

International Strategy Task Force Report

to

Executive Vice Chancellor & Provost
George Breslauer

University of California, Berkeley



February 10, 2012

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Anthony Saint George, Banatao Center for Global Learning and Outreach from Berkeley Engineering, attended the final task force meeting in Dean Sastry's stead, and improved the report with his knowledgeable suggestions.

Additional material on UCB's current involvement in India (Appendix VIII) was contributed by Helene Kim, Berkeley Law; Maryanne McCormick, Blum Center for Developing Economies; Raka Ray and Sanchita Saxena, Center for South Asia Studies; Anthony St. George, College of Engineering; Judith Warren Little, Graduate School of Education; Jay Stowsky, Haas School of Business; and John McKee, Letters & Sciences. We appreciate their extra effort.

The task force chair would like to acknowledge Sarah Nathe, Helene Kim, and Robert Price for their substantive and editorial contributions to the report.

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EXECUTIVE SUMMARY

On January 26, 2011, Executive Vice Chancellor and Provost George Breslauer charged a group of 18 senior faculty and staff from across the university to serve as an International Strategy Task Force (ISTF) to consider new approaches to Berkeley's international research, teaching, and service activities. Chaired by Michael Nacht of the Goldman School, the ISTF was asked to address a series of specific questions concerning strategic academic priorities, international fund raising, and operational obstacles to more effective delivery of services to faculty and students.

To answer the questions, the Task Force divided into work groups that addressed a number of issues: the current status of the university's international activities; the operational obstacles for faculty engaged in international research and for students, both international and domestic; a competitive analysis of our peer institutions' activities; an assessment of fundraising efforts and opportunities; and a consideration of the role of information technologies in supporting our international strategy.

An India Work Group was formed in October 2011 at the request of EVCP Breslauer to identify ways of strengthening India-related teaching and research at UC Berkeley. A group of faculty and administrators involved with India projects met in November and subsequently submitted brief summaries of their units' current activities and future plans. The input of other campus experts was also solicited. The supplemental material has been incorporated herein.

Observations

1. The university is an international institution of distinction, but must be dynamic in order to remain competitive.
2. At UC Berkeley (UCB), Chinese applicants are the fastest growing group of international students by far; however, our totals of international students at the undergraduate and graduate levels trail our competition significantly.
3. Other high economic growth areas--India, South Korea, Taiwan, Mexico, Brazil, Turkey and Vietnam--are increasingly represented among our international student body.
4. The campus is notable for the large number of collaborative faculty research projects with international partners and the almost 3000 international scholars in residence. In almost all cases, these result from individual faculty and small-group initiatives at the departmental level.
5. Donations to UCB from international sources account for about 4% of total external funds received, which appears to be close to average in the higher education sector.
6. With respect to international opportunities, the competitive environment is marked by many elite U.S. institutions with top-down international strategies. This environment will become more challenging as elite Chinese universities expand to compete in China and elsewhere.

7. India does not have enough institutions of higher learning, especially excellent ones, to accommodate the large numbers of highly qualified Indian students currently eligible for university education.

8. The university anticipates substantial growth in international students in the years ahead, and it must ensure that its student advising and counseling capabilities, and communications training resources, are sufficient in quality and quantity to meet the needs of those students.

Recommendations

1. The Global Education requirement being instituted by the College of Letters and Science should be required university-wide.

2. To attract and retain excellent international students, make operational adjustments and increase funding to improve services that the students expect and that our competition provides. Eliminate the non-resident supplemental tuition discount for graduate students and provide return-to-aid for non-resident supplemental tuition.

3. Improve support for faculty, students, and staff working or studying abroad, in part by streamlining services and establishing a data base for faculty conducting international research.

4. Better coordinate international initiatives by centralizing responsibility in one senior administrator.

5. Establish a UC Berkeley office in China, either in Beijing or Shanghai, with financial assistance from Chinese and other donors, to serve as a hub for research, executive programs, fund raising, and study abroad activities, and promote ties with political and academic elite.

6. Establish and strengthen ties with key Chinese universities, informed by a new China Strategy Committee that would evaluate joint research opportunities and identify capacity-building initiatives.

7. With guidance from an India Oversight Committee, recruit more Indian undergraduate and graduate students, strengthen ties to alumni there and in the Bay Area, increase partnerships with private Indian universities, and develop relationships with major Indian corporations that are interested in enhancing the skills of their young workforce.

8. Evaluate online education platforms and information technology investments by assessing unilateral vs. shared arrangements with private investors, and conduct a market analysis of demand for international users.

9. Enhance fund raising from international sources by mobilizing alumni and friends, developing funding relationships with government and other entities, and working more closely with parents of international students. Develop an international communications strategy to enhance and support international fundraising and engagement.

10. Evaluate the College of Engineering's relationship with the King Abdullah University of Science and Technology in Saudi Arabia to determine not only its effectiveness, but also its applicability to relationships with institutions in other countries.

11. Expand and/or establish new partnerships in Latin America, with special attention to Mexico, Brazil, and Chile. Conduct a cost-benefit analysis to determine whether a UCB office should be established in one of these countries to achieve objectives similar to the China office discussed in #5 above.

12. Establish a UC Berkeley-Lawrence Berkeley National Laboratory (LBNL) Research Hub at the Richmond Field Station to attract international scholars and programs to Berkeley, as recommended in a 2005 report.

The anticipated net effect of implementing these recommendations is a substantial enhancement of the university's international strategy with a moderate investment of additional resources. It is our expectation that, over time, considerable new revenues to the university may be realized through a variety of measures including supplemental programs, fundraising, and research funding.

I. TASK FORCE ACTIVITIES

A. Charge

On January 26, 2011, the International Strategy Task Force (ISTF) was charged by EVCP Breslauer to consider ways to bring greater strategic coherence to Berkeley's many international activities. Actionable recommendations were requested by August 31, 2011. The Task Force was invited to address numerous questions, listed below.

Strategic Academic Priorities

1. What are the best strategies for using our reputation to create collaboration and exchange relationships with universities and research institutions abroad? Criteria for choosing those universities and research institutions?
2. Are there, as yet, any lessons to be learned from the College of Engineering's partnership with the King Abdullah University for Science and Technology (KAUST) in Saudi Arabia?
3. While East Asia and South Asia are obvious foci, have we underestimated our strategic advantages, given our location, for expanded programs, collaborations, and outreach in Latin America?
4. What opportunities for collaborations with corporate and governmental entities abroad would enhance our research and teaching enterprises without compromising our academic freedom?
5. Does the campus need an explicit and integrated strategy for maximizing the potential benefits from bringing foreign students and scholars to campus?
6. Does the campus need an encompassing strategy for recruiting undergraduate students from abroad? Premised on linkages among admissions, alumni relations, and relationships with corporations and educational institutions?
7. If the campus received a \$100 million gift for an endowment for "international activities," how would you prioritize the potential uses of those funds?
8. Should the campus attempt to identify (or, if not on staff, recruit) budding academic-entrepreneurial stars and provide incentives for them to build international programs?

International Fund-Raising

9. Strategies for raising funds abroad for our research and teaching enterprises? Do we need to establish organizational presence abroad, such as offices or campuses? What role can the internet play in such an effort?
10. What role do the new information technologies play in international education and can they be exploited by Berkeley in new and innovative ways?
11. What are the best strategies for building and deploying our international alumni network to the benefit of our faculty, students, and fund-raising efforts?

Operational Questions

12. Are there unnecessary obstacles to international research collaborations in administrative policies or practices over which we have control? How can these be overcome?
13. Are there unnecessary obstacles to international student exchanges in administrative policies or practices over which we have control? How can these be overcome?
14. How good is our support for visiting international scholars? How can it be improved?
15. How good is our support for international students, undergraduate and graduate, in our student body? How can it be improved?

B. Participants

Michael Nacht, Professor, Goldman School of Public Policy (Chair)
Nezar Al-Sayyad, Chair, Center for Middle Eastern Studies
Anthony Cascardi, Director, Townsend Center for the Humanities
Pradeep Chhibber, Director, Institute of International Studies
Ronald Gronsky, Special Faculty Assistant to the Chancellor on International Relations
Teck Ho, Director, Asia Business Center, Haas School of Business
David Jeu, Assistant Vice Chancellor for International Relations, University Relations
Helene Kim, Executive Director, International & Executive Legal Education Program,
School of Law
John Lie, Chair, Center for Korean Studies
Beatriz Manz, Professor, Ethnic Studies and Geography
Sanaz Mobasser, Graduate Assembly representative
Robert Price, Associate Vice Chancellor for Research
Rick Russo, Dean, Summer Sessions, Study Abroad & Lifelong Learning
Shankar Sastry, Dean, College of Engineering
AnnaLee Saxenian, Dean, School of Information
Viola Tang, ASUC representative
Diana Wu, Dean, University Extension
Wen-hsin Yeh, Director, Institute of East Asian Studies

C. Process

To manage the charge and accommodate the size of the task force, we created a number of work groups: 1) current status of UC Berkeley international activities; 2) operational obstacles for UCB faculty and students as well as international students and scholars; 3) strategic mission statement; 4) feasible and desirable arrangements with international institutions; 5) competitive analysis; 6) international student recruitment; 7) fundraising; and 8) information technology.

All work groups developed short statements of their findings and observations for presentation to the full task force at a meeting in late May. Their recommendations also draw on conversations some task force members had with senior officials at other universities.

To expedite completion of the draft report, a small writing group (Nacht, Price, Kim, Nathe) was established, three of whom met with EVCP Breslauer in early June to discuss the preliminary recommendations. Following that meeting, the writing group met twice early in the summer to organize the report and determine which sections needed further development. A number of task force members volunteered for the additional research or discussions necessary to round out their sections, and the writing group covered the remaining material. The writing group met again in late July to assemble all the contributions from task force members, and to revise the report. The draft report was circulated among all task force members in early August, and many of their comments have been incorporated in this version.

D. India Work Group

In October 2011, EVCP Breslauer appointed a group of faculty and administrators to examine opportunities for UCB involvement in India to supplement the material provided in the draft report submitted on August 31 2011. A work group met in November, under the direction of Michael Nacht, to discuss a variety of issues related to higher education in India, and to decide how to structure ideas and recommendations that would be most helpful to the university. It was agreed that each member of the group would submit a summary of his/her unit's India-related activities and prospects for the future. In addition, work group members urged that we solicit the views of several other units that were not represented but are nonetheless working actively in India.

Reports were submitted by everyone present at the November meeting (marked by *), and by most of the additional units invited to contribute:

College of Letters and Science--Shail Kumar* and Mark Richards
Center for South Asia Studies--Raka Ray and Sanchita Saxena
Blum Center for Developing Economies--Maryanne McCormick and Ananya Roy
Institute of International Studies--Pradeep Chhibber*
Berkeley Law--Helene Kim
College of Engineering--Anthony St. George, Jitendra Malik* and Shankar Sastry*
Graduate School of Education--Judith Warren Little
Haas School of Business--Jay Stowsky
University Extension--Diana Wu*
University Relations--David Jeu*
Vice Chancellor Frank Yeary*

II. BACKGROUND OBSERVATIONS

A. UCB as a Global University of Consequence

The principal mission of any university is to educate its students about the world around them and of their place within it, and to equip them with the skills necessary to survive and excel in such a world. At UC Berkeley, our approach to understanding the global condition and articulating an international position stems from our conviction that the study of other societies,

cultures, peoples and places is an exercise that is necessary for our own well being and, in some instances, would be beneficial to them as well. The goals of our international strategy therefore should be as follows:

- Prepare UC Berkeley students, both undergraduate and graduate, for leadership and service in an increasingly interdependent world.
- Attract the most talented students and scholars to UC Berkeley from around the world, both at the undergraduate and graduate levels.

Achieving the first of these goals means that we must continue to ensure that our undergraduate and graduate programs address and explore international issues, and that as many of our undergraduates as possible study abroad at some time during their baccalaureate studies.

The College of Letters and Science (L&S) is in the process of implementing a new Global Education Requirement similar to the American Cultures Requirement (AC). The new Global Education Requirement is intended to ensure that UC Berkeley graduates leave this institution with a broader perspective on themselves and their place in the world than when they entered. Its substance reflects the conviction that the experience of grappling with and immersing themselves in a truly unfamiliar culture gives our students the double advantage of a deeper understanding of others and the ability to contemplate the degree to which their own cultural backgrounds shape their habits of mind. This facet of a UC Berkeley education, currently unique among peer institutions, will not only enrich students' capacities for imagination and empathy, it will also contribute to their abilities to communicate meaningfully and effectively in an increasingly complex global environment.

With reference to the second goal, UC Berkeley has already demonstrated that it is very attractive to scholars and graduate students from throughout the world. The opportunities here are very similar to those for U.S. graduate students and scholars: competitive salaries and stipends, high-quality infrastructure, a stimulating research environment, and world-renowned colleagues. The situation is not quite as attractive for undergraduates, as the available student support services are tailored to domestic students. The traditional 5% international undergraduate body has been expanding, which has placed California undergraduates, who have limited exposure to other countries, in classrooms with students who have very different viewpoints on national and international political, economic, societal, and religious issues.

B. UCB's Current Internationalization Efforts

Our assessment of UC Berkeley's current "internationalization" efforts is based on the following evaluation criteria:

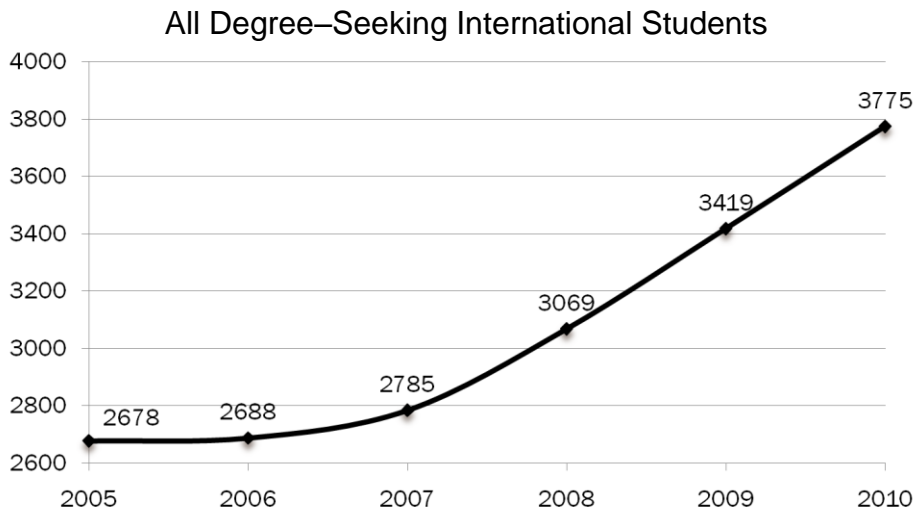
- International student applications and enrollments
- Active research collaboration among faculty with institutions abroad
- Current ties with institutions abroad, including international scholars
- Research funding and donations obtained from international sources
- Abundant international programs in the ORUs and professional schools

Understanding UCB’s current activities in some detail, and in relation to those of our peers, is essential to determining appropriate next steps.

