LAURA E. RUMBLEY
IVÁN F. PACHECO
PHILIP G. ALTBACH

INTERNATIONAL COMPARISON OF ACADEMIC SALARIES

An Exploratory Study

BOSTON COLLEGE

Center for International Higher Education
Lynch School of Education

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Laura E. Rumbley
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OCTOBER 2008

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EXECUTIVE SUMMARY

The remuneration of the academic profession is central to the success of the higher education enterprise everywhere and is also critically important to individual academics around the world. This report attempts to provide a comparison of academic salaries in more than one dozen disparate countries on all continents. This pioneering study is unique in its use of broad national-level data and its effort to compare salaries both across countries and employment ranks. The use of purchasing power parity (PPP) measures makes it possible to provide more accurate comparisons, while the study also offers some useful generalizations and caveats with regard to research on this key topic.

Unfortunately, measuring academic salaries is far from science. Plagued by a lack of consistent data (or for many countries, any data at all), difficulties in comparing living costs, and other problems, this study must be seen as a first attempt rather than a definitive report.

The main objective of the study is to examine how academic salaries compare and contrast across 15 different countries, with some consideration of a special case, Palestine. The countries included in the study are Argentina, Australia, Canada, China, Colombia, France, Germany, India, Japan, Malaysia, New Zealand, Saudi Arabia, South Africa, the United Kingdom, and the United States. The baseline of this study was the 2005–2006 academic year, according to the U.S. academic calendar. However, for some countries the available data did not fit this specific period. Most data are relevant from 2004 to 2007. The salary comparisons themselves were developed using the World Bank PPP Index (WB PPP), although we also provide some comparative findings using the Big Mac Index (BMI).

The study compares salaries in three distinct areas:

- at the entry points to the academic profession,
- at the highest levels of the academic employment ladder, and
- in terms of overall national averages.

We also aim to illustrate how academic salaries compare across countries when set against two key benchmark indicators for national development:

- the Human Development Index (HDI) of the United Nations Development Programme (UNDP) and
- the World Bank's gross domestic product (GDP) per capita estimates.

We focused on the following five major components:

- salary data,
- contextual information relevant to each country's higher education system and academic profession structure,
- purchasing power parity,
- national development considerations, taking into account fundamental standard of living indicators in each country, and
- key salary/income benchmarks for each country.

Data collection consisted primarily of reviewing publicly available government documents and databases (largely online), as well as reputable studies of the academic profession in the countries involved in the study. In-country experts were also contacted to provide information and feedback on preliminary findings. Table 1 summarizes the key findings from this study.

Table 1.
Highest and Lowest Salaries

Employment Level	Comparative Standing	Country	Monthly Salary (World Bank PPP$)
Entry level	Highest	Canada	5,206
	Lowest	China	682
Overall Average	Highest	Saudi Arabia	6,611
	Lowest	China	1,182
Top level	Highest	Saudi Arabia	8,490
	Lowest	China	1,845

Additional findings of interest include the following:

- Entry-level salaries average $2,888 per month (in World Bank PPP$) across the 15 countries involved in the study.
- Top-level salaries average $5,318 per month (in World Bank PPP$).
- The overall average academic salary calculated in the study is $4,050 per month (in World Bank PPP$).
- The best prospects for raising a salary over a career—from the entry-level average to the top-level average—are in Saudi Arabia, where the absolute difference in monthly salaries from the top to the bottom of the scale is $5,328 (in World Bank PPP$).
- The country with the worst prospects for salary progression in absolute terms is India, with an average increase of $920 (in World Bank PPP$) over the course of a career.
- In terms of a percentage increase in salary from entry- through top-levels of the salary scale, Chinese academic salaries register the most robust growth in the group, at 170 percent, while Germany shows the lowest increase in salaries moving up the employment ladder, at 39 percent. The average change from entry- to top-level salaries for this group of countries is 94 percent.
- Indian academics make, on average, 8.73 times their country's estimated monthly GDP per capita figure, while French faculty make, on average, 1.58 times the GDP per capita per month estimate for their country. These represent the highest and lowest outcomes, respectively, for this statistic. On average, the salary data from our study indicate that academics in the study countries can expect to make 3.2 times the monthly GDP per capita estimate for their country.
- China and India consistently register the lowest salary averages, while Saudi Arabia, Canada, the United States, and Australia hover near the top of the spectrum across the three salary levels analyzed in this study.
- Colombia and Argentina also present lower salary averages than the majority of the other countries, typically outperforming only India and China in terms of absolute salary averages and not far behind Malaysia. However, these two Latin American countries do register larger absolute differences between their entry- and top-level salaries than do France and Germany.
- New Zealand hovers in the middle of the pack across much of the analysis, as does Japan.
- South Africa offers some surprises in this study, sitting in 10th position on the ranking of entry-level salaries but rising to the fifth position in terms of top-level salary averages. This significant spread in salary levels between the entry and top positions on the academic employment ladder is outdone only by Saudi Arabia.
- More developed countries—as defined by their positions on the UNDP's Human Development Index and their relative GDP per capita estimates—tend to enjoy higher salaries than those considered to be less developed by these same two criteria. However, there is no lockstep relationship between these two variables.
- In less-developed countries, the ratios of salaries to GDP per capita incomes rank higher than in more-developed countries, and the spread between entry- and top-level countries tends to be greater.

ACKNOWLEDGMENTS

We are indebted to a significant number of individuals around the world whose very generous assistance made it possible for us to complete this work.

- Leslie Bozeman, David Fields, and Julie Margetta—graduate research assistants at the Boston College Center for International Higher Education—provided an outstanding preliminary scan of the field of information relevant to this topic.
- In Argentina, Pedro Krotsch, editor of *Pensamiento Universitario*, connected us with Marcelo Prati, an adjunct professor in sociology at the Universidad Nacional de la Plata, who provided us with outstanding feedback and advice on our preliminary findings there.
- Anthony Welch, associate professor in the Faculty of Education and Social Work, University of Sydney, helped us to clarify various details in both the Australian and Malaysian contexts.
- Jane Knight, adjunct professor in the Comparative and International Development Education Centre of the University of Toronto's Ontario Institute for Studies in Education, shared insight into the private higher education system in Canada. Glen Jones, who is the Ontario Research Chair in Postsecondary Education Policy and Measurement, also at the Ontario Institute for Studies in Education of the University of Toronto, provided us with invaluable assistance in refining our preliminary findings on Canadian academic salaries and employment ranks.
- Yan Wu of Shanghai Jiao Tong University's Graduate School of Education gave us useful statistics on the Chinese higher education system, along with articles about salaries in China, while Chenzi Wang (a master's student at Boston College) helped to translate and explain various materials in Chinese. Wanhua Ma of Peking University's Graduate School of Education also served as a helpful sounding board for our work.
- Guillermo Londoño, vice-rector at the Universidad de Antioquia and a member of CONACES, the Colombian commission for the evaluation and authorization of higher education programs, guided us to information relevant to Colombia, while Javier Botero, former vice minister of higher education and currently rector of the Escuela Colombiana de Ingeniería, helped us to put these data into perspective.
- Gaële Goastellec of the Université de Lausanne in Switzerland, and Christine Musselin of Sciences Po and the Centre National de la Recherche Scientifique in France provided incredibly useful information on French academic salaries and the highly complex French higher education system.
- Jürgen Enders of the Center for Higher Education Policy Studies in the Netherlands reviewed our work on Germany and suggested additional data sources of relevance.
- Pawan Agarwal of the Department of Science and Technology of the Government of West Bengal, and N. Jayaram, Dean of the Faculty of Social Sciences at the Tata Institute of Social Sciences in India, were instrumental in providing relevant data from India, as well as excellent feedback on our preliminary findings.
- Charles Jannuzi, an associate professor at the University of Fukui in Japan, led us to important sources of information and also provided a wealth of details about the broader higher education context in that country. Toru Umakoshi, a professor of higher education in the Graduate School of Obirin University, Tokyo, a former professor of comparative education at Nagoya University, Japan, and founding director of the Center for the Studies of Higher Education, also responded to our request for feedback on our work.
- Molly Lee of the UNESCO Bangkok read and commented on a preliminary draft of the country report on Malaysia. Her suggestions allowed us to improve significantly the final version. Muhamad Jantan provided us with additional information about salaries, retrieving it from the original sources in Bahasa Malaysia and helping us to make sense of these data.
- Roger Smyth, of the New Zealand Ministry of Education, was exceedingly helpful in terms of responding to our initial findings on New Zealand, as well as expanding our understanding of faculty employment in that context.
- Hala Taweel, president of the University of the Middle East Project, introduced us to the academic profession in Palestine, while Mohammad Ziad Al Jabari, of Hebron University provided a most helpful perspective on the ground there.
- Mohammad Al-Ohali, Deputy Minister of Educational Affairs of the Saudi Arabian Ministry of Higher Education, shared key data and perspectives from the Saudi Arabian context.
- In South Africa, we were most kindly assisted by Chika Sehoole, an associate professor of education policy at the University of Pretoria.

- William Locke, from the Centre for Higher Education Research and Information at the Open University, UK helped us to better understand and contextualize our findings in the United Kingdom.
- Martin Finkelstein, professor of higher education at Seton Hall University, shared with us his expertise on the U.S. academic profession and helped us to reconsider our work in significant ways.

We are exceedingly grateful for the ways in which these individuals helped us to move this project forward. Any errors or omissions in this work are solely our responsibility.

INTRODUCTION

The academic profession is at the center of the university. No academic institution can be successful without a strong, able, and committed professoriate. The university itself is at the center of the global knowledge economy, training the professionals needed for the new economy, conducting much of the research required for innovation, and providing a vital global link to the world's knowledge system. It is surprising, therefore, that so little is known about the academic profession. In most countries, virtually no information is available on the cadre of professionals who are the teaching and research staff in postsecondary education. Where something is known—mainly in the larger and wealthier academic systems—the research has focused on academic culture and on the attitudes of the professoriate.

Central to the working conditions of the professoriate is remuneration. There are several key questions that flow from this fundamental fact. What are the salaries paid to academics? How do these salaries compare to remuneration of others in the society and to the professors in other countries? Are academics paid enough to live an appropriate middle-class lifestyle in their country? Are they paid enough so that they are not tempted to decamp to universities in other countries that pay higher salaries in an increasingly globalized academic marketplace?

While academics are never at the top of the income ranges in any country, they must be adequately paid to attract bright people into the profession and to retain them once they have obtained the required academic qualifications and are appointed to a position in a university. We are convinced that successful universities and academic systems must offer their academic staff adequate and assured salaries, along with the option to pursue a full-time career path with appropriate guarantees of long-term employment. Without these conditions, no academic institution or system can be successful—let alone achieve world-class status.

This study has investigated the average salaries of academics around the world, to obtain a sense of the economic health of the academic profession. We focus on entry-level academic positions, average academic salaries, and remuneration for senior academics. We compare what the professoriate earns at different employment levels within each of the 15 case-study countries; we also compare national salary averages. We have used the World Bank's PPP Index as a way of comparing academic salaries across countries. PPP tools permit international comparisons of remuneration in ways that straight currency conversions do not, which is central to an understanding of a global academic labor market.

At the start of this study in 2006, we hoped that data would permit comparisons among up to 40 countries. In the end, only 15 countries were included, in large part due to a paucity of data. Moreover, the different types of data acquired restricted the comparative analysis to some degree. A few countries report national data from governmental sources or organizations such as professional groups and unions. For some countries, salary data were only obtained for a small selection of universities. Thus, this study represents an exploratory first step in the development of more complete research on this important topic.

Several characteristics of the academic profession worldwide impinge on salary issues but are not directly related. For example, the fastest-growing sector of postsecondary education worldwide is private higher education. Salaries in general vary between the public and private sectors. Most of the data reported here are from the public sector. A large proportion of the academic profession worldwide teaches part time; in many countries a majority do so. In Latin America, for example, most academics work part time. Even in the United States, only half the new appointments to colleges and universities are full-time tenure-track academic positions. This research focuses only on full-time academic staff. Furthermore, we do not have data on the qualifications of the professoriate. A large proportion of the world's academics have only a bachelor's or master's degree rather than a terminal degree (usually the doctorate). While educational qualifications may affect salaries, it is unclear to what extent this might be the case. In some countries, there are salary differentials by field of teaching—professors of law, management, or the life sciences in general often earn higher salaries than those in the humanities. Remuneration may be higher in research-intensive universities than in teaching institutions, but this differentiation falls outside the parameters of this study. Similarly, variations in salaries based on gender are not explored in this report nor, for that matter, is the impact of a growing feminization of the professoriate in some countries on academic remuneration. It is clear, however, that in some countries, such as the United States, women are paid somewhat less than men for comparable work in comparable disciplines and institutions.

This research does not report fringe benefits paid to academics in most countries—such as pension schemes, insurance policies, or health insurance—nor does it include the effect of taxes on academic salaries. Income tax rates, for example, vary considerably across countries. At least one of our case-study countries, Saudi Arabia, imposes no income tax at all.

Significantly, salaries may be only one part of the total compensation package for the academic profession. In many of the countries in this study, professors earn extra remuneration by teaching more courses than they may be required to teach, obtaining research grants with extra compensation, publishing articles in prestigious journals and perhaps yielding bonuses from their university, doing outside consulting, appearing on television or writing articles in newspapers, or even holding more than one academic job at a time. In several countries, professors are paid extra for grading examinations, sitting on special committees, supervising doctoral students, and doing other academic tasks. This study does not take such extra remuneration into account.

Despite these limitations, this research provides extraordinarily relevant data and analysis. Salary and remuneration help shape global academic mobility—including such issues as brain drain and brain gain. Meanwhile, seeing how academic staff salaries relate to national income indicators reveals the value individual societies give to the academic enterprise. Indeed, with few exceptions, the story of how the academic profession compares with other jobs within the national labor markets is not a very happy one, with significant implications for the future of the profession.

While part of a national and international job market, the academic profession is indeed a different line of work. The attitudes and commitments of academics in several countries show that people are attracted to academe for a variety of reasons beyond financial remuneration—such as a commitment to science and scholarship, intellectual interests, lifestyle issues, among other factors. But salary and remuneration are central to any academic career and are thus of great importance.

LITERATURE REVIEW

The literature on the academic profession is extensive but also incomplete—surprising in terms of this influential professional group. Most of the research is concerned with the attitudes and values of professors and focuses on a small number of industrialized countries. Little is known about the professoriate in developing or middle-income countries (Altbach, 2002), and there is minimal research on comparative or international themes. Work done by Altbach (1996) and Cummings (forthcoming) are among the most important international studies of the academic profession that have been conducted to date. These comparative research studies did not collect salary data in a systematic way, however, although academics were asked about their opinions relating to their remuneration.

This literature review focuses exclusively on the few research studies available concerning salaries. For a few countries, some databases are available concerning academic salaries. A number of these sources were studied in our research and are also noted in discussions of individual countries.

Much of the literature on salary comparisons in the field of education contains regional and subregional studies on primary and secondary teachers' salaries. A good portion of this work emerged in the late 1980s and 1990s and has been financed by the World Bank. Key examples of such studies include Cox (1989); Zymelman and DeStefano (1989); Farrell, Oliveira, and Batista Araujo (1993); and Psacharopoulos, Valenzuela, and Arends (1996).

By the late 1990s, teacher-salary comparisons started to gain wider attention. The Organisation for Economic Co-operation and Development's (OECD) 1998 *Education at a Glance* publication, for example, included among its indicators "statutory salaries of teachers in public primary and secondary schools." These data reflect teacher remuneration, using purchasing power adjustments and comparison to the relative GDP per capita. In addition, the OECD has been comparing teachers' salaries with other workers' salaries to determine the "relative attractiveness of teaching compared to other occupations" (OECD, 1998, 2007).

Meanwhile, a 1999 World Bank Study (Liang, 1999), based on information collected through family surveys, compared the remuneration level for teachers from primary through higher education in 12 Latin American countries with the salaries earned in comparable professions. The study concluded that even though teachers' income levels are lower, they work fewer hours; hence, when the comparison is based on labor hours, teachers' compensation proves better than that found in other occupations.

In terms of higher education, Ong and Mitchell's (1998, 2000) "Professors and Hamburgers" study provided the first formal recognition of the importance of using a PPP conversion rate, in particular the BMI, for international comparison of academic salaries. Developed by the *Economist* magazine, the "Big Mac Index is based on the comparison of its cost between countries compared to its cost in the US" (Vogel, 2005, p. 3). This was a pioneer study in several ways. In addition to advocating for the use of PPP indexes to measure academic salaries, Ong and Mitchell (1998, 2000) also analyzed the impact of taxation on salary comparisons by using gross salaries and net salaries based on information from *Prices and Earnings around the Globe*, a survey published every three years by UBS Wealth Management Research. They also considered quality-of-life factors for different countries, based on the *Economist*'s "Places to Live" ranking. The main limitation of this study was the exclusive focus on countries where English is the main language of instruction at the tertiary level.

The Association of Commonwealth Universities (ACU) has been studying the evolution of academic salaries in select countries of the British Commonwealth since 1997, initially conducting Web-based research and later gathering data through surveys (Kubler & Roberts, 2005; Kubler & Lennon, 2007; Lund, 2000; Maxwell & Murphy, 2003; Provan, 2001). These studies cover between five to seven countries and 45 to 50 universities (depending on the year) and analyze five standardized ranking levels: associate lecturer, lecturer, senior lecturer, associate professor, and professor. Moreover, these studies include "comparisons of academic salary scale averages with a relevant group of professional salaries scale averages in the private sector" (Kubler & Roberts, 2005, p. 1).

Early in this series of reports, the authors noted that "a simple currency conversion does not provide an adequate basis of comparison, as currency valuations fluctuate from day-to-day and do not take into account the different costs of living" (Kubler & Roberts, 2005, p. 3). To equalize the purchasing power among countries, ACU reports have used PPP indexes. The reports by Lund (2000) and Provan (2001) use the World Bank PPP rate; the studies by Maxwell and Murphy (2003), Kubler and Roberts (2005), and Kubler and Lennon (2007) use the BMI. All these studies contain information about benefits as well as salaries, and the last two studies include information about the GDP per capita for each country "to illustrate earnings against overall wealth" (Kubler & Lennon, 2007). While the 2003 report includes an appendix comparing the salaries converted by using the Big

Mac and the OECD PPP indexes, the 2007 report includes an appendix comparing the BMI and the 2004 World Bank conversion factor.

