services may actually be a means of accelerating the development of a national university system in the medium term. Foreign educational programmes and institutions can provide training for future teaching staff and promote knowledge exchange via partnerships between domestic and foreign institutions. Foreign direct investment is, on the whole, greatly beneficial to the development of developing countries (OECD, 2002a), and this can also be the case in the education sector. There is no reason why academic staff trained through cross-border post-secondary education cannot work and develop a quality national post-secondary education system in their own country. The more trained the academic and managerial local staff, the more likely it is that such a system can be created. Where the alternative is to have a domestic system of poor quality or no system at all, (quality) commercial cross-border education might be preferable, at least in the short run.

Moreover, international trade in education services can help developing countries to build capacity in trade and to become exporters of education services themselves, possibly to developed countries, given that they benefit from a cost advantage. For example, as a net importer of higher education services, Malaysia is willing to become a net exporter of educational services, and there are some signs indicating that it is using effectively the knowledge and the expanded capacity gained from its imports of education services to build capacity in trade of education services. Malaysia wants to expand into the export market by attracting fee-paying students from the region, mostly from China and Indonesia (and increasingly from Pakistan and other Islamic countries which might be experiencing difficulties getting visas in the post-September 11 world). Between 2000 and 2001, the number of foreign students in Malaysia has thus been multiplied five-fold to 18 900. In 2003, the Ministry of Education appointed the Malaysian Education Service to promote Malaysian education in Indonesia. Malaysia, Singapore and Thailand increasingly see twinning programmes not just as a means to meet needs domestically but as a way to enhance their own capacity to export educational services to other countries. As a Muslim country where the cost of living is lower than in most OECD countries, Malaysia may indeed have a comparative advantage for Muslim students from Asia and can sometimes offer them a post-secondary education taught in English, possibly through a franchise agreement with a British, US or Australian university. Malaysia is also starting to attract Australian and New Zealand post-graduate students.

Caveats of trade provision in education

Commercial provision might have three adverse effects for developing countries: it may lack stability, raise quality and inequity issues.

Firstly, as in other sectors of the economy, foreign investment in educational services may raise issues of stability and continuity of provision. In the event of an economic crisis, foreign educational institutions may leave the country and threaten the stability and continuity of the higher education system. This is one of the major differences between foreign private investment and long-term public investment and a good reason for a country not to leave its entire post-secondary educational infrastructure to foreign direct investment.

Secondly, trade could exacerbate low quality provision in cross-border education (which does not imply that quality is lower when provided commercially than when it is not). When programme and institution mobility does not generate income, post-secondary education institutions have no incentive to lower their quality standards: they tend to partner with good quality partners and/or to deliver education at their home quality standards. However, given the costs involved by such activities, institutions may in some cases have difficulties in keeping up these standards. When programme and institution mobility generates money (whether subsidies or profits), the possibility of misconduct is greater. Although students or importing countries may be more vigilant if they pay full cost for the educational services, the quality of education is not easily assessed by students. Education is typically a service involving asymmetric information between teachers and learners, institutions and students: institutions have better information than students on the quality of their teaching. This is why reputation plays such an important role in education. National students have better access to reliable information on educational institutions and have a much better understanding of this information than international students. Hence, the risk of receiving poor quality education is greater in cross-border provision than in domestic provision of education. The relative opacity of information at the international level gives degree mills more opportunities in cross-border provision: actually, they typically take the form of (fake or true) “foreign” for-profit institutions. Again, this does not imply that quality of cross-border post-secondary education is higher under not-for-profit than under for-profit provision, but just that the incentives for misconduct (*i.e.* to lower their standards of quality) are higher. Programme and institution mobility carry greater quality risks than student mobility, because they are new, less stable and often currently do not fall within the scope of the quality assurance and accreditation systems (OECD, 2004b). As we will see in the next section, these risks can however be tackled by appropriate quality assurance policies.

Thirdly, although it brings greater diversity and choice for students, cross-border tertiary education can raise the inequity of tertiary education participation in developing countries. As already noted, cross-border education via student mobility is generally accessible only to financially supported students or students from high income backgrounds. Although cross-border education via programme and institution mobility is cheaper, it is generally more expensive than private domestic education. In the absence of public support, it might thus expand access to tertiary education for a small part of the population and widen the gap between students from advantaged and disadvantaged backgrounds. Besides being unfair, too inequitable a distribution of income, which is reinforced by inequity of access to tertiary education, does actually hamper long-run economic development (Engermann and Sokoloff, 2002; Easterly, 2002). This is why one capacity building principle lies in ensuring sustained beneficial impacts on disadvantaged and marginalised groups and on future generations (see Box 1). Wherever possible,

funding domestic students to access cross-border education via programme and institution mobility could help alleviate inequity in participation.

Trade and development assistance: communicating vessels?

In line with the former argument, a major concern relating to the growth of trade in cross-border post-secondary education is that it may only benefit developing countries that are already developed enough economically to attract a foreign supply of education. In order to attract foreign direct investment in education or foreign educational providers, countries must have a large enough solvent demand for post-secondary education (and a stable political and economic environment). Actually, most of the commercial provision of cross-border tertiary education occurs in emerging economies in Asia, the Middle-East and, to a lesser extent, Latin America (OECD, 2004a). This is often not the case in the least developed countries, where many attract only few foreign educational institutions even if they open their markets fully to foreign providers.