1. International Students

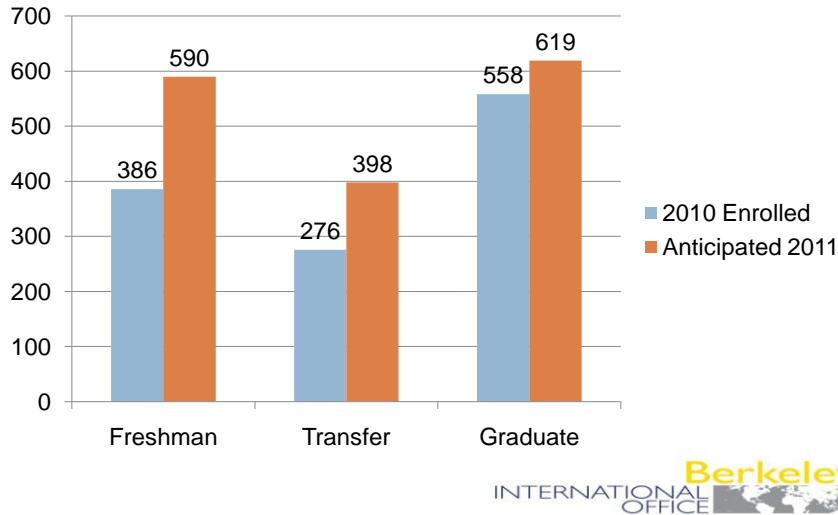
International students constitute a significant and growing percentage of total student enrollments at major U.S. universities, including UC Berkeley (UCB). The planned increase in the number of non-California residents among new undergraduate admittees will increase UCB’s international undergraduate population significantly. International students constitute 11% of the 2011-2012 freshman class, a proportion that exceeds what was the case for all non-resident freshman two years ago.

In the 2010 academic year there were nearly **4,000 enrolled international students**, divided nearly equally between undergraduate and graduate students. Moreover, as the charts below indicate, the number of international students has risen significantly in recent years, as the campus has lifted its limit on undergraduate admissions of non-California residents.

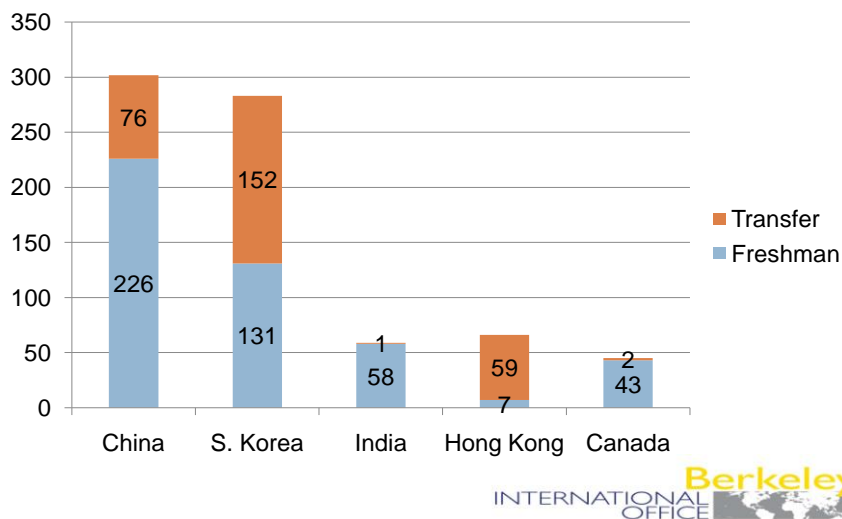


Source: Berkeley International Office (BIO)

2010 Enrollment and Anticipated 2011 Enrollment



Top 5 Countries Represented in New Degree Seeking Undergraduate Students

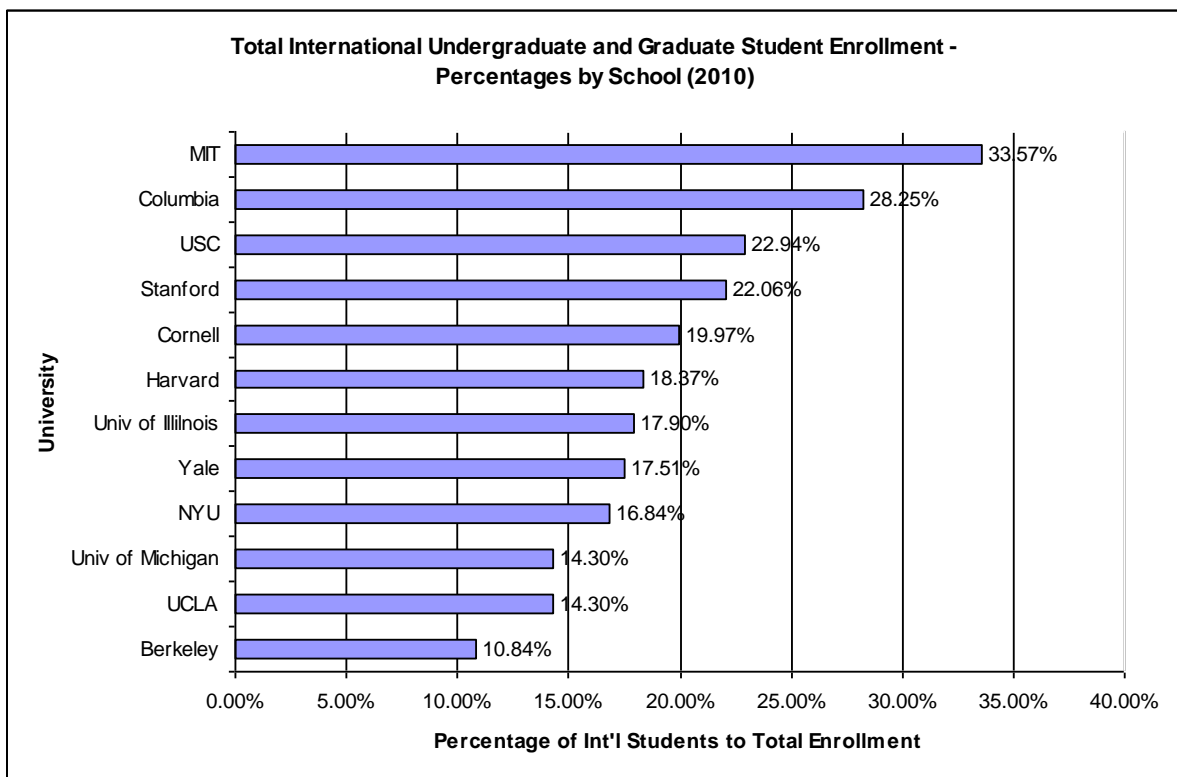


Among graduate and professional degree programs, the fastest growing segment of international applicants both nationally and at UCB are mainland Chinese¹ applicants. Chinese applicants to UCB graduate programs grew 74% in the past three years--or double the rate--relative to a 37%

¹ For purposes of this report, the term "Chinese" refers to people from mainland China, as distinguished from people from Taiwan or Hong Kong, who are categorized separately.

increase in the same period for all international graduate applicants. Regionally, applicants from the regions of East Asia, South Asia and Southeast Asia account for 69.7% of total international applicants to UCB graduate programs.²

Historically, UCB's percentage of international student enrollments has trailed its private and public university peers, particularly due to low undergraduate enrollment levels, in the range of 3-5% (see the chart below)³. This was the inevitable result of capping Berkeley's total non-California undergraduate enrollment at less than 10%.



Source: IIE (2010), found here: <http://www.iie.org/en/Research-and-Publications/Open-Doors>

Data compiled by the Council of Graduate Schools suggest that UCB is currently attracting 2-3% of all international student *applications* to U.S. universities.⁴ Thus, UCB has the potential

² See data compiled by the Office of the Vice Chancellor- Administration & Finance on international graduate enrollments by department, found at Appendix I.

³ See "International Students by Institutional Type: Top 40 Doctorate Institutions, 2009/2010," found at <http://www.iie.org/Research-and-Publications/Open-Doors/Data/International-Students/Leading-Institutions-By-Institutional-Type/2009-10>

⁴ See "Findings from the 2011 Council of Graduate Schools International Graduate Admissions Survey, Phase I Applications" (hereafter, "CGS Annual Report 2011"), which states that "230 institutions responding to the Phase I survey conferred about 61%" of the graduate degrees awarded and "provided data on a total of 488,035 applications to U.S. graduate schools by prospective international students for fall 2011." This suggests that as many as 800,000 prospective students applied to U.S. graduate programs; however, it does not account for the likelihood of significant overlap among applicants to various programs, and the total number is likely much lower.

opportunity to increase its future recruitment and admissions of international applicants from high-growth regions.

UCB's new policy to increase out-of-state resident enrollments, including international students, has already significantly raised undergraduate international enrollments from 3-6% in prior years to 11% for the incoming class of 2011-2012. At the graduate and professional school level, UCB's percentage of total international student enrollments is higher (17% compared to 15% for all U.S. universities,⁵ but still considerably lower than at top research universities such as MIT [37%]⁶, Stanford [32%]⁷, and Harvard [21%]). However, a significant increase in international graduate student enrollment is unlikely without a very substantial increase in fellowship funds. Domestic graduate students from outside California become residents and pay reduced in-state tuition after their first year, but international students must pay the higher out-of-state tuition until they have been advanced to candidacy for doctorate degrees; subsequently, they have three calendar years during which they receive 100% reduction in the annual nonresident tuition. However, at current levels of fellowship funding, departments cannot afford to support very many international graduate students.

Apart from these financial constraints, should UCB wish to increase the numbers of international students in its population, China offers an especially abundant source of potentially qualified applicants, particularly for graduate programs. According to the most recent survey by the Council of Graduate Schools, Chinese applicants continue to be the largest and fastest-growing segment of applicants to U.S. graduate schools, with double-digit annual percentage increases since 2005. Total applications from prospective Chinese graduate students grew 18% in 2011, following consecutive increases of 20% in 2010 and 14% in 2009, for a cumulative increase of 60% since 2008 for the top U.S. programs.⁸

During that same 2008-2011 timeframe, total Chinese applications to UCB graduate programs increased by 74%, outpacing this national average. (By comparison, all UCB international graduate school applicants as a group increased by 37% during this period.) In 2011, UCB received a total of 6,734 applications from Chinese applicants seeking degree programs, including 4,005 graduate school applicants and 2,729 undergraduate applicants. Chinese applicants represented 34% of the total 11,808 graduate school applications received by all UCB departments in 2011, and accounted for two-thirds of the net increase in UCB graduate applications 2007-2011, as shown by the chart on the next page.

Also obvious in the chart is the increase in Indian students, a trend that will only grow as India's college-age population seeks higher education. Since India has a critical shortage of colleges and universities, its students are looking elsewhere for their opportunities. A recent article in the *Christian Science Monitor* (<http://www.csmonitor.com/World/Asia-South-Central/2012/0116/In-India-the-challenge-of-building-50-000-colleges>) points out that half of the country's 1.2 billion people are below the age of 25, and that India must build 1,000 new universities and 50,000

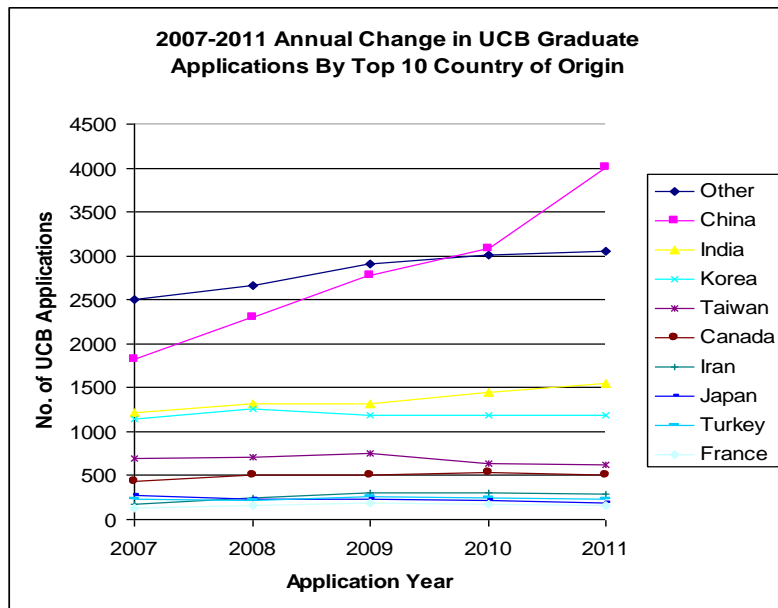
⁵ Ibid.

⁶ Official website of Massachusetts Institute of Technology: <http://web.mit.edu/facts/international.html>

⁷ Official website of Stanford University: <http://facts.stanford.edu/graduate.html>

⁸ CGS Annual Report (2011), supra.

colleges *in the next decade* if it hopes to educate them in the country. In the immediate term, however, opportunity abounds to attract more of the best Indian students to UC Berkeley.



Source: UCB Graduate Division, 2011

a. PRC Applicant Trends.