Despite including a very limited number of countries, these reports are among the most complete and credible studies on comparative academic salaries produced to date. Covering more than 10 years, the ACU is now evaluating trends within countries that have consistently responded to the surveys. The 2004–2005 ACU study (Kubler & Roberts, 2005) was referenced extensively in our work.

Additional data of interest from the British Commonwealth context can be found in a recent report (Robinson, 2006) prepared for Education International (EI), an organization that represents some 30 million teachers and education workers in 171 countries around the world (EI, n.d.). This work provides a complete overview on employment status, collective bargaining rights, salaries, academic freedom, and tenure in Australia, Canada, New Zealand, and the United Kingdom, as well as the United States. The study contains a brief section of academic salary comparisons and addresses related working-condition issues, such as the increasing use of contingent faculty and the rise of student/faculty ratios. It notes that "Academic salaries in most countries have experienced a long-term decline. There is some sign, however, that compensation levels have been recovering recently, particularly in Australia and the United Kingdom" (Robinson, 2006, p. 1).

A more recent work was commissioned by the New Zealand Vice-Chancellors Committee (Deloitte, 2008) to compare the academic salaries of this country with Australia, Canada, England, and the United States. This report was based on the current salary scales of a narrow number of institutions considered comparable by the consulting firm responsible for conducting the analysis. Data came from public sources and were organized, when available, across four employment ranks: lecturer, senior lecturer, associate professor, and professor. The study presented a brief report on each country including an overview, academic staff salaries, and academic staff nonsalary benefits. To compare the academic salaries among the five countries, the study generally used an average of the three most commonly referenced PPP tools: the *Economist's* BMI, the World Bank PPP, and the OECD PPP. This study also devoted a chapter to the implications for New Zealand. It also compared the results from 2008 with those from a similar study conducted by the same consulting firm in 2005. One of the main conclusions of the study is that "while New Zealand academic salaries have increased over the course of the previous three years, they are still significantly lower in PPP terms than in Australia, Canada and USA, but are similar to England" (Deloitte, 2008, p. 2).

In some other studies, international academic salaries are not the central issue but the topic is notably covered. One of these, *The Academic Profession: An International Perspective* (Boyer, Altbach & Whitelaw, 1994), is a survey commissioned by the Carnegie Foundation, aimed at evaluating the academic profession in an international context. Although faculty compensation represents just a small part of this study (just one of 40 questions related to faculty compensation), this work was important for our study in the way that it pulled together data from 14 countries, most of which do not use English as the main language of instruction. *The Decline of the Guru: The Academic Profession in Developing and Middle-Income Countries* (Altbach, 2002) is another very relevant work. This collection of country reports lacked a unified data collection methodology across each country chapter, but provided useful, albeit piecemeal, information about different issues related to faculty salaries.

A very dynamic source of continually updated information, used as an important reference in our work, is the Academic Careers Observatory of the Max Weber Programme, housed within the European University Institute. It provides information about academic careers in European and some non-European countries. The Max Weber Programme's "Academic Career Comparisons" Web site offers a section on salaries, including individual country descriptions and some comparative data. The focus on academic careers in the humanities and social sciences is one limitation to this otherwise extremely useful resource.

The Max Weber Programme's 2008 report, *Towards an Open and Competitive European Area for Research Careers*, "provides an overview of different national academic systems and academic career patterns in Europe" (p. 2) and includes a comparison of salaries across different countries. The study classifies the countries under consideration into four different groups based on remuneration averages, ranging from low to medium, high, and very high. The report concludes that the countries of southern Europe present low and medium remuneration levels, while the Nordic countries plus France and Switzerland demonstrate high and very high levels of remuneration. *Towards an Open and Competitive European Area for Research Careers* (Max Weber Programme, 2008) also includes a consideration of how European researcher salaries compare to those in the United States. The report finds that "the 'attractiveness' of European salaries for researchers is still much inferior compared to the level of the USA" (p. 17), with researchers in the European Union earning on average 40,126 euro per

year against 62,793 euro per year in the United States. Our study data also support the finding that academics in the United States earn more than their European counterparts. However, differences in the specific figures calculated in this report and those published by the Max Weber Programme (2008) may stem from the fact that the latter study focuses only on researchers and reports only after-tax earnings.

Also relevant to the study of academic salaries in Europe is the European Commission's (2007) "Study on the Remuneration of Researchers in the Public and Private Commercial Sectors." This study defined a researcher as anyone "who devotes at least 50% of her/his time to carry out research activities" (European Commission, 2007, p. 19). An exclusive focus on the research profession does not cover the many other aspects of academic work included in the more broadly defined "academic profession" that is the focus of our work. However, the European Commission's interest in comparing the "differences between researchers working in Europe and those in Australia, China, India, Japan, and the United States" (European Commission, 2007, p. 19) speaks to the growing desire to map the working conditions and compensation of professionals around the world who actively engage in knowledge creation and dissemination activities.

The examination of salary and employment trends in the broadest sense is also revealed in the work of such organizations at the World Salaries Group. This group maintains a free, online "International Average Salary Income Database," which lists monthly salary information (in PPP dollars) from 15 emerging market countries and 25 advanced economies, relevant to 26 different occupations—ranging among chambermaids, flight attendants, furniture finishers, miners, salespersons, nurses, physicians, teachers, and professors. World Salaries Group data are compiled from many of the same official government sources targeted in our study. The database makes an important contribution to the more technical side of salary comparisons by listing the compulsory deductions that affect workers' real take-home pay. The database also provides access to national survey information relevant to average annual employment income levels for the various countries under consideration. However, the World Salaries Group data do not shed much light on the question of what salaries look like at the entry and top levels of the occupations they include in the database, nor do they provide much of a contextual picture of the industries in which these professionals work.

METHODOLOGY AND SCOPE

Overview

Preliminary research related to this study was begun in the fall of 2006 by students in a graduate course on the academic profession at Boston College's Lynch School of Education. Research assistants at the Boston College Center for International Higher Education moved this work along in spring 2007 by collecting a series of data factors in higher education systems and the academic profession in some 40 countries around the world. During the 2007-2008 academic year, the authors of this study refined the research question and parameters, compiled a significant quantity of new data, and completed the analysis that forms the basis for this report.

The study's primary research question is framed as follows:

> *How do entry-level, top-level, and overall national salary averages for academic staff compare and contrast, in World Bank PPP dollars, across 15 different countries?*

The target countries were ultimately narrowed down from the broader field to 15 plus Palestine, which represents a somewhat special case. The 15 countries were: Argentina, Australia, Canada, China, Colombia, France, Germany, India, Japan, Malaysia, New Zealand, Saudi Arabia, South Africa, the United Kingdom, and the United States. These countries were selected for inclusion in the study for a variety of reasons. The objective was to explore academic salary comparisons across as many and as varied a range of contexts around the world as possible. To this end, this group of countries represents a wide geographic distribution, varying levels of national wealth and development, and different sizes and configurations of higher education systems. At the same time, we were sensitive to issues on which we already had—or could reasonably obtain—access to data. In addition, despite significant data collection challenges, we were keen to include India and China in the survey, given the common sense that these countries have evolving higher education systems that are important to observe.

Regarding methodology, conducting an international comparative study of faculty salaries is a most daunting task. From the outset, we evaluated a multitude of questions and issues relating to the project and sought ways to collect and understand very disparate (and often incomplete) pieces of data from extraordinarily unique higher education systems across the globe. Ultimately, we concluded that any study attempting to address these research questions must consider (at least) the following five major components of analysis:

- salary data,
- contextual information,
- purchasing power parity,
- national development considerations, and
- other salary or income benchmarks.

Salary Data

Salary information forms the heart of this study and required the most effort to identify, standardize, and analyze. A key issue in designing the project was to create a clear set of salary criteria to apply across a fairly large group of higher education systems around the world. To this end, our primary objective for each country was to collect monthly base salary information for full-time academic staff, for the 2005–2006 period. Our decision was to include data from baccalaureate (four-year or the equivalent) institutions through doctoral institutions, and more often than not we were limited to data relevant to the public higher education sector within each country. As much as possible, we attempted to include salary information only for employment ranks considered part of the formal academic profession. Specifically, we were interested in including salary details for entry-level ranks in each country that represent the first real appointment for an academic professional who is qualified, or on track to attain the appropriate qualifications, to move up through the ranks of the academy. For example, we chose not to include salary information for lecturers in the United States, given that most young academics beginning their careers are considered to have achieved their first real professional appointment when gaining the rank of assistant professor.

To obtain the necessary rank and salary details, we relied in large measure on one or two reliable, mostly publicly (and electronically) available resources for each country. These materials typically included official reports and/or Web sites sponsored by national ministries or prominent international organizations. We also

accessed information from relevant and credible research centers. In almost all cases, we called upon in-country experts to help guide us to hard-to-find data, to better understand information we had uncovered on our own, and to provide us with critical feedback about our preliminary findings. Also essential to note here is that we employed very simple mathematical approaches to convert annual salaries to monthly salaries and to calculate salary averages.

The individual country reports included in this final report list our key sources and explain in much greater detail how we isolated entry- and top-level salary levels, as well as calculated relevant averages. Most important to note here is that we did find enormous variations across the dozen-plus countries included in this study in terms of available salary data, their level of detail, their manner of presentation, and their comparability to our baseline criteria. Every effort was made to identify and use the most complete and accurate information and data that conformed to our criteria as closely as possible. Gaps and inconsistencies were inevitable, however, given the ambitious scope of this project. We have endeavored to be as open about these limitations as possible throughout this report.

Contextual Information

Academic salary structures do not operate in a vacuum. Although this study is, at its heart, a quantitative exercise, we believe that framing the faculty salary numbers for each country with some contextual details adds an important element to the overall analysis. We took a relatively straightforward approach to this work, again using for each country a limited number of reliable public sources of information (and sometimes in-country experts) to document the size and scope of the national higher education system. For each country, we have collected and presented in this final report key data points designed to give a broader sense of the postsecondary landscape in each context. Where available, we have included details about the number and types of higher education institutions; the number of students and their relative distribution across graduate and undergraduate levels of education and in the public and private sector; as well as the number of full- and part-time academic staff and their employment patterns across public and private higher education.

Purchasing Power Parity

Any meaningful comparative salary study must attempt to give insight into the relative value of compensation across different currencies and contexts. It is not enough to use a straight currency conversion, as this does not provide enough information about the standard of living that accompanies salary levels in different countries. A purchasing power parity approach, however, offers a way to get at these kinds of insights, as PPPs are "a form of exchange rate based upon a comparison of prices between countries" (Vogel, 2005, p. 3). PPPs "are prepared using relative prices for a very large number of comparable goods and services" (Vogel, 2005, p. 3). For this reason "PPPs should be used instead of exchange rates for comparison purposes," (Vogel, 2005, p. 3), and indeed are "often used to compare the standards of living between countries" (Wikipedia, n.d.).

Although much has been written about the pitfalls of using PPP approaches to make these kinds of analysis, this admittedly exploratory study required a basic mechanism to answer the fundamental research question. Our initial idea was to employ the so-called Big Mac Index. Although the BMI has been used in other salary studies, it presented various drawbacks to our work. On the one hand, India—one of the countries included in our study—is not included in the BMI. We also initially hoped to include salary data from at least one other sub-Saharan African country apart from South Africa, but the BMI would not apply in these contexts. Perhaps more importantly, the use of the BMI has been criticized as "a long way short of an appropriate measure of purchasing power" (Stevens, 2004). Fortunately, the analysis phase of our study coincided with the release of the World Bank's (2008) *2005 International Comparison Program: Tables of Final Results*. This provided what we felt to be a much more comprehensive and balanced PPP tool for our purposes and one that also coincided with our baseline year of interest, 2005.

Of course, no single PPP tool is considered infallible. The figures below illustrate how the use of one or another index can affect the relative position of a country in our salary comparison exercise.

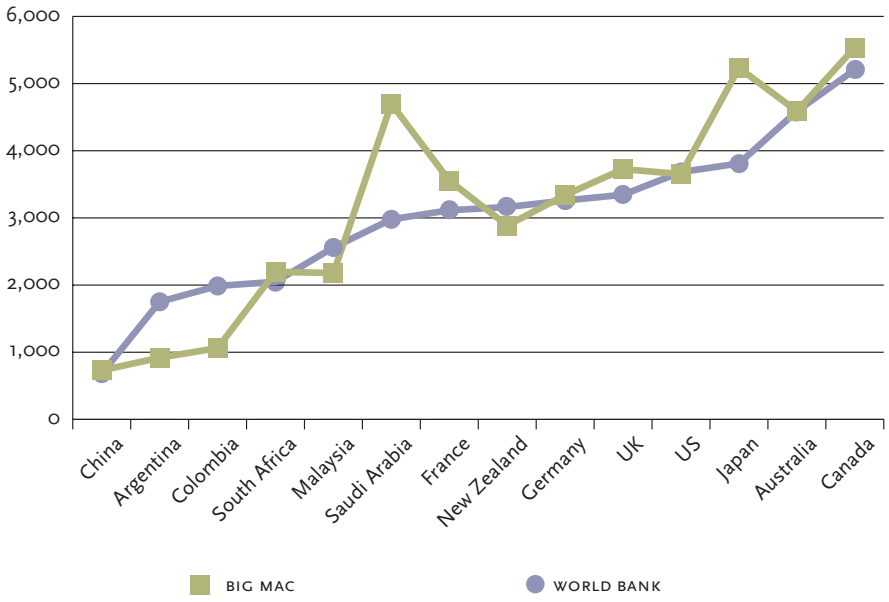

Figure 1A. Big Mac Index vs. World Bank PPP (Entry-Level Salaries)

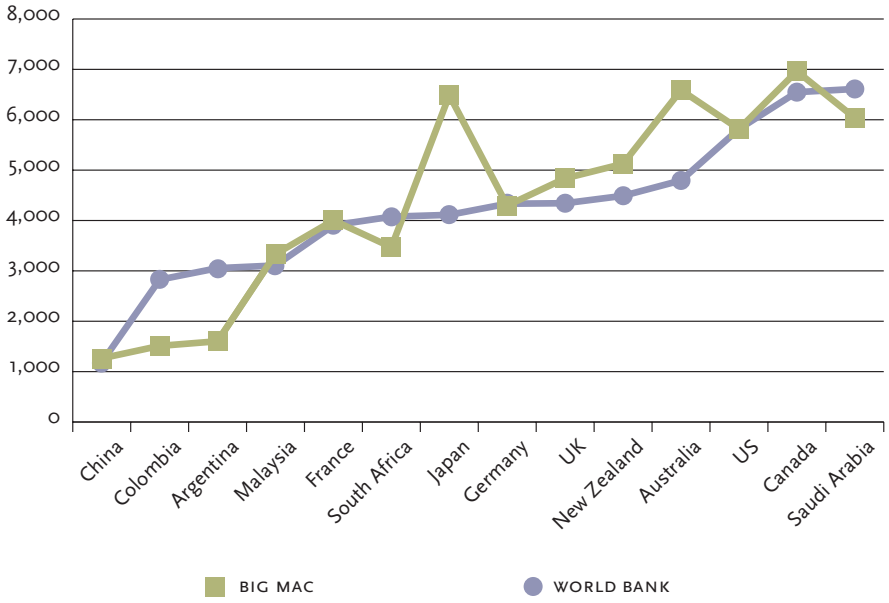

Figure 1B. Big Mac Index vs. World Bank PPP (Overall Salary Averages)

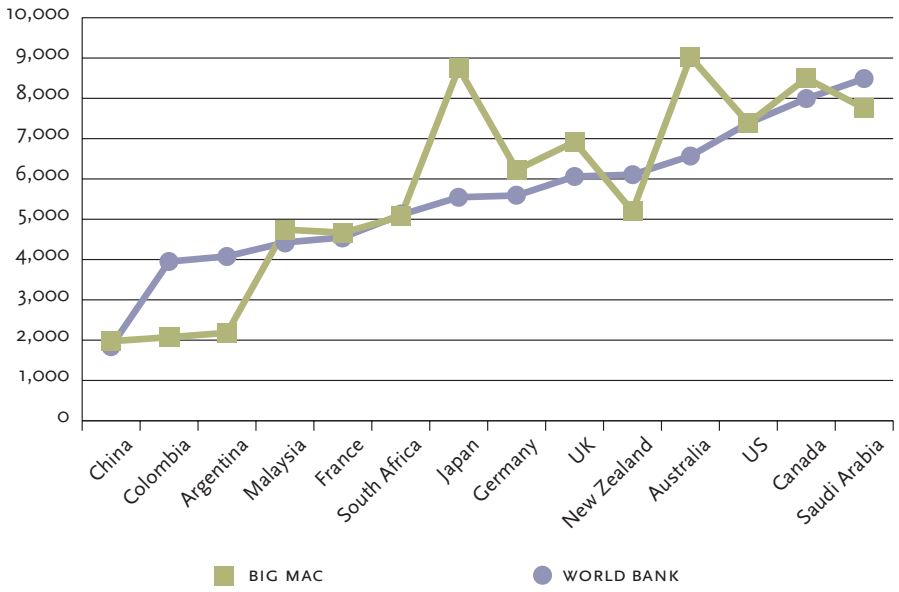

Figure 1C. Big Mac Index vs. Word Bank PPP (Top-Level Salaries)

Figures 1A, 1B, and 1C above indicate that the two indexes parallel one another fairly consistently. For example, in the case of such countries as China, Malaysia, Germany, France, and Canada, there are relatively minor differences in the salary values calculated using either the BMI or the WB PPP.