Having only a selective set of developing countries attracting foreign providers of education is not a problem in itself, as it is beneficial to them. The problem lies in the impact that the growth of trade in education services may have on donor countries' development aid policy in education, which remains crucial in these countries. The development of trade in cross-border educational provision could indeed lead to the progressive abandonment of development assistance programmes in post-secondary education in the least developed countries. This may hinder the development of a post-secondary education system in the least developed countries, and increase their educational gap with middle- and high-income countries. Drops in development assistance for post-secondary education for students from developing countries, in the form of scholarships or partial subsidisation of post-secondary education, may be detrimental to the poorest developing countries where the main problem for access to higher education is an inadequate level of economic development.

Thus, international trade in educational services represents opportunities but also presents challenges for developing countries, depending on their level of economic development. Table 3 shows that the bilateral development aid to post-secondary education from countries whose institutions are actively engaged in commercial cross-border post-secondary education is generally relatively low, except for New Zealand. This is clearly the case in Australia and the United Kingdom, arguably the most active countries in commercial provision of cross-border education (in relation to their size), where development assistance to post-secondary education has dropped significantly between 1995 and 2001. While the share of official development assistance to post-secondary education in all education development assistance decreased from 83% to 20% in Australia and from 24% to 2% in the United Kingdom, it increased on average in OECD countries from 16% to 47% over the same period. This is also possibly the case in the United States, where the official assistance to education has decreased (although the decomposition by level is unavailable for 1995). While the share of Canadian and Swiss development assistance to education has increased by 1% between 1995 and 2001, the 29% and 23% decrease of funding for post-secondary education in their educational development assistance (respectively) clearly indicates a shift of priorities towards basic education, possibly in relation to the inclusion of basic education in the Millennium Development Goals (but also to the development of revenue-generating activities in cross-border education). In Finland, where the overall assistance to education has risen by 2%, which has little (if any) commercial activity in cross-border education, the shift can be more readily attributed to a shift towards basic education. The data should be

interpreted with caution, however, given that development assistance (which often funds projects) is irregular⁷.

Table 3. Official Development Assistance (ODA) to post-secondary education and education (1995, 2001)

	ODA to post-secondary education (million current USD)		ODA to post-secondary education as % of GDP (current prices levels and exchange rates)		Share of ODA in education devoted to post-secondary education		Share of total ODA devoted to education		Total ODA as % of gross national income (total resource flows)	
	1995	2001	1995	2001	1995	2001	1995	2001	1995	2001
Australia	246.44	13.49	0.661	0.037	83%	20%	24%	9%	0.34	0.25
Austria	76.11	52.98	0.324	0.279	78%	80%	18%	13%	0.27	0.34
Belgium	47.79	39.85	0.173	0.175	63%	61%	14%	13%	0.38	0.37
Canada	100.94	50.48	0.174	0.072	71%	42%	9%	10%	0.38	0.22
Denmark	5.02*	10.05	0.033*	0.063	22%*	52%	5%	2%	0.96	1.03
Finland	5.54	0.21	0.043	0.002	37%	1%	7%	9%	0.31	0.32
France	m	415.38	m	0.315	m	54%	22%	24%	0.55	0.32
Germany	78.17	445.77	0.032	0.240	6%	78%	18%	16%	0.31	0.27
Greece	m	5.14	m	0.044	m	63%	34%	10%	m	0.17
Ireland	m	m	m	m	m	0%	18%	20%	0.29	0.33
Italy	67.5	12.99	0.062	0.012	100%	21%	6%	9%	0.15	0.15
Japan	223.82	401.87	0.042	0.096	14%	51%	9%	7%	0.27	0.23
Korea	m	m	m	m	m	0%	4%	8%	m	0.06
Luxembourg	m	m	m	m	m	m	12%	m	0.36	0.76
Netherlands	6.78	23.24	0.016	0.061	6%	11%	6%	9%	0.81	0.82
New Zealand	27.12	20.86	0.446	0.406	95%	74%	34%	33%	0.23	0.25
Norway	-	51.71	m	0.305	m	68%	3%	7%	0.86	0.8
Portugal	17.69	10.58	0.165	0.096	57%	34%	18%	17%	m	0.02
Spain	29.24	43.66	0.050	0.075	39%	31%	8%	11%	0.24	0.3
Sweden	16.73	15.97	0.067	0.073	17%	40%	8%	4%	0.77	0.77
Switzerland	9.65	5	0.031	0.020	41%	18%	3%	4%	0.34	0.34
Turkey	m	m	m	m	m	0%	m	40%	0.06	0.04
United Kingdom	40.06	3.65	0.035	0.003	24%	2%	10%	7%	0.29	0.32
United States	m	110.74	m	0.011	m	35%	5%	3%	0.1	0.11
DAC Country. Total	993.58	1733.62	-	-	16%	47%	11%	9%	0.39	0.36

* 1994 instead of 1995.

Source: OECD DAC statistical database.