UCB's graduate programs have room both to recruit more international applicants and to increase the percentage of enrolled international students, particularly from the growing ranks of Chinese applicants. Demand among Chinese students for admission to UCB graduate programs is concentrated in "hard" disciplines, i.e., engineering and the sciences, reflecting the traditional bias for such studies among China's "technocrat" elites. (This preference is also consistent with national trends: 62% of all international graduate students are studying in such fields.⁹) Among UCB graduate departments, the College of Engineering (CoE) leads the campus in total enrollment of international students at 36.7%. CoE also leads the campus in total applicants and admitted students from China.¹⁰ In 2011, Chinese applicants to engineering graduate programs accounted for 1,721, or 42.5%, of all Chinese graduate school applicants to UCB. CoE's Chinese graduate students account for over half of the total 188 Chinese graduate students admitted to all UCB programs.¹¹

A comparison of UCB graduate departments based on numbers of total international and Chinese applicants is found below, and reflects this strong demand for engineering and other scientific disciplines, as well as professional graduate studies programs:¹²

⁹ Council on Graduate Schools Annual Report, 2011, *supra*.

¹⁰ See data compiled by the Graduate Division on international graduate enrollments by department, found at Appendix I.

¹¹ *Ibid*.

¹² Note that the category identified as "professional" refers to an aggregation of 15 UCB schools and departments: Law, Business, Education, Optometry, Public Policy, Public Health, Journalism, Social Work, SIMS, Architecture, City and Regional Planning, Design, Environmental Planning, Landscape Architecture, Urban Design.

Interest of International Graduate Applicants (excluding self-supporting and Law)

	2007		2008		2009		2010		2011	
Arts and Humanities	458	5.2%	431	4.4%	494	4.7%	430	3.9%	441	3.7%
Biological Sciences	560	6.4%	641	6.6%	591	5.6%	690	6.3%	787	6.6%
Engineering	2786	32.2%	2991	31.1%	3532	33.8%	3666	33.8%	4318	36.5%
Natural Resources	239	2.7%	227	2.3%	255	2.4%	234	2.1%	291	2.4%
Physical Sciences	1019	11.7%	1177	12.2%	1209	11.5%	1325	12.2%	1442	12.2%
Professional	2609	30.1%	2969	30.9%	3135	30.0%	3238	29.9%	3371	28.5%
Social Sciences	973	11.2%	1168	12.1%	1213	11.6%	1245	11.4%	1158	9.8%
All	8643	100.0%	9603	100.0%	10429	100.0%	10827	100.0%	11808	100.0%

Source: UCB Graduate Division, 2011

Interest of PRC Graduate Applicants

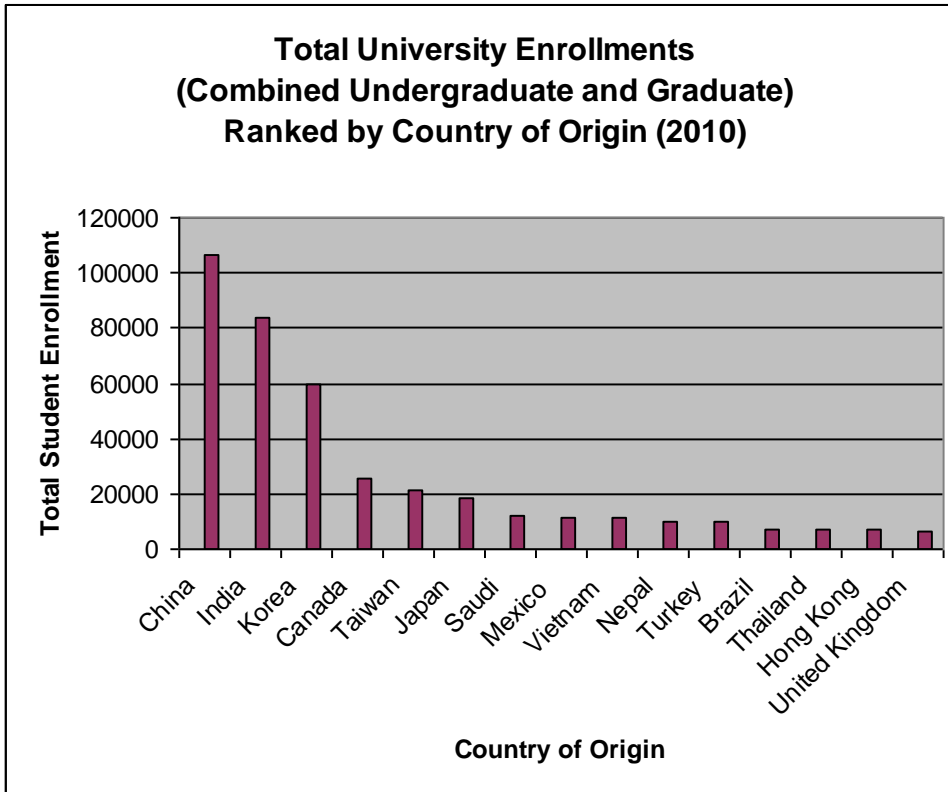
	2007		2008		2009		2010		2011	
	Apps	Admit %	Apps	Admit %	Apps	Admit %	Apps	Admit %	Apps	Admit %
Arts and Humanities	46	0.0%	43	0.0%	47	4.2%	55	0.0%	74	1.3%
Biological Sciences	152	5.9%	187	4.2%	171	7.0%	214	3.7%	239	2.9%
Engineering	679	7.3%	846	6.5%	1082	5.4%	1205	6.0%	1721	6.3%
Natural Resources	81	4.9%	94	4.2%	97	4.1%	96	3.1%	124	4.8%
Physical Sciences	323	5.2%	434	3.6%	468	5.9%	529	3.5%	655	3.3%
Professional	400	7.2%	520	5.3%	678	4.8%	714	3.2%	879	3.7%
Social Sciences	140	7.1%	179	5.0%	231	3.4%	263	4.9%	314	4.1%
All	1821	6.5%	2302	5.2%	2774	5.2%	3076	4.5%	4005	4.7%

Source: UCB Graduate Division, 2011

b. Other High-Growth Countries.

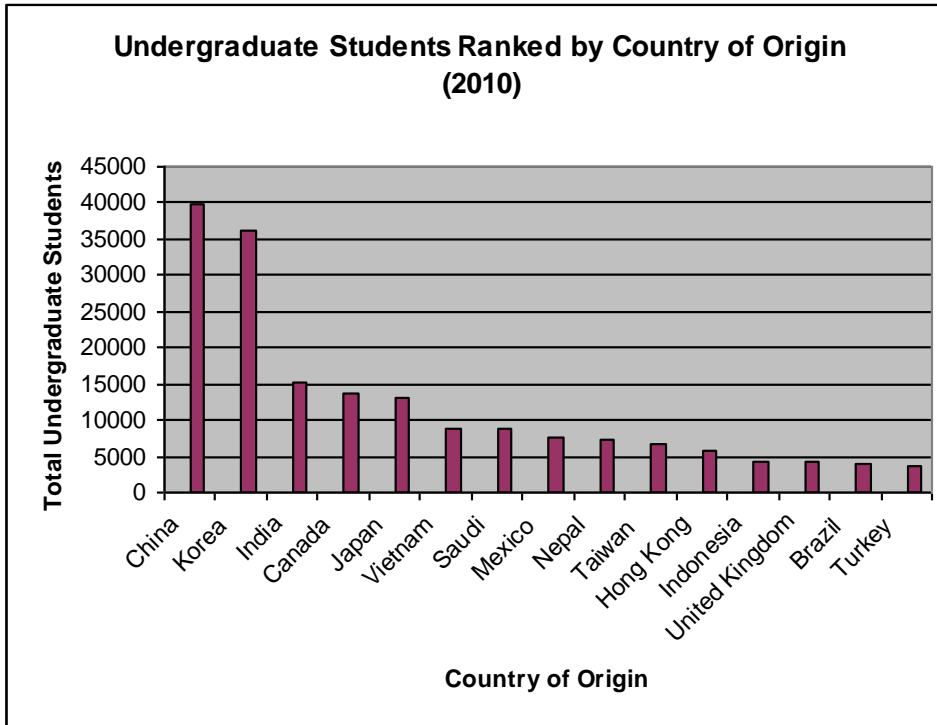
In 2001, Jim O'Neill, Goldman Sachs Chief Economist, coined the term “BRIC” for Brazil, Russia, India, China—and predicted that they would collectively overtake the six largest Western economies in terms of economic might by 2041 (subsequently revised to 2038, and now at 2032), and that they would come to represent the pillars of the 21st century global economy. In addition, other fast-growing countries such as Korea, Taiwan, Mexico, Chile and Vietnam present strong prospects for international student recruitment. UCB must recognize that the demographics of international applicant pools are rapidly changing, and must continue to recruit the best applicants from newly emerging countries, especially in Latin America and South Asia. (By “newly emerging” we mean rapidly growing economic societies that place important emphasis on higher education.)

Nationwide, U.S. institutions of higher learning annually enroll a total of 568,316 international students, including 274,431 undergraduates and 293,885 graduate students. Demand for U.S. education is highly concentrated from students in East and South Asian regions, as 156,056 undergraduates--over 50%-- come from Asian countries.¹³ Within the graduate segment, China, India and Korea--the top 3 ranked countries of origin--together account for over 50% of the 293,885 international graduate students in the U.S. Notably, the Top 15 rankings of international student enrollments by country of origin are increasingly dominated by emerging regions. See the graphics on next two pages.

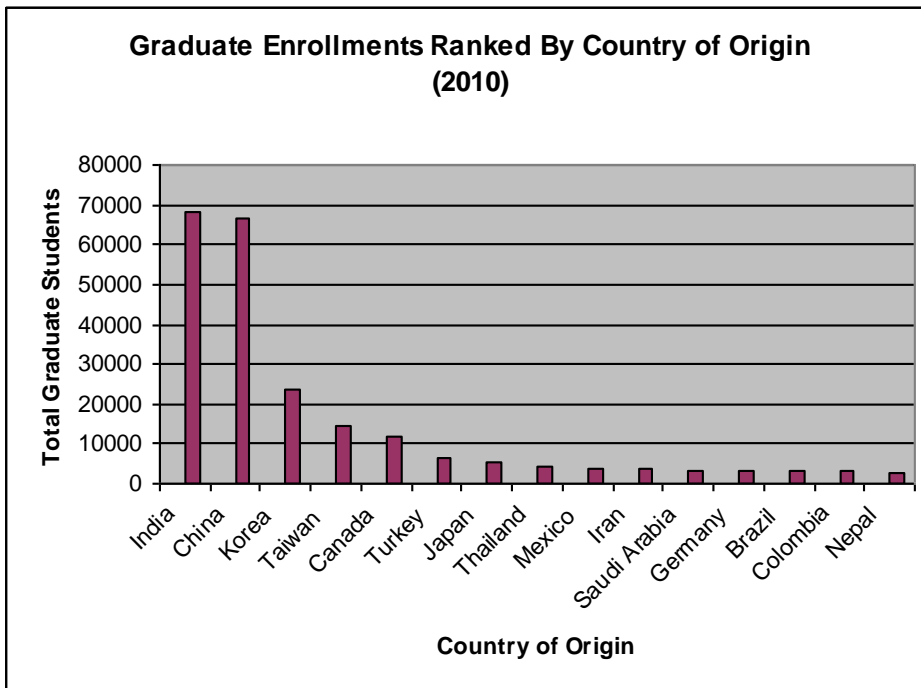


Source: Institute of International Education (IIE) website, 2011

¹³ Institute of International Education, 2010. "International Students: Enrollment Trends, 2009/10." *Open Doors Report on International Educational Exchange*. Retrieved from <http://www.iie.org/opendoors>



Source: Institute of International Education (IIE) website, 2011



Source: Institute of International Education (IIE) website, 2011

Indian applicants to UC Berkeley graduate programs are, relative to other countries of origin, proportionately under-represented compared to all Indian applicants to US graduate programs. According to UCB Graduate Division 2011 data, UC Berkeley drew 5.2% of all Chinese

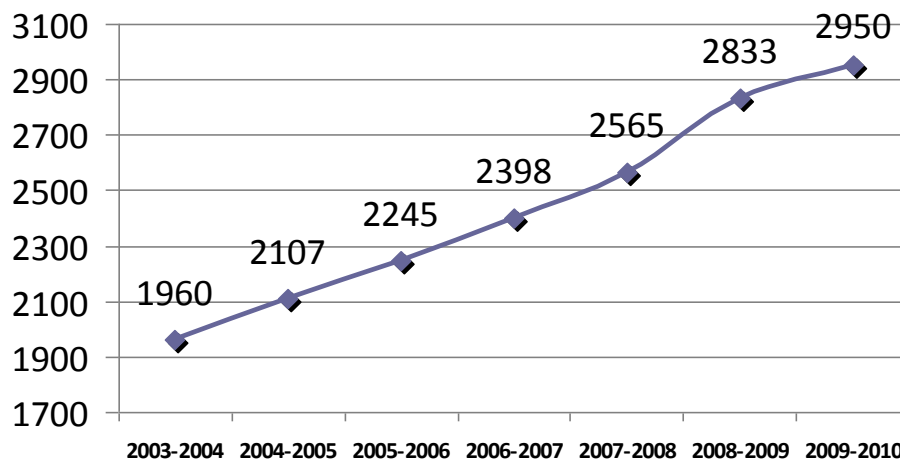
applicants and 5.3 of all South Korean applicants to US graduate programs, but only 2.3% of all Indian applicants.

2. Active Faculty Research Collaborations

While there is room for significantly greater internationalization, in many ways UC Berkeley is already a globalized university.

