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Tertiary Education Policy in Comparative Perspective

What Is Happening in Other Countries and Why It Matters

In the early 1990s the international edition of *Newsweek* featured the article “The Best Schools in the World,” with the cover subtitle “And What We Can Learn from Them” (Greenberg and Kantrowitz, 1991). The story drew attention to countries—more accurately schools within countries—that seemed to have succeeded in providing a “good education” or to have demonstrated “pockets of excellence”—from early childhood education in Reggio Emilia in Northern Italy, to secondary schooling (especially the “dual system” of coursework and job training) in Germany, to graduate schools in the United States. The *Newsweek* article is important not so much for the specific examples of “good education” (at least a few of which were judged to be inadequate on some criteria by the end of the decade) but rather because the comparative examples show what can be gained from a closer study of worldwide developments in tertiary education policy.¹

An immediate observation is that the distinctiveness of the “pockets of excellence” identified on the list has in some measure lessened over the past 10 years. At the tertiary level, the relative gap between the United States and other advanced, democratic, market-economy countries² has narrowed in terms of the scale of access and participation rates, volume of basic and applied research, diversity in institutions and students, and sharing of costs. Such convergence means that policy thinking and approaches in other countries and systems are now more relevant to policy development in the United States. In this respect, there is now “competition” between these countries in a different sense: for vision and for the creative, strategic, and effective

policies that foster and support advances toward that vision. Increasingly, that vision reflects the high stakes now at play at subnational, national, regional, and global levels. A key conclusion is that tertiary education provision and the institutions concerned are gaining attention in policy portfolios other than education or research, and in the supra-national policies of the European Union and trade agreements.

This paper has two parts. In the first part, I situate countries with respect to knowledge and skill levels and patterns of participation in tertiary education and adult education and training. The comparative data suggest differences and trends that relate to the choices authorities have made with regard to the shape of education and training policies, including tertiary education policies. In the second part of the paper, I draw attention to policy directions and initiatives that, while specific to the national settings and circumstances in which they are implemented, signal a growing interest outside of education or research ministries in the growth, provision, recognition, financing, and benefits of tertiary-level learning.

Economic Growth and Tertiary Education: A Broader Policy Interest

The familiar contours of the arguments that bring together education and economic growth require only brief summary. At the Organisation for Economic Cooperation and Development (OECD) during the 1990s, we discussed economic restructuring and jobs (e.g., OECD, *The Jobs Study*, 1993, and its follow-ups) and competitiveness (e.g., *Benchmarking the Netherlands: Test of Dutch competitiveness*, by the Dutch Ministry of Economic Affairs, 1995; “White paper” of the U.K. government, *Competitiveness: Creating the enterprise center of Europe*, Prime Minister’s Office, 1996). By the end of the decade, our discussions focused on economic growth. A reanalysis

of the sources of economic growth suggested that improvement in human capital (as measured by increasing levels of educational attainment) was a common factor behind growth in all OECD countries over the 1980s and 1990s.³ These findings are presented in Table 1, where increases in human capital are shown to have contributed a

Table 1. Decomposition of changes in annual average growth rates of GDP per capita: Estimated effect of changes in explanatory variables to changes in output per capita growth rates over the period 1980s to 1990s¹

Contribution from:	% change in output per capita growth rate						
	Investment share	Human capital	Population growth	Variability of inflation	Size of government ²	Trade exposure	
Australia	0.80	-0.16	0.17	0.46	0.05	0.03	0.57
Austria	-0.23	0.37	0.31	-0.07	0.12	-0.02	0.37
Belgium	0.37	0.37	0.45	0.17	0.26	0.06	0.24
Canada	-0.60	0.24	0.19	-0.10	0.01	-0.02	0.60
Denmark	0.34	0.10	0.20	0.03	0.07	0.01	0.22
Finland	-0.90	-0.91	0.44	-0.03	0.05	-0.13	0.33
France	0.04	0.01	0.35	0.27	0.23	-0.02	0.42
Greece	-0.06	na	0.57	0.09	-0.12	-0.05	0.54
Ireland	1.21	-0.17	0.54	-0.75	0.35	0.13	0.46
Italy	-0.06	0.05	0.84	0.36	0.18	-0.01	0.49
Netherlands	0.97	-0.04	0.43	0.32	0.07	0.10	0.25
New Zealand	-0.26	0.33	0.21	-0.47	0.68	0.06	0.44
Norway	0.61	-0.21	0.27	0.15	0.14	-0.41	0.30
Portugal	-0.15	0.25	0.32	0.02	0.42	-0.20	0.53
Spain	0.46	0.33	0.90	0.46	0.25	-0.12	0.67
Sweden	-0.64	-0.19	0.42	-0.05	-0.20	0.02	0.33
Switzerland	-0.58	0.02	0.26	0.09	-0.09	-0.07	0.14
United Kingdom	0.01	0.08	0.44	0.05	na	0.03	0.25
United States	-0.19	0.19	0.07	-0.06	0.13	0.07	0.65

Source: OECD (2000a).

Note: The calculations are from decompositions of differences in growth rates based on the results of multivariate regressions. The sums of the contributions shown do not correspond to the change in output per capita growth rates because the estimated impact of initial levels of GDP per capita and the component unexplained by the regressions are not shown.

