

Chapter 2

The Conditions of Continuity and the Drivers of Change

William K. Cummings

2.1 Conditions and Drivers

As the CAP project evolved, there was increasing interest in linking these external contextual factors to developments inside higher education including to the academy. A fundamental analytical development was the recognition that, at least for some issues of interest, the continuity or stability of attitudes and behavior was more striking than the change. And this continuity can be linked to the relative stability of certain contextual factors. Hence a major thrust of this paper is to distinguish between those contextual factors that favor stability (and which we will call conditions) and those that are potential agents of change (and which we call drivers).

The CAP project at its inception proposed a six stage conceptual framework starting with the Drivers of Change and ending with Accomplishments and National Development (described in the original concept paper as outputs and outcomes). Table 2.1 provides my tentative revision/elaboration of the CAP model with Conditions of Continuity and Drivers of Change listed in the left columns and Outputs and Outcomes listed in the right columns. Each cell identifies a variable that may for a particular country in recent years be moving in a positive or a negative direction. Explicit in the conceptual framework is the logic of causality from the left columns to the right columns (though variables in a particular row

W.K. Cummings (✉)
Graduate School of Education and HD, George Washington University,
Washington, DC, USA
e-mail: wkcum@gwu.edu

Table 2.1 Dimensions of the changing academic profession

Initial conditions	Drivers of change	System's response	Nature/ attractiveness of academic work	Accomplishments and national development
Ideology and culture				
Higher education perceived as a public good	Belief in the value of higher education for most citizens	Recognition that certain managerial reforms may enhance the effectiveness of higher education and research		
The state				
	Openness to market ideology as a principle for resource allocation	Increase in diversity of workplaces and goals of each place		
The economy				
Economic level	Economic growth	Continued support of sciences and engineering		Increase in higher education's share of national economies
	Shift to service economy with high tech manufacturing	Increased emphasis on the social sciences		Increase in salience of higher education for job preparation
	Increase in international trade	Increased provision of adult and professional education	Increase in use of technology for instruction and administration	Increase in scholarly productivity
	ICT revolution	Increased provision of graduate education		
System scale and demand				
Higher ed. enrollment (and number of academics) in early 1990s	Population growth or decline	Expansion of higher education	Decrease in student preparedness	Increase in educational level of the work force
	Higher perceived as leading to better jobs	Increased stress on inclusiveness	Increase in instructional accountability	

Funding and management			
State is main funder of higher education and academic research	Levelling off of government support for higher education	Increase in private sector's share of higher education and support for academic research	Increase/decrease in unit costs with corresponding impact on remuneration
Belief in academic freedom	Increase in private sector's interest in higher education	Increase in Work Load (Nos. of Students, Administrative Tasks, Expectations for Service and Research)	Increase in social and commercial relevance of research
Belief that decisions affecting scholarship are the prerogative of the academic profession	Increase in aggregate support for research		Decrease in academic profession's institutional loyalty
Internationalization			
Reliance on "national" language for instruction	Internationalizing language of instruction and research	Increased acceptance of international students Increased internationalization of academic content and personnel	Increase in collaborative research
			Increased mobility within and across boundaries

do not necessarily influence others in the same row). This particular elaboration will certainly be modified as research progresses.¹

The core of this paper considers the link between context and three of the main themes of CAP research: the teaching-research balance (one aspect of relevance),² internationalization, and institutional loyalty. These themes has been selected in order to highlight three contrasting patterns of “change.” We suggest, in the case of institutional loyalty, there is a common pattern of decline across most of the CAP countries—hence there must be powerful drivers of change common to most higher education systems. In the case of the teaching-research balance, we see a flip-flop pattern: Several countries that were high on research in 1992 have shifted towards a greater emphasis on teaching. And vice versa several that were high on teaching have strengthened their emphasis on research. Underlying these complex shifts must be the influence of drivers unique to each national case. Finally the internationalization theme exhibits more continuity than change and can be best understood as a reflection of persisting conditions rather than the influence of new drivers of change. I will restrict my discussion to the ten countries for which we have data in 1992 and 2007. The following section introduces several of the most important contextual factors and provides a brief summary of the potential linkages between these factors and the aforementioned themes.

2.2 The Context

2.2.1 *Higher Education Perceived as a Public Good*

The starting point for our analysis is the mid-70s–80s when in most advanced countries higher education and academic research were mainly perceived as desirable public goods worthy of relatively generous state funding. Thus in this period in

¹In Table 2.1, the T’s refer to tables in the text. The B’s, C’s, and so on refer to questions in the common instrument from which data can be compiled in forthcoming research. It might be noted that the international indicators largely focus on variables in the first two stages of the CAP model whereas the data collected with the survey instrument should help us understand later dimensions, especially beliefs and the nature of academic work.