- We know from the numerous international rankings of research universities that UCB is among the most prestigious in the world. The highly regarded Shanghai Jiao Tong University index rankings place UCB among the world's top five research universities.
- UC Berkeley researchers collaborate widely internationally. **Ninety percent of the 800 UCB faculty respondents** in a survey we recently conducted indicate that they are currently engaged in some form of international research collaboration.
- At present, UCB has **over 100 bilateral exchange agreements and memoranda of understanding (MOUs)** with universities abroad. Although many of these are superficial, lacking budgetary or personnel commitments, and attendant activity, they indicate foreign entities' interest in collaborating with us. Recent years have seen several substantial new international collaborations (KAUST in Saudi Arabia, the National University of Singapore [NUS], the National Taiwan University [NTU], and Nanyang Technological University), and the College of Engineering's recent partnership with Shanghai Zhangjiang Hi-Tech Park.
- The UCB community is enriched culturally and intellectually by its practice of hosting international scholars from throughout the world. In AY 2009-10, UCB hosted 2,950 international scholars, researchers, faculty and lecturers in its various departments.¹⁴

International Scholars: Postdocs and Visiting Scholars (BIO)



¹⁴ Institute of International Education. (2010). "Institutions Hosting the Most Scholars, 2009/10." *Open Doors Report on International Educational Exchange*. Retrieved from <http://www.iie.org/opendoors>

This is the second-largest number of international scholars hosted by a major U.S. university (after Harvard), and represents about 2.6% of the total estimated 115,000 international scholars who visit U.S. universities each year.¹⁵ The three leading sources of international scholars in the U.S. are China (25.6%), India (10%), and Korea (8.5%).¹⁶ By comparison to UCB, other leading U.S. universities tend to host larger percentages of international scholars relative to their total student population size: MIT (1,900 or 18%), Harvard (3,906 or 18%), and Stanford (2,662 or 17%), compared to 8.2% for UCB.

3. Current Efforts in International Fundraising

Organized efforts to fundraise internationally at UC Berkeley date back approximately 20 years, with a full-time staff function starting in the mid-1990s. In addition to direct fundraising, the International Relations unit also supports the activities of Berkeley Clubs in 46 countries that serve over 13,000 alumni and thousands of family members and friends. Some international fundraising also takes place via campus schools and colleges, most notably Engineering and Business.

In February 2010, the *Chronicle of Higher Education* surveyed a nonrandom sample of 51 schools in ten countries (67% from the U.S.) regarding the previous year's international fundraising. The first survey of its kind, it found the median amount raised was \$1.25 million, representing an average of 5.5% of total fundraising revenue. Although peer schools Harvard, MIT, and Stanford did not participate in the survey, others such as USC, Cornell, Cambridge and Oxford did.

- International donations at UC Berkeley over the past five years have averaged \$12.3 million, a figure that represents approximately 4% of total annual gifts and pledges.
- The top five countries by total donations received during the period 2000-10 were Hong Kong (\$70.5 million), Japan (\$16.3 million), Taiwan (\$12.1 million), China (\$7.4 million) and Korea (\$6.0 million).
- The campus data base indicates 685 alumni with an address in India, the vast majority with graduate degrees. Current enrollment of students from India is slightly less than 400, with more than 60% in graduate programs. Two alumni clubs are not very active, but include several prominent government and business leaders.
- From 2000-10, alumni made up 73% of international donors. Of the significant minority not alumni, most were individuals with some association with the university (e.g., supporters of specific types of research). Corporations and foundations made up about 7% of all international donors.
- As more international students are admitted to UC Berkeley, the international constituency of alumni and families increases annually. More attention is being paid to parents of current students and this has already led to donations in the six-figure range with the expectation of

¹⁵ Ibid.

¹⁶ Ibid.

ongoing and evolving philanthropic relationships.

- Across the UC system, revenue from gifts, contracts, grants and cooperative agreements has increased steadily, from \$142.9 million from 71 countries in 2006-07 to \$198.5 million from 91 countries in 2009-10. Analyzed by regions, the leading sources of funding across all categories in 2009-10 were Switzerland, France, Japan, the United Kingdom, Hong Kong, and Germany.

4. International Programs

There are many international program activities at Berkeley. While many of them, particularly those with an academic research focus, are housed within the International and Area Studies department, others are divisions in the professional schools and designed to expand the reach of existing curriculum to new international audiences. They include the Executive & International Programs (EIP) at the Goldman School of Public Policy, Asia Business Center at the Haas School of Business, International and Executive Legal Education (IELE) at Berkeley Law School, the Banatao Center for Global Learning and Outreach from Berkeley Engineering, and the Center for Global Public Health at the School of Public Health.

For the most part, the latter programs aim to create strategic ties with high-level constituents in industry, government and academia. Several of them are self-sustaining. Program activities include executive education and other certificate programs for international audiences, corporate sponsorship and development, and joint programs with counterpart institutions. Areas of strong focus include China, Mexico, Singapore, Korea, India, and other high-growth regions with demand for such programs. The university would benefit from supporting them centrally in order to build upon these programs' institutional ties and revenue-generating programs--and to tap into their ecosystems--to extend their impacts beyond their immediate departments or schools.

The College of Letters and Science (L & S) and the Center for South Asia Studies (CSAS) have extensive connections to India. Within the college, the Department of South and Southeast Asian Studies was founded in 1972 and is top-ranked for teaching and research on South Asia. UCB provides comprehensive language training on the seven major languages in the region. The library collection is ranked among the four leading South Asia collections in the U.S. Roughly 50 faculty from L&S and professional schools are engaged in teaching and research on South Asia. CSAS is one of the world's leading research institutes for the region and has secured funding for four chairs (three endowed) and six privately funded programs.

Berkeley faculty in numerous colleges and schools have collaborative relationships with major Indian institutions including Delhi University, Jawaharlal Nehru University, Jadavpur University, Calcutta University, Indian Institutes of Technology (IIT), and the Indian Institute of Sciences (IISc). A wide variety of programs and conferences are conducted in India and Berkeley on an annual basis, with a wide assortment of Indian partners.

The College of Engineering has had extensive ties with India for some time, including well over 150 undergraduates and 50 graduate students from South Asia and many faculty educated at the

Indian Institutes of Technology (including the dean). Current funded collaboration is in three primary areas: information and communication technologies for development, joint leadership on energy and the environment, and the Berkeley water center, where a program is in the works involving IIT-Kharagpur and TATA, the large Indian steel manufacturing company, which is acting as the corporate sponsor..

The Blum Center's Global Poverty and Practice minor, the fastest growing minor on campus, has interned more than 60 students on projects in India in the past three years. Multidisciplinary innovation teams from the Blum Center are working on five current projects there ranging from portable solar electric kits, to the expansion of basic health care in remote regions, to water and sanitation projects. UC Berkeley Extension is in the initial stages of working with Seer Akademi to bring continuing education to India. Seer Akademi, headquartered in Palo Alto, has its major operations in India where it is pioneering innovative changes to engineering education through distance education. Seer is pioneering new curriculum (for India) that emphasizes theoretical instruction as well as lab-based research and experimentation.

The Graduate School of Education has had several discrete initiatives by individual faculty. Two current projects involve the use of technology to enhance science education and literacy. Berkeley Law's International and Executive Legal Education Program is exploring a program with Jindal Global Law School, established in 2009 as part of Jindal Global University in New Delhi. JGU was founded by Naveen Jindal, Indian steel magnate and progressive member of the Indian Parliament. For more detail on UCB involvement in India, see Appendix VIII.

C. Competitor Benchmarking

1. Other U.S. Universities' International Strategies

While many peer institutions have various formal arrangements abroad—in East Asia and the Middle East, primarily--some are more successful than others and few grant degrees at this time. Initially, Yale University planned to offer a joint degree through its partnership with National University of Singapore (NUS), but after much faculty opposition, the current arrangement is that, at the end of their four-year program, students will graduate with a Bachelor of Arts or Science from the Yale-NUS College, awarded by NUS. At the Georgetown University School of Foreign Service in Qatar, students earn a BS in Foreign Service after completing 120 units, 60 of which must be taken in residence at Georgetown. NYU has new degree-granting undergraduate programs in Abu Dhabi (opened in 2010) and Shanghai (scheduled to open in 2013), but whether these early-stage ventures will prove successful remains an open question. Apparently, both Duke and MIT are in the early stages of discussing with local Shanghai district governments the possibilities of establishing campuses and offering degrees.

a. International Campus Benefits.

The campus forays abroad of U.S. institutions can be categorized as either 1) an auxiliary campus for sending students and faculty abroad to conduct research and programs; or 2) an independent degree-granting campus with separate admissions structure. Most initiatives fall into the former category, with few examples of the latter until now. A comprehensive listing of campus initiatives being pursued by top U.S. institutions is found in Appendix II. As reflected

there, many of the elite institutions have either established a presence in China or are in the process of doing so.

In most instances where degree-granting campuses abroad have been pursued, they have been typically instigated by financial subsidies from a foreign government or other local sponsor. Appendix III summarizes those geographic "hotspots" where foreign government sponsors have played a key role in catalyzing ventures. The role of the foreign government sponsor is to underwrite the program development costs by providing building facilities and/or to provide direct incentives to foreign university participants. The most notable example of the latter is the \$50 Million gift NYU received from the United Arab Emirates (UAE) government to open its Abu Dhabi campus.

If UCB were to consider establishing a future campus, it seems necessary to consider the following key factors: 1) local funding incentives including the availability of building grants and operating subsidies; 2) quality and size of the potential applicant pool; 3) ease of regulatory environment with regard to issues such as tuition pricing caps, capital repatriation, and mandatory partnerships; 4) current levels of applicants to UCB programs; 5) tuition parity with U.S. programs; and 6) conduciveness to online academic programs. With those considerations in mind, China appears to be a region where UCB should focus its efforts. The main advantages offered by China are its size and relative high quality of applicant pools, the preponderance of UCB students and unmet demand among current applicants for UCB programs, and the availability of local funding incentives in China to attract foreign universities. However, developing a deeper UCB commitment in China remains challenging in terms of the regulatory restrictions on foreign universities, as detailed in Section III. F, below.

b. Opportunities for Establishing a Presence in China.

In this section we focus on the comparative advantages, as well as the long-range challenges, of establishing a meaningful China presence. In China, there appears to be a great deal of emphasis on grants for long-term use of building facilities, especially given that real estate is very expensive in major urban areas such as Shanghai. Typically, a government or local university sponsor will provide classroom and research facilities to a top U.S. university as means to pursue its own capacity-building objectives. Examples of such long-term facility lease arrangements include Beijing University's (PKU) building grant to Stanford University, Renmin University's grant of facilities to the University of Chicago, and the Pudong government's construction of new building facilities for NYU's Shanghai campus.

It is instructive to note that in the case of Stanford's new PKU campus, Stanford was able to fundraise US \$5 million from its own donors in addition to obtaining the building grant from PKU. Current discussions initiated by various campus units indicate good prospects for UCB to obtain similar grants of building facilities from local sponsors in Shanghai, if UCB wishes to pursue this avenue. However, UCB will need to weigh carefully several objectives: which campus units should lead this effort; how our goals will fit the capacity-building objectives of the local sponsor; what impact a local presence will have on UCB's other institutional relationships in China; what internal resources UCB will need to deploy; and how the local China operations can become financially self-sustaining.

2. Competition from PRC Universities

Regardless of whether UCB decides to establish a local office in China, it is important to recognize the dynamic competitive landscape developing around recruitment of international students and scholars, and how the growing influence of Chinese universities may affect UCB's future standing. In a few years our major competition may not be only other U.S. universities, but also PRC universities that seek to expand their reach into other regions of China and nearby countries such as Taiwan, Korea and Singapore. PRC universities are increasingly assimilating U.S. faculty and curriculum and may compete soon with U.S. institutions abroad for top Chinese faculty and for international students—whom they subsidize—from other regions of Asia and Europe. In addition to recruitment of U.S.-educated Chinese faculty members from top U.S. universities, Chinese universities are competing with U.S. institutions for post-doctoral fellows and research grants.

The growth of PRC universities is being fueled, in large part, by Chinese central government funding subsidies that encourage expansion with the goal of developing indigenous universities that are world-class in substance and reach. Moreover, Chinese universities form a highly stratified system with only a handful of institutions offering world-class opportunities. The result is an inadequate supply of quality higher education for the children of China's new rich. The shortage of quality higher education has also led to the rise in enrollment of Chinese students in the universities of Hong Kong, Singapore, and even Taiwan, where 1) language is not a barrier; 2) English is taught at a more sophisticated level; and 3) population growth has slowed to the point of negativity, creating a capacity surplus in the local universities. As one example of this trend, Beijing-based Tsinghua University maintains a campus in Taipei, Taiwan to deliver courses in law and other subjects.¹⁷

The expansion initiatives by leading PRC universities are part of the Chinese government's so-called "211" and "985" institutional capacity-building directives, designed to strengthen Chinese universities to attain international standards.¹⁸ Project 985 involves a select group of 39 PRC institutions of higher education (HEIs) which receive extensive funding support from central government authorities, led by Tsinghua and PKU. A primary objective of these HEI initiatives is to strengthen those academic disciplines that will bolster mainland China's "social and economic development, scientific and technological advancement" that will, in turn, produce the skilled labor force necessary to fuel China's continued economic growth.

a. *PKU-Shenzhen Campus.*

A good example of the aforementioned trend is Beijing University's (PKU) new branch campus in Shenzhen, Guangdong, a fast-growing region of China. Established in 2002 as part of the

¹⁷ Tsinghua University is next to the Science & Technology Park in Hsinchu, Taiwan. Once part of the same university, the Taiwan Tsinghua was split off in 1949. The two campuses collaborate on alumni events as one university.

¹⁸ Projects 211 and 985 are considered Chinese national priorities, and the State Council has established a coordination committee that includes the State Planning Commission, Ministry of Education, and Ministry of Finance to provide necessary funding and regulatory approvals to implement their objectives. See "Project 211 and 985: A Brief Introduction," found at http://www.cps.zju.edu.cn/english/info_xz.php?id=1

Shenzhen Special Economic Zone, the PKU-Shenzhen campus is intended to create “transnational” world-class programs for Chinese students, within the territory of China. The Shenzhen campus opened in 2002 with 213 Chinese students, and now has an enrollment of over 2,000 students in its seven graduate schools: Computer & Information Engineering; Chemical Biology & Biotechnology; Environment & Energy; Urban Planning & Design; HSBC Graduate School of Business; School of Transnational Law; Humanities & Social Sciences. Professor Wen Hai, former Vice President of PKU’s Beijing campus, was appointed Chancellor of the PKU-Shenzhen campus in 2008. Students pay tuition fees significantly higher than PRC university tuition levels, but significantly below comparable U.S. programs.

Many of PKU-Shenzhen’s faculty are Chinese-Americans trained and recruited from top U.S. universities as well as from top universities in Canada, Korea and France. Faculty compensation is less than for U.S. counterparts, but significantly higher than for faculty peers at PRC universities. The Shenzhen campus also offers the prestige of visiting faculty from elite U.S. institutions such as Harvard and Yale who typically spend a semester teaching on an expenses-paid basis, i.e., little or no teaching compensation, while PKU builds a permanent faculty in tandem.