However, these same graphics reveal the presence of important income differences for a number of other nations, depending on the type of index employed. Japan provides perhaps the most dramatic case in this regard. Using the BMI, Japan consistently registers one of the highest salary averages, in close competition with such countries as Australia, Canada, Saudi Arabia, and the United States. However, switching to the WB PPP to calculate average salary PPP, Japan remains in eighth or ninth place in the international comparisons, outpaced by even South Africa when considering top-level salary averages (Figure 1C).

Meanwhile, Australia remains competitive no matter which index is applied, although the BMI calculations tend to exacerbate these positive results. Similarly, it is quite interesting to compare the salary levels of the Latin American nations in this study using the two different indexes. Here, salary averages in Colombia and Argentina come out looking consistently lower when calculated using the BMI as opposed to the WB PPP.

The conflicting trends reflected in the use of the two PPP indexes raises many troubling questions. A preliminary theory might suggest that in developing nations, the relative status of the Big Mac as something of a "luxury" item undermines the local value of the currency in PPP terms. Unfortunately, our lack of economics expertise puts us in no position to weigh in definitively on this question. Ultimately, we opted to use the World Bank's PPP information to convert the salary figures we compiled in local currencies into World Bank PPP dollars. Within the very basic framework of our understanding of international economics and currency conversions, we judged the WB PPP to be a more meaningful and appropriate tool for international comparison for the purposes of this particular project. However, we are keenly aware that different PPP indexes yield significantly different results and openly acknowledge the inherent limitations in these kinds of calculations. To illustrate how PPP index differences may affect comparative work, we have included a comparison of our salary findings using both the WB PPP and the BMI, which can be found in Table 38, in the Appendix at the end of this report.

National Development Considerations

This study takes a very macrolevel approach to academic salary comparisons. Rather than employing a more localized perspective to understand faculty salary issues at the level of individuals or particular institutions, our interest is in developing some sense of how faculty compensation differs across countries. To enhance this analysis, we felt it was important to acknowledge how the countries in this study differ from one another across key dimensions.

One basic assumption embedded in our work is that higher education is tightly connected to national development potential and performance. Therefore, we opted to include in this analysis a national development variable. Specifically, we relied on the Human Development Index (HDI), as developed by the United Nations Development Programme (UNDP, 2007). The HDI "is a summary composite index that measures a country's average achievements in three basic aspects of human development: health, knowledge, and a decent standard of living" (UNDP, n.d.). Although any such index can only be considered a rough analytical tool, we found that the HDI provided a helpful and internationally recognizable way to classify the development levels of the various countries in our study and to illustrate our salary findings in the broader context of national development considerations. Table 2 below gives an overview of where the countries in our study fall along the HDI continuum. A complete list of the HDI rankings for 177 countries around the world can be found in Table 39, in the Appendix at the end of this report.

Table 2.
2007–2008 UNDP Human Development Index, All Study Countries

Country	HDI Ranking	HDI Level
Australia	3	High
Canada	4	High
Japan	8	High
France	10	High
United States	12	High
United Kingdom	16	High
New Zealand	19	High
Germany	22	High
Argentina	38	High
Saudi Arabia	61	High
Malaysia	63	High
Colombia	75	Medium
China	81	Medium
Palestine*	106	Medium
South Africa	121	Medium
India	128	Medium

* Palestine is listed by UNDP in the HDI rankings as the "Occupied Palestinian Territories."
Source: United Nations Development Programme (UNDP). (2007). *2007/2008 Human Development Report, Human Development Rankings* (http://hdr.undp.org/en/statistics).

Income Benchmarks

In order to further frame the national environments out of which our salary information was drawn and across which we sought to make meaningful comparisons, we felt it was critical to establish a basic income benchmark for each country. This allowed us to put our salary findings into some perspective, both within the individual countries of interest and in an international context.

Comparing the academic salary data with salary information for other professionals within or across countries would have been ideal. Comparing the faculty salary information with national salary averages drawn from an analysis of real remuneration data would also have been extremely useful. We were not able to identify this kind of information in any systematic way, however. In its absence, we chose to recur to the World Bank's (2008) *2005 International Comparison Program* materials, which included a GDP per capita estimate in World Bank PPP dollars of virtually every country in the world. Dividing this amount by 12 gave us a monthly GDP per capita estimate for each of the countries we examined, which is used as a point of comparison against the monthly salary figures for faculty throughout this study.

Limitations

It is our hope that readers of this report will find much useful information and meaningful food for thought, but our study's many limitations must be openly acknowledged. Some of these concerns have been discussed above. An additional set of considerations includes the following:

- This is an exploratory study developed without the benefit of an economist's expertise. It aims to provide a rough comparative estimate of faculty compensation across three broadly defined levels of employment, in vastly different higher education settings, using different currencies, in many varied economic and developmental contexts. This is truly an exercise in "comparing apples and oranges," although we have also seen fit to include bananas, strawberries, kiwis, cherries, and plums, among others.
- This study does not necessarily reflect what academics really make. By focusing nearly exclusively on base salary data, we have eliminated from consideration in most cases all manner of bonuses, income from additional employment, and other benefits that form an important part of academic salaries in many quarters of the world. We also do not take into account the tax structures within countries, which can also have a significant impact on faculty take-home pay.
- This study does not compare academic salaries to the compensation received by other professionals within or across countries.
- The salary averages presented here are not weighted in any way.
- This study focuses on full-time faculty, mostly in the public higher education realm. This excludes the salary information relevant to part-time academic staff, and those working in private institutions, whose numbers appear to be growing significantly in many parts of the world.
- This study focuses on those academic staff who are roughly considered to be on the equivalent of the "tenure track" in the United States—that is, with the qualifications (or expectation) to move up through the employment ranks within the academy, as this is understood in each national context.
- This study does not attempt to disaggregate salary information across the various academic disciplines, which are known to be very differently compensated in many national and institutional contexts.
- This study involves only "high human development" and "medium human development" countries, as characterized by the UNDP's HDI (2007). No "low human development" countries were included in the project, due in large part to issues of lack of access to good faculty salary data for such countries.
- Ultimately, this study does not capture how academics feel about what they make and the broader contexts in which they live and work at particular income levels.

In spite of these limitations, we believe that our work as reported here represents a unique and worthwhile contribution to the question of how academic salaries compare to one another internationally. The following section outlines our key findings.

COMPARATIVE FINDINGS AND ANALYSIS

As stated previously, this study's primary objective is to provide a preliminary understanding of how faculty salaries compare across more than one dozen countries on six continents. We are primarily interested in looking at overall national monthly salary averages and at compensation for faculty at the entry points and the most advanced levels of the professional ladder. Beyond a straight comparison of salary figures, this project also explores the differences in salary progressions (i.e., how salaries evolve from the start of an academic career through its later stages) and how these salary figures compare to baseline income data for the countries involved in the study. The intersection between salary averages and human development rankings (UNDP, 2007) for these countries is also considered. Unless otherwise indicated, all salary figures below are presented in World Bank PPP dollars. Comprehensive data tables can be found in the Appendix.

Entry-Level Salaries

As indicated in Figure 2 below, entry-level salaries for the 15[1] countries included in this analysis range from $682 per month in China, to a monthly base pay of $5,206 in Canada. The average entry-level salary for academics in these selected countries is $2,888 per month. The difference between the highest and lowest entry-level salaries is $4,524. At the lowest end of the spectrum, in China, entry-level faculty earn approximately 7.6 times less than their Canadian counterparts.

In general, the "medium human development" countries in our study—according to the HDI (UNDP, 2007)—exhibit the lowest entry-level salary figures, while those countries designated as having "high human development" populate the top end of this chart. It is interesting to note here, however, that there is not a lockstep correlation between HDI ranking and entry-level salary. For example, Figure 2 below indicates that Saudi Arabia's entry-level salary average in World Bank PPP dollars is slightly higher than that seen in New Zealand and Japan. Yet both Japan and New Zealand sit much higher on the HDI ranking (#8 and #19, respectively) than does Saudi Arabia (#61). Similarly, Malaysia is considered a country of "high human development" and is ranked #63 on the HDI, yet South Africa, ranked #121 and designated a country of "medium human development," registers a slightly higher entry-level salary for its faculty. Even more interesting is the situation of Argentina, with an HDI ranking of 38, showing one of the lowest entry-level salary averages in the group.

Obviously, the HDI is not designed as a standard indicator of what to expect in terms of academic salaries around the world. Still, using this indicator as a standard point of reference, it is interesting to note the somewhat unexpected ways in which countries with ostensibly similar or different "human development" characteristics compensate their entry-level faculty.

1 Although we do include a country report on Palestine in this study, it was necessary to exclude data from Palestinian faculty salaries in this comparative findings section, as the World Bank report from which we drew our PPP dollar figures did not include a PPP conversion for Palestine.

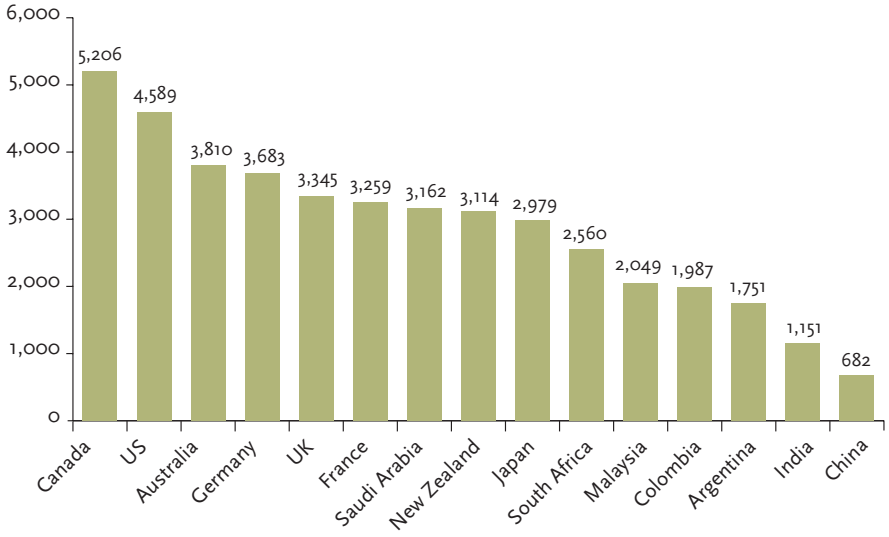

Figure 2. Average Monthly Entry-Level Salaries (WB PPP$)

Top-Level Salaries

The average monthly base pay for top-level academics in the countries included in this study is $5,318, with a difference between the highest and lowest top-level salaries of $6,645. In absolute numbers, the difference between the highest and lowest base pay figures for the most senior academics is greater than that between the highest and lowest pay for entry-level academics. However, the highest top-level salary ($8,409 in Saudi Arabia) is only 4.6 times greater than the lowest ($1,845 in China) and represents a smaller spread between the most generously and least generously compensated faculty at this level than what was calculated for the entry-level salaries.

Many of the "high human development" countries, as indicated by the HDI, lead the group in terms of compensation for top-level academics. As was seen in the analysis of the entry-level salary figures, however, these rankings cannot be used as a proxy for relative standing on the top-level salary continuum. For example, Saudi Arabia (a lower-ranked "high human development" country) registers the most robust top-level salaries. Meanwhile, South Africa (a country of "medium human development," standing at #121 on the HDI rankings), shows higher top-level salary averages than a wide variety of highly developed countries, including New Zealand, the United Kingdom, Japan, Germany, and France. At the other end of the scale, India and China stand out with notably low salary figures for faculty at these higher ranks.

Figure 3. Average Monthly Top-Level Salaries (WB PPP$)

Overall Average Salaries

According to our analysis, overall average monthly salaries for the countries included in this study range from $1,182 in China to $6,611 in Saudi Arabia. This produces an international average of $4,050 per month, with Saudi academics earning on average 5.6 times more on a monthly basis than their Chinese counterparts. For the most part, countries with higher HDI rankings exhibit higher overall monthly salary averages. It is again somewhat startling to see South Africa registering close alignment with salary levels found in countries with much higher HDI rankings, such as France and Japan. Consistent with the analysis for the entry- and top-level salaries, India and China show the lowest salary averages.

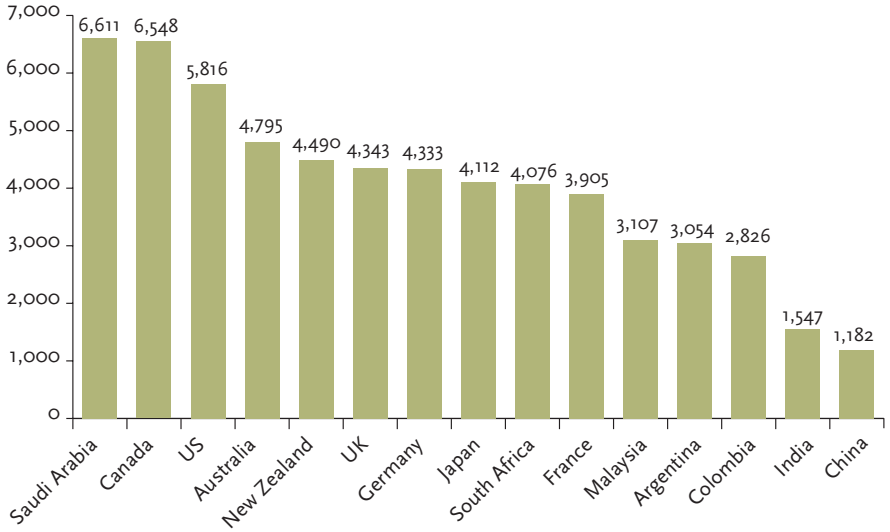

Figure 4. Overall Average Monthly Salaries (WB PPP$)

It is important to note here that this study does not address the issue of how many or (what percentage) of the faculty in each country occupy each level of employment. For example, in the United States, there is an unwritten expectation that many career academics will eventually reach the full professor rank, whereas in such places as the United Kingdom, Germany, France, and India, only a very small proportion of the professoriate fills the most

senior ranks. In a straight comparison of top-level salaries, this is not terribly important. However, when such top-level salaries are not weighted with this fact in mind, national salary averages may be inaccurately inflated.

Figure 5 below offers a composite picture of the salary comparisons at the three levels of employment across all of the countries in our study. This graphic gives a good sense of how the group standings fluctuate depending on the employment level. It also hints at some of the differences in salary progressions over the course of a career in the various countries, which is the subject of the following section.

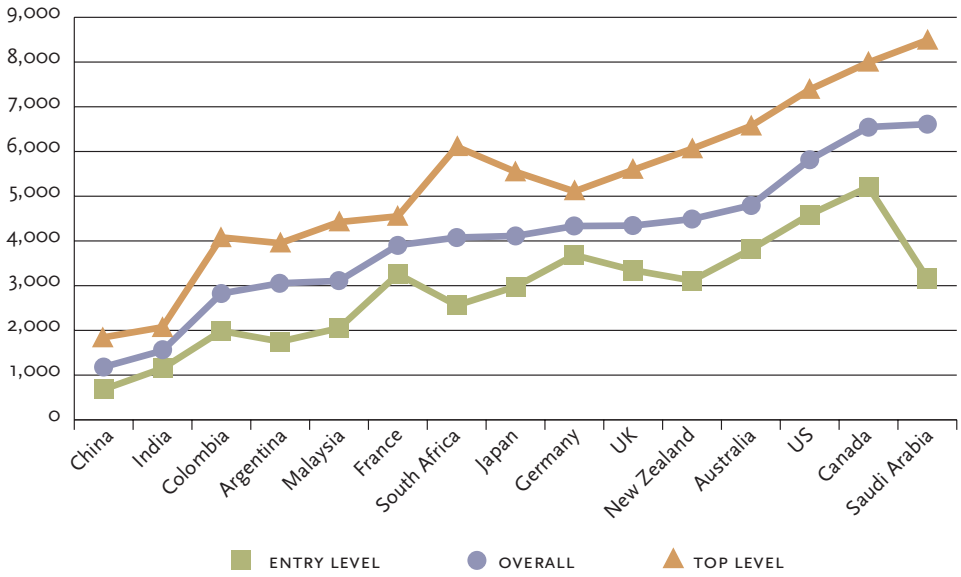

Figure 5. Combined Entry-Level, Top-Level, and Overall Average Monthly Salaries (WB PPP$)

Salary Progressions

Although imperfectly, our study finds that salary figures for academics at the three levels of employment included in this analysis roughly parallel the HDI rankings and relative GDP per capita income estimates for the 15 countries included in this comparative findings section. That is to say, countries of "high human development" and greater wealth tend to have higher relative salaries in World Bank PPP dollar terms, and vice versa.

Changes in monthly salary as academics move through their careers, however, show a somewhat less predictable pattern when set against these markers. It is interesting to consider these data from the perspective of both absolute numbers and as percentage changes. Figure 6 below indicates that academics in Saudi Arabia can expect to experience the highest absolute increase in their monthly salaries ($5,328) when moving from entry to top levels of employment. This is unquestionably the largest leap in salary earnings across the career, as determined by our study. Meanwhile, South Africa sits in the number-two position on this scale. Despite being the country in our study with the second-lowest HDI ranking (#121), it presents in absolute terms greater potential for an increase in salary from entry to top levels than New Zealand, the United States, Canada, Australia, Japan, the United Kingdom, Germany, and France, countries of ostensibly much higher human development. Interestingly, Malaysia (with an HDI ranking of 63) is on a par with Japan (#8 on the HDI) and the United Kingdom (#16 on the HDI) across this unit of analysis, and outperforms Germany (#22) and France (#10) in this area. Also notable, Colombia (with an HDI ranking of 75) closely trails the United Kingdom here (outpaced only by Argentina, with an HDI ranking of 38), and registers greater potential for its academics to grow their monthly paychecks than more highly developed countries such as Germany and France. The average difference in pay between the entry- and top-level salary averages for this group is $2,429.