It should be noted that development assistance to post-secondary education does not necessarily reflect countries' commitment to development assistance in education nor to development assistance in general: countries may have priorities other than education on

7. The drop in Italy should might be due to incomplete data as the country reported that all its development assistance was devoted to post-secondary education in 1995.

their development assistance agenda. For example, Denmark contributes more to development assistance (as a percentage of its GDP) than any other DAC member, but its development assistance to post-secondary education is inferior to that of other OECD countries, though increasing. In any case, Table 2 shows that development assistance for post-secondary education is generally very modest and has declined significantly in recent years. The share of development assistance devoted to education (all levels) has in fact also slightly declined from 11% to 9% between 1995 and 2001.

Trade or aid?

While the development of trade in education might have an adverse effect on development assistance disbursement to education in donor countries, decline in development assistance can be traced back to a number of other reasons than trade. Some doubts about the effectiveness of aid have been voiced over the past decade as the impact of development assistance on development appeared questionable (see Hudson, 2004, and Tarp, 2000, for a quick overview). Aid ineffectiveness has been attributed to the bad governance of some developing countries (Burnside and Dollar, 2000; Easterly and al., 2004; Dalgaard and al., 2004; Boone, 1996), to ineffective practices in the donor community, aid tying being the most widely criticised, to inappropriate allocation of aid assistance on political rather than economic grounds (Alesina and Dollar, 2000), etc. Again, the rise of the concept and of the principles of capacity building can be seen as a response to these critics.

In this context, trade could be seen as more effective and more development-friendly than non-commercial forms of partnerships, especially development assistance. Actually, a “trade is enough” policy has been prevalent from the eighties to the mid-nineties in development economics and in development policy agendas (Adelman, 2000). While there is still no definitive econometric evidence that trade liberalisation leads automatically to growth and economic development in (all) developing countries (Rodriguez and Rodrick, 2001), anecdotal evidence from Asian countries suggests that outward-looking and export-led economies have yielded more growth than less open economies (World Bank, 1993; World Bank, 2003). Although it is difficult to assess whether more developed economies are more open because they benefit more from trade or, conversely, it is because they are more open that they are more developed, there is neither quantitative nor anecdotal evidence that closed economies could lead more effectively to growth and economic development than open economies (Winters, 2004).

The very nature of trade actually embodies many (though not all) principles of capacity building. “Learning-by-trading” has become central to many contemporary treatments of trade and growth: the learning externalities of trade are an important theoretical argument for considering trade liberalisation as an engine of growth in developing countries. Some argue that trade is a means of knowledge circulation giving access to knowledge to all trading partners. Exports expose domestic firms to foreign knowledge and allow developing countries to reap benefits from foreign research and development (R&D): they may learn about new technologies and materials, production processes, or organisational methods. Imports of goods and services can also be seen as diffusing foreign R&D developed by trade partners: importing intermediate goods embodying foreign research and development correspond to a use of this technology by the importing country, which could affect positively its productivity (Grossman and Helpman, 1991; Coe and Helpman, 1995; Bayoumi, Coe and Helpman, 1999; Romer, 1993).

Like capacity building (and cross-border education), trade helps development by giving developing countries access to (mainly foreign) knowledge. While it is more expensive for the importing country than aid, trade in post-secondary education does not make them dependent on developed countries' policy agendas: for example, aid assistance often has an indirect cost, either economic (*e.g.* tied aid) or political. Trade gives developing countries ownership and leadership on the cross-border education services they import. This might explain why "capacity building" is sometimes viewed as a synonym of "trade capacity building".

On the other hand, if capacity building principles are to be actually implemented by the donor community, developing countries would be better off if they could access cross-border education at lower cost through academic partnerships and development assistance. They could actually use development assistance revenues to finance their imports of commercial cross-border education services.

The reality is that it is often not their decision.

In certain cases, trade in educational services may be effective for quickly building capacity in post-secondary education. In other cases however, especially in the least developed countries, trade is not likely to happen. A decrease in development assistance could widen the gap in post-secondary education between the developed and the least developed countries. One way to limit this risk would be for donor countries to target development assistance for post-secondary education to the least developed countries, where there is no market for commercial cross-border provision.

8. What policies can help reap all the benefits of cross-border education and minimise its possible risks?

Overall, there are many reasons to maintain that cross-border tertiary education can effectively help developing countries to build capacity in tertiary (and post-secondary) education and subsequently foster their economic development (see Figure 4). Cross-border post-secondary education can help developing, emerging and transition economies to expand domestic access to post-secondary education, through outbound student mobility as well as through inbound programme and institution mobility; ultimately, a well-trained population contributes to growth and development.

Cross-border student and scholar mobility facilitates the building of international networks, which are essential to academic knowledge as well as, more generally, to the creation of national innovation systems and to international business. Partnerships of local and foreign universities in programme and institution mobility may induce positive spillovers and can help improve the quality of local provision; a good quality and large enough post-secondary education system favours the return of sufficient numbers of highly skilled emigrants.

While all kinds of contractual arrangements can yield to those benefits, commercial provision of cross-border post-secondary education allows the building of capacity more quickly than with domestic or development assistance resources only and grants receiving countries more negotiating power to dictate their conditions. It is however not likely to be affordable to the poorest developing countries, unless they are able to use their development assistance funds for this purpose.