A distinguishing feature of the PKU-Shenzhen campus model is its emphasis on research collaboration with industry donors. For example, one high-profile division of the PKU-Shenzhen campus is the PKU-HSBC Graduate School of Business. UK-based HSBC is the largest bank incorporated in the Hong Kong Special Administrative Region, and it donated RMB 150 Million (about US \$25 Million) to PKU with the aim of creating a world-class business management graduate studies program. In addition to HSBC support, PKU-Shenzhen has received ongoing funding from the Shenzhen local government, Guangdong provincial government, and the central PRC government to fund its growth and research.

A second graduate division is PKU-Shenzhen’s law school. Established in 2008, it is headed by Dean Jeffrey Lehman, the former dean of University of Michigan Law School and former President of Cornell University. Its four-year program confers both a Juris Doctor (JD) graduate degree in American law and a Master’s in Chinese law. The program enrolls approximately 45 students per year.

b. CEIBS Graduate School of Business (Pudong, Shanghai).

A second example of indigenous China-based competitors is the highly successful CEIBS (China Europe International Business School). Established in 1994 and headquartered in the Pudong district of Shanghai, CEIBS is regarded as one of the most competitive graduate MBA programs in China and recently established a second campus in Beijing’s Zhongguancun high-tech complex in April 2010.¹⁹ CEIBS originated as a three-way joint venture among the Shanghai Municipal Government, Shanghai Jiao Tong University, and the European Union.

According to one of its founding board trustees²⁰, the Shanghai Municipal government provided a grant of US \$20 Million in the form of operating subsidies, along with valuable land and buildings, as part of the joint venture terms. Apparently, CEIBS has been operating on a

¹⁹ See press release: <http://www.ceibs.edu/media/archive/51577.shtml>

²⁰ Interview with member of CEIBS Board of Trustees, Shanghai, China (2011)

profitable basis for the past several years, and has net earnings upwards of US \$10 million per year.²¹

CEIBS enrolls 700 students in its 18-month MBA program and also offers an Executive MBA (EMBA) program, both of which attract a diverse array of international students, about half of whom are from China. The remaining half hail from the U.S., Europe, Korea, Taiwan and other parts of Asia. Tuition fees are US \$50,000 for the MBA and US \$72,000 for the EMBA. Approximately 60% of CEIBS' permanent and visiting faculty are from abroad, and they include former European Commission President Romano Prodi. CEIBS follows a faculty recruitment model of paying highly competitive salaries on multi-year renewable contracts, but with a strict "no tenure" policy--purposefully designed to encourage continuing innovation and competitiveness among its faculty. CEIBS also has numerous research centers on finance, leadership, organizational behavior, and other areas.

CEIBS provides a clear example of how an indigenously formed institute of higher learning can compete with U.S. universities for top students and faculty. It also demonstrates the ways in which Chinese universities are increasingly attracting top students from other parts of Asia, Europe, and other regions of the world.

III. RECOMMENDATIONS

Based on the Task Force's review of UC Berkeley's current international activities, and our assessment of future opportunities, it is our collective judgment that the following recommendations should be implemented.

A. Institute a Global Education Requirement University-Wide

The College of Letters and Science (L&S) is implementing a new Global Education Requirement similar to the American Cultures Requirement (AC); this should be expanded to students across the university.

Recommendation:

The requirement will ask students to select one of three ways through which to learn about an otherwise unfamiliar contemporary culture or society: acquisition of advanced foreign language competency; study abroad; or successful completion of a designated course that undertakes an in-depth historical, analytical, or thematic study of no more than two specific societies, traditions, or cultures.

B. Attract and Retain Excellent International Students

UCB attracts abundant international graduate students, but it lacks a comprehensive strategy for recruiting, and retaining, undergraduates. The counseling and English-as-a-Second Language (ESL) infrastructures are insufficient to provide quality services to the anticipated growth in international undergraduates. The Operational Obstacles Work Group identified a set of unique

²¹ Ibid.

needs facing international students—undergraduate and graduate--that have a bearing on the success of these students.

1. Advising Undergraduates

In addition to having regular advising needs comparable to all Berkeley students, international students should receive more comprehensive advising that allows for extra time to deal with cultural and communication issues and to take into account visa issues and English proficiency. Our discussions with international students and university administrators made it very clear that the advising resources and models on campus are not adequate to assist international students in acclimating to the Berkeley culture, academic challenges, the intricacies of student life, and possible tax and visa issues. Career counseling for these students also requires specific knowledge of their cultures and indeed their countries. All these issues are interrelated and the disconnected way that advising is currently delivered does not serve international students well.

This problem results from numerous complicated issues of understaffing, multiple and decentralized advising operations, and lack of cross-training among offices. The Advising Network Council issued a document in January, 2011 (see Appendix IV, attached) that details a number of the issues facing international students, but it does not recommend solutions to the problems identified. Advising must be evaluated at the university-wide level involving decision makers that have the authority to implement pervasive changes to satisfy the advising needs for all students, not just international ones. However, if specific actions are not taken to address the lack of services and clear advising for international students, we are confident that retention, student persistence, time-to-degree, and Berkeley's reputation internationally would all suffer.

It is clear that without top level leadership and access to resource redeployment, these problems will persist and international students will be disadvantaged. We recommend that a high-level ad hoc committee be appointed to recommend important changes to the advising system and related student services, and to plan the implementation of the new campus-wide advising strategy.

In addition to that effort, specific actions must be taken immediately to address the needs of international students already here, in particular the following:

Recommendation: Locate Academic Advisors at the Berkeley International Office

The subcommittee recommends implementing a method that has worked to address a similar issue on campus. The University Health Services has stationed some staff in various locations around the campus—for example, mental health counselors are located in the Dean of Students' office--so that the students can easily access the service without having to go to the Tang Center itself. The oversight of this operation lies with the UHS, and the staff members are supervised by the UHS (none report to anyone in their physical location). Similarly, academic advisors from colleges could be stationed at the BIO, where international students make their first contact via visa processing, so that international students can continue to visit the office they're already familiar with and get the advising they need. It is a way to achieve a certain level of centralization without changing the current administrative models.

Recommendation: Develop Career Counseling Services for International Students

International students' unique advising needs extend from the beginning of their academic careers through to graduation. Many more international students are seeking counseling to clarify their career goals, find internships, and secure employment following graduation. These activities can be daunting for any student, but the job search for international students is further complicated by the status of their student visas, which expire shortly after graduation, forcing them to quickly find a job to remain in the US or to return to their home country without a clear career plan. One way the campus could support international students is to develop a comprehensive career services program to assist them with finding employment in their home countries or in the US. By building relationships with US employers who hire international students, either to work in the US or globally, and with employers in students' home countries, UCB will be able to better serve its international students. Utilizing alumni contacts beyond US borders will be integral to the program's success.

2. Communications for International Students

To smooth the entry of newly admitted international students into the discourse practices in undergraduate classrooms at UC Berkeley, the Task Force identified a need for more support for students in the following areas: oral communication; conventions of academic writing; grammar, academic vocabulary and editing; and critical reading. The College Writing Programs (CWP) has developed a curriculum proposal in these areas (see Appendix VI), and a pool of lecturers trained in applied linguistics or English-as-a-Second Language is available to teach the curriculum. Some of the courses in the proposed curriculum have been taught successfully in the Summer English Language Institute (SELI), and can be adapted to address more closely the needs of the quite specific cohort of UCB admits. Many of the same lecturers who teach in SELI, which enrolls some 400 international students annually, could be tapped to teach this new cohort.

Recommendations:

CWP's proposal should be reviewed and additional analysis conducted to determine whether the target number of new sections and enrollment seats proposed is appropriate to meet the anticipated demand associated with increased international student enrollments. Summer courses could be funded by Summer Sessions; however, any fall and spring course offerings would require TAS allocations from the EVCP Office.

In addition to reviewing the CWP Proposal, the campus should explore additional options for self-supporting programs. University Extension is developing an ESL program to teach "Academic English" year-round. Qualified students in the rigorous program will be able to package concurrent enrollment and Extension courses along with, or after completing ESL work.

Additionally, other campus units such as the Student Learning Center, with critical roles in supporting ESL students, should be consulted about current and potential services, as well as funding needs and revenue-generating possibilities.

Representatives from key units should be convened soon in an ad hoc group, supported by OPA's provision of appropriate data, to develop a coordinated approach.

3. Non-resident Tuition and Graduate Students

In discussions with faculty and the Dean of the Graduate Division, we learned that non-resident tuition costs at the graduate level can be a disincentive to faculty members' selecting the most qualified students for a research projects in the sciences. That is, given a choice between two students, one of whom is international and has no possibility of ever qualifying for in-state tuition, a faculty member may choose the domestic student who will cost less to support. To compete with our elite peer institutions, we have to subsidize international students all the years they are here.

Recommendation:

Making additional funding available for non-resident tuition (NRT) scholarships would help us recruit the most qualified students, regardless of their origin, and contribute to the quality of research. The Graduate Dean endorsed two possible ways to create funding for such scholarships.

a. Eliminating Non-Resident Tuition Discounts.

Currently state-supported professional programs like the HAAS MBA programs and the JD program enjoy a discount on Non-Residential Supplementary Tuition (NRST) of up to \$6122.50 per student per semester, compared to the amount required from other academic graduate students (\$7,551 per semester). One possibility is that the discount be eliminated and all graduate students be charged the non-resident supplemental tuition of \$7,551 per semester. The additional income from such an NRST increase could be directed to fellowships restricted to fund non-resident supplemental tuition for academic students. With approximately 725 students currently receiving this professional student discount, it would raise an additional \$2M in NRST fellowship funds, resulting in academic year NRST support for 137 students. However, given the recent growth in professional degree supplemental tuition, this may be difficult to achieve.

b. Return-to-Aid for Non-Resident Supplemental Tuition.

There is currently no return-to-aid (RTA) on Non-Resident Supplemental Tuition. However, there is a 50% RTA on increases in graduate tuition for graduate academic students, whether resident or non-resident. To enable *global* recruiting for the best talent, which means more non-resident students being admitted to UC Berkeley, it is possible to increase the number of non-resident students (and equivalently decrease the number of resident students) and use the additional NRST funds generated by the increased non-resident students to create a return-to-aid on all NRST for graduate academic students.

The attached exhibit (Appendix V) demonstrates the funding model that could be used to accomplish this goal. In the example, a 25% RTA on NRST for graduate academic students could hold harmless the center, while allowing for 461 more (academic year) NRST fellowships. If these are distributed for use on NRST-paying international students, a few hundred more international doctoral students could be part of the Berkeley campus, with no additional outside funds required. The Graduate Division has indicated that there is certainly capacity to increase

the number of NRST-paying graduate students admitted to ensure that the targeted NRT tuition could be achieved to fund the return-to-aid on NRT tuition.

C. Improve Support to Faculty/Students/Staff Working Abroad

1. Database for Students and Faculty Working Abroad

UC Berkeley has many resources, programs, and opportunities for international students and partner institutions, but there is no one place a student or faculty member can learn about all of them. If faculty members were aware of other faculty engaged in projects in the same area, they could benefit from each other's work, resources, or contacts. Other institutions actively working abroad have well-organized and comprehensive websites that create a one-stop shop for all international activities. The UCB website could include the following:

- Enrollment at UC Berkeley in undergraduate and graduate programs
- Summer Sessions' international visiting student program
- Berkeley Study Abroad
- University Extension International Diploma Programs, Certificate Programs, Concurrent Enrollment, and custom programs
- Visiting Scholars Program
- Berkeley International Office
- Programming for international students and scholars
- International Student Groups (graduate and undergraduate)
- International research efforts
- ESL resources and language programs
- Events geared towards an international audience

Alternatively, there could be two web sites, one for students and one for faculty. For faculty, an existing database could be modified to include an opportunity for faculty to enter information about their international research which would then be made available in a searchable database. On the VC-Research web site <http://vcresearch.berkeley.edu/>, the "Faculty Expertise" tab takes the user to a searchable database of faculty research interests, with an easy link for faculty to enter or update their information. It would be simple to add a box or drop-down list with which faculty can indicate their experience doing research in one part of the world or another.

Creating web sites requires administrative offices to take responsibility for content development and maintenance, and therefore some staff time.

2. Streamline Accounting for International Research

Operational difficulties can be encountered in all phases of the reimbursement/payment process. Currently, many of the proper procedures are not clearly articulated and posted in a place that's easy to locate. In addition, many of the procedures for international work need to be updated, especially since the volume of international payments has increased. As a result, payment requests can require numerous back and forth communications. There is no regular training,

either in departments or in central disbursements; on-line training resources would be a huge improvement.

The difficulties are compounded by the number of central departments involved in the process. For student payments, Financial Aid, Payroll, Disbursements, and Billing & Payment Services all play a roll. For purchases of tangible goods abroad, Procurement and Disbursements are involved. In all cases, the payment is dependent upon the upstream processing of paperwork, and the necessary approvals.

Last, given the complexities of dealing with international payment difficulties regardless of the cause, the lack of a protocol for resolving them causes further delays in payment processing.

Recommendation:

The Controller's Office should review the current procedures and determine the changes that need to be made in order to improve customer satisfaction. In some cases, the procedure will need to be revised; in other cases, it will need to be clearly documented and widely disseminated. In all cases, training should be developed and provided.

The Controller's Office should collaborate with campus users to develop the optimal working procedures. In addition, as many of the up-stream functions are outside the Controller's area, they should partner with Financial Aid and Purchasing. In order for the improvements to be made in a timely manner, the Controller's Office may need to employ additional resources. The Controller's Office recommends that it partner with consultant Grant Thornton, with which it has been working, to find solutions to the operational obstacles quickly and put them in place. The VC-Administration & Finance should work with the Controller's Office to find a workable way forward.

D. Better Coordinate International Initiatives

Most of our peers that are active internationally have not only developed a strategy but also established a central office to work with institutions in Asia. All universities in China, and most in all other countries, have a top-down strategy and foreign affairs officials to implement it. They find it easier and more effective when their American counterparts are similarly organized. However, at UCB a combination of the shared governance philosophy, the tradition of operational decentralization of campus activities, and the centrality of L&S in campus decision making militate against implementing a top-down international approach.