1. Changes in growth are based on differences in average growth in GDP per person of working age over each decade. The 1980s include the period 1981 to 1989; the 1990s cover the period up to 1997.
2. Government consumption as a percentage of GDP is used as a proxy for the size of government due to data inavailability. This variable is historically correlated in most countries with tax and non-tax receipts (as a share of GDP) for which, however, country coverage is more limited.

half percent or more to the average percentage change in the output per capita growth rate in Belgium, Finland, Greece, Ireland, Spain, Sweden, and the United Kingdom. The contribution to the change in the growth rate in the United States was more modest but positive. With the exception of trade exposure, other factors were variable in impact.

The contribution to economic growth seemed to emerge, in part, from changes in the structure of economies that made use of advanced-level skills and knowledge. Three facts suggest an “upskilling” process: (1) knowledge-based industries⁴ increased as a share of business sector value added and business sector employment; (2) the share of workers with tertiary education increased more rapidly than did their share of the overall population; and (3) “white-collar, high-skill”⁵ employment increased more rapidly than employment in other occupations in two-thirds of the OECD countries for which data are available (OECD 2001c). How far does completed tertiary-level education distinguish knowledge workers—

those in knowledge-economy jobs?⁶ A first set of calculations, presented in Table 2, show that a bit more than half (56 percent) of knowledge workers completed tertiary education. Another 17 percent demonstrated high levels of adult literacy, while completing no more than a full cycle of secondary education.

In light of these findings on country differences in the sources of economic growth and the emergence of a knowledge economy, how do OECD countries stack up in terms of literacy levels and patterns of participation in education and training?

Table 3 presents country-by-country results from the OECD Programme on International Student Assessment (PISA)⁷ for each of the three areas in which 15-year-olds were tested: reading, mathematics, and science. Results are shown separately for G-7 countries and for the rest of the OECD area. For both groups, high-performing countries appear before low-performing countries. In the ranking, countries can be further distinguished according to whether the country mean is significantly different from the overall OECD average. The United States falls into the group of countries that cluster around the overall country average. Among G-7 countries, Canada, Japan, and the United Kingdom are above that average; other OECD countries above the average are Australia, Austria, Finland, Korea, New Zealand, and Sweden.

These findings can be viewed against patterns of participation in tertiary education, presented in Table 4. Countries are ranked (separately, within the G-7 and the other OECD country groups) by expected years of tertiary education attainment. High rates of entry and years of attainment account for the leading position of the United States. Among G-7 countries, France, Japan and the United Kingdom also have high entry rates (particularly for the more vocationally oriented tertiary type B programs⁸). Other OECD countries with high entry rates or years of attainment are Denmark, Finland, Korea, New Zealand, Norway, Spain, and Sweden.

Table 5 shows country differences in literacy for adults. The mean scores for document literacy and quantitative literacy for the population aged 25 to

**Table 2. Education and literacy skills of knowledge workers:
Proportion of knowledge workers by education and literacy levels**

	Educational attainment	
	Upper secondary and below	Tertiary Literacy
Levels 1/2	6.9% (33.9%)	3.7% (2.3%)
Level 3	20% (31.3%)	17.5% (6.8%)
Levels 4/5	17.1% (16.4%)	34.8% (9.3%)

Source: OECD (2001c).

To read: Among knowledge workers, 6.9% are poorly educated and have low literacy skills. A higher proportion (34.8%) is highly educated and highly literate. The sum of all the figures gives the entire knowledge worker population (100%). For comparison purposes, the equivalent figures for nonknowledge workers are given in parentheses.

Adult literacy was assessed in 18 countries, between 1994 and 1998 using the International Adult Literacy Survey (IALS). Literacy scores for the document scale (used in this chart) are based on tests of the knowledge and skills required to locate and use information contained in various formats, such as official forms, timetables, maps, and charts. IALS collected biographical information, such as educational attainment, occupation, and job tasks, from each participating adult. In each country, samples of 2,500 to 6,000 adults were drawn to be broadly representative of the civilian, noninstitutionalized population aged 16 to 65. Response rates ranged from 45% to 75% across countries.

Table 3. Reading and mathematics literacy of 15-year-olds: Results from PISA 2000