If they decide to recourse to cross-border tertiary education to build capacity and complement domestic provision, developing countries face several policy challenges. The

benefits that they can reap from cross-border do indeed not follow automatically from cross-border provision. As described above, they should put in place a framework facilitating:

- Participation of their nationals in cross-border education and participation of foreign programmes and institutions in their tertiary education sector;
- Relevance of cross-border education;
- Actual spillovers in the domestic higher education sector;
- Quality provision in cross-border education;
- Limitation of possible brain drain.

Developing countries should try to ensure that cross-border education meets their quality requirements, that their domestic students get the right information when they enrol in a foreign programme or institution, and, finally, that foreign programmes and institutions meet their needs and lead to actual spillovers in the domestic higher education system. The two first challenges can be tackled with an appropriate national quality assurance framework whereas the third challenge needs a regulation of foreign educational provision in the receiving country. Enhancing participation of domestic students to cross-border education can rely on several policy instruments: one is the recognition of foreign degrees; another is the extension of grants to all forms of cross-border education. Finally, policy tools to prevent a possible brain drain can also lie in the recognition of qualifications acquired abroad foreign degrees or to policies facilitating the return of mobile students. However, the mobility of highly skilled people actually depends on many factors, some of which are not under governments' control.

Quality assurance

In the past 20 years, the number of agencies, networks and initiatives which focused on quality assurance at national levels has grown considerably. National quality assurance and accreditation systems are increasingly necessary to monitor not only the quality of higher education nationally but also the delivery of it across borders. More than 60 countries worldwide (others are in the process) have established national systems, as an external quality assurance system is increasingly seen as essential for establishing credibility of a national higher education system (OECD, 2004b). But most national systems of quality assurance and accreditation often focus exclusively on assuring the quality of programmes delivered in their country by their traditional domestic institutions. The challenge for the current systems is to cover foreign institutions and for-profit providers by broadening the scope of existing systems or by establishing new systems specifically for them (Middlehurst and Woodfield, 2003; Campbell and Middlehurst, 2003).

The lack of comprehensive frameworks for co-ordinating various initiatives at the international level, together with the diversity and unevenness of quality assurance and accreditation systems at the national level, creates gaps in the quality assurance of higher education across borders. It makes students and other stakeholders more vulnerable to low-quality provision of cross-border higher education. The issue is even more complex for online delivery across borders—the Internet does not have any physical borders and the control of electronic communication (on a geographical basis) is difficult.

Developing countries which resort to cross-border tertiary education to build capacity should make sure that the foreign institutions and providers deliver quality programmes

that are in line with their needs. In this respect, establishing transparent and clear quality assurance and accreditation frameworks for national and foreign institutions is very important. Given that developing countries often lack capacity in quality assurance, they will often need to build capacity in quality assurance, by training a number of experts in this field but also possibly by pooling their resources and capacity at the regional (supranational) level (Lenn, 2003). Helping domestic students to get more transparent information on foreign educational systems and on the quality of foreign institutions can also be very helpful.

There are many initiatives both at national and international levels to improve quality assurance, accreditation and recognition of qualifications of cross-border provision. One is a joint initiative by UNESCO and the OECD on developing non-binding guidelines on “Quality provision in cross-border higher education”. The main goals of this initiative are to protect students against misleading information and low-quality provision; to make qualifications readable, transparent and stronger in their international validity and portability; to increase transparency and coherence of recognition procedures and to intensify international co-operation among national quality assurance and accreditation agencies⁸.

Regulation of cross-border mobility of programmes and institutions

Making sure that foreign provision is consistent with one’s national objectives and that foreign provision of tertiary education induces positive spillovers goes beyond quality assurance. Developing countries should thus also set up a framework to regulate foreign programmes and institutions and ensure that they meet their national needs and objectives. These frameworks should serve these goals while remaining attractive to cross-border providers. For example, a promising avenue to foster beneficial spillovers is to give incentives to foreign institutions and providers to partner with local institutions. Many middle-income developing countries that wish to reap the possible benefits of cross-border post-secondary education, under commercial as well as non-commercial provision, are promoting partnerships between their educational institutions and those in the OECD area. To operate in China for example, foreign institutions are obliged to forge links with domestic ones to promote knowledge transfer. Countries willing to build capacity in research could for example favour institution mobility to programme mobility. Although national regulations should suit national objectives, developing countries could look at the existing examples of regulatory frameworks for cross-border education that are mostly to be found in the Asia-Pacific region (see OECD, 2004a for a survey). Indeed, Asia-Pacific countries have devised measures to regulate entry and operating conditions for foreign providers both to respond to, and to initiate and promote, the growth of programme and institution mobility as part of national development strategies.

Since 1997, Hong Kong, China has regulated the provision of foreign courses on its soil through the Non-local Higher and Professional Education (Regulation) Ordinance (Government of Hong Kong, 1997a, 1997b, 2001; French, 1999; McBurnie and Ziguras, 2001). The legislation aims to protect Hong Kong students by guarding against the marketing of substandard non-local courses.