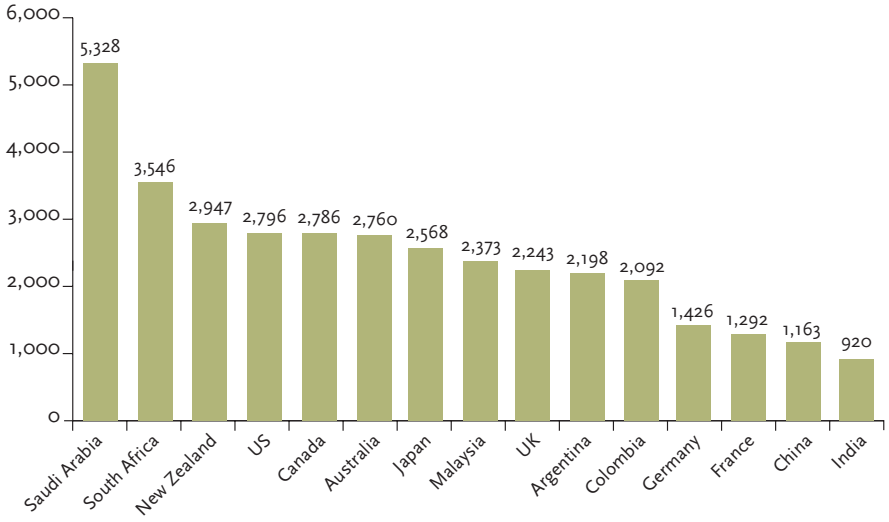

Figure 6. Difference Between Top- and Entry-Level Average Monthly Salaries (WB PPP$)

Figure 7 allows for the consideration of these data from another perspective, looking at the percent increase in monthly salaries over time from entry to top levels of employment. We found that on average monthly salaries grow by around 94 percent between entry into the academic profession and reaching its highest ranks. Here, too, there is a significant shift in the way that countries' HDI standings compare to salary considerations, with several countries of "medium human development" far outperforming nations with higher HDI rankings. For example, China, Saudi Arabia, South Africa, Argentina, Malaysia, and Colombia register salary increases of more than 100 percent over the course of a career. Indeed, the data for China suggest the potential for academics to grow their salaries over 170 percent from entry through top levels.

It is also interesting to note the fairly low percentage increases in salary demonstrated by France and Germany, at 40 percent and 39 percent, respectively. The civil servant status of the profession in these countries may explain why they do not show marked percent increases in salary over time—although the Saudi Arabian and Colombian data, where there are robust salary progression possibilities for civil servant academics, do not support this theory. Conversely, the contexts in which higher education operates in a more marketized environment—or in countries in which a great deal of emphasis in recent years has been placed on increasing the competitiveness of the sector, such as in China and South Africa—may provide some explanation for why these salaries show significant potential to increase as academics rise through the professional ranks. Finally, it is important to note that our study attempted to isolate those employment ranks that are directly implicated in the "academic profession." The variability in salary progressions may also be a function of the different ways that the academic profession is structured in different countries, particularly when it comes to the inclusion of fewer or more employment ranks in academia.

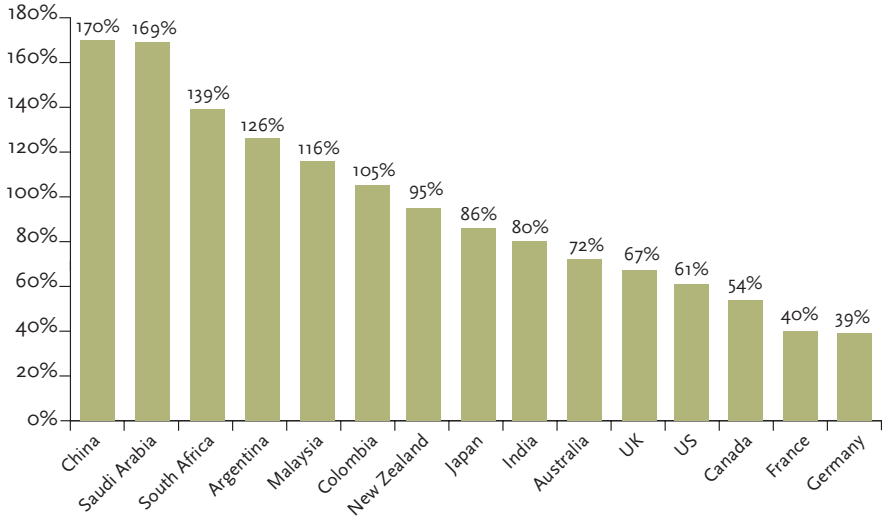

Figure 7. Percent Change Between Entry and Top-Level Average Monthly Salaries (WB PPP$)

GDP Comparisons

In addition to looking at how base pay amounts in World Bank PPP dollars compare across countries, we also thought it would be helpful to provide some sense of how these figures compare to average income levels within each country. This type of analysis can shed some light on the relative value assigned to the academic profession within each society, although this analysis is obviously incomplete without a comparison of the academic profession against other professional salary averages within these same countries.

Our baseline income information comes from the World Bank (2008) estimates of GDP per capita, expressed in PPP dollars and calculated as a monthly figure. Figure 8 represents our findings in this area, which indicate that, on average, academics in the countries we studied can expect to make 3.2 times the average GDP per capita per month estimate for their nations. Here we see a tendency for the more-developed countries (excluding Argentina) to present faculty incomes on the lower end of the spectrum, ranging from 1.58 to 2.24 times their country's GDP per capita per month figures. Meanwhile, India's data indicate that average faculty salaries are a whopping 8.73 times more than that country's average GDP monthly per capita estimate. While not as dramatic, the findings for the survey's other "medium human development" countries also register a trend toward more robust faculty income-to-GDP per capita per month ratios.

There may be several explanations for these important distinctions. In some of the less-developed countries, the more striking differences between faculty salary averages and national income averages may be a function of high overall poverty levels and substantial gaps between the income levels of rich and poor. It could also indicate that there is a high social and financial value placed on the academic profession. In the more-developed countries, lower ratios between what faculty and the general public earn may suggest that the academic profession is not especially valued, at least in straight financial terms. Or it could be an indication of a more egalitarian social and economic environment in some national contexts. More research needs to be done to address these important questions and to better understand the way that different societies view the academic profession and compensate it through salary structures.

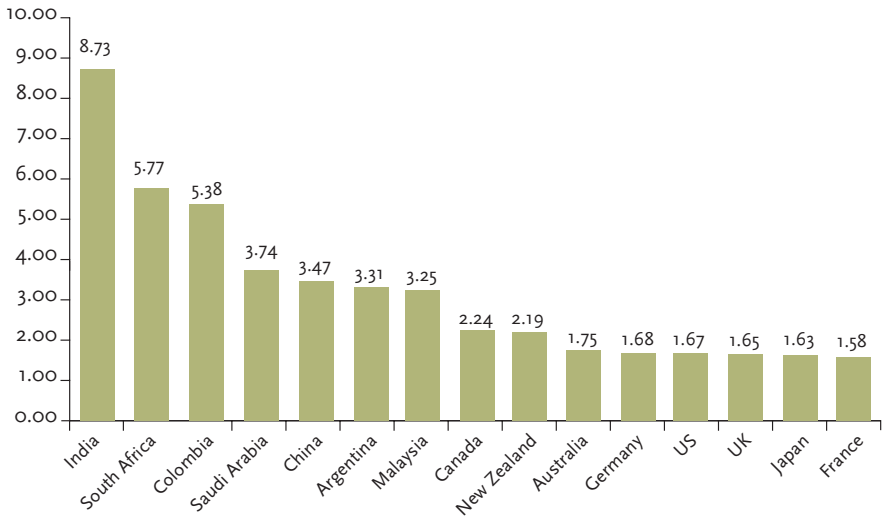

Figure 8. Overall Average Monthly Salaries Compared to GDP per Capita per Month (WB PPP$)

Summary

This study finds that there are significant differences in faculty salaries around the world. This is true both in PPP terms and in terms of how academic salaries compare to national income averages in the various countries involved in this study.

Our analysis indicates that the best-paying countries for entry-level academic employment are Canada and the United States. At the top levels of employment and in terms of overall national salary averages, Saudi Arabia and Canada demonstrate the highest levels of remuneration. India and China are consistently the countries showing the lowest academic salary averages. Meanwhile, our analysis of how academic salaries compare to GDP per capita estimates yields very different results. India, followed by South Africa and Colombia, are the countries where faculty salaries compare most favorably to the national GDP per capita figures. In these countries, academics' incomes would appear to be significantly higher, on average, than the "average" citizen's. Meanwhile, France, Japan, the United Kingdom, United States, Germany, and Australia all hover at the bottom end of the spectrum, making between 1.6 and 1.8 times the national GDP per capita estimates in their respective countries.

Overall, then, our project suggests that more-developed countries—as defined by their positions on the UNDP's (2007) Human Development Index—tend to enjoy higher salaries than those considered to be less developed by the HDI. At the same time, they tend not to make dramatically more than their fellow citizens. The opposite is true in many of the less-developed countries in our study.

This is not a surprising revelation, but it does have important ramifications for both groups of countries. First, for the world's lesser-developed countries, there is an obvious problem in terms of attracting high-quality foreign talent and keeping talented nationals at home. In a world in which advanced technical knowledge and flexible, skilled labor forces contribute directly to national development, less-developed countries often struggle to engage and leverage the benefits of the so-called "global knowledge society." Higher education institutions play a key role in developing new knowledge and training skilled workers and professionals. Faculty sit on the front lines of these efforts and it will be increasingly important for less-developed countries to attract and retain qualified academic staff. While our study indicates that faculty in at least some less-developed countries are not necessarily poorly compensated in comparison with their own national GDP per capita income estimates, competitive salary faculty packages may be a small but important tool in advancing and sustaining national development in the 21st century. This is also true when one considers that the brightest scholars and researchers around the world are increasingly aware of the global nature of the higher education employment market. If salaries at home cannot compete with overseas employment offers, brain drain will continue to beleaguer many already struggling poorer nations.

These kinds of considerations are also important, but in a different way, for the more-developed countries included in our study. It is true that faculty in "high human development" countries enjoy better salaries than their colleagues in other parts of the world. However, our GDP comparison exercise indicates that the academic

salaries in more-developed countries are not much higher than their average per capita income estimates. In countries where an egalitarian approach to remuneration across society is an important cultural norm, this may not be an issue. But in contexts in which academics may find themselves making an "average" salary following many more years of schooling than the average citizen—or making far less than other professionals (for example, in the legal, medical, or technology fields)—it may be difficult to retain top talent in higher education. Of course, this study does not compare faculty salaries to those of other professions, and more work in this area clearly needs to done.

Our limited resources prevented us from including a more extensive number of countries in this study, and indeed it would have been quite helpful and informative to have represented many more countries here. This is particularly true if we consider the possibility that there may be some unique regional phenomena in terms of faculty salaries. For example, our analysis found that the continental European countries—France and Germany—frequently paralleled one another across the findings. A similar tendency may be noted when considering the relative positions of Colombia and Argentina, as well as India and China, across several dimensions of analysis. This question of whether there are some important regional trends for faculty salaries is worthy of closer consideration, and it would be worthwhile to explore how a larger number of countries within regions measure up to one another in terms of faculty compensation.

Finally, we note that Saudi Arabia—and to some extent South Africa—represents a significant and interesting anomaly in terms of its higher-than-expected salary levels when compared to its HDI ranking and GDP per capita figure. More work needs to be done to fully understand the circumstances in these countries, as well as to tease out the implications of such robust salary trends in these rather surprising contexts.

Although the preliminary and exploratory nature of this study and its findings cannot be overstressed, we believe that our work presents valuable data that, with further refinement and extensive triangulation, can begin to tell a meaningful story about faculty compensation around the world.

COUNTRY REPORTS

The following section takes a closer look at each unique set of data and findings for the 15 countries (and one special case) included in this study. Each country report addresses four main areas of consideration:

- benchmark information,
- data collection,
- the higher education context, and
- salary information.

The benchmark information section presents each country's position on the UNDP's (2007) Human Development Index. It also provides details on the country's gross domestic product per capita. The GDP figures are presented as both annual and monthly income estimates. In the data collection section, we provide insight into the primary sources for our country data and attempt to explain any unique challenges we faced or considerations we feel to be most relevant in our effort to accurately represent contextual and salary information in the context of each country report.

Each country report's higher education context section attempts to provide a quick, mostly statistical overview of the national higher education landscape in question. Key details typically include student population numbers and breakdowns of public versus private, as well as graduate versus undergraduate, enrollment levels. The number and types of institutions are presented here, along with data relevant to faculty numbers and employment characteristics (i.e., public versus private and full time versus part time).

The salary information section provides a detailed description of how we determined which data to use for entry- and top-level salary averages and how we calculated national salary averages. We pay special attention here to any discrepancies in our efforts to maintain a standardized methodology for the calculations and analysis. In each case, we present a brief summary of our average salary findings, including a set of key indicators, such as the ratio of entry- to top-level salaries and the ratio of overall average salary to monthly GDP per capita estimates.

The country reports are designed to give a slightly more detailed picture of the faculty salary situation and related issues in each country, as well as to enhance understanding of the broader comparative findings presented in this report.

Argentina

Benchmark Information

Argentina is considered a country of "high human development," according to the United Nations Development Programme (UNDP). The UNDP's (2007) 2007–2008 Human Development Index (HDI) ranked Argentina 38th out of the 177 total countries included in its comparative look at social and economic development indicators across the globe. The average annual GDP per capita estimate for Argentina is $11,063 (in World Bank PPP dollars), which works out to be $922 per month.

Data Collection

Data for Argentina were obtained through one main source, the Argentine Ministry of Education. The ministry's Secretariat of University Policies, and specifically its 2006 yearbook publication (Argentine Ministry of Education, 2006), provided the bulk of the information relating to the number and types of institutions, students, and academic staff in the Argentine higher education system. Faculty salary information was compiled from several pages of the ministry's Web site focused on the evolution of faculty remuneration (Argentine Ministry of Education, n.d.-b, n.d.-c, n.d.-d, n.d.-e, n.d.-f).

Higher Education Context

Higher education in Argentina is comprised of both a university subsector and a nonuniversity subsector. Private and public institutions operate in both contexts. There are many more nonuniversity institutions (approximately 1,700) than university institutions, but the nonuniversity institutions tend to be smaller and enroll a minority (around 25 percent) of the country's postsecondary students (Fernández Lamarra, 2003).

The university sector in Argentina is made up of slightly more than 100 postsecondary institutions. In the public sector, there are 38 national universities and one provincial university, along with six state-run university institutes. There are a significant number of private institutions in Argentina, as well, although private enrollment is much lower than that in public higher education. Some 43 private universities and 13 private university institutes are active in the country. There is also one officially recognized international university and one foreign university operational in Argentina (Argentine Ministry of Education, n.d.-a).

In 2005–2006, there were some 1,646,246 students enrolled in Argentina's universities. Approximately 96 percent (or 1,583,376) were enrolled at the undergraduate level, and 4 percent (or 62,870) in graduate education. The majority of Argentine students study in public institutions, as indicated by the fact that in 2005–2006 the public sector captured 82 percent of all students, with the remainder (roughly 18 percent, or 293,912 students) studying in private colleges and universities. Of those in private higher education, 95 percent pursue undergraduate studies (Argentine Ministry of Education, 2006).

Another very important characteristic of the Argentine university system is the relatively high concentration of students and faculty in a small number of institutions (Prati, personal communication, July 4, 2008). Some 61 percent of the public university enrollment is concentrated in just seven national universities, with a significant proportion of these students enrolled in just one giant institution, the Universidad de Buenos Aires (Argentine Ministry of Education, 2006). Faculty employment patterns mirror this same kind of clustering of numbers in the same seven national universities.

The Argentine Ministry of Education (2006) reports that in 2006 there were 17,059 full-time faculty positions in the country's national universities. This figure represents just 14.5 percent of the academic staff in this sector. Full-time status (known as *dedicación exclusiva* or *de planta*) in this context implies a relatively stable, longer-term, 40-hours-per-week employment arrangement, which may be secured through a competitive hiring process (Prati, personal communication, July 4, 2008). This figure obviously leaves out important information relevant to the private sector in Argentina and to those full-time faculty employed in other types of public institutions. Furthermore, this study's focus on the salary issues relevant to full-time faculty only presents a significant drawback for analysis of salary compensation in Argentina, where a large portion of academic staff are employed in a part-time or hourly capacity. Indeed, another 100,334 faculty positions provided employment based on some part-time arrangement in 2006, accounting for some 85.4 percent of the total 117,393 academic positions in the country's national universities (Argentine Ministry of Education, 2006).

It is important to note that the official statistics on employment in Argentina's university sector reflect numbers of *positions* rather than numbers of *people* actually employed. In Argentina it is acceptable to be employed in any

combination of academic positions, as long as one individual does not exceed 50 hours of work per week, and indeed it is quite common for one person to hold multiple part-time faculty positions or some combination of full- and part-time employment that does not exceed 50 hours per week. In 2004, for example, the Argentine statistical yearbook noted that "the 117,354 faculty positions correspond to 85,329 academic staff, that is, the ratio of positions to people is 1.38" (Prati, personal communication, July 4, 2008).

The academic profession in Argentina is comprised of four main employment ranks, presented here in descending order, in terms of the professional and salary hierarchy: full professor (*profesor titular*), associate professor, adjunct professor, *jefe de trabajos prácticos* (or *JTP*), and *ayudante de primera*, which is considered the first real professional appointment for an aspiring young academic in Argentina. There is an even more entry-level designation, known as *ayudante de segunda*, but this is reserved for students and may only involve part-time employment (*dedicación simple*) of 10 hours per week (Prati, personal communication, July 4, 2008).

Salary Information

The salary information used for this study comes from five Argentine government Web sites (Argentine Ministry of Education, n.d.-b, n.d.-c, n.d.-d, n.d.-e, n.d.-f). Although the Higher Education Law of 1995 did, in theory, introduce a salary decentralization scheme for the national universities of Argentina—whereby individual institutions could "define their own salary scales, within certain parameters"—virtually none of the national universities have made moves to do so, beyond a few newer and smaller institutions (Prati, personal communication, July 4, 2008). The specific salary figures included in this analysis are those for full-time faculty in public universities, at the levels of *ayudante de primera*, *JTP*, adjunct professor, associate professor, and full professor.