²Before considering these themes it is appropriate to ask who is a “member” of the academic profession, and who is not? In the early stages of the CAP project it was agreed that there are many members of modern society that identify with academia and share many of the values of academia but have employment conditions that differ from the IHE appointments of the mainstream academics. In systems with extensive public research institutes such as in France, most of the researchers in these institutes have an academic profile—and many teach part-time in IHE. So many of the staff in the research institutes have the attributes of academics. A second group worthy of inclusion in a definition of the academy are the expanding legion of part-time teachers: Some part-timers have second jobs outside of higher education and some have second or even third appointments inside higher education. While it might have been desirable to include the above groups in the CAP survey, in most systems it proved difficult to sample these groups, so the de facto sample became full and part-timers in degree granting institutions. We end up with the unresolved conceptual tension between the “true” boundaries of national systems and the imposed CAP boundaries.

most advanced countries upwards of 80 % of all higher education expenditures were provided by central and local governments, and this percentage was maintained even as system enrollments expanded. Similarly budgets for the support of academic research increased on the assumption that the basic research that took place in universities often led to the discovery of applications that could be developed into useful products.

2.2.2 *Level and Rate of Economic Growth*

Enabling the generosity of states was the overall health of most advanced economies into the early 90s. Of the ten countries/economies, as reported in Table 2.2, six have been world economic leaders for some time, two (Hong Kong and Korea) transitioned in the 1990s from a middle income position towards economic maturity (though it is notable that Hong Kong's GDP per capita exceeded that in all countries except the USA and Japan), and two are on the brink of this transition.

In terms of rate of economic growth over the 1992–2007 period, the second group is most notable experiencing very rapid growth and earning the title of Newly Industrializing Countries (NICs). Brazil and Mexico are sometimes described as near NICs; the actual size of these two economies has expanded but the population growth rate is also relatively high so the per capita income has not increased that much. The expansion in economies has been accompanied both by the expansion of academic systems and the upgrading of their research productivity. Economic growth, as it is associated with the expansion of productivity and the search for new markets, puts pressure on national academies to generate supporting technologies and relevant information, and the academic response may be to seek new partners in foreign settings.

Table 2.2 Indicators of GNP per capita, and export trade as a percent of GDP, 1992 and 2007

Country	GDP per capita 1992 (constant 2000 US\$)	GDP per capita 2007 (constant 2000 US\$)	Average % annual growth	Exports of goods & services as % of GDP 1992	Exports of goods & services as % of GDP 2007
Mexico	5,169	6,561	1.6 %	15	28
Brazil	3,282	4,290	1.8 %	11	13
Korea	7,841	15,158	4.5 %	27	42
Hong Kong	22,263	34,041	2.9 %	138	208
Australia	17,158	24,756	2.5 %	16	20
UK	19,728	28,915	2.6 %	23	27
Japan	34,801	40,707	1.1 %	10	18
US	28,402	38,701	2.1 %	10	12
Germany	20,566	25,249	1.4 %	24	47
Netherlands	19,354	26,889	2.2 %	55	75

Source: World Bank Economic Indicators

2.2.3 *Globalization*

The extent to which a national economy is integrated with the world economy as indicated by the total value of imports and exports divided by the Gross Domestic Product is one indicator of globalization. In 1992 all ten countries were substantially engaged in the world economy, though in relative terms the U.S. was towards the low end and Hong Kong was the most integrated. The U.S. nevertheless had a comparatively high level of military, social, and cultural integration.

Over the 1992–2007 period Hong Kong, the Netherlands, Germany, Korea, Mexico, and Japan have become relatively more engaged in the global economy whereas there has been little change for the U.S., the UK, Australia, and Brazil. Economic globalization places pressure on universities to internationalize curricula and to generate knowledge that enhances national competitiveness. These pressures could tilt the balance of academic work towards greater time devoted to the instructional role, notably for curriculum development and course material renewal.

2.2.4 *Belief in the Value of Higher Education for Most Citizens*

Steady economic growth spurred by globalization and the ICT revolution has led to an upgrading of the educational needs of the labor force. Employment rates and wages of the college educated are considerably ahead of those with lesser educational achievements. Young people and their parents have become increasingly aware of these labor market signals and thus have aspired for advanced education. Both governments and private sector educators have recognized this demand and have founded new institutions.

2.2.5 *Massification and Expansion*

Massification refers to the inclusiveness of higher education, systems with enrollment rates below 10 % being referred to as elite systems and those between 10 and 50 % described as mass systems. Table 2.3 provides information on the relative inclusiveness (as measured by the tertiary level gross enrollment ratio) and the scale (as measured by total student enrollment and total teaching staff) of the ten systems under consideration in 1992 and 2007.³ Some systems by 1992 had gone a long way

³The UNESCO numbers are for all higher education institutions including junior colleges and technical institutes, whereas the CAP sample only includes institutions that minimally confer bachelor degrees. While the scope for the numbers is thus not strictly comparable, they are at this time the only available numbers.