In Singapore, foreign institutions operating with local providers must apply for government approval, supplying details of course content, the status of the foreign

8. Further information on this initiative can be found on the following web-page:
www.oecd.org/edu/internationalisation/guidelines.

provider at home and the division of responsibilities between the foreign and local partners. Partnerships with local universities can only be created at government invitation (Singapore Ministry of Education, 2000; Ziguras, 2003).

Malaysia's requirements for foreign providers are set out in legislation dating from 1996 when the country opened its system to foreign branch campuses. There is a five-stage approval and review process, covering educational, business and legal requirements, for foreign providers seeking to establish as fully recognised operators. Addressing the concern to ensure the nation-building role of education, the Private Higher Educational Institutions Act (1996) stipulates the subjects that Malaysian citizens must pass in order to graduate, regardless of discipline (Kandasamy and Santhiram, 2000; McBurnie and Ziguras, 2001).

In Indonesia, programme mobility is a form of twinning: students can receive qualifications from both the local institution and the foreign provider, on condition that at least one semester is spent studying abroad in the foreign institution. According to the regulation enacted in 1999, co-operation should not be undertaken merely for profit and should be an "equal partnership" benefiting all parties and consistent with national and institutional priorities. It "must be harmonious with the direction of higher education policy in general, and [...] the strategic plan of the relevant higher education institutions". Furthermore, "co-operation [...] shall be prioritised in the fields in which graduates are especially required" (DGHEI, 2000).

Access and equity

The policies to facilitate access in cross-border education and promote equity in participation are mostly about funding and recognition of foreign degrees.

Recognition of degrees acquired abroad or in foreign institutions is important to facilitate study abroad periods and to allow students holding foreign degrees to work in their own country or, more generally, in the international labour market. Lack of recognition of foreign qualifications is an obstacle to cross-border education: in their home country, there may be a disincentive for students to study abroad if their qualifications may not subsequently be recognised in their own country. Also, students' options for undertaking further study abroad may be limited from the start if their basic home country qualifications are not recognised by the foreign institution for the purpose of enrolling in higher education or further training. Governments should thus attempt to engage in international dialogue and try to have their domestic degrees recognised abroad. Participating in the above-mentioned international initiatives to improve quality assurance, accreditation and recognition of qualifications of cross-border provision is important in this respect.

As for participation in cross-border education, governments should try to support student and academic mobility as much as they can, and possibly allow domestic students to get public means-tested funding when they participate in recognised cross-border education via programme and institution mobility. While this might actually be difficult in many developing countries, because of the severe budgetary constraints and/or the impact of such measures on private domestic education, governments could at least put in place policies targeting disadvantaged groups of students (or academics in the case of mobility). Funding domestic students to participate in cross-border education delivered at home could be a wise use of limited financial resources.

Brain drain

Part of the growth in demand for cross-border education is migration-related, and increasingly so. Arguably, developing countries' students wish to study in OECD member countries partly for migration-related reasons. Moreover, OECD member countries increasingly promote cross-border student mobility as a way to attract a skilled workforce and build or maintain capacity for a knowledge economy. Although brain exchange occurs between OECD countries regardless of cross-border post-secondary education, *e.g.* as a result of career strategies, war, political, ethnic or religious persecution, cross-border post-secondary education is certainly a powerful catalyst of brain exchange. In the United States in 1999, some 25% of H1-B temporary visa holders had previously been enrolled in US universities (Cervantes and Guellec, 2002). Cross-border education may lead to brain drain in some cases. Instead of returning to their home country and contributing to its economic, social and academic development, international students may stay in the foreign country in which they studied, or move to another country after completion of their studies (post-docs, etc.). The departure of those human resources may represent a significant economic cost for the students' countries of origin, given that productivity and growth partly depend on the society's level of available human capital.

The mobility of highly skilled people cannot be understood simply as a one-way transfer of human resources and revenues from one country to another (OECD, 2002b). Highly skilled migrants do not transfer completely, as they often retain active links with their country of origin, reinvesting, sending remittances and sometimes migrating back. When there is insufficient demand for their skills in the labour market of their country of origin, developing countries may favour the outbound mobility of highly skilled people. Remittances are also a significant source of income for developing countries, although highly skilled workers seem to remit less than less skilled workers (ILO, 2003). While countries like India have strong evidence of the economic benefits coming from their skilled diasporas, a recent study covering selected developing countries could not marshal any clear evidence that skilled diasporas always contribute significantly to the growth of their domestic economies (ILO, 2003). But again, developing countries have different attitudes towards the mobility of their highly skilled people, as it can have very contrasted impacts according to the countries.

The United States is the main recipient of foreign students and also probably the main magnet for highly skilled migrants. The average stay rate⁹ of foreign doctoral recipients in science and engineering fields four to five years after graduation increased from 41% to 56% between 1992 and 2001. It rocketed from 65% to 96% for Chinese holders of doctorates, and increased from 72% to 86% for Indians. Stay rates vary considerably by country of origin and by field of study (Finn, 2003). In most cases, they do not decline significantly over time. They seem to partly depend on the economic development of the country of origin, although there appears to be no systematic pattern. China, India, Iran, Israel, eastern European countries, Greece, Argentina but also New Zealand, Canada and the United Kingdom have stay rates in the United States of over 50% five years after completion of the doctorate.