It is interesting to note that the government Web pages providing the salary information are titled *Recuperación del Sueldo Docente Universitario*, or, in English, Recovery of University Teaching Staff Salaries. This reflects the fact that there has been a dramatic increase in monthly salaries for Argentine academics since the early 2000s, a period during which Argentina has experienced a particularly tumultuous economic situation.[2] Indeed, according to these sources, monthly salaries for the five academic ranks considered here have grown by anywhere from 140 percent to 204 percent, between May 2003 and September 2007. Although this study has attempted to draw data only from the years 2005–2006, in the case of Argentina, we chose to use the salary figures from September 2007, to reflect the most recent information in this rapidly changing context.

Calculating the salary averages for our study involved several steps. The entry-level figure is not a calculated average, but is simply the lowest salary figure for the "ayudante de primera" employment rank. In order to calculate the salary averages for the four other employment ranks in Argentina, we took the salary figures available for faculty in these positions with "no seniority," "average seniority," and "maximum seniority," added these together, and divided by three in all four cases, yielding an overall average monthly salary for each level of employment. The overall average was then calculated by averaging the average salaries for five levels of employment. We then converted these amounts to World Bank PPP dollars, as indicated in Table 3 below.

Table 3.
Average Argentine Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: peso)	Monthly Salary (World Bank PPP$)
Entry level (*ayudante de primera*)	2,224	1,751
Overall average	3,879	3,054
Top level (*profesor titular*)	5,016	3,950

2 The *CIA World Factbook* (2008) provides a nice summary of these developments, with the following details: "The [Argentine] economy bottomed out...[in 2002], with real GDP 18% smaller than in 1998 and almost 60% of Argentines under the poverty line. Real GDP rebounded to grow by an average 9% annually over the subsequent five years.... Inflation, however, reached double-digit levels in 2006.... Multi-year price freezes on electricity and natural gas rates for residential users stoked consumption and kept private investment away, leading to restrictions on industrial use and blackouts in 2007" (CIA, 2008, n.p.).

Additional analysis of these salary findings is presented in Table 4.

Table 4.
Key Argentine Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	1,171 : 922
Ratio: top-level salary/entry-level salary	2.3
Ratio: overall average salary/monthly GDP per capita	3.3

Before entering into any analysis of this information, it is important to note here several important limitations and exclusions. First, the salary data we are using come from salary tables and do not necessarily reflect what faculty members actually make. This is true for our study as a whole but must be carefully pointed out again in contexts like Argentina, where the incidence of individual academics holding multiple appointments inside and outside of academia—and therefore potentially earning above and beyond what is indicated in a given salary table—is especially high.

Bonuses of various sorts represent another important detail in Argentina. While academics at all levels may benefit from outside employment, higher-level faculty in particular can take advantage of bonuses designed to encourage research or technology transfer activities. Meanwhile, as of mid-2008, faculty holding a doctoral degree may be eligible for a bonus of up to 15 percent of the base salary. And finally, publicly employed full-time faculty, like the majority of full-time employees in Argentina, receive each year the equivalent of a 13th month of salary. This bonus (known as the *aguinaldo* or *salario anual complementario*) is distributed in two parts—half in early July and the other half in early January (Prati, personal communication, July 4, 2008).

The lack of weighted averages is also a concern, given that the salary data of some ranks where relatively few people are employed exert an inordinate influence over the findings. For example, both *ayudantes de primera* and associate professors only represent 10 percent each of the full-time ranks in Argentina, whereas full professors make up 21.5 percent of this group, adjunct professors 31 percent, and *JTP*s 26.4 percent (Argentine Ministry of Education, 2006).

These caveats aside, however, the data on full-time faculty salaries in Argentina give rise to two interesting considerations. The first is that full-time academics can expect, on average, to make more than three times the average GDP monthly salary in Argentina, as indicated in Table 4 above. In general terms, this suggests that full-time academic employment provides a fairly comfortable existence, when compared to overall income averages in the country. This notion is reinforced when set against the fact that monthly salaries for the five levels of employment studied here grew by an average of 172 percent from 2003 to 2007, while the cost of living in Argentina during this same period rose at a significantly smaller (though inarguably still dramatic) pace, just under 40 percent (Argentine Ministry of Education, n.d.-b, n.d.-c, n.d.-d, n.d.-e, n.d.-f).

Secondly, the monthly salary growth over time is not insignificant in Argentina, particularly when placed in the comparative context of this study—depending upon the degree of seniority, a full professor can expect to make anywhere from 1.5 to nearly 2.8 times that of his or her entry-level colleagues.

Of course, any more detailed study of faculty salaries in Argentina would have to take seriously into account the issue of part-time academic employment and the "moonlighting" phenomenon, whereby one individual holds more than one job. A much more sophisticated analysis would also include a consideration of how faculty salaries have held up against the remuneration levels of other professionals in Argentina, particularly in the context of the especially volatile economic environment that has characterized the country in recent years.

Australia

Benchmark Information

According to the United Nations Development Programme (UNDP, 2007), Australia is a considered a "high human development" country, ranked third among 177 by the UNDP's (2007) 2007–2008 Human Development Index. Its annual GDP per capita is estimated in World Bank PPP dollars at $32,798 (World Bank, 2008), which is $2,733 per month.

Data Collection

Statistics and context information about Australian higher education were obtained mainly from the Australian Department of Education, Science and Training. Salary information came from the *2004–05 Academics Staff Salary Survey* (Kubler & Roberts, 2005). For Australia, Kubler and Roberts' (2005) analysis was based on a survey applied to 16 universities, all members of the Association of Commonwealth Universities (ACU). We decided to work off of this 2004–2005 information in spite of the fact that the baseline year for our study is 2005-2006, because the Kubler and Roberts (2005) survey was the most complete salary survey involving Australia that was available at the time of our data collection and analysis work.[3] We are cognizant of the fact that this decision may affect slightly the Australian salaries' comparative positions in our study, which might appear a little lower than they would in the baseline year of 2005–2006.

Higher Education Context

The Australian higher education system is mostly publicly funded. In 2007, there were about 192 higher education "providers," including 37 public universities, one Australian branch of an overseas university, four self accrediting institutions, and more than 150 non-self accrediting institutions (Australian Department of Education, Employment and Workplace Relationships, n.d.).

In 2005, there were 929,030[4] higher education students: 30 percent (263,504) in graduate programs and 665,526 in undergraduate programs. In this same year there were 38,952 professors in public institutions (Australian Department of Education, Science and Training, 2007). Information about students and faculty in private institutions was not available, nor was information on part-time faculty. Hence, the total number of teachers indicated here covers only full-time faculty in public institutions. However, available information suggests that, mirroring the trend in many other countries, full-time and fractional full-time positions have remained virtually unchanged in Australia, while "casual" (i.e., non-full time) academic employment has been growing. Indeed, between 1990 and 2001 the number of faculty employed on a casual basis grew from 9 percent to 20 percent of the total academic workforce (Robinson, 2006).

Salary Information

Salaries and benefits in Australia are not determined by a national authority or through individual negotiation, but rather through enterprise bargaining. Although Kubler and Roberts (2005) concluded that Australian academic salaries were the most attractive salaries among the Commonwealth nations, a declining trend in nominal academic salaries has been reported. This has forced the creation of various supplementary compensation strategies—such as housing subsidies, housing loans, research support, flexible work programs, parental leave, etc.—to attract and recruit the appropriate staff (Horsley, Gaye, & Woodburne, 2005).

The Australian academic employment ranks consist of five categories: associate lecturer, lecturer, senior lecturer, associate professor, and professor. Since our study aimed to compare monthly incomes, we took the annual income as provided by Kubler and Roberts (2005) for each category and divided by 12. Entry-level salaries were calculated as an average of the bottom, middle, and top of scale average salaries corresponding to the lecturer level. Despite having information about the associate lecturer level, we did not include it in our calculations given our understanding that it is not necessarily considered the formal entry point to the Australian academic profession. In Australia, while it is possible to proceed from associate lecturer to professorial ranks, it is uncommon (Welch, personal communication, July 29, 2008).

3 For those interested in Commonwealth country salary issues, a new version of the Commonwealth salary study has since been released.
4 Students from nonaward courses, enabling courses, other undergraduate award courses, diploma, advanced diploma, and associate degree programs were not included in this number.

The top-level average salary was obtained from the only value available for the professor rank. Using the standard procedure in our study, the overall average salary was obtained by calculating a simple average from the available salaries corresponding to the academic career ranks. The results are presented in Table 5 below.

Table 5.
Average Australian Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: Australian dollar)	Monthly Salary (World Bank PPP$)
Entry level (lecturer)	5,295	3,810
Overall average	6,666	4,795
Top level (professor)	9,132	6,570

Table 6 presents a summary of the academic salaries compared to GDP per capita. However, for this comparison it must be taken into account that we are contrasting the academic salaries for the year 2004–2005 with the GDP per capita for the year 2005.

Table 6.
Key Australian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	3,799 : 2,733
Ratio: top-level salary/entry-level salary	1.7
Ratio: overall average salary/monthly GDP per capita	1.8

In our overall comparative study, Australia has the third-highest entry-level salary, and the fourth-highest top-level and overall salary averages, just behind Canada and the United States in these standings. In terms of the ratio of top-level salary to entry-level salary, Australia registers a result of 1.7, which is just below the average figure for this study of 1.9.

Canada

Benchmark Information

Ranked fourth among 177 countries on the UNDP's Human Development Index, Canada is a considered a "high human development" nation (UNDP, 2007). For the year 2005, Canada's GDP per capita was estimated at $33,375 in World Bank PPP dollars (World Bank, 2008). This translates to $2,923 per month.

Data Collection

Context information (number of institutions, students, and teachers) was drawn from Statistics Canada, the official statistics agency of the country. Unlike our approach to the data for the other British Commonwealth countries included in this research, we decided not to use Kubler and Roberts' (2005) study as our main source of information for Canada. Instead, we employed data from a study by the Canadian Association of University Teachers (CAUT, 2007) because it covered the same period of our study (the academic year 2005–2006), as well as reflected information from a larger number of institutions across Canada—64 versus 10 in the Kubler and Roberts (2005) study.

Higher Education Context

Higher education in Canada is almost exclusively public (Smallman, 2006), however, "universities are legally incorporated as not-for-profit private corporations" (Jones, personal communication, June 23, 2008). Private providers are mainly religiously-affiliated universities and, in addition, there are a few private for-profit institutions (Knight, personal communication, March 26, 2008).

Counting higher education institutions in Canada is not an easy task due to several factors, including ambiguity in the way that universities are classified and counted, the existence of a number of nonuniversity institutions that offer baccalaureate degrees, and the fact that, among other reasons

> there are quite a number of institutions that have the legal authority to grant degrees (and therefore are counted as universities) but have decided not to use this authority because they are operating in a federation or affiliation arrangement with another institution (Jones, 2008).

Contextual factors of this nature are extremely important in making sense of Canadian academic salaries for two main reasons. The first is that public university salaries are higher than the salaries in the small sector of private universities, in the community-college sector, and in the private-religious-college sector. If a broader definition of university were employed (to include, for example, other types of baccalaureate degree-granting institutions) then the average faculty salary levels would decline. The second factor is that there is only a modest level of institutional diversity within the Canadian university sector (as defined above) in that most universities are comprehensive degree-granting institutions that offer a combination of undergraduate, professional, and graduate education. All of these institutions have missions that include teaching, research, and service. There are certainly differences in the level of research activity by institution, but it is important to note that there are no teaching-only (or predominantly teaching) institutions that might have a quite different academic salary structure (Jones, 2008).

AN EXPERT'S PERSPECTIVE...

Canadian universities are created as independent corporations and faculty are employees of the university. Full-time faculty at the vast majority of public universities have created unions operating under provincial labour laws, and salary levels at these institutions are determined by collective bargaining. Even at those universities where full-time faculty are not unionized, salary increases tend to be determined through negotiation between a faculty association leadership and the university administration . . . There are differences in salary structure by institution . . . This becomes an important factor in interpreting the comparative data because while some systems have national salary structures, rank definitions, and conditions of employment, these issues are dealt with on an institutional basis in Canada. Focusing on national average salaries in the Canadian case essentially hides differences by institution in salary levels, and there are fairly large differences which means that junior salaries are much lower and senior salaries are much higher at some institutions than the national data might imply. It is also important to recognize that there are differences in the cost-of-living within a very large country like Canada, and these differences may (or may not) influence faculty salary levels.

GLEN JONES,
Ontario Institute for Studies in Education, University of Toronto

Based on official data for the academic year 2005–2006 there were 413 higher education institutions in Canada: 121 universities (60 percent public) and 292 colleges (58 percent public). The total enrollment for the same year was 1,047,700 students: 803,500 undergraduates (84 percent), 153,600 graduates (16 percent), and the remaining 90,600 students corresponded to the category of "other programs" (Statistics Canada, 2008, February 7).

In the same period, there were 34,017 full-time teachers. As in many other countries in our study, information about part-time faculty was not available; therefore our data are limited to full-time faculty from public universities. Part-time faculty represent a significant segment of Canadian faculty, however. In 1992 they already accounted for more than one-third of the professoriate (Rajagopal & Farr, 1992), and during the last decade of the 20th century a trend toward an increase in part-time numbers and a decrease in the number of full-time faculty has been noted (Omiecinski, 2003). Still, reliable statistics are not available, even though "anecdotal evidence" suggests that the incremental use of "contingent academic labor"—which includes part-time and non-tenure track appointments—is similar, although not as dramatic, as in the United States (Smallman, 2006).

Salary information

Among the principal factors that can make a difference in the remuneration scales from one university to another are faculties' credentials, academics' number of years teaching, and the fact that "some universities imposed a maximum salary range for each rank while others have open ended scales" (Statistics Canada, 2008).

Based on CAUT (2007) data for average salaries of full-time university teachers for the year 2005, our entry-level salary was taken directly from the average salary for assistant professor; our top-level salary was taken directly from the average salary for full professors; and the overall average was calculated as the average of the salaries corresponding to the three academic ranks: full professor, associate professor, and assistant professor. We did not include in our calculation salaries corresponding to the rank of lecturer for several reasons. In Canada, the three ranks considered to comprise the academic profession are those included in our calculations, while the denomination "lecturer" has very ambiguous uses (Jones, personal communication, June 23, 2008) and, in general, it is not considered an entry level position to the academic profession. The final results of our calculations are summarized in Table 7.

Table 7.
Average Canadian Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: Canadian dollar)	Monthly Salary (World Bank PPP$)
Entry level (assistant professor)	6,300	5,206
Overall average	7,923	6,548
Top level (full professor)	9,670	7,992

As indicated in the comparative findings section of this report, Canada registers some of the highest academic salaries in our study. In the interest of transparency, we note here that the overall average value we obtained was slightly bigger than the value reported by CAUT (2007) as "all ranks combined," since we did not include the salary data for lecturers.

The decision to use the CAUT data may impact our study's comparative analysis in two main ways. First, the CAUT study (2007) reports information from a more recent year—2005—than the Kubler and Roberts (2005) data for Commonwealth universities, which comes from 2004–2005. This means that in our study, Canada registers more recent salary data than some other countries from the Commonwealth that we analyzed using the Kubler and Roberts (2005) data. This creates some level of concern in terms of the analysis involving the other Commonwealth countries, but does provide a better comparison of Canada against many of the other non-Commonwealth countries in the study, most of which present data from our baseline year of 2005–2006.

Secondly, as opposed to the way that we calculated averages for many of the other countries in this study, in the case of Canada we did not calculate the top-level and entry-level salaries as averages from a scale of salary values. Rather, we simply used as the entry-level average salary the national average for assistant professor and,

as the top-level average, the national average for a professor. Similarly, the overall average was calculated from the single salary averages corresponding to the three ranks included in our study: assistant professor, associate professor, and professor.

A comparison of the values that we obtained based on the data from Kubler and Roberts' (2005) study involving the Association of Commonwealth Universities, and the numbers published by the CAUT (2007), are presented in Table 8 below.

Table 8.
Comparison of Canadian Salary Averages

Employment Level	Average Annual Salaries, ACU (2004–2005)	Average Annual Salaries, CAUT (2005–2006)
Lecturer	54,749	65,445
Senior Lecturer	65,254	75,594
Associate Professor	79,768	93,599
Professor	88,110	116,040

Note: The ACU annual salary averages were calculated by us from the report's monthly salary figures. All figures (ACU and CAUT) are in Canadian dollars.
Sources: CAUT (2007); Kubler and Roberts (2005).

One important implication of this difference in values is that while, according to Kubler and Roberts' (2005) study, Australia had the better paid faculty among the Commonwealth countries, in our study Canada performs better that any other Commonwealth country. Meanwhile, although our study found that academic salaries may grow, on average, 94 percent from entry to top levels, salaries in Canada register just a 54 percent increase over the course of a career. Table 9 provides the standard salary progression and GDP comparison findings for Canada.

Table 9. Key Canadian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	3,537 : 2,923
Ratio: top-level salary/entry-level salary	1.5
Ratio: overall average salary/monthly GDP per capita	2.2

China

Benchmark Information

Widely recognized as one of the most dynamic economies in the world, China is considered a "medium human development" country by the UNDP Human Development Index, which ranked it 81 among 177 countries (UNDP, 2007). China has the largest population and the second smallest GDP per capita among the countries in our study. By 2005, its annual GDP per capita income was $4,091 in World Bank PPP dollars (World Bank, 2008); which, divided by 12, yields $341 per month.

Data Collection

Collecting information from China was not an easy task. While statistics on number of students, faculty, and institutions were obtained from the *Education Statistics Yearbook of China* (2000–2005) (Ministry of Education of the People's Republic of China, 2006), information about salaries was more difficult to obtain and we had to use data from several sources. Work done by Weiping Wang (2005) was the most recent and comprehensive approach to salaries that we could find. However, it is limited to three schools in one private institution (Zhejiang Shu Ren University) and two public universities (B University and W University), and was based on small surveys within these institutions. A study by C. Wang (2000) provided information about the School of Sociology at Nankai University, for the year 2000. However, the age of the data forced us to keep this study only as a reference point, and did not allow us to include them in our average salary calculations. We found several scattered references to salaries in academic articles and newspapers. Most of the data coming from these sources were from years prior to the period of our study. However some of the most recent information is cited in this report to provide some context.