	Reading literacy % at level 3 or above	Reading literacy % at level 5	Reading literacy mean score (std. error)	Mathematics literacy mean score (std. error)	Science literacy mean score (std. error)
G-7					
Canada	73	17	534 (1.6) a	533 (1.4) a	529 (1.6) a
Japan	72	10	522 (5.2) a	557 (5.5) a	550 (5.5) a
U.K.	67	16	523 (2.6) a	529 (2.5) a	532 (2.7) a
France	63	8	505 (2.7) -	517 (2.7) a	496 (7.3) -
U.S.	60	12	504 (7.0) -	493 (7.6) -	499 (7.3) -
Germany	55	9	484 (2.5) b	490 (2.5) b	487 (2.4) b
Italy	55	5	487 (2.9) b	457 (2.9) b	478 (3.1) b
Other OECD					
Australia	69	18	528 (3.5) a	533 (3.5) a	528 (3.5) a
Austria	64	9	507 (2.4) a	515 (2.5) a	519 (2.5) a
Finland	79	18	546 (2.6) a	536 (2.1) a	538 (2.5) a
Korea	76	6	525 (2.4) a	547 (2.8) a	552 (2.7) a
New Zealand	70	19	529 (2.8) a	537 (3.1) a	528 (2.4) a
Sweden	67	11	516 (2.2) a	510 (2.5) a	512 (2.5) a
Belgium	64	12	507 (3.6) a	520 (3.9) a	496 (4.3) -
Czech Rep.	58	7	492 (2.4) b	498 (2.8) -	511 (2.4) a
Denmark	59	8	497 (2.4) -	514 (2.4) a	481 (2.8) b
Iceland	64	9	507 (1.5) a	514 (2.3) a	496 (2.2) -
Ireland	71	14	527 (3.2) a	503 (2.7) -	513 (3.2) a
Norway	63	11	505 (2.8) -	499 (2.8) -	500 (2.7) -
Switzerland	68	9	494 (4.2) -	529 (4.4) a	496 (4.4) -
Greece	50	5	474 (5.0) b	447 (5.6) b	461 (4.9) b
Hungary	52	5	480 (4.0) b	488 (4.0) b	496 (4.2) -
Luxembourg	38	2	441 (1.6) b	446 (2.0) b	442 (2.3) b
Mexico	26	1	422 (3.3) b	387 (3.4) b	422 (3.2) b
Poland	53	6	479 (4.5) b	470 (5.5) b	483 (5.1) b
Portugal	48	4	470 (4.5) b	454 (4.1) b	459 (4.0) b
Spain	58	4	493 (2.7) b	476 (3.1) b	491 (3.0) b

Source: OECD (2001d).

a: above average; -: not significantly different than country average; b: below average

The assessments aimed to gauge the extent to which 15-year-olds understood key concepts, mastered certain processes, and applied knowledge and skills in certain situations. Assessments in 2000 covered literacy in reading, mathematics, and science.

34 were obtained from assessments administered in the International Adult Literacy Survey (IALS).⁹ Among the G-7 countries, Germany recorded the best results, and the United States recorded the weakest results. Other OECD countries with relatively higher levels of adult literacy include the Czech Republic, Denmark, Finland, the Netherlands, Norway, and Sweden.

Table 6 shows the participation of adults in continuing

education and training for a set of OECD countries. Among G-7 countries for which data are available, Germany, the United Kingdom, and the United States show relatively high rates of participation for both completers of secondary education and graduates of tertiary education. Other OECD countries with high rates of participation of adults in continuing education and training include Denmark, Finland, New Zealand, Norway, and Sweden.

Table 4. Access to and participation in tertiary education, 2000

	Net entry rate, tertiary type B	Net entry rate, tertiary type A	Expected years, tertiary education
G-7			
United States	14	43	3.4
Canada	na	na	2.8
Japan, a	32	39	na
France	21	37	2.6
United Kingdom	28	46	2.5
Italy	1	43	2.3
Germany, b	13	30	2.0
Other OECD			
Finland	na	71	4.1
Korea, a	50	45	3.7
Norway	7	59	3.2
Australia	na	59	3.0
New Zealand	37	70	3.1
Sweden	7	67	3.1
Spain	15	48	3.0
Greece	na	na	2.8
Belgium	34	36	2.7
Denmark	35	29	2.6
Poland, a	1	62	2.6
Netherlands	1	51	2.4
Portugal	na	na	2.4
Austria	na	33	2.4
Ireland	26	31	2.3
Iceland	10	66	2.3
Hungary	2	65	2.0
Switzerland	14	29	1.7
Czech Republic, a	9	25	1.5
Slovak Republic, b	3	37	1.5
Mexico	1	26	1.0
Turkey	9	21	0.8

Source: OECD (2001b).

The net entry rate is the sum of net entry rates for all ages. For a given age, the net entry rate is obtained by dividing the number of first-time entrants to each type of tertiary education of that age by the total population in the corresponding age group (multiplied by 100).

a: gross entry rate for tertiary-types A and B; b: gross entry rates for tertiary-type B. The gross entry rate is obtained by dividing all entrants, regardless of age, by the size of the population at the typical age of entry.

Expected years of tertiary education are calculated as the sum of net enrollment rates for people aged 17 and over (divided by 100). Figures refer to all tertiary education: type A, type B, and advanced research programs.

The comparative data can be read in a way that frames different possible orientations for education and training policies, including those applying to tertiary education. Policies allowing for extensive, relatively open provision of tertiary-level education (demonstrated by the entry rate and expected attainment figures) and of continuing education and training for adults could be seen, in part, as responses to relative performance gaps of those with lower secondary education (as shown in the PISA results) and in the skills and knowledge of adults (as shown in the IALS results). This describes the U.S. case. However, some countries appear to be making strong efforts to boost already relatively high levels of skills and knowledge in their populations. Finland and the United Kingdom, for example, have relatively strong PISA results *and* have expanded participation (rapidly, over the 1990s) at the tertiary level. Both countries have reasonably high levels of adult literacy *and* show relatively high rates of adult participation in continuing education and training.

When considered with the increased attention given to human capital and growth and the evolution of the knowledge economy, these comparative data provide background for looking more closely into policies having impact on tertiary education. Particularly in developed countries, policy development now reflects a recognition of tertiary education's growing role in the competition between national economies and, more specifically, in trade.