9. The "stay rate" does not measure whether foreign students stayed continuously in the United States, but how many foreign doctorate recipients from a specific year were in the United States a few years later. Some of those graduates may leave the country and come back. For example, the stay rate for the class of 1991 was 58% in 2001 but it would be 81.5% if the rate were to represent the proportion who had worked in the United States for at least one year during the 1992-2001 period (Finn, 2003).

Brain drain depends on factors that are to some extent beyond (democratic) governments' control (other countries' immigration and visa policies, competitiveness of the offers these highly skilled people can get in their country compared to foreign countries, etc.) or difficult to change in a short period of time: reversal of brain drain depends on the economic, social and political environment in the country of origin of the migrants. For example, the stronger the economic growth and the more globalised the economy, the greater the rate of return migration as skilled emigrants will not feel that they will drop out of the loop of their profession (Iredale and al., 2003).

However, in countries suffering from brain drain, government policies, notably tertiary education, science and technology policies, play a role in facilitating return migration, alongside the country's economic, social and political environment.

In the education sector, the return of highly skilled students and academics depends on the quality of the post-secondary education and research infrastructure, which can be improved thanks to cross-border post-secondary education. "Countries that have succeeded in fostering the return of skilled migrants have done so not just through specific return migration programmes but through long-term and sustained efforts to build the national innovation infrastructure" (Cervantes and Guellec, 2002). Investing in research infrastructure and grants builds local potential directly, and also indirectly, via feedback effects from cross-border capacity and higher graduate return rates. In turn, returning graduates build more cross-border collaboration and more national capacity in a continuous global feedback loop. Countries that augment local research capacity in their universities are best equipped to gain from internationalisation. And educational institutions operating in a foreign country are part of that country's local capacity (without being a substitute for domestic capacity building), and may offer opportunities for local academics or return of skilled graduates. Cross-border higher education offers one means of fast-tracking the development of university research. In Hong Kong, China and Singapore, international linkages between universities are now well established and contribute significantly to the development of local university research. International activity and national capacity in higher education are interdependent. China's policy effort to build 100 world-class universities can facilitate the return of highly skilled Chinese international students and academics, who will find work opportunities while maintaining contact with the best academics and scientists internationally. Science parks in Korea, India, Chinese Taipei, China or Costa Rica perform or have performed a similar role and have proved successful for building national innovation systems (World Bank, 2003; OECD, 2003a and b).

Moreover, governments can also use policies and programmes for cross-border education, with differential effects on return rates, to fashion national capacity selectively. For example, Malaysia secures very high return rates among government-sponsored students, mostly *bumiputra*, through the bonding conditions attached to the scholarship and through career prospects on return. The return rate among privately supported students with no career guarantees, mostly from Chinese and Indian families, is less favourable. China has taken various measures to encourage Chinese students to return after their studies abroad, for example through the establishment of an "Office for Returned Chinese overseas students" that offers Chinese students opportunities when they come back. Launched in 2000, Chile's Millennium Science Initiative proved successful in attracting back world-class Chilean researchers (World Bank, 2003). Brazil also has very high return rates (Finn, 2003; World Bank, 2003, p. 198).

Finally, the lack of recognition of the degrees acquired abroad by their citizens sometimes contributes to their non-return. This should be taken into account in the government's policy about recognition of foreign qualifications.

9. Conclusion

The rise of new forms of cross-border education and of actual capacity building approaches to cross-border education is too recent to yield definitive empirical evidence of its effectiveness as an economic development tool. However, there is already enough evidence that deliberate import strategies of cross-border education can be mainstreamed in national capacity building strategies.

Cross-border education can be a good capacity development tool for developing countries, for their tertiary education system but also, more broadly, for their economy. Cross-border tertiary education can help to expand the domestic access to tertiary education, to enhance the quality of tertiary education, and to increase its variety and relevance. A strong tertiary education system can support the overall education system in a developing country, improve the quality and quantity of its human and social capital, and subsequently contribute to a virtuous development circle (see figure 4).

Cross-border tertiary education also presents challenges, in relation to quality, access, equity, and migration. Each country has to consider how to use it in a wise way in order to reap its benefits and to minimise its risks. There is no blueprint in this respect: they have to scan globally and reinvent locally. All countries should be aware of the opportunities that cross-border tertiary education offers and should design a strategy in dealing with it—whatever that strategy may be.

References

- Adelman, I. (2000), "The role of government in economic development", in F. Tarp (Ed.), *Foreign Aid and Development. Lessons learnt and directions for the future*, pp. 48-79, Routledge, London.
- Aghion P. and Howitt P. (1998), *Endogenous Growth Theory*, MIT Press, Cambridge, MA.
- Alesina, A. and Dollar, D. (2000), "Who gives aid to whom and why?", *Journal of Economic Growth*, 5(1), 33-63.
- Arndt, C. (2000), "Technical co-operation", in F. Tarp (Ed.), *Foreign Aid and Development. Lessons learnt and directions for the future*, pp. 155-177, Routledge, London.
- Barro, R. J. (1991), "Economic growth in a cross-section of countries", *Quarterly Journal of Economics*, Vol. 106, 407-43.
- Bayoumi T., Coe D. and Helpman E. (1999), "R&D spillovers and global growth", *Journal of International Economics*, 47, 399-428.