Recommendation:

UCB should consider assigning the centralized responsibility for international liaison to somebody already in a senior administrative position, perhaps VC Wilton, or Special Assistant Gronsky.

According to VC-R Fleming, the approach to new enterprises that works best here at UCB is "facilitated bottom-up," involving incentives. Campus-level international initiatives are

losing out because no one has a vested interest in making them happen. Some of our peers have grant writing units to assist in the extensive work involved in applying for Integrative Graduate Education and Research (IGERT) or US Agency for International Development (USAID) grants to support work in developing countries.

Recommendation:

It is clear that UC Berkeley could benefit from a small proposal development unit--for both international and domestic grants.

E. Establish an Office in China

As documented in the earlier section on the activities of our peer institutions, U.S. institutions of higher education are increasingly active in establishing ties and major programs in a number of the fastest growing economies and societies where there is also a governmental focus on strengthening their colleges and universities. Notable attention is being given to South Korea, Taiwan and Singapore in East Asia; India in South Asia; Qatar, Abu Dhabi and Saudi Arabia in the Persian Gulf; and to an increasing degree Brazil in South America.

All these activities appear to be dominated by the determined focus on China, for understandable reasons: it is the most populous country in the world; its economy has been growing at or more than 10% per annum for more than a decade as it has rushed headlong from an agrarian society to one of the most advanced in the world; its gross domestic product (GDP) now exceeds that of Japan, second only to the United States, with projections that it could exceed the US GDP by 2016 (although its GDP per capita lags far behind the leading industrial countries); and it values higher education greatly, has tens of thousands of highly qualified students, and has reached out to many US universities to forge meaningful relationships.

Forging ties with Chinese institutions is not without downside risks. First, the Chinese Communist Party controls the political system, with democratic practices and freedom of speech still very scarce. Recent efforts by the Chinese government to constrain and harass Google's activities in China suggest the real limits that the regime will tolerate in allowing its population full access to all that the internet provides. Second, there are substantial vestiges of political opposition that could grow in the future and threaten the stable societal environment that is required for effective teaching and research. Latent or real opposition ranges from pro-democracy activists in cities in the southeast to disenfranchised agrarian workers in the central part of the country to pro-secessionist movements in Tibet and in the Uyghur sections in the west. Beijing faces a number of potential threats to its political control which, if they gain strength, could threaten the investments of US universities in the country.

Third, China is not immune to economic overheating and a major economic downturn. Its phenomenal growth rate for more than a decade is not guaranteed to continue indefinitely. A deep recession in China could alter considerably its policies toward relations with foreign academic institutions. Lastly, China and the United States differ over the future of Taiwan. Should China again--as it has done periodically since the 1950s--threaten Taiwan's independence, it could provoke a major confrontation with the US which continues to guarantee the island nation's national security, however tacitly.

It is not feasible to calculate with great accuracy the probability of any of these risks materializing, and they have not precluded major China initiatives by Harvard, MIT and other elite American universities. The prevailing view is that China will continue to emerge as the 21st century's leading economic and military competitor with the US, and that our involvement in educating their students and conducting joint research could or would over time lead to a democratic transformation of the society.

UC Berkeley has, of course, a distinguished record of teaching and research on China and East Asian Studies. It boasts one of the most eminent research institutes on the region thanks to the extraordinary efforts of Robert Scalapino and his successors. The Center for Chinese Studies, founded in 1957, has over 70 core faculty members in over 25 departments. Former Chancellor Tien made major contributions and, more recently, Chancellor Birgeneau has succeeded in establishing special relations with Tsinghua University in Beijing. Berkeley is clearly one of the premier "brands" for which the Chinese have a deep respect and it gives us a comparative advantage over many of our competitors.

Since the UCB approach has been primarily from the bottom up, its activities with and about China are primarily the aggregate of efforts by individual scholars, research centers, and some professional schools. One notable example of the achievements of individual Berkeley faculty in creating important ties with Chinese institutions was the recent announcement by Beijing University (PKU) that it will create a \$100,000 scholarship in honor of Sheldon Zedeck, in recognition of his contributions to establishing PKU's new Psychology Department. Actively engaged in China-related program development and research are the Center for Chinese Studies, the Banatao GLOBE Center in the College of Engineering, the IELE program at the Law School, the Goldman School's EIP, and the Center for Global Public Health. However, these programs are mostly limited in impact to departmental interests. The central administration could build on these "bottom up" initiatives to broaden their influence, especially in creating important ties with Chinese universities.

Recommendation:

To make significant progress in our international strategy, as well as to strengthen ties with China's political and education elite, UC Berkeley should establish an office in Shanghai or Beijing, both of which could operate similarly to the Harvard Shanghai Center model. UCB has received offers for real estate in Shanghai, but none so far for Beijing; the latter could be pursued actively, however, if we decide on that venue.

Benchmarking studies of our peers' international efforts and discussions with William Kirby, noted Harvard Professor of China Studies and former Dean of the Faculty of Arts and Sciences, made a convincing case that a UC Berkeley physical presence would offer the capability to launch numerous activities: 1) executive education programs; 2) conferences that could promote joint research and also enhance ties with Chinese political and academic leaders; 3) international student recruitment; 4) alumni relations that could bolster 5) fund raising; 6) deploying UCB undergraduates for study abroad; 7) facilitating UCB researchers; and 8) introducing humanities and liberal arts courses in China. The office could serve as an aggregation hub for the offering

of "blended courses" that would involve a percentage of UCB faculty presence there, an online curriculum, and student presence on both Chinese and the Berkeley campuses.²²

Although cost is a central concern for any undertaking during these difficult budgetary times, we think the cost of the office would be small compared to its benefits. The staff would not be large or highly paid. The office space could be donated or sponsored. In Harvard's case, its executive education programs at the Shanghai Center are said to be doing "extremely well" and it is "on the ground" in China and prepared to exploit whatever opportunities arise.

But much work needs to be done before the university should act. A carefully crafted business case must be established to justify the effort. And the selection of which departments and activities to emphasize would require a careful analysis based on understanding the evolving educational "marketplace" in China. On the other hand, the establishment of an office at Shanghai or Beijing could generate a "supply side" effect where UCB individuals, departments, schools and colleges would seize the opportunity to implement programs that they would be reluctant to launch without such resources.

F. Strengthen Ties with Leading PRC Universities

Stronger, deeper ties with leading PRC universities will both broaden our access to top graduate school applicants from China, and expose UCB's own community to the increasingly important research agendas taking shape in China. While such ties have existed for some time among individual faculty, what has been missing to date are more formal and sustained institutional commitments that have broader impact beyond one faculty member or department's research agenda.

As evidenced by the Chancellor's recent visit to Beijing, UCB's relationship with Tsinghua University is especially strong and could be expanded. Berkeley's extensive and in-depth interactions with Tsinghua have produced a wealth of knowledge and familiarity on both sides with regard to the internal functioning and the key faculty and leadership at the partner institution.

UCB's primary goal should be consideration of the long-range benefits from exposing faculty and students to important research and cultural trends at our counterpart PRC institutions--a driving motivation among other leading U.S. universities. At the same time, such collaborations should be self-sustaining, if not sources of additional income. A key priority in developing these institutional ties is generating new income sources from both international program development and research partnerships with Chinese universities. Some pathways currently being explored by campus units include development of both degree and non-degree programs; online program development and distribution; joint research in areas of keen interest to Chinese stakeholders, (for example, green energy initiatives); and enlisting government and industry sponsorship. To assess the range of opportunities in China, it is recommended that a China committee be established to evaluate the following partnerships from a campus-wide perspective.

²² We are aware of the UCEAP center in Shanghai, but do not think it provides the space necessary for the kind of program envisioned.

We also need to consider how such institutional ties might engender aid to our international recruitment efforts; research funding, opportunities for student and faculty involvement there; data on Chinese societal dynamics to use in our research, other informed perspectives to enrich our research; and potential influence on China's emerging cadre of western-educated leaders and the shaping of its technological and scientific policies.

Various UCB departments have already initiated ties with top-ranked PRC universities such as Tsinghua, Beijing University, Fudan and Shanghai Jiao Tong. However, these institutional ties are mostly in the early development stages. Developing ties with other PRC universities that are less technological and more oriented to social sciences and humanities would offer an opportunity for meaningful dialogue on China's developing economic and social policies. (See the discussion in Section III.C, above.)

Recommendation:

To assess the full range of opportunities in China, it is recommended that a new China Strategy Committee be established to evaluate the potential partnerships from a campuswide perspective.

1. Joint Research Funding

PRC funding may pose an important source of future scientific research funding at UCB. Given the increasing importance of China-specific applications to many industrial sectors such as automobile technology, clean energy, and biopharma, UCB should pursue government and private research funding opportunities for China-specific applications. As one notable example, Lawrence Berkeley National Laboratory (LBNL) received a five-year USD \$25M Department of Energy grant for joint research with Tongji University in Shanghai, to conduct research on green building efficiency under the Clean Energy Research Center (CERC) initiative. Similarly, the University of Michigan received a five-year US \$25M grant from the U.S. Department of Energy (DOE) and industry sponsors to collaborate on Clean Vehicle technology research with Shanghai Jiao Tong and Tsinghua, as part of the U.S. federally funded CERC initiative with the Chinese government.²³ This research collaboration apparently stems from the long-term relationship between University of Michigan and Jiao Tong in establishing their joint degree Engineering program in Shanghai.

As another example, Berkeley's College of Engineering is working with Tsinghua University on a joint research initiative relating to green energy; it is being funded by the Chinese government on the Tsinghua side, and with seed funding by private donors on the CoE side. In general, sustainable energy initiatives are a strategic focus of Chinese universities. Tsinghua's international research collaborations also include the Tsinghua-MIT-Cambridge Joint Laboratory of Low-Carbon Energy, based at Tsinghua's Beijing campus.

Given China's growing importance in the global economy, industry sponsors may play a growing role in funding research collaborations with Chinese entities that seek access to

²³ See press release at: <http://css.snre.umich.edu/project/us-china-clean-energy-research-center-clean-vehicles-cerc-cv>

Berkeley's world-renowned research capabilities and intellectual property generation. To maximize its prospects for obtaining local research funding from Chinese stakeholders, UCB will need to ally itself with strong Chinese university partners that can attract such government and private funding.

2. Capacity-Building Initiatives

UCB's program development efforts in China will need to be aligned both with the strategic priorities and the regulatory constraints of the Ministry of Education, which require such partnerships with local universities as the price of market entry.²⁴ Chinese government regulations and practices will require such partnerships with local universities, whether establishing local degree programs or Chinese government-funded research, both of which are the main priorities of Chinese universities.

These priorities pose something of a dilemma for UCB. While PRC universities seek to expand their capacity to deliver degree-granting programs, the traditional UCB model of selective access is at odds with the proliferation of its degree programs. Moreover, the vast size of China's higher education markets renders it difficult for UCB to realistically scale its degree programs to make significant inroads into this demand. For example, each year, China produces 100,000 lawyers and over 350,000 engineers from its baccalaureate and graduate programs. At the same time, this demand is highly segmented, as the most prestigious universities like Tsinghua and PKU graduate very small classes, similar to elite U.S. institutions.

To address the inherent tension between maintaining selectivity and scaling resources, UCB should pursue a twofold approach: 1) on a very limited and selective basis, explore the feasibility of degree-granting graduate level programs in strategic domains that are priorities for China's growth, and for which there is large unmet demand (Engineering, for example); and 2) use more scalable non-degree granting programs such as executive education and online certificate programs to establish UCB's presence in China more broadly. A third approach being studied is the expansion of existing degree programs to an offshore auxiliary campus where Berkeley's currently enrolled students would be encouraged to spend time to conduct research, similar to the Stanford campus that is being planned in Beijing. This would expand the capacity of current UCB degree programs by allowing for enrollment of more students and perhaps serve as a better alternative than a separate degree-granting campus.

²⁴ The Chinese government requires that the Ministry of Education approve a foreign university's application to establish and operate local degree-granting and some non-degree granting programs. Special restrictions apply to the establishment of foreign university degree-granting programs: 1) mandatory partnering arrangements with local universities under MoE regulations; 2) some degree of revenue-sharing with local university partners; 3) possible restrictions on the amount of tuition fees that may be charged for local academic programs; and 4) types of degree-granting programs that may be allowed to operate. Generally, a foreign university's application must demonstrate that its proposed degree-granting programs are "beneficial" to Chinese stakeholders and not already sufficiently offered by the Chinese universities, i.e., consistent with the capacity-building goals of HEI 211 policies. It is important to note that MoE regulations do not require that foreign universities issue a joint degree with the local university partner, but only that the local institution has a nominal involvement in the program auspices and is benefitted by such an arrangement.

For non-degree programs, UCB should investigate and pursue strategic alliances with entrepreneurial PRC universities that can best serve as marketing and distribution conduits. Harvard's Shanghai Center is an instructive model. Though it appears that the center is independently operated, in fact it relies on local alliances with Fudan University to provide joint instruction (involving their faculty and to some extent curriculum), as well as marketing and distribution of Harvard-branded programs to local audiences of international executives. As another example of this co-branding approach, the MIT-Sloan Business School's Certificate in International Business is a long-term legal partnership that includes marketing and co-branding with Tsinghua University's prestigious School of Economic Management (SEM).

G. Increase Focus on India

India has the tenth largest nominal gross domestic product (although 129th in GDP per capita) and ranks third in purchasing power parity. It is estimated to have several hundred million people living what we would define as a middle-class life, even if many hundred millions more are living with very limited resources or in deep poverty. It is common knowledge that India has the world's second largest population, projected to replace China as the most populous by about 2025. It is the world's seventh largest in area and often referred to as "the world's largest democracy." Since the end of the Cold War, the U.S. has become increasingly close to India—the 2006 US-India agreement to further nuclear energy cooperation was seen by many as the formation of a tacit bilateral strategic relationship.