Table 2.3 Enrollment in total tertiary education, gross enrollment ratios, and teaching staff, 1992–2007

Year	1992			2007			% increase in total tertiary	% increase in teaching staff
	Total tertiary	GER	Teaching staff	Total tertiary	GER	Teaching staff		
Australia	559,365	0.40	28,417	1,083,715	0.75	34,413	94 %	21 %
Hong Kong	85,214	0.19	5,978	194,236	0.42	10,500	128 %	76 %
Japan	2,899,143	0.30	286,166	4,032,625	0.59	515,732	39 %	80 %
Republic of Korea	1,761,775	0.40	77,458	3,208,591	0.96	201,851	82 %	161 %
Brazil	1,591,176	0.10	134,403	5,272,877	n.a.	367,638	231 %	174 %
Mexico	1,302,590	0.13	134,424	2,528,664	0.28	274,618	94 %	104 %
Germany	2,033,702	0.35	279,806	2,278,897	n.a.	295,447	12 %	6 %
Netherlands	493,563	0.42	41,217	590,121	0.62	44,632	20 %	8 %
United Kingdom	1,385,072	0.33	89,500	2,362,815	0.58	129,930	71 %	45 %
United States of America	14,360,965	0.78	826,000	17,758,870	0.86	1,310,453	24 %	59 %

Source: UNESCO. For Australia: Department of Education, Employment and Workplace Relations (and its antecedents). 'STAG1992' and 'STAG2007' Staff aggregated data sets

Mexico 1993 data, Mexico teaching staff for 1991, Germany 2007 Total tertiary excludes ISCED Level 6 and hence GER 2007 (Levels 5 and 6) is not available, Germany teaching staff is for 1993. UNESCO does not provide statistics for Hong Kong, so we report estimates supplied by the Hong Kong research team. Australian figures include academic staff who only do research

towards massification (US, Germany, Netherlands); for these systems the main change since then has been the addition of lower tier institutions to further access. Institutions in a second group (Hong Kong, Korea, and arguably UK and Australia) over the past 15 years have made the transition; in this second group, the enrollment rate for Korea doubled to reach 80 %; expansion was also notable in the other countries. A third group (Brazil and Mexico) had low to moderate access. Since 1992 the institutions in this latter group have experienced an impressive infusion of resources and have experienced considerable expansion. Massification leads to the hiring of additional academic staff, and many of these new staff may be appointed to fields that have international orientations such as global business, international affairs, or the sciences.

2.2.6 Massification and the Relative Expansion of Students and Faculty

Table 2.3 provides information on the relative scale (as measured by total student enrollment and total teaching staff) of the ten systems under consideration in 1992 and 2007. Table 2.3 compares the rate of expansion of student enrolments to faculty growth. In a few systems the rate of expansion of faculty has exceeded that of students; in contrast in Australia, Hong Kong, The UK, and Brazil the student body has increased at a faster rate than the faculty; and in Germany, the Netherlands, and Mexico the rates of expansion are similar. Where the student body increases at a faster rate than faculty, the higher educational institutions may enjoy some savings—but these savings are achieved by requiring individual professors to assume heavier teaching loads.

2.2.7 Massification and Institutional Differentiation

It can be argued that in the increasingly globalized world, ironically it is the institutions of higher education rather than the national systems that compete against each other and are measured and pitched against each other in terms of their attraction for globally mobile students, top-notch faculty and promising young researchers, knowledge production, and placement in the league of “world class universities.” Globalization has curiously led to more differentiation within national systems than across them. Teichler (1996) has argued that institutional diversity in Europe produced a similar effect—with more variation among institutions of higher education within countries than across them. There have emerged sectors within systems or within institutions themselves that are more globally aligned and competitive, thus having further “globalized the difference” between those who fit the neoliberal paradigm and those who do not. This prompts close consideration of institutional effects on internationalization alongside other system characteristics.

2.2.8 System Size

There is immense variation in the size of the ten academic systems. There are over one million academics in the U.S. compared with less than 50,000 in the Netherlands and only circa 10,000 in Hong Kong. The large size of the U.S. system enables numerous options for in-country collaboration, whereas the smaller size of the Dutch and Hong Kong academics creates pressure for international collaboration. System size also influences student behavior; where a system is small students are more likely to think of leaving their country to seek higher educational opportunities in a foreign country.

2.2.9 Rise of Market Ideology

While the 1980s was a relatively good time for most higher education systems, it was also the era when the expenses of the welfare state began to radically exceed the revenues routinely collected by the state. Whereas one option was to raise taxes, a contrasting approach of shrinking the state role in the provision of services was forcefully articulated particularly in the UK by Margaret Thatcher and in the U.S. by Ronald Reagan. Rather than have the state provide for services, this approach argued that the private sector could do a better job. Or alternately the use of vouchers or the introduction of choice would create market-like pressure and thereby improve the efficiency and effectiveness of public services. Higher education was one of the services most severely hit as this market approach was converted into policies.