- Benhabib, J. and Spiegel, M. (1994), "The role of human capital in economic development: evidence from cross-country data", *Journal of Monetary Economics*, 34, 143-173.
- Bolger, J. (2000), "Capacity Development: why, what and how", CIDA, Policy branch, Capacity Development Occasional series, Vol. 1, N°1.
- Boone, P. (1996), "Politics and the effectiveness of foreign aid", *European Economic Review*, 40, 289-329.
- Burnside, C. and Dollar, C. (2000), "Aid, policies and growth", *American Economic Review*, 90, 847-68.
- Campbell, C. and R. Middlehurst (2003), "Quality Assurance and Borderless Higher Education: Finding Pathways through the Maze", OBHE Report, August.
- Cervantes, M. and D. Guellec (2002), "International Mobility of Highly Skilled Workers: From Statistical Analysis to Policy Formulation", *International Mobility of the Highly Skilled*, OECD, Paris, pp. 71-98.
- Coe D. T. and Helpman E. (1995), "International R&D spillovers", *European Economic Review*, 39, 859-887.
- Dalgaard, C.-J., Hansen, H., and Tarp, F. (2004), "On the Empirics of Foreign Aid and Growth", *Economic Journal*, 114 (June), F191-216.
- DGHEI (Director General of Higher Education of the Ministry of National Education of the Republic of Indonesia) (2000), "Decision of the Director General of Higher Education of the Ministry of National Education of the Republic Of Indonesia No. 61/Dikti/Kep/2000 Regarding Guidelines for the Implementation of Cooperation Between Higher Education Institutions in Indonesia and Overseas Higher Education Institutions/Other Institutions".
- Easterly, W. (2002), "Inequality *does* cause underdevelopment", Center for Global Development, Working Paper n°1, http://www.cgdev.org/docs/cgd_wp001.pdf.
- Easterly, W., Levine, R. and Roodman, D. (2003), "Aid, policies and growth: comment", *American Economic Review*, 94(3), 774-780.
- Engerman S. and Sokoloff K. (2002), "Factor endowments, inequality, and paths of development among new world economies", NBER Working Paper n° W9259, www.nber.org/papers/w9259.
- Finn, M.G. (2003), "Stay Rates of Foreign Doctorate Recipients from U.S. Universities, 2001", Oak Ridge Institute for Science and Education, www.ornl.gov/orise/pubs/stayrate03.pdf
- French, N.J. (1999), "Transnational Education – Competition or Complementarity: the Case of Hong Kong", *Higher Education in Europe*, 24/2, pp. 219-223.
- Fuente (de la), A. and Ciccone, A. (2002), « Le capital humain dans une économie mondiale fondée sur la connaissance », European Commission, Brussels.
- Gemmell, N. (1996), "Evaluating the impacts of human capital stocks and accumulation on economic growth: some new evidence", *Oxford Bulletin of Economics and Statistics*, 58(1), 9-28.
- Government of Hong Kong (1997a), *Non-Local Higher and Professional Education (Regulation) Ordinance*, www.justice.gov.hk/

- Government of Hong Kong (1997b), *Implementation of the Non-local Higher and Professional Education (Regulation) Ordinance*, www.info.gov.hk
- Government of Hong Kong (2001), *Non-Local Higher and Professional Education (Regulation) Ordinance — List of Registered Courses*, www.info.gov.hk/emb/eng/prog_high/
- Grossman G. and Helpman E. (1991), *Innovation and Growth in the Global Economy*, Cambridge, MA: MIT Press.
- Hall R. E. and Jones C. I. (1999), “Why do some countries produce so much more output per worker than others?”, *Quarterly Journal of Economics*, February, 83-116.
- Hildebrand, M. and Grindle, M. (1995), “Building sustainable capacity in the public sector: what can be done?”, *Public Administration and Development*, Vol. 15, pp. 441-463.
- Hudson, J. (2004), “Introduction: Aid and Development”, *Economic Journal*, 114 (June), F185-190.
- ILO (International Labour Organisation) (2003), “Skilled Labour Mobility: Review of Issues and Evidence”, *Migration and the Labour Market in Asia: Recent Trends and Policies*, OECD, Paris.
- Iredale R., F. Guo and S. Rozario (eds.) (2003), *Return Migration in the Asia Pacific*, Edward Elgar, Cheltenham.
- Kandasamy, M. and R. Santhiram (2000), “From National Interest to Globalization: The Education System of Malaysia”, in K. Mazurek, M.A. Winzer and C. Majorek (eds.), *Education in a Global Society: A Comparative Perspective*, Allyn and Bacon, Boston.
- Knight, J. (2003b), “GATS, Trade and Higher Education. Perspective 2003: Where are We?”, *Observatory Report*, May, www.obhe.ac.uk/products/
- Krueger A. B. and Lindahl M. (2001), “Education for growth: why and for whom?”, *Journal of Economic Literature*, 34 (December), 1101-1136.
- Lenn, M. P. (2003), *Strengthening World Bank Support for Quality Assurance and Accreditation in Higher Education in East Asia and the Pacific*, CQAIE, Report to the World Bank.
- Lucas, R. (1988), “On the mechanics of economic development”, *Journal of Monetary Economics*, 22, 3-42.
- Mankiw, N. G., Romer, D., and Weil, D. (1992), “A Contribution to the Empirics of economic growth”, *Quarterly Journal of Economics*, 107, 407-437.
- McBurnie, G. and C. Ziguas (2001), “The Regulation of Transnational Higher Education in Southeast Asia: Case Studies of Hong Kong, Malaysia and Australia”, *Higher Education*, 42/1, pp. 85-105.
- Middlehurst, R. and S. Woodfield (2004), “The Role of Trans-national, Private and For-Profit Provision in Meeting Global Demand for Tertiary Education: Mapping, Regulation and Impact”, Report to UNESCO and the Commonwealth of Learning.
- NCN (New China News agency) (2003), “Regulation of the People’s Republic of China on Sino-Foreign Cooperation in the Running of Schools”, 24 March.
- OECD (2000), *The Well-Being of Nations*, Paris.