A 2011 Ernst and Young report (Appendix VII), "New Realities, New Possibilities: The Changing Face of Indian Higher Education," offers abundant thought-provoking facts relative to higher education:

1. India's higher education system of 26,000 institutions, 92% private, is the largest in the world with tremendous latent demand, especially in rural areas and among women.
2. Rapidly increasing family incomes is driving greater demand that will require major new institutional investments.
3. India sends 160,000 students abroad, second to China, with almost half enrolled in US institutions. With job placement as the top priority, professional programs in engineering, management, computer applications, pharmacy and medicine are the most popular.
4. There are more than 150 foreign institutions collaborating with Indian institutions, most from the US and UK, with Duke, Georgia Tech, Virginia Tech, the London School of Economics and Political Science, and others establishing campuses there. A majority of the foreign partners are public institutions even though most Indian institutions are private. Online learning and other new delivery modes are increasingly emphasized.
5. Academic-industry collaboration and public-private partnerships are a growing trend.

In addition to these findings, we note that:

1. The Berkeley brand of "access and excellence," already strong, could become far more appealing with additional investment given the competitive nature of Indian society and the appeal of our access across the socio-economic spectrum that is uncommon in Indian culture.

2. Despite the large number of Indian academic institutions, fewer than 2% meet required academic standards and even the premier Indian Institutes of Technology face more than 20% faculty vacancies.
3. Dr. Ramasami, the Secretary of the Indian Department of Science and Technology, informed Jitendra Malik in mid-December that there will be a significant increase in the amount of funding devoted to research in science and technology: the plan is to increase it from 1% of GDP to 2%.
4. A number of major Indian corporations—Reliance, Modi, Goenka—are investing heavily in professional degree education, as is Azim Premji, the chairman of Wipro Ltd, the large Indian outsourcing company.
5. There are about 55 billionaires and many other individuals of great wealth in India whose support should be cultivated.

The Task Force understands that India is very complex and we must be cautious before investing scarce resources in major initiatives. Nonetheless, the potential in intellectual, human resource development, and financial terms appears to be very substantial. The central campus should assist, where appropriate, individual units in their own initiatives, as it does in many other areas. It should incentivize units to engage with Indian students and institutions, and it must establish conditions that allow all who are willing, or already engaged, to succeed.

Recommendations:

Establish an India Oversight Committee²⁵ to guide the overall campus effort, facilitate the sharing of intelligence across units, develop a business case to evaluate high-payoff activities, and identify private partners to support our efforts, including student recruitment. The Oversight Committee should be made up of representatives of all the units that contributed to this report, and its strategic goals should include the following:

- Increase the number of talented native Indian students attending UC Berkeley at both the undergraduate and graduate levels.
- Raise UC Berkeley’s visibility with key Indian constituencies, and cultivate more aggressively our alumni, both in India and in the Bay Area.
- Develop relationships with major Indian employers to assist them in enhancing the skills of their most talented young workers.
- Focus on private Indian universities, corporations, and individuals and avoid state governments that tend to be obstacles rather than facilitators of productive interaction.

H. Invest in Online Education Resources

Information technology (hereafter IT) is of growing importance to establishing and maintaining international research and educational activities of all sorts and must be part of any UC Berkeley internationalizing endeavor. IT is especially critical for expanding UCB's capacity to work with international partners and to reach broader audiences, given limitations on hiring or relocating

²⁵ One member of the India Work Group has a somewhat different opinion—see Appendix VIII, page 2.

abroad our existing faculty. Drawing from the apparent strengths of the Harvard Shanghai Center model, which uses advanced videoconferencing systems for its executive education programs, UCB should consider investing in state-of-the-art video conferencing facilities at the proposed China office as a capacity-expansion measure. Such facilities would support, and possibly reduce the costs of, international conferences, research collaboration, executive education, and many other program offerings that could expand their reach to international audiences.

A number of campus units, particularly the professional graduate schools, are already working towards identifying the right curricular focus, audience base, technology platforms, and financial models for online delivery of educational content, from certificates to degrees. The latest generation of web-based technologies has dramatically reduced the cost of communicating, including interacting face-to-face and in real time, with international students. Multiple departmental pilots will be underway in the next 6-12 months to investigate the pedagogical benefits of online and blended learning instructional delivery methods; to identify and select appropriate web-based technologies; and to ascertain the cost and feasibility of delivering programs to international audiences. The purpose of these online pilots is to determine whether there is a scalable instructional delivery model that attracts international audiences at price points similar to our offline programs, particularly for non-degree offerings.

Decisions about campus investments in the common infrastructure and tools to support online delivery of educational content should recognize the potential benefit of positioning campus units to tap international demand for quality content associated with UC Berkeley. The demand is evident in the large, and growing, volume of international applications for Berkeley degrees; few, if any, programs admit all of the qualified international applicants. In addition, international students who are admitted to our programs often do not come because of the high residential costs. This unmet demand is likely the tip of the iceberg in countries like China and India, and is partly what motivates top-tier universities to build new campuses abroad. Since the technology required for providing online education is essentially the same whether students are located in California or Chengdu, and since high speed Internet connectivity is available in many of the world's urban areas, the opportunity to tap international markets for high quality online educational programs is increasingly an attractive reality.

At the same time, we must recognize that few U.S. universities have yet to identify a high-paying segment of international clients for online programs, especially for non-degree programs, so careful market analysis is required before we jump into this realm. In fact, among elite universities, MIT provides free public access to "virtually all" its course teaching materials through its OpenCourseWare website, and Harvard and the University of Chicago have stated that they have "no plans" to start online degree programs.²⁶ In the case of the Harvard Shanghai model, they are deploying IT resources (e.g., videoconferencing) in tandem with live instruction in-country. Similarly, we should consider how online and other IT platforms could help augment in-person instruction through a so-called "blended learning" model. From the standpoint of learning effectiveness, at least one recent study sponsored by the U.S. Dept. of Education

²⁶ "UNC Makes Risky Online Bet; Top-20 Business School Aims to Extend Its Global Reach with Internet M.B.A.," *Wall Street Journal* (July 7, 2011).

suggests that "blended learning" (combining of online and offline instruction) may be just as effective as, if not superior to, either online or live instructional delivery.²⁷

UCB should evaluate the costs and potential returns of investing in an online learning platform that includes comprehensive tools for instructor-student interaction (multimedia content authoring tools and templates; video capture, processing, and distribution; content repository; mobile delivery framework; and course evaluations), and an open, flexible Learning Management System that can be integrated into and customized for existing programs. We should also assess the financial impact of deploying these IT investments for international instruction, apart from their general utility to the campus.

There are compelling economic reasons for UCB to consider making its own strategic investments in such a state-of-the-art online learning platform and services that would serve international, as well as domestic, students. The technology and the expertise required for quality online delivery is very costly; campus provision would spread the costs of ownership, while also providing the entire university with access to the same tools and platforms. In addition to program development uses, UCB should also identify the potential cost-savings associated with using online communications for cross-border research collaborations.

The implementation of an online program development strategy for international markets will also pose unique marketing, financial and technology-related issues:

- Determining whether UCB-branded online degree and certification courses would be competitive in international markets such as China;
- Assuming that strong demand does exist among international users, identifying the correct market segments and the appropriate distribution channels and partners that can help UCB to access these online students;
- Determining whether it is feasible to charge the same tuition rates for online degree programs, if this pathway is pursued;
- Investigating the availability and operational costs of international infrastructure that allows for high-quality synchronous online interaction and learning; ;
- Researching how to best control against the risks of online content piracy, e.g., encryption and authentication technology, blended learning models, etc.

Furthermore, UCB must specifically address the issue of scalability in devising a profitable business model. For example, it would seem that a campus investment in online delivery capacity would allow us to expand the total number of international students that participate in all UCB programs, through a combination of online and offline instruction. On the other hand, scalability is particularly challenging with regard to online degree-granting programs, as they typically require high volumes of student enrollments to amortize curriculum and other development costs.

²⁷ "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies," commissioned by the U.S. Department of Education Office of Planning, Evaluation, and Policy Development Policy and Program Studies Service (revised September 2010).
<http://www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

According to UNEX Dean Diana Wu's analysis, the break-even point can be up to 200 students per cohort based on UCB's present out-of-state tuition. One leading-edge online degree program offered by the University of Southern California jointly with a private funding partner has an enrollment base of 1500 online graduate students.

By comparison, elite institutions like UCB are traditionally reluctant to "open the floodgates" to degree-seeking students, either domestic or international. Thus, the economics of any online degree-based business model that UCB adopts will be fundamentally different from those employed by less discriminating "open enrollment" institutions such as University of Phoenix or Open University, whose primary aim is to maximize the financial benefits of this scalability. The latter institutions are not constrained--as we are--by an inherent limitation on the number of degrees conferred.

Finally, given the relatively high investment expense required upfront to develop curriculum and create an online delivery platform, and the uncertain upside of scaling online program delivery, UCB must also consider whether it is willing to co-invest with external partners (in the form of vendor financing, revenue-sharing arrangements, or venture capital investors) to reduce the risks of such online forays, particularly for non-degree programs where there is less certainty of a profitable audience.

Recommendations:

Undertake a financial analysis to compare the potential returns on a risk-adjusted basis from UCB's unilateral investment in this capacity development versus sharing the development risks with outside partners and investors.

Encourage interested campus units to undertake a marketing analysis to assess the feasibility of offering degree or non-degree programs to international users based on tuition pricing levels that are comparable to our offline programs, to address the other issues outlined above, and to identify the most appropriate local distribution partners to establish UCB's online brand in those markets.

As they are implemented over the next 6-12 months, evaluate pilots conducted by various campus units to assess their potential for scaling to broader campus initiatives.

Determine synergies with other online initiatives such as the UCOP online pilot currently underway, in areas such as curriculum development, marketing and distribution of programs, technology investments, and other resource-sharing measures.

I. Increase International Fundraising

As noted earlier in the section on UCB's current internationalization efforts (p. 18), international fundraising is well established and with results that compare favorably with our public and private peers.

The world's population of high net worth individuals (HNWI, defined as those with investable assets of at least \$1 million, excluding primary residence) has shifted to the Asia Pacific region. The *Capgemini World Wealth Report 2011* notes that the HNWI population in the U.S. and Europe (3.1 million in each) has been eclipsed by Asia Pacific (3.3 million). Although the U.S. population still commands the largest amount of HNWI wealth (\$11.6 trillion), Asia Pacific wealth (\$10.8 trillion) now exceeds that of Europe and is increasing at the fastest rate of the three regions. Eight out of ten of the fastest growing HNWI populations in the world are in Asia (see <http://www.capgemini.com/services-and-solutions/by-industry/financial-services/solutions/wealth/worldwealthreport/>).

There is evidence that the potential for attracting philanthropic and other revenue from international sources has been growing and will continue to do so. We should carefully monitor future developments for opportunities to tap into international funding from the rapidly developing Asia Pacific region. Given that state-related industry sponsors appear increasingly willing to fund research with top PRC universities, UCB should consider how to align its research agendas where appropriate.

Our potential for fundraising success internationally is closely tied to the Berkeley "brand" which could be positioned for specific audiences in different countries and regions. According to the Times Higher Education World University Rankings of March 2011²⁸, UC Berkeley is very well-regarded internationally. In the largest global survey ever of academic opinion--over 13,000 academics in 131 countries--respondents rated academic excellence in teaching and research, and the results (out of a score of 100) yielded six universities described as "super brands": Harvard (100.0), MIT (85.0), Cambridge (80.7), UC Berkeley (74.7), Stanford (71.5) and Oxford (68.6). Ranking #7 was Princeton, but with a score of only 36.6.

The culture of philanthropy varies around the world, as do legal and tax considerations, but the differences can be acknowledged, respected, and accommodated. The UC system has partially addressed the latter with the establishment of legal foundation entities in the U.K. (linked to a network of 14 EU countries), Hong Kong and Japan.

Recommendation: Develop region-specific fundraising strategies in coordination with other international revenue-generation

Given limited resources, international fundraising efforts should prioritize regions and programs by their potential to generate donations and other revenue. The effectiveness of fundraising strategies will be increased and program synergies realized if linked with other international revenue generating initiatives on campus.

²⁸ The Times Higher Education annual survey of the world's top 200 universities is widely acknowledged as one of the two most comprehensive rankings (see <http://www.timeshighereducation.co.uk/world-university-rankings>). The other is published by the Academic Ranking of World Universities (ARWU) organization at Shanghai Jiao Tong University (see <http://www.arwu.org/index.jsp>). UC Berkeley placed #8 in the Times Higher Education 2010 list and #4 in the ARWU's 2011 edition.

Recommendation: Develop an international communications strategy

Charge the public affairs and marketing functions of the institution to develop a comprehensive international communications strategy to enhance and support international fundraising and engagement activities. Such a strategy would provide a consistent framework for how UC Berkeley is presented internationally, one which effectively leverages the institution's international reputation.

J. Review UCB's Experience with the King Abdullah University of Science and Technology

EVCP Breslauer should appoint a small faculty review committee to examine what has worked well, and what has not. Such a review was called for by the Academic Senate when the arrangement was first formalized, and sufficient time has passed to assess fairly the benefits and costs. Determine the extent to which this arrangement can be a model for other international partnerships. The ISTF believes that this is an important initiative and the KAUST partnership deserves a careful independent review to assess its effectiveness, potential, and utility to other units with non-American partner institutions.

K. Expand and/or Establish Partnerships with Institutions in Latin America

To this point, the task force has not been able to probe in depth the opportunities for UCB in Latin America, especially in comparison to our assessment of China and East Asia. We have, however, consulted with several Latin American scholars on campus including Harley Shaiken and Peter Evans, and reviewed material provided by the Center for Latin American Studies and selected other sources. This limited inquiry has revealed four countries in Latin America that hold particular promise for UCB because of their economic growth, the quality of their academic institutions and their connections with citizens of California: Mexico, Brazil, Chile, and Argentina.

1. Mexico

The U.S. shares with Mexico a long border and a very long history. It is one of the top three U.S. trading partners, with almost US \$400 billion in cross-border trade in 2010. Despite great poverty, there is also substantial wealth in Mexico, and it has first-rate universities including the Instituto Tecnológico Autónomo (ITAM), the Universidad Nacional Autónoma (UNAM), the Instituto Tecnológico y de Estudios Superiores (Monterrey Tech), and others. UC Berkeley boasts prominent alumni in senior positions and close connections with researchers at those universities. As one example, Law School Dean Chris Edley and Lecturer Maria Echeveste have participated in the U.S.-Mexico Futures Forum, organized jointly by ITAM and CLAS at UCB, and in its tenth year.