2.2.10 Decline in Public Funding for Higher Education

While education continued to be valued, it came to be perceived as expensive. Also images of the good life on university campuses were circulated highlighting the consumer goods side of education. Economists sometimes argued that the private returns of higher education were now exceeding the public returns. Thus particularly in the Anglophone countries public support for higher education was slashed. In several of the Asian settings, a more gradual approach of converting national universities into public corporations was launched; while this reform was intended to encourage a market-like signal for the affected institutions of higher education, it did not lead to a significant financial cutback (Table 2.4).

2.2.11 Knowledge Production/Competition

One indicator of the prominence of an academic system is the extent to which it contributes to the international body of knowledge through the medium of refereed academic articles (Chapman et al. 2010). Large systems such as the U.S. system

Table 2.4 Public expenditure per pupil as % of GDP per capita, tertiary level

System	Year		
	1995	2005	2007
Mexico	57.8	39.0	38.0
Brazil	109.8	35.0	29.6
Korea	5.6	8.7	9.0
Hong Kong	66.2	59.7	38.5
Australia	28	21.5	20.2
UK	39.2	31.6	24.3
Japan	13.7	19.2	20.1
U.S.	24.0	23.1	21.7
Germany	39.6	n.d.	n.d.
Netherlands	45.8	42.4	40.0

Table 2.5 Relative country shares of the world total of scientific articles, 1990 to 2007

Country	1990		2000		2007		% change in world share 1990–2007
	Articles	World share %	Articles	World share %	Articles	World share %	
World Total	508,795	100.0	632,781	100.0	758,142	100.0	
Mexico	1,038	.2	2,950	.5	4,223	.6	173.0
Brazil	2,374	.5	6,195	1.0	11,885	1.6	236.0
Korea	1,170	.2	9,386	1.5	18,467	2.4	959.3
Hong Kong	995	.2	4,914	.8	7,127	1.1	510.0
Australia	10,664	2.1	14,700	2.3	17,831	2.4	12.2
UK	39,069	7.7	49,485	7.8	47,121	6.2	–19.1
Japan	38,570	7.6	55,413	8.8	52,896	7.0	–8.0
US	191,559	37.6	196,221	31.0	209,695	27.7	–26.5
Germany	32,295	6.3	43,440	6.9	44,408	5.9	–7.7
Netherlands	10,176	2.0	12,330	1.9	14,210	1.9	–6.3

Source: NSB (2010), p. 5–14. The articles included in this table are those listed in the Science Citation Index and the Social Science Citation Index. Where the authors of an article are from two or more countries, fractions are used to indicate country attribution

might be expected to contribute a greater share. Indeed as illustrated in Table 2.5 in 1990 and down to the present the U.S. is the world's greatest contributor, though over the 1990–2005 period the U.S.'s relative share has decreased, and that of some other systems, notably Korea and Brazil, have increased. Increases in academic research productivity tend to be accompanied by increases in international research collaboration and publications.

2.2.12 Language of Instruction

English is often considered the international language of academic communication. Several of the CAP nations use English as the language of instruction (the U.S., the UK, Hong Kong, and Australia). In Hong Kong, where most of the population uses Chinese in the home, English is the main medium of instruction in university education. English is also relatively prominent in the Netherlands academy. In contrast are several countries that have instructional languages unique to their country: Germany uses German, Japan uses Japanese, Korea uses Korean. Mexico uses Spanish and Brazil uses Portuguese.

2.2.13 Regionalism

All ten of the countries were participants in one of the major socioeconomic organizations promoting regional ties (the European Union in Europe, NAFTA in North America, Mercosur in Latin America, and ASEAN and APEC in Asia). Of these regional associations, the EU has placed the most emphasis on higher education notably through its promotion of student mobility and its funds to support cross-border research projects. Perhaps Asia is second in terms of promoting regional ties.

2.3 Teaching-Research Balance

Teaching and research constitute the core work of the academy, and most academics devote some of their time to both of these activities. Historically universities modeled after the German university (as in Japan and Israel) placed a greater emphasis on basic research, those modeled after the U.S. land grant model stressed applied research, and those modeled after the English university (e.g. throughout the former British empire) placed more emphasis on teaching.

The Carnegie survey and the CAP survey captured the baseline orientation by asking respondents whether their “interests lie primarily in teaching or in research” as reported in Table 2.6. This data invites more than one interpretation depending on whether the middle two categories or the teaching versus research categories are the focus. In all countries, the majority of academics for both time periods select the middle two categories. But if one focuses on the percentages inclined or somewhat inclined to teaching, a different interpretation is possible: that is, in all countries the proportions selecting primarily in teaching or inclined to teaching is less in 2007 than in 1992.

However, distinct from what professors want to do is what they actually do in response to the needs of their workplace. Table 2.7 reports by country the average

Table 2.6 Academic preferences: do your interests lie primarily in teaching or in research?