Tertiary Education: Policy Development from a Comparative Perspective

Policies directed at or affecting tertiary education continue to be formulated, implemented, and revised. A review of the reports of commissions, green and white papers, and legisla-

Table 5. Adult literacy for 25- to 34-year-olds: Results from the International Adult Literacy Survey (IALS), 1994–98

	Document literacy mean score (std. error)	Quantitative literacy mean score (std. error)
G-7		
Germany	301.9 (4.7)	306.9 (4.6)
Canada	289.0 (3.8)	291.4 (4.4)
United Kingdom	290.2 (5.6)	290.2 (5.7)
United States	270.0 (4.8)	272.2 (4.6)
Other OECD		
Czech Republic	307.1 (3.4)	321.8 (4.1)
Sweden	316.3 (2.4)	312.0 (2.6)
Denmark	307.4 (1.9)	307.5 (2.0)
Netherlands	309.0 (2.1)	305.6 (2.3)
Finland	310.0 (2.6)	299.6 (2.5)
Switzerland	292.6 (3.1)	297.7 (2.7)
Norway	301.2 (3.2)	295.7 (3.0)
Belgium	290.3 (5.0)	290.7 (5.8)
Australia	288.2 (2.3)	290.4 (4.4)
New Zealand	290.4 (4.4)	290.2 (5.3)
Ireland	281.8 (5.7)	289.1 (6.4)
Portugal	281.0 (4.0)	285.6 (4.6)
Hungary	260.6 (3.3)	280.6 (4.0)
Poland	259.8 (3.2)	270.1 (2.8)
Slovak Republic	254.9 (3.4)	264.3 (3.7)

Source: OECD (2001b).

Adult literacy was assessed in 18 countries between 1994 and 1998 using the International Adult Literacy Survey (IALS). Literacy scores for the document scale (used in this chart) are based on tests of the knowledge and skills required to locate and use information contained in various formats such as official forms, timetables, maps, and charts. Literacy scores for the for the quantitative scale are based on tests of the knowledge and skills required to apply arithmetic operations to numbers embedded in printed material, such as balancing a checkbook, figuring out a tip, completing an order form, or determining the amount of interest on a loan from an advertisement.

tive initiatives exhibit several features:

- In countries such as Australia, Denmark, Germany, Japan, and New Zealand, there is evidence of *sustained policy attention*. Sweeping reforms launched in the late 1980s in Australia and New Zealand were reviewed and, where found to be insufficient, revised during the 1990s and early 2000s. The Danish and Japanese experience is better characterized as a continuous process of reform, one that in Japan has taken on a sharper and potentially more profound edge with the proposal to change the legal

status of the national universities. In Germany, more substantial reform has come later, with policy initiatives from the mid-1990s still being pushed today.

- In countries such as Denmark, Ireland, the Netherlands, New Zealand, and the United Kingdom—and, in some respects, Germany and Japan—policy thinking and approaches have been *innovative*. In these countries, policy reflection and action represent substantial departures from long-standing policy approaches. Innovation can be seen in performance-based funding of institutions and students, student and family participation in financing, qualifications, quality and standards, and governance.

- In countries such as Australia, Ireland, Norway, the United Kingdom, and the United States, policy thinking has been *broadly based*. The issues identified for policy action are to some extent new to tertiary education, or at least new in the extent to which they are expressed in explicit terms. So, for example, in Ireland, Norway, and the United Kingdom, policy makers see conventional tertiary education as a means to address adult learning needs. In Ireland and the United Kingdom, important policy initiatives envisage tertiary education institutions as one of a much wider range of providers—and tertiary education as a part of, rather than apart from, other providers and learning.

Policies to Promote the Acquisition of Skills and Knowledge

Several recent initiatives shift existing policy frameworks and incentives from a focus on the tertiary education sector and institutions to a focus on learning through formal tertiary education study programs. Under these approaches, provision by tertiary education institutions becomes, if not more varied, then more closely linked to learning at other stages and in other settings.

One such policy initiative is voucher-type funding schemes, which Sweden and the United Kingdom have actively developed and implemented. In both countries,

Table 6. Continuing education and training participation rates, adults aged 25–64

	Secondary education completers (%)	Tertiary education graduates (%)
G-7		
United Kingdom	58	75
United States	46	65
Germany	45	64
Italy	37	52
Canada	25	43
Other OECD		
Denmark	59	75
Finland	48	72
Sweden	58	70
New Zealand	55	69
Norway	47	67
Australia	39	60
Portugal	39	55
Switzerland	44	55
Netherlands	42	52
Ireland	30	50
Czech Republic	36	49
Hungary	17	49
Belgium	28	47
Poland	23	37

Source: OECD (2011b). Data from International Adult Literacy Survey (IALS), 1994–98 and national household surveys on adult education and training.

the individual learning account (ILA) scheme supports participation in a wide range of learning activities, including programs at tertiary education institutions.

In the United Kingdom, the government managed the accounts, and during the first year contributed £150 to match £25 from the learner. To be eligible for the government contribution, the learner must have been in the labor force, not enrolled full-time, and not in a public training program. Third-party contributions to the account from an employer were possible, but account holders were obliged to treat those contributions as income subject to tax. In practical terms, the ILA scheme provided discounts on course fees, with higher discounts available if ILA holders entered IT or math courses. The U.K. ILA fits within a broader framework to support learning in the country, notably through the University

for Industry, an organization for open and distance learning that brokers—and in some cases commissions and assesses the quality of—all types of learning.