- OECD (2001a), *Strategies for Sustainable Development: Guidance for Development Co-operation*, The DAC Guidelines, Paris.
- OECD (2001b), *Strengthening Trade Capacity for Development*, The DAC Guidelines, Paris.
- OECD (2002a), *Foreign Direct Investment for Development. Maximising Benefits, Minimising Costs*, Paris.
- OECD (2002b), *International Mobility of the Highly Skilled*, OECD, Paris.
- OECD (2003a), *Trends in International Migrations*, OECD, Paris.
- OECD (2003b), *Migration in Asia*, OECD, Paris.
- OECD (2004a), *Internationalisation and trade in higher education. Opportunities and challenges*, Paris.
- OECD (2004b), *Quality and Recognition in Higher Education: the cross-border challenge*, Paris.
- OECD (2004c), *Education at a Glance. OECD Indicators 2004*, Paris.
- OECD / World Bank / IOM (2004d), *Trade and Migration: Building Bridges for Global Labour Mobility*, Paris.
- Olsen, A. (2002), *E-learning in Asia: Supply and Demand*, Report for the Observatory on Borderless Higher Education, London.
- Pritchett, L. (2001), "Where has all the education gone?", *World Bank Review*, 15(3), 367-391.
- Rodriguez F. and Rodrik D. (2001), "Trade policy and economic growth: a skeptic's guide to the cross-national evidence", in B. Bernanke and K. S. Rogoff, eds., *Macroeconomics Annual 2000*, 261-324, Cambridge, MA: MIT Press for NBER (or NBER Working Paper n°W7081).
- Romer P. M. (1989), "Human capital and growth: theory and evidence", NBER Working Paper n°3173.
- Romer P. M. (1993), "Two Strategies for Economic Development: Using ideas and Producing Ideas", *Proceedings of the World Bank Annual Research Conference 1992*, supplement to the *World Bank Economic Review*, March, 63-91.
- Schultz, T. P. (1999), "Health and schooling Investments in Africa", *Journal of Economic Perspectives*, 13(3), 67-88.
- Sen, A. (1999), *Development as freedom*, Alfred Knopf, New York.
- Sen A. and Williams, B. Ed. (1982), *Utilitarianism and beyond*, Cambridge.
- Sianesi, B. and Van Reenen, J. (2003), "The Returns to Education: Macroeconomics", *Journal of Economic Surveys*, 17(2), 157-200.
- Singapore, Ministry of Education (2000), *Information Notes: Registration of Distance Learning Programmes*, Private Schools Section, Ministry of Education, Singapore.
- Tarp, F. (ed.) (2000), *Foreign Aid and Development. Lessons learnt and directions for the future*, Routledge, London

- Temple, J. (1999), "Generalisations that aren't? Evidence on education and growth", *European Economic Review*, 45, 905-918.
- Thorbecke, E. (2000), "The development doctrine and foreign aid 1950-2000", in F. Tarp (Ed.), *Foreign Aid and Development. Lessons learnt and directions for the future*, pp. 17-47, Routledge, London.
- UNESCO/OECD (2002), *Financing Education – Investments and Returns: Analysis of the World Education Indicators*, UNESCO/OECD, Paris.
- United Nations Development Programme (UNDP) (2003), *Ownership, Leadership and Transformation. Can we do better for capacity development?*, Edited by Carlos Lopes and Thomas Theisohn, Earthscan, London.
- United Nations Development Programme (UNDP) / Global Environment Facility (GEF) (2003), Capacity development indicators, UNDP/GEF Resource Kit n°4, http://www.undp.org/gef/undp-gef_monitoring_evaluation/sub_me_policies_procedures.html.
- Winters, L. A. (2004), "Trade liberalisation and economic performance: an overview", *Economic Journal*, 114 (February), F4-F21.
- World Bank (1993), *The East Asian Miracle: Economic Growth and Public Policy*, Oxford University Press, New York.
- World Bank (2002), *Constructing knowledge societies: new challenges for tertiary education*, World Bank: Washington, DC.
- World Bank (2003), *Closing the Gap in Education and Technology*, Washington D.C.
- Ziguras, C. A. (2003), "The Impact of the GATS on Transnational Tertiary Education: Comparing Experiences of New Zealand, Australia, Singapore and Malaysia", *Australian Educational Researcher*, 30(3).