2007/Country	DE	UK	US	JP	KR	HK	AU	BRZ	MX
Primarily teaching	10	10	24	6	3	9	7	8	20
In both but leaning towards teaching	18	27	34	23	29	28	23	42	37
In both but leaning towards research	40	37	34	57	61	52	40	42	33
Primarily research	32	26	9	14	7	11	29	7	5
1992/Country									
Primarily teaching	8	12	27	4	5	11	13	20	14
In both but leaning towards teaching	27	32	36	24	40	35	35	42	45
In both but leaning towards research	47	40	30	55	50	46	43	36	37
Primarily research	19	15	7	17	6	8	9	3	4

Source: Carnegie and CAP Surveys

Table 2.7 Average hours per week devoted to teaching by country 1992 and 2007

Country	DE	UK	US	JP	KR	HK	AUS	BRZ	MX
2007	12.3	15	21.6	21.8	21.4	19.9	17.6	18.9	21.5
1992	16.4	21.3	18.7	19.7	23.1	19.0	21.8	21.9	16.9

Source: Carnegie and CAP Surveys

number of hours academics devote to teaching (when classes are in session) in 1992 and 2007. The average load ranges from 16.4 to 23.1 h in 1992 and from 12.3 to 21.6 in 2007. In four of the countries, the average teaching load has increased between 1992 and 2007 (US, Japan, Hong Kong, Mexico), and in five it has decreased (Germany, UK, Korea, Brazil, Australia).

So for half of the countries there is a widening divergence between what academics are inclined to do and what they actually do. What accounts for these complicated trends? Table 2.8 identifies several of the contextual factors that are most likely to be influencing the teaching research balance- e.g. the partial retreat in public funding of higher education so institutions of higher education (and academics) place an increased reliance on tuition, technological advances have influenced the delivery of teaching, the size of the adolescent population may have declined creating pressure to improve teaching in order to attract students, those entering the profession are more likely to have received advanced training in research so they are more inclined to spend their time on research.

2.4 Continuity or Change in Teaching Load

Working from the estimates in Table 2.8 we sought to develop an aggregate prediction of the teaching load level in 1992 and the 2007/1992 change for the nine focal countries (for which information is available). If for a particular condition a

Table 2.8 Main contextual factors and drivers influencing the teaching research balance of national systems

System	Conditions			Drivers					R&D funding up
	Market-based coordination	Tuition-based funding	Private sector	Economic growth	Higher Ed. a private good	Massification: system expansion	Massification; differentiation	Population decline	
Mexico	Moderate	Moderate	Yes	Rapid	Moderate	High	Moderate	Low but increasing	Yes
Brazil	Moderate	Moderate	Yes	Rapid	Moderate	High	High	Low but increasing	Yes
Korea	Rising	High	Yes	Very rapid	Moderate	High	High	Moderate	Yes+
Hong Kong	High	High	No	Rapid	Moderate	High	Limited	Moderate	Yes+
Australia	Very high	Very high	Yes	Moderate	High	Moderate	Some	Moderate	No
UK	Very high	Moderate	No	Moderate	High	Moderate	Some	High	Yes
Japan	Moderate	Moderate	Yes	Slow	Moderate	Moderate	Some	High	No
U.S.	Very high	Very high	Yes	Moderate	High	Moderate	High	Moderate	No
Germany	Moderate	Moderate	No	Moderate	Moderate	Moderate & increasing	High	Moderate	No

Table 2.9 Relative aggregate strength of contextual factors for teaching load

Country	Conditions	Drivers
Mexico	2.5	2
Brazil	3	2.5
Korea	3.5	2
Hong Kong	2	2.5
Australia	3	3.5
UK	3	1.5
Japan	2.5	2
U.S.	2.5+	3.5
Germany	1.5	3

country received a high estimate it was given a score of 1; if a moderate estimate then a score of .5; and if a low estimate then a score of 0. This scoring procedure was repeated for all of the conditions and then the several scores were added up to get an aggregate conditions value. The same procedure was followed to obtain a drivers value. The outcomes of these two procedures are summarized in Table 2.9.

2.4.1 CAP Indicator of Teaching Load

Now let's compare these predictions with the CAP findings on the number of hours devoted to teaching in the start off year of 1992. Korea and Australia receive relatively high scores in both distributions and Germany receives low scores. The six other countries lie in the intermediate zone for both distributions.

Concerning change both our driver scores and the actual 1992–2007 change in teaching hours are congruent in the cases of the U.S., Japan, Hong Kong, Mexico, and Germany. However, whereas our analysis of drivers predicted stability in the teaching load for Korea and the UK, the actual direction of change was negative; higher education in both of these countries has been under considerable policy pressure to increase research productivity, a driver that we have perhaps insufficiently recognized.

2.4.2 Internationalization

Academics work in institutions that are primarily situated in particular nations. Much of their work contributes to the welfare of these nations, but aspects of their work may reach beyond national borders. Constructed interrelations of the national, international, and global purposes and content of higher education have been shifting throughout history—depending on the socio-economic and political context.