In Sweden, the government has approved a similar learning account scheme that would give account holders earned income tax relief but would tax the funds on withdrawal. The program would encourage withdrawals through a “competence premium,” a tax deduction of up to half the amount withdrawn to cover the costs of courses or training, irrespective of the provider. Thus far, no decision has been taken on which agency should administer Sweden’s ILA system. Indeed, four of the five options under consideration would involve two or three agencies, each with responsibility for particular functions. These programs’ similarity to lifelong learning tax credits in the United States is obvious, with one important difference: the Swedish and U.K. ILA schemes envisage a much wider selection of eligible providers and programs.

As with the U.S. program, these ILA initiatives are too new to assess, and their designs have evolved with growing experience and further reflection. For example, the U.K. program initially planned to establish bank accounts into which individuals and the government would deposit funds, but this idea was dropped because banks had little interest in managing a large number of relatively small accounts. In the United Kingdom, several cases of abuse by companies offering low value and poor quality learning, as well as evidence of more widespread fraud, led authorities to suspend, then close, the entire program. Sweden is developing a regulatory framework to prevent such abuses and to encourage activities that offer the promise of relatively high social rates of return. Notwithstanding these experiences, the schemes reflect efforts to mobilize new funds, or redirect existing funds, for learning activities and to shape the demand (content and timing) for those activities—including those offered in tertiary education institutions.¹⁰

Two more examples of policies seeking to promote learning in general—and study programs and tertiary education institutions indirectly and only in part—are qualifications authorities and qualifications frameworks. These arrangements bring together the authority for setting standards, approving certificate, diploma, and degree programs, recognizing acquired skills and competences,

Table 7. Foreign students in OECD countries, 1980–1999.

	Number		Index of growth (1980 = 1.0)
	1980	1999	
Australia	8,777	117,485	13.3
Japan	15,008	56,552	3.8
United Kingdom	56,033	209,512	3.7
Germany	61,841	178,195	2.9
New Zealand	2,464	6,900	2.8
Austria	12,885	29,819	2.3
United States	311,882	451,934	1.4
Canada	28,443	35,543	1.2
France	115,202	130,952	1.1

Sources: OECD (2002).

and auditing program and institutional performance based on academic or financial criteria. Such arrangements exist in a number of countries. The policies giving rise to the arrangements envisaged a “seamlessness” that would bring all programs—including tertiary-level programs—under the same oversight structure for standards and learning.¹¹

As initially conceived, the New Zealand Qualifications Authority (NZQA) assumed sole responsibility for operation of a qualifications framework through which all qualifications would be authorized and recognized. The program would register qualifications in terms of standards of competencies (further broken down into “unit standards”) for all levels and forms of education and training, and would give recognition to those who

Table 8. Share of foreign tertiary students studying abroad in OECD countries by region of origin (%)

Region of origin	1995 OECD countries in:				1999 OECD countries in:			
	Europe	EU	Americas	Asia-Oceania	Europe	EU	Americas	Asia-Oceania
	Europe	77	69	21	2	83	74	15
EU	78	70	21	1	84	77	15	2
Americas	34	32	62	4	40	38	55	5
Asia-Oceania	25	23	53	22	29	27	46	25
OECD	50	46	39	11	54	49	34	13

Source: OECD (2002).

To read: 77% of foreign students from all Europe were studying abroad in European OECD countries in 1995.

Table 9. Share of region of origin of tertiary education foreign students in six OECD Anglophone countries (%)

	U.S.		U.K.		Australia		Canada		New Zealand		Ireland		Total	
	1995	1999	1995	1999	1995	1999	1995	1999	1995	1999	1995	1999	1995	1999
Asia-Oceania	48	44	7	11	13	16	5	2	1	1.0	0.0	0.0	74	74
Americas	56	49	9	15	1	3	6	5	0.2	0.3	1.0	1.0	73	72
Europe	19	14	17	24	1	2	2	2	0.1	0.1	1.0	1.0	39	41
EU	16	12	20	28	1	1	5	2	0.1	0.1	1.0	1.0	42	44
OECD	34	31	12	14	7	8	4	2	0.4	0.5	0.4	0.5	58	56

Source: OECD (2002).

To read: 48% of foreign students coming from Asia and Oceania were studying in the United States in 1995.

could demonstrate specific competencies.¹² Via unit standards, the qualifications framework would register university studies in the same way as industry-training and school-level certificates. While New Zealand's qualifications framework could not easily apply the unit-standard approach to tertiary education degrees and qualifications, and while the NZQA has been recast in a different role with respect to tertiary education providers and programs, the progressive development of the qualifications framework revealed the interests of the prime minister's office and the finance, labor, and education ministries in establishing greater transparency and commonality in learning across all post-compulsory stages and in all forms.

Ireland's new Qualifications Authority takes a different approach, having the responsibility not only for ensuring recognition of qualifications—at inter-institutional, intra-institutional, and international levels—but also for establishing and maintaining quality and facilitating access, progression, transfer, and mobility (with special attention to individuals whose learning pathways might otherwise fall between the boundaries of institutions and subsectors). The legislation adopts “providers” as a generic reference to the institutional landscape and it retains the existing awards councils (further education and training; higher education and training).

Both the NZQA and the Irish Quality Authority exemplify a policy/government focus on learning that brings together and redefines issues of standards, quality assurance, and qualifications. They recognize and encourage learning, wherever and however it occurs. However, such an approach raises a question of ministerial oversight: Responsibility for programs and institutions is more clearly defined for the ministry of education, the research ministry, and the specialized ministries responsible for professional programs in specific fields. But, a focus on learning bridges these programmatic, structural, and policy boundaries. Implementation and oversight questions aside, the broader qualifications authority approach could allow for a much lighter regulation of providers and more attention to the outcomes and quality of what is offered.