Since wages in public universities are defined by the central government we believe that the information presented here may serve to illustrate roughly the general situation of Chinese faculty in public institutions. Nonetheless, it must be taken into account that recent changes in Chinese regulations allow these institutions to improve teachers' salaries with monies from other sources, which can create important differences from one institution to another or even among schools in the same university.

Higher Education Context

After a long period of isolation from the rest of the world and an imposed divorce between teaching and research, from the 1980s on China started a series of changes that would positively affect higher education in this country. Enrollment figures have been rising at an astonishing rate since 1998, and the academic profession, which in former years was highly appreciated but poorly paid, has become more attractive for young professionals.

In 2005, China had 2,273 higher education institutions, of which 1,792 were regular full-time institutions, and the rest were public adult higher learning institutions. Among the regular full-time institutions, 86 percent were public while only 14 percent were private; 39 percent were universities, and 61 percent were non-universities. In the same year, this country reported 23,609,761 enrolled students: 978,610 at the graduate level and 22,631,151 undergraduates (including 4,360,705 adult students, and 2,652,679 Web students). The system also registered 1,939,095 faculty: 1,072,692 full-time and 866,403 part-time academic staff (Wu, personal communication, December 12, 2007, based on Ministry of Education of the People's Republic of China, 2006).

Salary Information

According to article 47 of the Chinese Law of Higher Education (Ministry of Education of the People's Republic of China, 1998), there are four ranks for teachers in higher education: assistant, lecturer, associate professor, and professor. As indicated previously, the salary data for this study came from just three universities. In these institutions, information was available for the following ranks:

- B University: assistant lecturer, lecturer/associate professor, and full professor;
- W University: assistant lecturer, lecturer, associate professor, and full professor; and
- Zhejiang Shu Ren University (private): lecturer, associate professor, full professor.

We then calculated averages for the entry-level, top-level, and overall spectrum using the same methodology employed for the rest of the countries in this study.

The small size of our sample demanded that we be very cautious about any kind of generalization. However, information from academic journals and newspaper has been consistent with our findings. For example, according to our calculations based on the information provided by W. Wang (2005), the overall average academic salary was RMB 4,077. This amount is reasonably close to the information presented by P. Chen (2006), who illustrates the example of an assistant professor who "only makes about RMB 4,786 per month" (including base salary, sundry stipends, and reimbursements). According to P. Chen (2006), "The official national salary given to a full professor in China today as set out by the Ministry of Education is a mere RMB 4,000 ($500) a month" (n.p.).

Lai and Lo (2007) illustrated how a regional university has been implementing a new remuneration system based on 11 positions or ranks. Under this system there is a basic salary of about RMB 24,000 per year. In addition, faculty members receive a subsidy depending on their rank. There is an increment of RMB 5,000 per year between ranks, so a professor in the first category would have a basic compensation of RMB 24,000 plus the subsidy of RMB 5,000, while a professor in a top position would have the same basic salary (RMB 24,000) plus a subsidy of RMB 50,000. Under the new system, professors' ranks and income levels depend on their publications, their teaching loads, and their research projects. This is dramatically different from the older system—still applicable in many universities—which is based mostly on years of work and seniority (Lai & Lo, 2007). This system was first introduced in 1998 in Peking University and Tsinghua University and has been replicated in several other institutions (P. Chen, 2006).

An additional obstacle in determining the real income of Chinese faculty is the way salaries are compounded, which is unique to this country, although perhaps similar to the salary compositions for top researchers in Mexico. Salaries are made up of payments from three main sources: the government, the local authority, and the university. Faculty salary composition by source may vary around these percentages: government, 30 percent; position allowance in university, 35 percent; local allowance, 25 percent; welfare income, 10 percent (R. Chen, Liu, & Lin, 2006).

The government part of the academic salary in China is calculated based on years of service, title, and administrative position of the faculty member. The position allowance is in the range of RMB 10,000 to 50,000. (The complete range is RMB 3,000 to 50,000, since all university personnel receive this type of compensation, but the faculty compensation figures start at RMB 10,000.) The compensation provided by the school or department is the most variable component, and it depends on the university's and the school's wealth. While wealthy schools will have a good amount of money to pay their faculty, poor schools (even in the same university) may not have any resources at all for that same purpose. In addition, faculty who have research grants may get a percentage of the grant ranging between five and 20 percent. This source of income has certain limitations. For example, governmental grants usually cannot be used to pay salaries or pay for research work. The academic field or discipline also matters; most of the research resources are oriented toward applied research, while other fields (e.g., pure sciences and education) are less likely to gain access to these monies (Ma, personal communication, June 26, 2008).

Bonuses represent another important part of salaries. At Shu Ren University (a private institution), for example, a teacher with a base salary of RMB 1,800 can get an additional RMB 2,240 in teaching bonuses. This calculation is based on RMB 35 per teaching hour, at 16 hours per week (W. Wang, 2005). Something similar happens in the public sector. A professor from a public university in Beijing put it in these terms: "I do not count the base salary, it is too low. I only count what I can earn from the bonus. Bonuses can be much higher than the salary" (W. Wang, 2005). This situation makes international salary comparisons particularly complex.

Academic superstars were a challenge for our study. They have received a certain amount of attention by the media in China (*Beijing Daily*, 2005; Li, 2004), but we were not able to find specific salary information for this select group of faculty in a way that would allow us to compare it with other academic salary data. For this reason we decided not to include in our calculations the sometimes exorbitant amounts reported by the media, but we feel it is important to mention the academic superstar phenomenon as a part of the salary landscape in China.

Some universities are trying to attract teachers from other countries. For example, a full professor with a doctoral degree from a prestigious university overseas can be paid $60,000 a year (Aiyar, 2008) or more (Li, 2004). However, some universities are trying to attract foreign faculty with salaries closer to the standard compensation. For example, a job posting from Beijing University of Posts and Telecommunications (n.d.)—oriented to international English speakers from the United States, the United Kingdom, Australia, and Canada—offers salaries between RMB 2,600, for bachelor's-degree-holders with minimal teaching experience, and RMB 3,400, for PhD-degree-holders with minimal teaching experience. Experienced teachers may be eligible for an additional RMB 200–400, and there are some additional benefits for all of them.

Ultimately, our information on academic salaries in China yielded the results indicated in Table 10 below.

Table 10.
Average Chinese Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: RMB yuan)	Monthly Salary (World Bank PPP$)
Entry level	2,354	682
Overall average	4,077	1,182
Top level	6,366	1,845

Table 11 presents a summary of the academic salaries compared to the monthly GDP per capita estimate for China. For this comparison, it should be noted that we are contrasting the academic salaries for the year 2004–2005 with the GDP per capita for the year 2005.

Table 11.
Key Chinese Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	1,176 : 341
Ratio: top-level salary/entry-level salary	2.7
Ratio: overall average salary/monthly GDP per capita	3.5

Information from China is complex, uneven, and certainly incomplete. Figures about salaries and key indicators must be analyzed considering that in many cases salary is not the main source of income for teachers, while bonuses, which are not included in our study, play an important role. However, a comparison between the overall average salary and the monthly GDP shows that the government effort to improve academic salaries in recent has been successful, with an average full-time higher education teacher earning in 2005 more than 3.5 times more than the average Chinese citizen, based on the GDP per capita for that year. This is consistent with our average finding for this statistic, which stands at 3.2.

It is also quite important to note that the Chinese ratio of top-level to entry-level salary, which stands at 2.7, is the largest—tied with Saudi Arabia— among the countries studied in our research (apart from Palestine, which is considered as a separate special case). This translates into an increase of some 170 percent from average entry- to average top-level income. However, there are reasons to expect a more dramatic difference. The new remuneration model, implemented first in Peking and Tsinghua Universities and then in some other institutions, consists of nine ranks with three categories (A, B, C). Subsidies for each rank are determined by each university and the differences can be as big as RMB 50,000 ($6,200) at the highest level, and RMB 3,000 ($370) at the lowest. This represents a striking 17-fold difference (X. Chen, 2002).

Chinese government efforts to improve academic remuneration have already produced a significant raise in faculty salaries, which now are bigger than the national GDP per capita, as illustrated above. The Chinese academic remuneration system is evolving from a very centralized model to one in which universities and their schools are gaining autonomy to define and negotiate academic salaries. The introduction of the new remuneration system is producing important changes in the Chinese academic world; much remains to be seen about how developments in this area will unfold. Finally, it appears that Chinese efforts to lure faculty from abroad may improve salary conditions for a very thin tier of international professors while increasing inequality domestically in the academic profession.

Colombia

Benchmark Information

Based on the 2007–2008 Human Development Index results, the United Nations Development Program considers Colombia a "medium human development" country, and ranked it 75th among 177 countries (UNDP, 2007). In 2005, Colombia's GDP per capita was $6,306 (in World Bank PPP dollars) per year (World Bank, 2008); that is to say, $525 per month.

Data Collection

The main source for contextual information for Colombia was the National Information System on Higher Education (or SNIES, Sistema Nacional de Información de la Educación Superior), which is run by the Colombian Ministry of National Education (n.d.). Information about enrollment, number of faculty, and demographics is provided directly by the higher education institutions to the government and then processed by SNIES. Both public and private institutions are obliged to report their information to the system.

Information about salaries came from a different source, since SNIES neither collects nor analyzes information on salaries. Instead, we used a document produced by a group of universities during a negotiation process with the central government aimed at improving salaries for faculty at public universities (Londoño et al., 2005). This document provided data about three unidentified public institutions, two of them with information about salaries per employment level and one of them with just an institutional overall average salary. Salary details from another public research university were later included to improve our sample.

Higher Education Context

After decades in which private higher education accounted for more than 60 percent of the total enrollment in the country, in 2005 private and public education shared the enrollment almost equally. Still, in terms of number of institutions private ones are the majority. There are more than two private institutions for every public one (in total, 191 private versus 81 public) (Colombian Ministry of National Education, n.d.).

The enrollment ratio in graduate programs in Colombia is relatively low. Most students are in baccalaureate (four- or five-year) programs and just 4.7 percent of the total enrollment corresponds to graduate students, which is similar to countries like Argentina (3.8 percent), China (4.1 percent), or Saudi Arabia, but lower than India (15 percent), South Africa (16 percent), or the United States (14 percent).

Full-time faculty are a minority both in private and public institutions. Most faculty are hired through hourly contracts and it is common that an instructor teaches at two or more institutions simultaneously. In 2005, from a total of 81,666 faculty, 52,078 were hired under hourly based contracts, 9,025 under half-time contracts, and 20,563 were full-timers (Colombian Ministry of National Education, n.d.). The numbers for hourly based and half-time contracts must be considered with some caution, however, since the same person working at two or three institutions can be counted two or three times.

Salary Information

There are important differences between the contract models for public and private universities in Colombia. While a specific law regulates the first group, the latter are regulated by the general labor law. Faculty salaries in public universities are calculated on the basis of points allocated mainly in terms of rank, seniority, and productivity. The compensation per point is defined every year by the government, and the final salary is the result of multiplying the number of points by their assigned value. Nonetheless, public universities have a certain degree of freedom in this area, which allows for the existence of differences in compensation from one institution to another. In contrast, private universities have an even broader degree of freedom and salaries are defined through individual negotiation.

There are four faculty categories in Colombian public universities: auxiliary professor (*profesor auxiliar*), assistant professor (*profesor asistente*), associate professor (*profesor asociado*), and titular professor (*profesor titular*), as determined by the national Congress, through Law 30 of 1992 (Congreso de la República de Colombia, 1992). The entry-level salary in our study was calculated as an average of the average salaries for auxiliary professors. In the same way, the top-level salary was calculated as an average of the salaries for titular professors. For each one of the sample universities for which we had detailed information (three in all), we calculated an overall institutional average salary. We did

this by adding the average salary for each of the four employment categories and dividing these values by four. The overall average salary for the country was the average of the overall averages for each university, including the data from the one additional public research university for which we had an overall average salary estimate.

The information presented here covers only full-time faculty from public universities, which is a small part of the Colombian professoriate. The sample size is also small: only 4 of 77 universities. However, considering that the salary definition process for these kinds of universities is centralized, it provides a good idea of salaries in public universities. Table 12 summarizes our Colombian salary findings.

Table 12.
Average Colombian Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: Colombian peso)	Monthly Salary (World Bank PPP$)
Entry level (auxiliary professor)	2,149,607	1,987
Overall average	3,057,829	2,826
Top level (titular professor)	4,413,258	4,079

In terms of World Bank PPP dollars, Colombian academics are among the most poorly paid when compared to the academic staff in the other countries in this study. They consistently sit in a position three or four levels from the bottom of the scale, ahead only of India and China, as well as Argentina at the entry and top levels of employment.

However, when compared to GDP per capita estimates (as seen in Table 13), the situation is quite different. The Colombia data demonstrate the third-largest ratio of average salary to GDP per capita among the studied countries, behind only India and South Africa.

Table 13.
Key Colombian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	568,538 : 526
Ratio: top-level salary/entry-level salary	2.1
Ratio: overall average salary/monthly GDP per capita	5.4

Similar results were obtained when we compared the entry-level salary for a professor appointed at a public university with the minimum wage in Colombia. While for the year 2005 the minimum wage was 381,500 pesos (excluding a transportation subsidy), the entry salary was 2,149,607 pesos, or 5.6 times more than the official minimum wage. This may suggest that faculty from public universities have a comfortable life compared to the average Colombian. However, it is necessary to stress the limitations of our study to avoid any inaccurate conclusions, as well as to note that the salary averages from this study were not compared with the salaries for other positions in Colombia demanding similar qualifications.

In terms of salary growth over the course of a career—presented in this study as a simple ratio between top-level and entry-level salaries—we found that the Colombian data registered results slightly above the median of 1.8 for all of the countries included in this project. These results may not tell the whole story, however. A Colombian expert who reviewed our data—a former vice minister for higher education who is currently a rector of a private institution in Colombia—felt that our top-level salary results were too low (Botero, personal communication, August 15, 2008). More importantly, Botero suggests that

> To make a study on academic salaries for Colombia more reliable it would be necessary to include private institutions and perhaps consider different sectors in terms of location, type of institution, accreditation level and the public or private nature of the institutions. I understand that this information is very limited, but I think it would be worth the effort (Botero, personal communication, August 15, 2008).

The limitations pointed out by Botero are legitimate, and this study openly acknowledges these concerns. Indeed, it is very instructive to note that a government decree related to salaries for academic staff in public universities in 2002 set the highest possible top-level salary at $8,083,567 Colombian pesos (Departamento Administrativo de la Función Pública, 2002). This figure is almost twice the top-level average salary we calculated for Colombian academics. Furthermore, if we take into account the official pay increments that applied in the period 2002–2005, the top-level salary from 2002 could have grown to around $9,600,000 Colombian pesos in 2005, which translates into a significant amount—$8,873 in World Bank PPP dollars.

This information clearly begs for further discussion. On the one hand, it is difficult for us to use this data in any meaningful way. The 2002 government decree does not provide information on the employment ranks to which the salaries apply, and our study is based fundamentally on salary averages for employment levels, not individuals. In addition, given that these data are valid for 2002, we do not know to what extent they (for the top salaries in particular) correspond to actual salaries today or to the baseline period for our study, 2005–2006. What is clear from this information, however, is that the range of salaries for Colombian academics is probably broader than what our analysis finds here, and a great deal more work needs to be done to clarify the limits of faculty remuneration in this country, particularly in a comparative sense.

France

Benchmark Information

The United Nations Development Programme considers France one of the top ten countries of "high human development" around the world. Indeed, UNDP's (2007) 2007–2008 Human Development Index, places the country at number 10, out of a total 177 nations. The World Bank (2008) estimates average GDP per capita for France at $29,644 (PPP$). Divided by 12, this yields an average GDP per capita per month in France of $2,470.

Data Collection

The process of gathering data on the French higher education system was remarkably challenging, in spite of the fact that the system is known for its highly centralized nature. Indeed, long-time scholars of French higher education admit that "despite [the fact that] France is always presented as a centralized country, the quality, the reliability and the accessibility of the centralized data, when they exist, are unfortunately not very high" (Musselin, personal communication, November 24, 2007). Still, most of the data for this study came from the French National Education Ministry. This was supplemented by some information from SNESUP, the French National Higher Education Union (Syndicat National de l'Enseignement Supérieur). Two well-positioned scholars of French higher education also provided invaluable advice and feedback during the data collection process.

Higher Education Context

The French higher education system is mostly public in nature, with primary oversight exercised by the national government (Max Weber Programme, n.d.). In 2005–2006, the baseline year for this study, some 2,275,044 students were enrolled across all of France's complex higher education system, including the country's overseas territories. Nearly 63 percent of these students (1,421,719 in total) were enrolled in universities (Ministère Éducation Nationale, 2007a). Public higher education captures roughly 86 percent of the nation's higher education enrollment (Ministère Éducation Nationale, n.d.-b). There are 81 universities in France, two national polytechnic institutes, and 18 *grand établissements* (the so-called *grandes écoles*). In addition, there are 14 engineering *grandes écoles*, four teachers' colleges, and five French schools that operate overseas (Ministère Éducation Nationale, n.d.-a).

Although this study focuses on that segment of the French higher education system that is overseen by the Ministry of Education, it is extremely important to note that there are a significant number of higher education institutions that operate beyond the purview of the Ministry of Education. For example, the ministries of defense, industry, and agriculture exercise oversight over various public *grandes écoles* that provide training in fields ranging from engineering to veterinary studies. There are also "non-public" *grandes écoles*, including some engineering schools and the *grandes écoles de management*. The most prestigious among the business schools are run by the French Chambers of Commerce and Industry. Little to no precise information is available about the number of staff employed in those institutions not overseen by the Ministry of Education, or the salary scales that apply to them. Finally, the Ministry of Education data do not provide any insight into "either the CNRS [Centre National de la Recherche Scientifique, or National Center for Scientific Research] researchers (about 11,000 individuals) or other staff of the different national research institutions (INRA, INSERM, IRD etc.) These represent a rather important share of the French academics... about which very little is known" (Musselin, personal communication, July 31, 2008).