Kerr (1990) argued that for the most part the modern history of higher education is driven by two laws—one of internationalization of learning and the other of nationalization of purposes. Scott (1998) proposes that, in the age of globalization, higher education is increasingly locked in national contexts yet it has the potential of resurrecting (albeit on different terms) its international associations and networks. Focusing on the academic profession, this chapter considers the internationalization of the academic profession as the shift in academic work that takes place in national systems and their constituent institutions on a continuum from a primarily national focus to a more borderless or international focus. This shift can be manifest in many aspects of academic work, i.e. the increase in the international mobility of students, the increase in the international content of courses, the increase in the cross-border collaboration of researchers and institutions.

2.4.3 Stability and Change in the Context

We turn next to look at some aspects of the recent supposed advance of internationalization. To what extent has Internationalization intensified over the past 15 years? What might be promoting or deterring change? Table 2.10 outlines our best judgments on the relative position of the ten higher education systems in terms of a select group of conditions and drivers that are believed to influence internationalization.⁴ In the following discussion, we review the likely relation of each of the identified conditions and drivers to the internationalization trend.

2.5 Continuity or Change in Internationalization

Working from the estimates in Table 2.10 we sought to develop an aggregate prediction of the internationalization level of the ten focal countries. We undertook the same scoring procedure as in the preceding section. The same procedure was followed to obtain a drivers value. The outcome of this procedure is summarized in Table 2.11.

The implication of these computations is that Hong Kong and the Netherlands with Conditions scores of 3+ will have the highest baseline values for various indicators of Internationalization while Japan, the US, Mexico, and Brazil will have the lowest baseline values. Concerning post-1992 change, the implication is that Hong Kong will have the greatest change followed by Korea and Mexico.

⁴The selection of particular contextual factors and drivers depends on the analytical topic; for example an analysis of managerial practices might place greater emphasis on the ideology of public versus private good or the ideology of social equity versus elitism.

Table 2.10 Main contextual factors and drivers influencing the internationalization of national systems

System	Conditions				Drivers				Knowledge production
	Economic Level	Participation in world trade	System Size	'International' language	Economic growth	Globalization	Massification: system expansion	Massification; differentiation	
Mexico	Moderate	Moderate	Moderate	No	Rapid	Moderate	High	Moderate	Low but increasing
Brazil	Moderate	Moderate	Moderate	No	Rapid	Moderate	High	High	Low but increasing
Korea	Rising	High	Moderate	No	Very rapid	High	High	High	Very high
Hong Kong	High	Very high	Small	Yes	Rapid	Very high	High	Limited	Very high
Australia	High	High	Moderate	Yes	Moderate	Moderate	Moderate	Some	Moderate
U.K.	High	Moderate	Moderate	Yes	Moderate	High	Moderate	Some	High
Japan	Very high	Moderate	Large	No	Slow	Moderate	Moderate	Some	High
US	Very high	Moderate	Large	Yes	Moderate	Moderate	Moderate	High	Moderate
Germany	High	High	Moderate	No	Moderate	Moderate	Moderate & increasing	High	Moderate
Netherlands	High	Very high	Small	Yes	Moderate	High	High	High	Moderate

Table 2.11 Relative aggregate strength of contextual factors

Country	Conditions	Drivers
Mexico	1.5	2
Brazil	1.5	1.75
Korea	2.5	3.5
Hong Kong	3+	4.5
Australia	2.5	1
UK	2	2
Japan	1.5	.5
U.S.	1.5	.5
Germany	2.5	.5
Netherlands	4+	2

Table 2.12 Percent of academics who indicate they collaborate with foreign partners in research

	% that collaborate	
	1992	2007
Mexico	39.9	34.6
Brazil	24.2	28.4
Korea	25.1	29.5
Hong Kong, China	65.0	60.2
Australia	57.0	59.3
UK	43.1	61.4
Japan	28.5	23.8
U.S.	39.1	33.3
Germany	55.0	50.0
Netherlands	74.3	62.9

Sources: Carnegie survey (question 65a) and CAP survey (question D1)

2.5.1 CAP Indicators of Internationalization

Now let’s compare these predictions with the CAP findings. Internationalization has been a major focus of the CAP project and was featured rather prominently in the CAP questionnaire. Some of these same items were asked in 1992, e.g. about international recruiting and international collaboration. So CAP enables a true test of the extent of change for the ten countries that participated in both studies.