Internationalization: Trade and Supra-National Policies Affecting Tertiary Education

The flow of students, staff, and services across borders is introducing a new dynamic in tertiary education, to some extent driven by increased policy attention outside of education (or higher education) and to some extent emerging apart from deliberate policies.

It will be helpful, first, to provide some details on the patterns and trends (OECD 2002):

- As Table 7 shows, for a subset of leading host countries, enrollments of foreign students roughly doubled from 1980 to 1999. Within this group, only Canada and France experienced lower relative increases than the United States.

- As Table 8 shows, from 1995 to 1999, OECD countries in the Americas (Canada, Mexico, and the United States) experienced a relative decline in the share of foreign student enrollment. OECD countries in Europe (EU countries in particular) accounted for most of this shift, increasing their market share from all regions. Asia-Oceania recorded increases in its share of the volume of foreign student flows from both within its region and from the Americas.

- Looking at only the six Anglophone OECD countries over this same period, Table 9 shows that Australia and the United Kingdom increased their shares of foreign student enrollments largely at the expense of Canada, the United States, and the rest of the OECD.

In some respects, these quantitative trends thus far could be described as somewhat less than meets the eye, at least in the aggregate. With the exception of just a few of the advanced, democratic, market-economy countries, and leaving aside the impact of the important EU project for mobility and integration, flows of foreign students have increased more or less in line with overall enrollment growth. Corporate and profit-making provision of education across borders (a share of which is organized in cooperation with conventional universities and colleges) tends to be aimed at professional and vocational-education needs. E-learning has not risen as rapidly as anticipated, perhaps partly owing to present weaknesses in national economies affecting demand and partly due to its inability to achieve substantial economies of scale for ter-

Table 10. Exports of educational services: \$US million (current prices) and as a percentage of total exports in services

	1970		1989		1997		2000	
	\$US million	% total service exports	\$US million	% total service exports	\$US million	% total service exports	\$US million	% total service exports
Australia	6	0.6	584	6.6	2,190	11.8	2,155	11.8
Canada	68	2.7	530	3.0	595	1.9	796	2.1
Mexico	na	na	na	na	52	0.5	29	0.2
New Zealand	na	na	na	na	280	6.6	199	4.7
Poland	na	na	na	na	16	0.2	na	na
United Kingdom	na	na	2,214	4.5	4,080	4.3	3,758	3.2
United States	na	na	4,575	4.4	8,346	3.5	10,280	3.5
Greece	na	na	na	na	Na	na	80	0.4
Italy	na	na	na	na	Na	na	1,170	2.1
Brazil	na	na	na	na	4	0.1	4	0.0
Venezuela	na	na	na	na	4	0.3	60	4.9

Source: OECD/CERI (2002).

Data refers to foreign tertiary students, except for Australia, Italy, and New Zealand, where foreign primary, secondary, postsecondary, vocational training, and language training students are included.

Poland: 1999; U.K.: Office for National Statistics; Brazil, Venezuela: International Monetary Fund.

tiary-level studies in all but a few fields (OECD 2002).

However, the data suggest a new dynamic characterized by growing competition and positioning in a global setting. Engagement in the global flow of students, faculty, research, and ideas is seen as a means to strengthen national economies through the training of home country students. There are substantial commercial gains at stake—from the export of educational services to long-term benefits derived from graduates who return to their home countries and purchase from suppliers in the country where they studied.

The financial stakes for countries engaged in the export trade are considerable. Tables 10 and 11 provide comparative and trend data. “Export” of education services is defined narrowly, covering only revenues generated by foreign student flows into a country. “Imports” are defined as payments made for students studying abroad. Based on these definitions, the United States generated the largest revenue from the export of education services—some \$10 billion in the year 2000. Australia, Italy, and the United Kingdom also recorded substantial revenues from enrollments of foreign students. These figures overstate the financial returns from the flows, since part of the purchases of education services are covered from within the country in the form of scholarships, grants, or

stipends. In the United States, that figure is about \$2 billion. Taking both exports and imports into account, foreign student flows for Australia contribute a relatively high net share of trade in services. For Canada, the net share has declined.

Policies developed largely to foster greater diversity and improve quality within college and university programs¹³ and to project national influence¹⁴ are now balanced by hard-edge financial calculations that demonstrate the value and contribution of the expertise available in a tertiary education system to the country’s economic accounts. The financial benefits are attracting the interest of ministries of trade, finance, foreign affairs, and the economy, and figure prominently in the negotiations on the General Agreement on Trade in Services (GATS).¹⁵ With respect to education service trade, negotiations are focusing mostly on cross-border supply (i.e., provision in another country) and consumption abroad (e.g., study abroad). Similar questions arise within the EU, where broader EU aims for integration are supported by soft measures (funding for intra-European student flow, including support for the development of infrastructure such as credit transfer protocols, European Credit Transfer System, and the development of inter-institutional agreements on integrated study plans) and hard measures

Table 11. Imports of educational services: \$US million (current prices) and as a percentage of total imports in services

	1970		1989		1997		2000	
	\$US million	% total service imports	\$US million	% total service imports	\$US million	% total service imports	\$US million	% total service imports
Australia	24	1.5	178	1.3	410	2.2	356	2.0
Canada	37	1.1	258	1.1	532	1.4	602	1.4
Mexico	na	na	na	na	44	0.3	53	0.3
Poland	na	na	na	na	41	0.7	na	na
United Kingdom	na	na	67	0.2	182	0.2	150	0.2
United States	na	na	586	0.7	1,396	0.9	2,150	1.0
Greece	na	na	na	na	na	na	211	1.9
Italy	na	na	na	na	na	na	849	1.5
Brazil	na	na	na	na	22	0.1	78	0.5
Venezuela	na	na	na	na	165	3.0	113	2.7

Source: OECD/CERI (2002).