In 2005–2006, National Ministry of Education data indicate that some 89,366 full-time faculty were employed in French public higher education (Ministère Éducation Nationale, 2007b). Regrettably,

> this does not include those employed in post-secondary schools which are not part of this [the national education] ministry, nor the faculty in private institutions (many business schools for instance), nor the faculty teaching preparatory classes (CPGE) to enter a *grande école* or teaching in '*STS*' (*section de technicien supérieur*) because they are secondary school teachers teaching post-baccalaureat students and thus not considered as post-secondary faculty even if they teach post-secondary classes (Musselin, personal communication, November 24, 2007).

Salary Information

Most of the salary information for France came from the National Ministry of Education (Ministère Éducation Nationale, n.d.-c, n.d.-d). There are two main categories of full-time academic staff in France, the *professeur des universités* (which can be considered the equivalent of a professor in the United States) and the *maître de conférences* (a tenured assistant professor) (Max Weber Programme, n.d.-a). For both the professeur des universités and the maître de conférences the ministry provides salary scale information for four stages of employment—at the beginning of one's career, after two years, at the highest level of the "normal grade," and again at the highest level of the senior grade (Ministère Éducation Nationale, n.d.-c, n.d.-d). We used the maître de conferénces "beginning of career" salary figure as the average entry-level figure, given our sense that most French academics begin their careers at this clearly defined entry-level point. We then calculated a top-level salary average by averaging the four figures included in the *professeur des universités* salary scale. To determine an overall national salary figure per month, we then calculated a simple average from the entry-level and top-level averages we had generated, and then converted this amount to World Bank PPP dollars, as indicated in Table 14. Salary progression and GDP comparison information follow in Table 15.

Table 14.
Average French Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: euro)	Salary (World Bank PPP$)
Entry level (*maître des conferénces*)	2,998	3,259
Overall average	3,593	3,905
Top level (*professeur des universités*)	4,187	4,551

Table 15.
Key French Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	2,273 : 2,470
Ratio: top-level salary/entry-level salary	1.4
Ratio: overall average salary/monthly GDP per capita	1.6

It is important to note that we believe the figures in Table 14 under-represent to some degree what French academics actually make. A variety of bonuses (known as *primes* in French) may be applied on top of base salaries. These include the universal research and teaching bonus, which stood at 1,176 per year in 2003–2004 (Ministère Éducation Nationale, n.d.-e), and was up to 1,219 per year in 2007–2008 (Goastellec, personal communication, November 30, 2007). There is an additional doctoral supervision and research bonus available to some faculty involved in this kind of work, and other bonuses may be accessed by those taking on administrative duties and teaching-related activities outside the formal classroom setting (Goastellec, personal communication, November 1, 2007; November 30, 2007; Ministère Éducation Nationale, n.d.-e). Supplementary pay may also be accrued when faculty take on extra teaching hours (Musselin, personal communication, July 11, 2008). A more in-depth study involving French academic salaries would most certainly need to consider the ways in which this menu of salary supplements affects incomes in the academy.

In very general terms, it appears that faculty salaries offer a comfortable if not lavish lifestyle for faculty in France, as indicated in Tables 14 and 15. The overall salary average of $3,905 is higher than the average GDP per capita per month figure of $2,470. This salary advantage is also made somewhat more robust by the fact that French academics have the additional opportunity to earn extra pay through the bonus system. At the entry level, they earn roughly 1.3 times the average GDP per capita per month for their nation, while at they top level, on average, they earn 1.8 times this figure.

Germany

Benchmark Information

According to the United Nations Development Programme, Germany is a highly developed country. It stands at number 22 (out of 177) on the UNDP's 2007–2008 Human Development Index (UNDP, 2007). Germany's GDP per capita (World Bank, 2008) is $30,946 (PPP$) per year. Using simple division by 12, this translates into an average GDP per capita per month of $2,579.

Data Collection

The information on the German higher education system and German faculty salaries came from two main sources. The German Federal Statistical Office (Statistisches Bundesamt Deutschland) served as the main source of data for contextual issues, such as the number of German higher education students, the number and type of institutions of higher education in Germany, and the number of academic staff in the system. Meanwhile, data on average salaries for German faculty were collected from the Academic Careers Observatory of the Max Weber Programme. Findings from work done by Janson, Schomburg, and Teichler (2007), which focuses on a comparison of academic careers in Germany and the United States, were also consulted as a way of gauging the accuracy of our analysis.

Higher Education Context

Various sources provide different counts for the total number of higher education institutions in Germany. These range from 333 (Max Weber Programme, n.d.-b) to 383 (German Federal Statistical Office, n.d.-a) to 347 (German Rectors' Conference, n.d.). This includes some 103 universities, as well as a multitude of colleges of education, public administration, theology, art and music, and the Fachhochschulen (German Federal Statistical Office, n.d.-a).

German higher education is overwhelmingly public in nature, with primary responsibility for this educational sector in the hands of the 16 individual German Länder (Max Weber Programme, n.d.-b; Teichler, 2003). However, there are today some 114 state-approved private or church-run institutions (German Rectors' Conference, n.d.). Privatization of German higher education can also be discerned in the move "away from complete control of higher education [by government] toward less direct regulation through contracts, indicator-based funding, and evaluation. Generally, higher education is being more strongly shaped by competition and incentives than in the past" (Teichler, 2003, p. 23). In 2005 (the baseline year used for this study) there were 1,985,765 students enrolled in German higher education (German Federal Statistical Office, n.d.-c). In early 2008, total enrollment in German higher education stands at 1,940,808, with the vast majority (more than 95 percent) enrolled in the public sector (German Rectors' Conference, n.d.).

Data from the German Federal Statistical Office (n.d.-b) indicate that there were 215,761 full-time academic staff in Germany in 2005–2006. This figure includes full-time academic and creative arts staff, professors, and C4 professors. As of the writing of this report, the authors could not confirm the percentages of full-time faculty working at public colleges and universities versus private institutions. However, given the overwhelming proportion of students enrolled in the public sector, it is assumed that the vast majority of full-time academic staff in Germany are employed in public higher education.

Salary Information

Given difficulties we encountered in getting salary information from official German sources, our study draws heavily from the Max Weber Programme's Academic Careers Observatory (ACO) Web site. One of the disadvantages of doing this is the fact that the ACO focuses specifically on information related to academic careers in the humanities and social sciences. Despite the exclusion of salary information pertinent to other academic fields and disciplines, we still felt that the ACO's data provided us with a reliable and important baseline of information for the German context, and could be used as a meaningful point of comparison for the purposes of this study.[5]

5 For those interested in pursuing more information on academic salaries in the German context, it is important to note that the ACO gathered much of its salary data from the German Association of University Professors and Lecturers (Deutscher Hochschlverband) and Academics.de, an online job search portal for academic positions in science. We were not able to access these sites in the course of our project, given membership and other access restrictions. These could, however, prove to be extremely useful resources for further work in this area.

The ACO's information on academic salaries in Germany distinguishes between Eastern and Western Provinces in the country (Max Weber Programme, n.d.-b). Given our interest in compiling national monthly salary averages, we used both Eastern and Western Province monthly salary information to calculate averages at the junior professor, associate professor, and full professor levels. We designated the junior professor rank as our entry-level position, and the full professor rank our top-level position. We then calculated an overall average using the salary averages for all three ranks available to us—junior professor, associate professor, and full professor. We converted the monthly salary averages from euros to World Bank PPP dollars. The results are presented in Tables 16 and 17 below.

Table 16.
Average German Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: euro)	Salary (World Bank PPP$)
Entry level (junior professor)	3,278	3,683
Overall average	3,856	4,333
Top level (full professor)	4,547	5,108

German full-time entry-level academic staff can expect to make nearly 1.4 times more than the calculated monthly GDP per capita figure, while at the top level, a full-time German faculty member may almost two times this baseline figure. In addition, income may be supplemented through a system of salary bonuses (Janson, Schomburg, & Teichler, 2007), while child and family allowances may also be obtained (Max Weber Programme, n.d.-b)

Table 17.
Key German Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	2,295 : 2,579
Ratio: top-level salary/entry-level salary	1.4
Ratio: overall average salary/monthly GDP per capita	1.7

These salary data, while highly simplified, present a picture of relative financial comfort for full-time German academics. The elevation to civil service status once the rank of associate professor is obtained adds an element of professional and financial security that may not be present in other national contexts, while the strong tradition of academic freedom in Germany is perceived as an important benefit of employment in academe.

Despite this comfortable outlook, however, Janson, Schomburg, and Teichler (2007) note that German academics and scientists employed in the country's universities suffer to some degree from "unfavorable employment conditions" when compared to "other sectors" (p. 103). An analysis of what other professionals make in Germany, and what options they have to grow their careers over time, would add significant depth and meaning to the very basic salary overview presented here. Meanwhile, the German academic profession appears to be in some flux. Career track changes and adjustments to long-standing salary schemes—including, for example, the introduction of bonuses based on performance rather than seniority—speak to the evolving nature of employment in the German academy (Max Weber Programme, n.d.-b),[6] and how its members are compensated.

6 For more information about the evolving German higher education system and effects on both salaries and the German academic profession in general, see also Pritchard, R. (2006). Trends in restructuring German universities. *Comparative Education Review*, 50(1), 90-112.

India

Benchmark Information

The United Nations Development Programme considers India a country of "medium human development." India is ranked 128th out of a total 177 nations, sitting between #127 Equatorial Guinea and #129 Solomon Islands. The average annual GDP per capita for India is $2,126 in World Bank PPP dollars) (World Bank, 2008), which translates into a monthly GDP per capita figure of $177.

Data Collection

Information on the Indian higher education system and faculty salaries on the subcontinent came from three main sources. Data on the number and types of institutions and students was obtained from official government of India Web sites, as well as through a working paper published by the Indian Council for Research on International Economic Relations (Agarwal, 2006). Details relevant to the salary levels for academic staff in India were provided by an in-country expert on Indian higher education, through personal communication and a key publication (Jayaram, 2002). In general, the data collection process for India was somewhat challenging, given that "the higher education scenario does not permit neat categorisations, and the availability and quality of data leave much to be desired" (Jayaram, personal communication, January 18, 2008).

Higher Education Context

The Indian higher education system is very large and quite complex. It boasts the third largest student enrollment in the world, just behind China and the United States (Altbach, 2005b), with estimates ranging from 11.8 million in 2004–2005 (Government of India, n.d.), to just under 10.5 million in 2005–2006 (Agarwal, 2006). Jayaram (personal communication, January 18, 2008), suggests that some 85 percent of students in India are enrolled at the undergraduate level.

India is also home to an extremely large number of higher education institutions, although, again, registering an exact count of Indian colleges and universities is somewhat challenging. For example, the Government of India (n.d.) data for 2004–2005 show that some 16,552 postsecondary institutions were operational. Of these 543 were considered universities. These include central and state universities, "institutions deemed to be universities," institutions of national importance and research institutes. Meanwhile, 16,009 fell into the category of colleges and institutes, including those institutions devoted to general education; engineering, architecture, and other technical fields; medical and teacher training; law, management, and agricultural schools; etc.

However, Agarwal (2006) determined that 17,973 higher education institutions were operational in India in 2005–2006, and his analysis provides some additional insight into the breakdown of private versus public higher education in the country.[7] Excluding some 150 "foreign institutions" (Agarwal, 2006, p. 14), a total of 348 universities and 17,625 colleges and institutes make up the higher education landscape. There are some 278 universities that could be considered "public," which included universities under the government and those deemed universities that are publicly aided. The balance (70) are fully private universities or those deemed private universities that do not receive public aid. Meanwhile, some 9,975 Indian colleges are either "under the government" or private but receive public aid, while another 7,650 are fully private and unaided through public sources.

An analysis of these figures indicates that roughly 57 percent of the higher education institutions in India are public (or, though private, receive public support). The public sector (including private institutions receiving public aid) enrolls some 69 percent of the total student population.

Two separate sources indicate that there are over 400,000 full-time faculty working in Indian higher education, although it is difficult to assess the breakdown of employment in the private versus the

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The salaries of the professoriate under the UGC system were last revised in 1996. To meet the deficiencies resulting from inflation, the dearness allowance (DA) has been periodically revised upwardly since then. UGC has since constituted a Committee to review the salaries of the professoriate; this Committee is expected to submit its report in September 2008. (The Sixth Pay Commission, appointed by the Government of India to review the salaries of its employees, submitted its report in March 2008.)

N. JAYARAM,
Tata Institute of Social Sciences

7 For more information on private universities in India, see Agarwal, P. (2007). Private deemed universities in India. *International Higher Education*, Fall(49), 14-16.

public sector. Jayaram (personal communication, January 18, 2008) puts the total number of full-time academic staff at 411,600. Agarwal (2006) indicates that 471,931 full-time faculty are working in India. This figure includes professors, readers, senior lecturers, lecturers, and tutor/demonstrators in university departments, university colleges, and affiliated colleges.

Salary Information

Lacking more current faculty salary information, this study draws on data from the late 1990s and early 2000s (Jayaram, 2002).[8] This information suggests that there are four primary employment levels in Indian higher education—lecturer, lecturer (senior scale), lecturer (selection grade) or reader, and professor. For each of these four employment levels, the "start" monthly gross salary and the "end" monthly gross salary were added together and divided by two. We considered the average calculated for the lowest lecturer level to be our entry-level monthly salary average, and that calculated for the professor level to be our top monthly salary average. To calculate an overall average, we took the average salaries at all four levels of employment and simply divided by four. We then converted these amounts from rupees into World Bank PPP dollars, as indicated in Table 18 below.

AN EXPERT'S PERSPECTIVE...

Since higher education is a subject of legislation by both the union and the state governments, there is no guarantee that the recommendations of the UGC's Committee will be implemented in all the states or uniformly across the country. Even if implemented uniformly in all the states, it would cover only those teachers who have been appointed as per the UGC norms. During the last two decades appointments to regular positions have been rare and the resulting shortage has been met by appointment of teachers called variously as "guest," "visiting," "part-time," and "contract" lecturers. These "non-regular" appointees are not likely to get the benefit of the revised scales, at least to the extent of the "regular" appointees. Incidentally, there is no reliable data on the "non-regular" professoriate.

N. JAYARAM,
Tata Institute of Social Sciences

Table 18.
Average Indian Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: rupee)	Salary (World Bank PPP$)
Entry level (lecturer)	16,890	1,151
Overall average	22,701	1,547
Top level (professor)	30,384	2,071

The ratio of overall average monthly salary to the monthly GDP per capita estimate in India—as recorded in Table 19—is striking. This mathematical exercise suggests that full-time Indian academics can, on average, expect to make nearly nine times the GDP per capita figure, and may be able to double their monthly salaries over the course of a career. Fundamentally, Jayaram (2002) concludes that "teachers can lead a comfortable middle-class life" (p. 223).

Table 19.
Key Indian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	2,599 : 177
Ratio: top-level salary/entry-level salary	1.8
Ratio: overall average salary/monthly GDP per capita	8.7

8 As of early October 2008, recommendations for a revised set of pay scales for college and university teachers—including salary increases of up to 70 percent—were working their way through official channels, with an attendant sense that the government is "keen to implement the recommendations soon... before it announces general elections" (Jayaram, personal communication, October 6, 2008).

This quick sketch of the Indian higher education context and faculty salary issues in India provides some helpful insight. A great deal more work needs to be done, however, to make sense of this enormously complex higher education system. For example, the pay scale reflected in this study was put forth in 1998. More recent data are clearly needed. Also problematic is the fact that the pay scale used for this analysis was put forth by a national body—the University Grants Commission, ostensibly with a nationwide purview—but in practice the pay scale has been implemented differently in various Indian states (Jayaram, 2002). Finally, gross pay packages include special subsidies, such as a "dearness allowance (linked to the cost of living index according to a fixed formula, currently forming 41 percent of the basic pay), city compensatory allowance (in the case of those working in cities), and a subsidized housing or house rent allowance)" (Jayaram, 2002, p. 222). All of these add-ons significantly complicate straight salary analysis, but must be taken into account in any comprehensive and measured study of faculty compensation in India.

AN EXPERT'S PERSPECTIVE...

Comparisons are invidious, but compared to the salaries offered in the service sector in India today—for example, BPO and call center employees, air hostesses, etc.—let alone the charmed realms of IT, BT and the management sectors, the academic profession (which requires 5-9 years of tertiary education) is unattractive. There is concern among policy-makers about the impact that this will have on tertiary education in the country. The concern is serious considering the National Commission's recommendations for expanding the tertiary system of education and for improving the quality in existing institutions.

N. JAYARAM,
Tata Institute of Social Sciences

Japan

Benchmark Information

Japan is considered to be a country of "high human development" according to the 2007–2008 Human Development Index, as published by the UNDP (2007). The HDI ranks Japan in eighth position in its global survey of 177 countries. In World Bank PPP dollars, Japan's GDP per capita income is approximately $30,290 (World Bank, 2008). Using simple division by 12, the Japanese GDP per capita figure works out to approximately $2,524 per month.

Data Collection

The Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT), as well as the Research Institute for Higher Education (RIHE) at Hiroshima University in Japan, served as the main sources for the data for this country report. MEXT's statistical information Web sites provided easy access to all manner of details relating to the numbers of students, faculty, and institutions engaged in higher education across the country. RIHE's resources were most helpful in terms of compiling faculty salary data.

The lack of easily accessible official information on faculty salaries in the public sector presented us with a major challenge in terms of presenting a complete picture of academic salaries in the Japanese context. However, with the guidance and advice of an energetic higher education observer in Japan, we were able to gather some very current and relevant details, which do allow us to provide some insight into the public sector in this analysis.