First we will consider the extent of international collaboration as reported in Table 2.12 above. The pattern is exactly as predicted. Hong Kong and the Netherlands, as predicted, are the two countries in 1992 with the highest levels of international collaboration, Australia closely follows with Mexico and the US having moderate levels, and Brazil and Japan have the lowest levels; Korea has a somewhat lower level than expected. Concerning driven change between 1992 and 2007, the prediction is for Hong Kong and Korea to experience the greatest change but neither of these countries experienced much change. In contrast, the UK unexpectedly

Table 2.13 Percent reporting difference between country of training and employment

	1992		2007	
	Country of degree and employment differ 1992	Country of doctoral degree and employment differ 1992	Country of first degree and employment differ 2007	Country of doctoral degree and employment differ 2007
Mexico	10	7	9	41
Brazil	13	n.d.	2	13
Korea	31	31	1	42
Hong Kong, China	68	84	56	72
Australia	32	33	35	26
UK	6	7	43	15
Japan	7	7	15	5
U.S.	7	11	14	6
Germany	4	4	8	11
Netherlands	5	5	44	14

Sources: Carnegie survey (question 3C) and CAP survey (questions F9, A1)
n.a. stands for “no data available.”

experienced the greatest positive shift in international collaboration. So we might say that the factors favoring continuity (and the model emphasizing conditions) have outweighed those favoring change in so far as the frequency of international collaboration is concerned.

Turning to international recruitment as illustrated in Table 2.13, again we find as predicted from the aggregate scores on conditions that Hong Kong stands out in 1992 in terms of international recruitment as does Australia and Korea. Japan has a relatively closed market as surprisingly does the Netherlands. But turning to change, the aggregate scores model predicts that Hong Kong will have the highest increase in openness; however, in actuality the greatest shift towards openness is found in Mexico and the Netherlands followed by the UK. As was the case with international collaboration, the driver scores are not good predictors of what changed from this baseline. So concerning the internationalization trend, conditions seem most important while the drivers have inconsistent impact.

2.5.2 Declining Loyalty

How sensitive are academics to changes in the physical, socioeconomic, and political dimensions of their workplace? In a previous section, we noted that a majority of the academy believe that the physical aspects of their workplace are relatively attractive and nearly as many suggest there may have been some improvements over the past 15 years. But when it comes to institutional decision-making, the majority feel that they have little influence, especially concerning decisions on institutional

Table 2.14 Percent of academics who indicate that their affiliation with their institution is important

	% who say institutional affiliation is important	
	1992	2007
Mexico	94	93
Brazil	96	79
Korea	97	74
Hong Kong, China	78	60
Australia	74	50
UK	84	38
Japan	80	63
US	90	61
Germany	34	51
Netherlands	Nd	50

Sources: Carnegie survey (question B4) and CAP survey (question 17)

level issues. And when the focus shifts to salaries, academics are acutely aware that their take-home pay and job security have declined in recent years (Gappa et al. 2007). Does this sense of powerlessness and deprivation impact the way academics order their priorities and go about their work?

Albert Hirschman (1970) once argued that individuals have three distinctive options when they encounter shortcomings or obstacles in an organization or social group with which they are engaged. They can suspend their reservations about current developments, trusting in the wisdom of current leaders to identify and rectify the shortcomings. They can voice their concerns in the hopes that the group will listen and attempt improvements. Or they can decide there is little hope for improvement and thus the best solution is an early exit. We suggest here that a substantial number of academics, in response to their sense of increased powerlessness and deprivation, are inclined to the exit option.

One of the most striking findings of the CAP survey is the strong sense of commitment that academics express towards their academic disciplines both in 1992 and 2007 (see Table 2.14). But they express a sharp decline in their loyalty to their employing institutions over this same 15 year period. What accounts for this drop? Table 2.15 presents our interpretation of the key factors behind this shift:

It has been argued that the 1980s through the early 1990s was a golden era for the academy. The norm of shared governance was widely accepted. Student enrollments were steadily increasing and the level of college preparedness of the incoming students remained satisfactory. Political leaders believed that higher education was primarily a public good, and in most national settings public funding for higher education was keeping ahead of inflation.

But since that time conditions have deteriorated in many of the advanced countries (as well as in many poor countries, especially in Africa). The experienced changes

Table 2.15 Main initial conditions and drivers influencing the decline in institutional loyalty

System	Initial conditions				Drivers				Decline in public support of HE	Manager's role expands	Performance evaluation strengthened
	Shared governance accepted	Respect for academic freedom	State sees HE as public good	Rise of market ideology	Massification	Privatization	Decline in public support of HE	Manager's role expands			
Mexico	Somewhat	Yes	Yes	Minimal	Early stages	Increasing	No	Contracts	Moderate		
Brazil	Somewhat	Yes	Yes	Minimal	Early Stages	Increasing	Sharp	Contracts	Moderate		
Korea	Somewhat	Moderate	Yes	Moderate	Hi	Hi	No	Stable	Considerable		
Hong Kong	Yes	Yes	Yes	Moderate	Moderate	Low	Modest	Modest	Considerable		
Australia	Yes	Yes	Yes	Strong	Hi	Modest	Modest	Expands	Considerable		
UK	Yes	Yes	Yes	Strong	Hi	Low	Sharp	Expands	Considerable		
Japan	Yes	Yes	Yes	Moderate	Hi	Hi	No	Modest	Moderate		
US	Yes	Yes	Yes	Strong	Hi	Moderate	Modest	Modest	Considerable		
Germany	Yes	Yes	Yes	Minimal	Moderate	Negligible	Stable	Expands	Moderate		
Netherlands	Yes	Yes	Yes	Minimal	Moderate	Negligible	Stable	Expands	Moderate		