Data refers to foreign tertiary students, except for Australia, Italy, and New Zealand, where foreign primary, secondary, postsecondary, vocational training, and language training students are included.

Poland: 1999; U.K.: Office for National Statistics; Brazil, Venezuela: International Monetary Fund.

(free movement of citizens, partly linked to mutual recognition of diplomas, certificates, and other evidence of formal qualifications).¹⁶

Trade and European interests will likely shape the scope of both national policies and institutional initiatives and the associated global competition for students, staff, resources, and prestige.¹⁷ The introduction of a trade orientation in policies is seen, by some, to undermine the benefits of existing cross-border cooperative arrangements by shifting the balance of activities in public universities and colleges. In this respect, alliances such as those elaborated under the French *pôles universitaires* (involving a region's universities, businesses, and public authorities with international partners) and the vision of an international extension of Network Norway (bringing together that country's universities and colleges) represent deliberate national policies that seek cross-border arrangements for building and harnessing educational capacity with these benefits in view. The effects of these initiatives remain to be seen.

The Japanese and New Zealand education authorities see university engagement in cross-border activities, including global IT links, as necessary to sustain, if not improve quality ("to learn from the world's best, no matter where they may be," as expressed in New Zealand's strat-

egy document, Ministry of Education, 2002). There are many examples of cross-border cooperation in research, which increasingly involves private partners, both in Europe and elsewhere. How far a new emphasis on trade will alter the policy calculus and reshape these arrangements is not known.

Summary and Conclusions: Why This Matters for U.S. Colleges and Universities

Changes in the context and orientation of national policies affecting tertiary education within the group of advanced, democratic, market-economy countries offer both challenges and opportunities for U.S. universities and colleges. Purposeful and innovative policies in systems that now look more similar to U.S. systems in scope, funding patterns, and aims, shape those opportunities and challenges. Possible responses, at system or institutional levels, include and extend beyond learning from others in strengthening or adapting good practice. U.S. universities and colleges may wish to consider the ways in which well-established links with cross-border partners (educational, research, or commercial; public or private) might be altered, augmented, or complemented.

The emergence of the knowledge economy notwith-

standing, questions about the pace and shape of the transformations under way have given rise to policies that anticipate new demands for skills and knowledge. One immediate implication is a new emphasis on boosting learning outside of conventional university and college degree programs, both during the traditional college age and into later adult life. Universities and colleges play a role in the anticipated provision of such learning in nearly all the countries reviewed, although the extent of engagement from conventional tertiary education institutions varies. Initiatives to introduce voucher-type funding (so-called individual learning accounts in Sweden and the United Kingdom) and variants of qualifications authorities and qualifications frameworks (in Ireland and New Zealand, among others) are two examples of more far-reaching efforts to both stimulate and respond to diverse learner demands advanced at different ages.

Issues are raised on just how—and how far—university and college degree programs should be reformulated to meet individual demand: Public and employer interests as well as learner demands are at play, and there is considerable understanding in university and college faculties about how a body of knowledge can be accessed, understood, updated, and applied. Still, the policies themselves would allow for a wider range of learning at different stages and as such invite universities and colleges to offer new learning options, and to adapt existing study programs.

A second implication is that policy portfolios other than education (or higher education or research)—namely, labor, finance, social affairs, trade, economy, foreign affairs, and defense—increasingly expect tertiary education (including the universities and colleges within the sector) to assume a larger role in advancing broader policy aims. This is the case with ILAs and qualifications frameworks and qualifications authorities in the countries identified. Cross-portfolio policy interests are not new for U.S. universities and colleges, of course, even if the relative “weights” of the different policy portfolios continue to shift. That this is occurring elsewhere allows for some shared learning and possibly opens up opportunities for new types of and arrangements for cooperation.

The special case of the global presence and operation of universities, colleges, and other providers of tertiary-

level education and research brings together both comparative and international perspectives. The activities and operations organized across borders mostly occur beyond the reach of any one country’s policies and regulations, and there has been considerable discussion about, and some policy attention to, what is now seen as a growth point for demand and provision.

In a few countries, the financial stake is substantial enough to encourage proactive efforts on the part of institutions—with considerable success, as evidenced by the Australian experience. A question to be addressed is how the widening number of countries (and their universities and colleges) interested in attracting foreign students will shape the flows moving between countries. If universities and colleges in Anglophone (and other) countries are supported in ways that allow them to better accommodate foreign student flows, will students be attracted to those countries? From which countries? What types of students?