Promoting ties with Mexican institutions that benefit our growing Hispanic student population, and that help California provide greater opportunities for Mexican Americans would, we judge, be well-received in Sacramento. Any new initiative should involve strong academic roots and be sensitive to emerging policy issues in U.S.-Mexico relations. The possible involvement of UC Berkeley with other UC campuses in the revitalization of Casa California in Mexico City--despite the challenges of being part of a consortium--might be a low-cost, low-risk way to

initiate targeted activities including executive programs, fund-raising, recruitment of Mexican students, facilitating UCB students studying in Mexico, and promoting joint research activities.

2. Brazil

Brazil is one of the world's emerging economic powers with growing political influence. It is a perennial candidate to become a permanent member of the UN Security Council and has reached out to major powers all over the world to enhance its economic potential: it is attracting major Chinese investment, importing nuclear energy technology from Germany, and engaging in sensitive dialogues with Iran. It is now the 8th largest U.S. trading partner, with almost US \$60 billion in trade in 2010. Brazil is the "B" in "BRIC"--coined by Goldman Sachs to highlight that Brazil, Russia, India and China have the greatest potential to be dominant economically in the next several decades and are prime for investment opportunities. It is increasingly prominent in energy and climate change. Petrobras, the state-owned oil company, is one of the largest in the world, and UCB synthetic biologist Jay Keasling is partnering extensively with Brazilian colleagues and institutions in both his academic and private sector path-breaking activities. A recent Council on Foreign Relations study, co-chaired by former U.S. Secretary of Energy Samuel Bodman and former World Bank President James Wolfensohn, recommended that the U.S. president name a National Security Council Staff Senior Director solely for Brazil because of its huge importance to American foreign policy.

CLAS has strong ties with Brazil, as does the campus. Among the visiting scholars CLAS is hosting this year is former President Fernando Enrique Cardoso; it also has strong ties with the government of Luiz Inacio Lula da Silva, and with many in the new government of Dilma Rouseff.

3. Chile

Chile is a small but exceedingly prosperous nation with a burgeoning economy and is at a scale where a UCB investment might have a large impact. The country has come a long way politically and economically since the dark days of the Pinochet dictatorship, and the previous administration made significant strides in internationalizing Chile's public universities. Moreover, according to a recent article in the *Chronicle of Higher Education*, the Chilean government has implemented strategic initiatives for higher education capacity-building that include establishing a US \$6 billion fund to enable 18,000 graduate students to study abroad by 2018.²⁹ Since 2008, over 5000 Chilean graduate students have received full-tuition subsidies, and the Chilean government has signed numerous academic exchange protocols with universities in the U.S., Canada, Australia, and New Zealand. Particular areas of interest for Chilean students include engineering, agriculture, environmental sciences and health, as well as

²⁹ "Latin America Hopes to Lift Global Profile," *Chronicle of Higher Education* (April 18, 2010), found at: <http://chronicle.com/article/Latin-American-Universities/65126/>

professional studies like law and business. This represents a significant opportunity for UCB to tap into government-funded scholarships to bring greater international diversity to its graduate student applicant pool.

The Center for Latin American Studies has very close ties with prominent Chileans including former President Michele Bachelet, who has visited the campus often in the past few years, and former President Ricardo Lagos, who will be teaching a special CLAS seminar in fall 2012. UC Berkeley scholars are already tied to several excellent academic institutions there. Chile's potential is attested to by a recent one-week trip there by the UCSF Chancellor to explore joint relationships.

4. Argentina

Argentina always retains the potential for a bright future that continually eludes it. It has a highly educated, talented population drawing on its European roots from Spain, Italy and France, and substantial natural resources. But it has long suffered from dictatorial and corrupt governments and roller coaster economic performance. The task force does not have a detailed knowledge of UCB ties with Argentine institutions, although some like the Di Tella Institute in Buenos Aires are internationally known for their economic analysis and have long received Ford Foundation and other U.S. philanthropic support.

CLAS has ties with the current administration, having hosted current President Cristina Fernandez de Kirchner, as well as Foreign Minister Hector Timmerman; with highly regarded academics; and with journalists including the former editor of *Clarín*, the country's leading newspaper. The work of UCB Professor Emeritus Tulio Halperin and Professors David and Ruth Collier is well-known and respected in Argentina.

This admittedly cursory review suggests clear potential in Latin America for UCB that we would be remiss not to assess in greater detail. Without relying excessively on Harvard's experience, we cite its successful programs through its Center for Latin American studies. In efforts similar to that at its Shanghai Center, Harvard has established: a) a regional office in Santiago, Chile, that enables relationships with individuals and institutions in nearby countries; and b) a Brazil Program office in Sao Paulo that works with partners there.

Recommendations:

A small team of perhaps three or four scholars and administrators should perform a detailed cost-benefit analysis of establishing at least one office in Latin America--most likely in Mexico or Brazil, or possibly Chile. As with our China model, we would hope this could be done with alumni and other donor support to minimize the costs to the university, with the aim of promoting the mix of activities discussed above in the Mexican case.

Campus experts on government and legislative affairs should determine--even in this highly constrained budget environment--promising UCB activities in the region that could attract legislative support.

The university must acknowledge that, because of the hierarchical nature of these societies, the Chancellor himself needs to invest time in visiting one or more of these countries to demonstrate the seriousness of the UC Berkeley interest and commitment.

L. Establish UCB-LBNL Research Hub at the Richmond Field Station

As documented earlier in this report, the drive for international collaborations, especially with East Asia and the Gulf States, has led our peer institutions to arrangements in which their faculty engage in research and educational collaborations in a host country. This strategy, whereby U.S. institutions move, or reproduce, a part of their operations abroad, can be thought of as “outward globalization.” In 2004, the then Dean of Engineering, Rich Newton, proposed a different strategy for Berkeley’s international research collaborations—what he termed “intellectual insourcing.” His idea was to develop at the Richmond Field Station (RFS) a critical mass of laboratories and centers and offer secure space in these facilities to foreign universities, which in return would either lease space or buy it through contributions of capital.

In 2005, a task force appointed by EVCP Paul Gray endorsed the Newton concept, recommending that UCB “should begin in a pragmatic, focused and staged way to launch a Pacific Rim Science & Technology Collaborative Center” so as “to capitalize on UCB’s international reputation and strategic location on the Pacific Rim.” In this manner, the task force report continued, UCB could position itself “as the international leader of a comprehensive US-Asia/Pacific research collaboration, *with an intellectual nexus in Berkeley.*”³⁰

Despite the strong endorsement, the task force’s recommendations were never followed up, but a dramatic new development looms on the horizon. The RFS has been chosen by LBNL for the creation of its second campus. Given the Lab’s synergy with UCB scientists, and the site’s potential, the RFS would be an optimal place for the development of a “Science, Technology, and Innovation Park.” The combination of LBNL’s unique research facilities, its scientists, and increased UCB research activity at RFS could become a magnet for startups as well as established high tech companies that might locate at the Field Station and adjacent properties. (Think of La Jolla’s Torrey Pines Science Park with its combination of UCSD, private research institutions, and bio-medical companies as a model of what the Richmond waterfront, with RFS at its core, could become.) A science and innovation park combining the strengths of LBNL, UCB, and high-tech research industries could be a very strong draw for foreign universities that want their scientists collaborating with, and working in proximity to this hub of cutting edge research and innovation.

Recommendation:

UCB should explore the feasibility of creating an International Science, Technology, and Innovation Center as part of the larger LBNL Second Campus. This would in no way preclude “outward globalization” such as the China Center recommended above, but it would position Berkeley uniquely among its peers in globalization efforts.

³⁰ *Pacific Rim Science and Technology Collaborative Center Task Force Report*, John Lie, Chair, April 2005.

IV. CONCLUSIONS AND RECOMMENDATIONS

The Task Force has documented a rich array of international education activities that clearly place UC Berkeley among the leading international universities in the world. We have much to be proud of:

- A growing number of international students at the undergraduate level that stand at 11% of the 2011-12 freshman class, a proportion in excess of all non-California resident freshmen from just two years ago. This percentage is expected to rise appreciably in the coming years, in part as a response to severe budgetary pressures.
- At the graduate and professional school level, approximately 17% of the student body are citizens of other countries. Overall, there were almost 4000 international students enrolled in 2010, providing a rich learning environment for US domestic students
- Rapidly emerging as one of the dominant powers of the 21st century economically, politically and militarily, China accounts for the largest number of these students at both the undergraduate and graduate levels. This means that Berkeley is well positioned to help train many of the next generation of Chinese leaders.
- UC Berkeley has a rich history of faculty collaboration with non-domestic scholars. In a recently administered faculty survey, an astonishing 90% of the 800 respondents indicated they are currently engaged in some form of international research collaboration. These individual activities are complemented by the distinguished heritage of the university's international and area studies research institutes.
- The quantity and quality of our faculty research is reflected in recent Shanghai Jiao Tong University index rankings that place UC Berkeley as one of the world's top five research universities.
- The international presence on campus is augmented significantly by the almost 3000 post-doctoral and visiting international scholars present in academic year 2009-10, the second largest group hosted by a major U.S. university (after Harvard).
- On balance, UCB enjoys "super brand" status in East Asia and other regions of the world that very few of our competitors can match.

But we cannot rest on our laurels, for a number of reasons:

- The number of our international undergraduate and graduate students is actually far below those of many of our peer institutions. These peer institutions--Harvard, Stanford, MIT, as well as NYU, Georgetown, Duke and others--are developing and implementing aggressive, top-down international strategies that have led to their establishment of campuses abroad, joint degree programs, and other activities that, in some cases, have produced substantial gifts and revenue streams including potential research funding that may result from local collaborations.

- We project that in the future UC Berkeley will be competing not only with these U.S. peers, but also with elite Chinese universities that will be expanding their activities throughout China and drawing students from other countries in East Asia.
- The severe budgetary pressures UCB is under are likely to continue for several years, at a minimum, and it is incumbent upon us to assess how our international activities could be adjusted to contribute new revenue streams to our operating budget and endowment.
- Our student advising and counseling services, and ESL resources are inadequate both quantitatively and qualitatively to provide the services expected and required by Berkeley's international student body.

The Task Force offers the following recommendations to enable UCB to be fully responsive to these needs and to position ourselves to perform with distinction in an increasingly competitive international education environment.

1. The university's mission is in part to prepare our students to have a sophisticated understanding of other cultures and societies for both their intellectual and future professional benefit. In support of this objective, the College of Letters and Science is implementing a global education requirement. It is our collective judgment that this requirement should be required university-wide at the undergraduate level.
2. We are limiting our ability to recruit the most accomplished international graduate students because of our tuition pricing policies. We should consider eliminating the non-resident supplemental tuition discount and providing return-to-aid for non-resident supplemental tuition.
3. We need to enhance institutional support for faculty and students working and studying abroad. This can be achieved in part by establishing a data base for faculty conducting international research in order to enhance effective communication and collaboration, and by better coordinating international activities.
4. The Provost should select an ad hoc group to plan for strengthened advising and counseling services for UCB international students. Note that failure to offer sufficient services will hamper the success of international students, could contribute to their leaving UCB before earning their degrees, and will have deleterious effects on fund-raising efforts in which they as alumni and their parents might otherwise be engaged.
5. We should establish a UC Berkeley physical presence in either Shanghai or Beijing. The office should be opened with the financial assistance of Chinese and other donors and would act as a Berkeley hub to promote executive education programs, to facilitate research collaboration, to enhance alumni and corporate fund raising, to recruit students to Berkeley, and to assist our faculty and students in working and studying abroad. A net effect of these efforts would be the strengthening of our ties with China's political and education elite that could, in turn, reinforce our objectives.
6. A campus-wide China Strategy Committee should be established to strengthen ties with other Chinese universities, evaluate joint research opportunities, and identify other capacity-building initiatives.

7. UC Berkeley's brand of "access and excellence" is very appealing to qualified Indian students, as well as to the Indian corporations that wish to employ them, and it could become more appealing with increased recruitment, partnerships, and alumni cultivation. An India Oversight Committee should be established to oversee and coordinate opportunities for more UCB engagement with India and Indian students.

8. We need to mount a serious examination of how we can utilize information technologies (including social media and video-conferencing capabilities) to support our international activities. We should evaluate online education platforms and information technology investments by assessing unilateral initiatives versus shared arrangements with private investors, and by conducting a market analysis of demand for international users to understand where to best focus such online initiatives.

9. The university's international fund-raising strategies and programs should be coordinated with other international revenue-generating activities. These should be supported by a sophisticated communications strategy. Public affairs and marketing should develop a comprehensive international communications strategy to enhance and support international fundraising and engagement activities.

10. The College of Engineering's relationship with the King Abdullah University of Science and Technology (KAUST) is one of Berkeley's most significant international commitments. Now that it has been in operation for a few years, we must conduct a rigorous evaluation of its objectives, activities, and potential--not only to identify "lessons learned" and to assess its effectiveness, but to determine whether such a relationship can or should be replicated with other institutions in different societies.

11. The university should consider how best to establish new or expanded partnerships with institutions in Latin America, especially Mexico, Brazil, and Chile. A cost-benefit analysis should be conducted to determine the advantages of establishing a UC Berkeley office in Mexico, Brazil, or perhaps Chile.

12. Establish a UCB-LBNL Research Hub at the RFS. This idea, first suggested by a 2005 task force, has become more feasible with LBNL's choice of the RFS as its second campus. The hub would bring international scholars and programs to Berkeley to complement the many other initiatives that take Berkeley scholars abroad.

The implementation of these recommendations would position UCB to compete effectively in this intensified international education environment, and would raise substantial additional revenues with minimal marginal costs and investments.

APPENDICES

- I. Interest of International Graduate Applicants to UCB
- II. Top U.S. Universities with Presences Abroad
- III. Foreign Government-Sponsored International Education Zones
- IV. Briefing on the Challenges of an Increased Non-resident Student Population
- V. Non-Resident Tuition
- VI. College Writing Program Curriculum Proposal
- VII. Ernst & Young Report on Indian Higher Education
- VIII. Summaries from UCB Units Involved in India