Table 2.16 Relative strength of contextual factors for loyalty

Country	Conditions	Drivers
Mexico	2.5	.5
Brazil	2.5	.75
Korea	2	3
Hong Kong	3	2.5
Australia	3	4
UK	3	5
Japan	3	2.5
U.S.	3	3.5
Germany	3	1.5
Netherlands	3	1.5

are internal to higher education. In several of the advanced systems, the CAP survey found that faculty power is down and managers are perceived as less communicative. Students are not as well prepared as they used to be, but they are more demanding—in several systems their demands are linked to the fact that they now pay tuition. So work is tougher and less satisfying. And these internal realities contribute to a decline in loyalty. Behind these internal changes are several external factors.

As with the two other themes, we present in Table 2.16 our calculus for estimating the impact of the 1992 start off condition and the 1992–2007 drivers. In 1992 loyalty was high in most of the CAP countries and similarly was predicted to be high by our calculus of the relevant conditions. Concerning the impact of drivers, our calculus predicts a substantial drop in loyalty in every country excepting Mexico and Brazil, and excepting Germany the prediction is congruent with the findings.

2.6 Conclusion

2.6.1 *What Constitutes Change?*

Our analysis focused on three issues, and each had a different pattern of change. So what constitutes change?

2.6.2 *Percentage Difference as Change*

The most commonly reported indicator of change in the CAP project has been a comparison of the percent who share a belief or manifest a behavior in 2007 compared to the percent in 1992. This can be called the percentage difference or percentage gain score. The argument we presented on institutional loyalty is a good example. In 1992 for most countries roughly eight out of ten respondents indicated that they

felt a strong sense of affiliation with their institution (see Table 2.14). But in 2007 the percentages were dramatically down for most advanced countries while stable for the emerging countries. We argued that the change is primarily a reflection of external drivers.

2.6.3 Quantitative Difference as Change

A variation on the above is what might be called numerical or quantitative differences and is illustrated by the incidence of international collaboration. Table 2.12 shows for most countries that the percentages engaging in international collaboration are very similar in 1992 and 2007. For example the respective percentages for Germany are 55 and 50; for Brazil they are 24.2 and 28.4. So from the perspective of percentage differences, one might say there has been little change. However, over this 15 year period the Brazilian academic profession has expanded by nearly 250 % (see Table 2.3) whereas the size of the German academy has experienced little growth. So despite the absence of a percentage change, the number of Brazilians engaged in international collaboration has dramatically increased. Thus the question arises: do we consider both percentage differences and quantitative differences as change?

2.6.4 Flip-Flop in Relative Position as Change

Yet another way to approach change is to compare the national rankings for a particular variable at two points in time. For example, As illustrated in Table 2.4 the average number of hours that scholars devote to teaching per week has increased in about half of the countries and decreased in the other half. Most notable are the US where the increase is considerable and Korea where the decrease is also substantial. This is an example of change where both the average percentages and quantities have not changed much but the situations of particular counties have been significantly reshuffled.

In sum, it is important in mounting arguments about change to be clear about what is considered change and what is considered continuity.

2.6.5 What Is Context?

Our second concern has been with the meaning of the term context. We proposed two elaborations of this concept. First we proposed that context includes both those factors that promote change (drivers) and those factors that promote continuity (conditions). The initial Cap design minimized the role of conditions, but it is our

suggestion that many facets of academic life including specifically internationalization cannot be understood without balanced attention to both continuity and change.

Finally we have suggested that context consists both of factors that are external to academic systems (the usual understanding of context) and of factors that are Internal to these systems. A particular example is the new managerial practices in many systems that create friction with classical commitments to the norms of shared governance and academic freedom. These perceived violations of acceptable behavior by actors within the higher educational system go a long way towards explaining the dramatic decline in the loyalty of academics to their institutions.

Our analysis has identified a substantial host of contextual factors that are presented in the respective Tables 2.1, 2.8, and 2.10. While there is no need to repeat these lists, it is worthwhile noting the exceptional salience of several of these factors:

- higher education as a public good—a firmly established value through the 80s;
- higher education as a private good—a belief that became increasingly pervasive from the mid-80s, and helps to account for many of the 1992–2007 changes discussed in this analysis;
- the increasing reliance on market signals for the coordination of higher education;
- the pressures of massification;
- the demand of relevance;
- system scale, especially as it influences the availability of domestic collegueship;
- the language of instruction, with the contrast between systems that use English as contrasted to other languages.

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