The question remains as to the extent to which tertiary education and its providers will operate in a global market substantially apart from national regulation or bilateral or multilateral agreements. Notwithstanding government efforts to position and promote universities in the global setting, cross-border demand and judgments are informed by reputation and familiarity with qualifications. A related question concerns the extent to which the strength of leading countries and institutions in a global market will weaken the position of universities in developing countries and hence the contributions they can make. Despite some experience in Europe (within the EU), the scope for establishing some kind of supra-national infrastructure to support and guide cross-border flows of students, services, and research activities has yet to be assessed. Such an infrastructure would need to serve stakeholders outside as well as within tertiary education institutions and also those beyond national borders.

The comparative picture, then, shows a widening and varied mix of policies directed at or affecting tertiary education. Some reach beyond education ministries and even originate outside national boundaries; others are innovative and ambitious. The shape and weight of the mix creates opportunities as well as challenges, and it will be left to individual universities and colleges to balance the de-

mands while contributing in new ways to economic and social development. For them, no less than the agencies and ministries advancing new policy aims and approaches, a cross-border view can stimulate new thinking and lead to new forms of collaboration and partnership.

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1. Tertiary education refers to a level or stage of learning beyond secondary education, undertaken in tertiary education institutions (universities, polytechnics, and colleges, both public and private), as well as in other settings and through other means (including secondary schools, work sites, and free-standing information-technology-based offerings).

2. I refer to member countries of the Organisation for Economic Cooperation and Development (OECD), for which there is a considerable volume of comparative statistics, policy studies, and policy reviews.

3. The OECD work looked at how different factors accounted for differences in growth rates. In addition to human capital, the factors identified and examined in the regressions were investment share, population growth, variability of inflation, size of government, and trade exposure. See OECD (2000a).

4. Knowledge-based industries are defined here to include the main producers of high-technology goods, high- and medium-high technology manufacturing, and the main users of technology (e.g., services such as finance, insurance, business, communications and community, and social and personal services).

5. White-collar, high-skill employment is defined here to include professional, technical, administrative, and managerial occupations.

6. Knowledge-economy jobs are defined here to include those in white-collar, high-skill occupations *and* which involve performance of a set of tasks that revolve around creating and processing information (reading, writing, and quantitative tasks). Based on this definition, knowledge workers account for a bit less than 20 percent of the labor force in a set of OECD countries for which data are available (ranging from 6.4 percent in Poland to 25.5 percent in Sweden). See OECD (2001c), chapter 4.

7. See OECD (2000b). A distinguishing feature of PISA is that the assessments derive from agreements between authorities in the participating countries on what a 15-year-old should know and be able to do.

8. The standard international classification defines tertiary

type A programs as largely theory based and providing access to advanced research programs and professions with high skills requirements, and tertiary type B programs as shorter and with a focus on practical, technical, or occupational skills. On this classification, some programs located in universities would not be type A while some programs offered at more technically oriented institutes could be type A. See OECD (1999).

9. Nineteen countries participated in the survey over the period 1994–1998. See OECD and Statistics Canada (2000).

10. Student financial support arrangements include flexibility to allow for and even encourage movements between learning, work, and other activities. For example, Denmark's "taximeter," as the label implies, is one example. A 1998 issue paper by the New Zealand Ministry of Education presented one option to provide a further subsidy *after a break in study*, but the proposal was not adopted. Sweden's 25-and-4 scheme, in which funded places are reserved for persons who are at least 25 years old and have four years of relevant work experience, embodies a similar concept for initial entry. In the Netherlands, the Hermans Committee proposed a more sweeping change in financing that would open up possibilities for diverse and delayed patterns of participation. All students would be eligible, depending on performance, to tap into an account of over 10 years for up to four years of study. Students would be obliged to commence studies under the scheme before age 25.

11. Norway's discussion about "competence reform" remains at a conceptual level. It is noteworthy, however, that the discussion is on competence—not qualifications, institutions, or structures per se. It is also more broadly based than higher or tertiary education.

12. Qualification frameworks of this type have well-recognized weaknesses. To greatly simplify two issues, (1) it is difficult to encompass the progression and linkages in learning toward a quali-

fication on such frameworks, where attention is given to the nominal combination of an identified set of independent skills acquired in any sequence and at any moment in time, and (2) the basis for qualifications frameworks is found most often in employment "needs," but these become more difficult to define in the light of widespread changes in the organization of work and the evolution of more varied career paths. These issues are not unique to qualifications frameworks, and the results of efforts to address them within such approaches will have wider application.

13. For example, a number of non-Anglophone countries now offer study programs in English, particularly at the post-graduate level, and most countries offer grants, scholarships, below-cost tuition and fees, or stipends to attract students. These policies predate the current interest in education service trade but would figure in strategies to advance trade objectives.

14. Foreign student flows are believed to have wider impact. In announcing the establishment of EDUFRANCE to promote cross-border delivery of services and expertise from French schools, colleges, and universities, French Foreign Affairs Minister Hubert Védrine said, "CNN and Hollywood are everywhere ... and in every government in the world there are ministers who have been educated in the United States." (Trean, 1999.)

15. GATS negotiations lead to multilateral agreements that bind WTO member countries. A good discussion of the implications of GATS for cross-border provision and student flows may be found in Larsen, Martin and Morris (2002).

16. See Elsa Hackl (2001).

17. The new dynamics give rise to new challenges for policy. Newby (2001), for example, puts in opposition "the emergence of global, or at least transnational, systems of collaboration between universities on the one hand, and the essentially national systems of accountability and evaluation which pertain on the other."