Higher Education Context

Japan is one of a minority of countries around the world where the private higher education sector dominates the overall postsecondary system, in terms of number of institutions, student enrollment, and faculty employment. The Japanese higher education system as a whole is characterized by three broad types of institutions: universities and graduate schools, junior colleges, and colleges of technology (MEXT, n.d.-d). As of 2005, there were 726 universities in Japan. Of these, 553 (or 76 percent) were private (MEXT, n.d.-l). There are some 488 junior colleges, the vast majority of which (436, or 89 percent) are also private (MEXT, n.d.-h). There are around 63 colleges of technology, which do tend to be public in nature (only 3 are private) (MEXT, n.d.-a).

The Japanese postsecondary student population in 2005 stood at 3,143,566. Most (2,865,051) were enrolled in the country's universities (MEXT, n.d.-k). Junior colleges attracted some 219,355 students (MEXT, n.d.-j), while 59,160 were enrolled in colleges of technology (MEXT, n.d.-c). While just four percent of college of technology students were enrolled in private institutions (MEXT, n.d.-c), the private sector captures the vast majority of junior college students (92.7 percent) (MEXT, n.d.-j), and much of the Japanese university population (73.7 percent) (MEXT, n.d.-k). Undergraduates account for 88 percent of the total number of students enrolled in the country's universities (MEXT, n.d.-k). Nearly one quarter of Japanese doctoral students are enrolled in private institutions, as are 37 percent of master's students, and 70 percent of professional degree seekers (MEXT, n.d.-k).

The figures for 2005 indicate that some 178,119 full-time faculty members are employed in Japanese higher education (MEXT, n.d.-b, n.d.-f, n.d.-g). The large majority (91 percent) work in university settings. Of this group, 55 percent work in private institutions (MEXT, n.d.-g). Nearly 88 percent of all junior college faculty work in the private sector, as well (MEXT, n.d.-f). Overall, 56 percent of all Japanese academics work in private higher education (MEXT, n.d.-b, n.d.-f, n.d.-g).

Beginning with the introduction of policies for the "Structural Reform of Universities" in June 2001 (MEXT, n.d.-e), a number of important changes affecting universities have been introduced. Key developments have included the re-organization and consolidation of some national universities; the evolution of national universities into national university corporations (NUCs) and local or public universities into public university corporations (PUCs); "the introduction of the principle of competition through third-party evaluation;" and the focus on quality assurance for international competitiveness (MEXT, n.d.-e).

Salary Information

The predominance of the private sector in Japanese higher education is evident in our inability to find complete salary information for publicly employed academic staff in Japan. Indeed, it is interesting to note that even the International Average Salary Income Database (World Salaries Group, 2007) indicates that its data reflect only "private establishments with 50 or more regular employees," and include no information from the public sector

(n.p.). The same is true for our analysis here—our salary data reflect only the private higher education sector in Japan, current for the year 2004. In keeping with our objective to include data only for baccalaureate institutions and above, we chose to include data relevant only to universities.

RIHE (n.d.) provides mean monthly salary information for four academic ranks within Japan's private universities: assistant, assistant professor, associate professor, and professor. At the assistant and assistant professor levels, only one salary figure is presented for each of these ranks. Within the ranks of associate professor and professor, however, two and three different salary figures, respectively, are presented. These figures correspond to age ranges, suggesting that individuals are more likely to move through these higher employment ranks at somewhat slower paces than at the earlier stages of employment. This information also suggests that faculty ages play an important role in salary progression.

The calculation of the salary averages for the purposes of this study involved several steps. To begin, we determined that the one assistant-level mean salary figure should be considered our entry-level average salary. Next, in order to determine the top-level figure, we simply averaged the three mean monthly salaries provided for the professor level. Finally, to calculate our overall national average, we first calculated an average associate professor's monthly salary. We did this by taking the two salary figures for this level of employment, adding them together and then dividing by two. We then had one salary figure for each of the four employment levels presented by RIHE. We added these together, divided by four, and then converted this figure from yen to World Bank PPP$. The results can be seen below in Tables 20 and 21.

Table 20.
Average Japanese Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: yen)	Salary (World Bank PPP$)
Entry level (assistant)	385,886	2,979
Overall average	532,755	4,112
Top level (professor)	718,522	5,546

Table 21.
Key Japanese Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	327,006 : 2,524
Ratio: top-level salary/entry-level salary	1.9
Ratio: overall average salary/monthly GDP per capita	1.6

When compared to the average GDP per capita per month figure for Japan of $2,524, private higher education faculty salaries are relatively flat at the entry level, but progressively more robust with increasing experience and seniority. Our entry-level figure suggests that academics at this rank may expect to earn a mere 1.2 times the monthly GDP per capita estimate. At the highest levels of the seniority and pay continuum, however, Japanese private university faculty may earn nearly 2.2 times the monthly GDP per capita estimate, while the overall salary average for this sector suggests monthly earnings of 1.6 times this baseline figure.

The minimal information we were able to identify relevant to public higher education indicates that, in 2005, the overall monthly salary average for Japan's national universities was 765,500 yen (MEXT, n.d.-i), or $5,909 (World Bank PPP$). It is interesting to note that this overall average for the public sector is higher than the top-level average we calculated for the private sector of Japanese higher education. This could be explained by demographic trends, whereby a disproportionate percentage of faculty occupy higher ranks within the national university system than in the private or public university corporations. It could also be explained by the fact that many national universities have in recent years moved "heavily into research in the sciences [and] have made bolder moves [aimed] at [introduc ing] differential pay systems, compared, for example, to conservative colleges of education/faculties of education in charge of teacher training programs" (Jannuzi, personal communication, March 7, 2008). Interestingly,

> national and public faculty also get subsidized housing, severe climate allowances, and fairly sizable severance packages. They also get a 'research account' of several thousand dollars that they more or less get to use for personal expenses on the job as opposed to having it devoted to a specific research project (Jannuzi, personal communication, March 7, 2008).

On the face of it, this very basic sketch of academic salaries in Japan suggests a very comfortable salary picture for full-time faculty in the country's private universities. Some information suggests, however, that there have been downward trends in Japanese academic salaries in general in recent years (Jannuzi, personal communication, March 8, 2008). Furthermore, moving forward, Japanese academics will not be able to rely on seniority alone to secure professional and financial advancement; rather, in a context in which universities are being forced to operate in a more competitive domestic and international environment, performance and productivity will factor more heavily into the salary equation for academics in Japan.

AN EXPERT'S PERSPECTIVE...

The national government is committed to decreasing its bloc grants to its former institutions. And almost all, in turn, have announced that they will meet the 1% annual decreases by decreasing the salaries (actually the "bonuses," which amount to about five months' salary). That brings up a word about bonuses. If a private institution has financial and/or enrollment problems, the first place it will attempt to save money is with its bonuses for full-time employees. The national universities come out of a civil service system that was largely sheltered from the vagaries of private institutional finance... Only recently have the civil servants come under the scrutiny and got their bonuses cut to reflect worsening economic conditions.

CHARLES JANNUZI,
University of Fukui and Japan Higher Education Outlook *blogger*

AN EXPERT'S PERSPECTIVE...

The biggest factor for the institutions in the urban environments will be the hiring of still more part-time and even full-time "adjunct" faculty. The problem for the ones in the remoter regions will be a lack of university teachers, though even these have moved deeply into part-time and contractual employment. Part-time employment—which amounts to full-time but not permanent work—at the universities and colleges is really so extensive that I guess the best question to ask is: Could it expand anymore without something breaking?

CHARLES JANNUZI,
University of Fukui and Japan Higher Education Outlook *blogger*

Malaysia

Benchmark Information

Malaysia's economic progress in the last three decades has allowed for a substantial reduction of poverty and a general enhancement of living standards. However, the country still faces major challenges to succeed in a knowledge economy, and higher education is called to play a significant role in this process (World Bank, 2007). Currently Malaysia is considered a "medium human development" country and is ranked 63rd on the Human Development Index (UNDP, 2007). For the year 2005, its GDP per capita was $10,882 in World Bank PPP dollars (World Bank, 2008), or $956 per month.

Data Collection

Statistics and context information for Malaysia were obtained from the Ministry of Education and the Ministry of Higher Education (MHE), supplemented by UNESCO data (2007) when key pieces of information were not available through Malaysian ministry sources.

Salary information was obtained from the MHE, although Malaysia was included in Kubler and Roberts' (2005) comparison of academic salaries in Commonwealth countries. We preferred the MHE data over the Kubler and Roberts (2005) study data for two main reasons. First, the MHE provided information for 2005, which is the baseline year for our study. Second, the MHE provided information on the totality of public universities, while Kubler and Roberts (2005) conducted their survey in only one university, the University of Malaya.

Higher Education Context

Malaysian higher education has been growing for several years both in the public and the private sectors. The number of private institutions is very high but enrollment in public institutions is still bigger. Among 660 higher education institutions in the country, only 15 percent (99) are public, and among them 18 are universities (Ministry of Education Malaysia, 2006). In 2005 the country had 731,077 students and 41,871 post-secondary teachers (UNESCO Institute for Statistics, 2007). During the same year, over 320,000 students (approximately 44 percent of the total) attended private higher education institutions (Jantan, Chiang, Shanon, & Sibly, 2006).

It is important to note that our data collection activities did not uncover any reference to the number of part-time faculty in Malaysian public institutions. In contrast, for the private sector, there are some reports pointing to a "substantial number of part-time lecturers, especially [in] the smaller colleges" (Lee, 2002, 2004). However, there is no specific information about the number of part-time faculty in either private or public higher education, or the impact that these faculty may have in their institutions and the larger higher education system in Malaysia.

Salary Information

In Malaysia, faculty at public universities are considered public servants and are therefore subject to a standardized payment scale, with annual payment increases based on a predetermined formula. For a lecturer it would take twenty years to reach the maximum salary level; for an associate professor, ten years; and for a professor, five years.

Remuneration for academic staff consists of two parts in Malaysia, basic pay and allowances. A lecturer may accrue anywhere from 1,300–1,600 ringits more per month in allowances, while a professor's allowance may total 4,750–5,950 ringits per month (Jantan, personal communication, July 15, 2008).

A summary of the average salaries based on the figures from the MHE both in local currency and in World Bank PPP dollars is presented in the Table 22 below, with salary progression and GDP comparison information in Table 23.

Table 22.
Average Malaysian Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: ringit)	Monthly Salary (World Bank PPP$)
Entry level (lecturer)	3,545	2,039
Overall average	5,375	3,332
Top level (professor)	7,650	4,742

Table 23.
Key Malaysian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	1,653 : 956
Ratio: top-level salary/entry-level salary	2.2
Ratio: overall average salary/monthly GDP per capita	3.3

While the average academic salary in Malaysia is the lowest among the Commonwealth countries (in PPP terms) it appears to be better than those found in many of the other "medium human development" economies included in this study. Meanwhile, when comparing the overall average academic salary to the monthly GDP per capita, the resulting figure of 3.3 is higher than more than half of the other countries we examined. From this perspective, it would be possible to assert that full-time higher education teachers in Malaysia maintain a better lifestyle than many of their fellow citizens and many other academics around the world.

The question of how academic salaries in Malaysia grow over time is also an important consideration. According to the information available, the average top-level salary is double the average entry-level salary. Furthermore, it has been documented how a senior professor can earn five times more than colleagues at the entry-level. This salary progression potential, however, has not stopped the exodus of academic professionals to the commercial and industrial sectors in Malaysia (Lee, Molly N. N., 2002), which indicates that a comparison of salaries between academia and other professional fields deserves serious attention.

New Zealand

Ranked 19th on the Human Development Index (UNDP, 2007), New Zealand is considered a "high human development" nation. In 2005, its annual GDP per capita income was $24,996 (in World Bank PPP dollars), or $2,083 per month (World Bank, 2008).

Data Collection

Statistics and context information for New Zealand were obtained from the New Zealand Ministry of Education. Although New Zealand is included in Kubler and Roberts' report (2005) on Association of Commonwealth University faculty salaries, we preferred to use salary information from the Association of University Staff of New Zealand (AUS). These data provided information about a larger group of universities over a longer period of time, and allowed us to obtain information specifically for our baseline year of interest, 2005 (AUS, 2008). However, there is no real departure between these two sources, since Kubler and Roberts (2005) also used the AUS for their study, just restricting the sample to the ACU members in 2004.

Higher Education Context

Despite the overwhelming number of private institutions, higher education in New Zealand is mostly public. Private education was legally sanctioned in 1989 (Abbot, 2006). There are about 14 private higher education institutions for every public institution (33 public, 480 private) but 84 percent of the total enrollment in higher education is concentrated in public institutions. The total enrollment for 2005 was 350,853 students, with 295,884 in public institutions and 54,969 in private institutions. Graduate students represented seven percent of the total enrollment (New Zealand Ministry of Education, 2006). Full-time faculty are the majority. From a total 11,237 teachers in public institutions only 4,612 are reported as holding part-time contracts (New Zealand Ministry of Education, 2006). We were unable to find any information about faculty at private institutions.

Salary Information

Salaries in New Zealand are negotiated through enterprise bargaining (Kubler & Roberts, 2005), whereby each institution negotiates individually with each of the four main unions (Quality Public Education Coalition, Inc., n.d.). In addition, universities can hire faculty through individual contracts, regardless of the local collective arrangement, and the possibility for greater collective bargaining action has recently emerged (Robinson, 2006). Kubler and Roberts (2005) reported how salaries have been losing power in this country, jeopardizing higher education's ability to retain academic talent, particularly when salaries are compared with neighboring Australia.

There are five categories in New Zealand's academic ranks. They are, from entry to senior levels: lecturer, senior lecturer, senior lecturer above bar, associate professor, and professor. In our study the entry- and top-level salaries were calculated as the average of the minimum and maximum salaries reported for the lowest and highest employment ranks. Therefore the entry-level average was the average from the minimum and maximum salaries for a lecturer, while the top-level average came from the minimum and maximum salary figures for a professor. The overall average was determined by adding the average values calculated for the five employment ranks, and dividing by five. Since the original values were annually based, we then divided the results by 12 in order to obtain monthly values. The results are presented in the Tables 24 and 25.

Table 24.
Average New Zealand Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: New Zealand dollar)	Monthly Salary (World Bank PPP$)
Entry level (lecturer)	4,795	3,114
Overall average	6,914	4,490
Top level (professor)	9,334	6,061

Table 25.
Key New Zealand Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	3,151 : 2,046
Ratio: top-level salary/entry-level salary	1.9
Ratio: overall average salary/monthly GDP per capita	2.2

In several ways, New Zealand represents a fairly middle-of-the-road country in our comparative study. Its salary averages (particularly at the entry level) tend to hit the middle of the spectrum, as do its salary progression and salary-to-GDP ratios.

Saudi Arabia

Benchmark Information

The UNDP (2007) ranks Saudi Arabia 61 out of a total 177 countries on its 2007–2008 Human Development Index (HDI). Although this ranking places the kingdom into the category of "high human development," the list of "medium human development" countries begins with rank number 71 (UNDP, 2007). Meanwhile, according to the World Bank (2008), Saudi Arabia's GDP per capita (in PPP dollars) is $21,220. Saudi Arabia's monthly average GDP per capita, by simple division by 12, works out to be $1,768.

Data Collection

Data for Saudi Arabia was gathered from three main sources. The *Statistical Yearbook, 1425–1426*, put out by the Saudi Arabian Ministry of Higher Education (2005), provided important details on the size and scope of the country's postsecondary system. An unpublished preliminary report by an international consulting firm that has been working with Saudi Arabian authorities on a comprehensive educational reform project over the last year gave additionally helpful information about the Saudi system (CRA International, 2007). Specific salary details were also provided to us directly by the Deputy Minister of Educational Affairs of the Saudi Ministry of Higher Education.

Higher Education Context

Saudi Arabia has 23 universities and 157 postsecondary colleges and institutes. The system of higher education in the country is overwhelmingly public—just three of the kingdom's universities and 17 of its colleges and institutes are private (CRA International, 2007). The Ministry of Higher Education (2005) reports that some 603,000 students were enrolled at the postsecondary level in Saudi Arabia in 2004–2005. The vast majority of these (576,468) were studying at the undergraduate level, while a mere 26,532 (just 4.4 percent of the total), were enrolled in graduate programs. The higher education system in Saudi Arabia employs nearly 28,000 faculty members. This figure includes both Saudi and non-Saudi faculty, although specific data regarding the percentage of foreign faculty were not available to us.

Salary Information

The data we were able to collect for faculty salaries relates to academics' earnings at the levels of lecturer, assistant professor, associate professor, and professor, and applies to Saudi nationals only. Foreign academic staff are hired on a contract basis with negotiated pay, while Saudi nationals are permanent employees of the state with civil service status (CRA International, 2007).

In our analysis, we used the rank of lecturer as the entry-level position and the professor rank as the top-level position on the Saudi academic employment ladder. The salary scale for Saudi lecturers ranges from 7,620 riyals per month to 13,780 riyals per month. However, given our sense that the tightly organized civil service nature of the Saudi academic profession has most young academics starting off at the true entry-level point, we designated the low end of the scale as our entry-level average. Meanwhile, since more experienced academics at the level of professor may end their careers at any point along the salary continuum for this rank, we calculated an average top-level monthly salary from the official range of 16,015 riyals per month to 24,905 riyals per month. To calculate our overall average, we averaged each of the salary ranges for the four academic ranks, then divided these average figures by four. Finally, although we understand that a 600 riyal benefit may be applicable universally (CRA International, 2007), we opted not to include this amount in our calculations, given our interest in comparing only base salaries for academics around the world. The results of our analysis are presented in Tables 26 and 27 below.

Table 26.
Average Saudi Arabian Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: riyal)	Salary (World Bank PPP$)
Entry level (lecturer)	7,620	3,162
Overall average	15,933	6,611
Top level (professor)	20,460	8,490

Table 27.
Key Saudi Arabian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	4,262 : 1,768
Ratio: top-level salary/entry-level salary	2.7
Ratio: overall average salary/monthly GDP per capita	3.7

When compared to the average GDP per capita per month figure for Saudi Arabia of $1,768, faculty salaries enjoy a comfortable margin over this amount, particular at the higher end of the employment spectrum. Indeed, a professor earning an average salary for this rank can expect to make nearly five times the average GDP per capita per month figure. Meanwhile, the potential to grow one's salary over time is appreciable in the Saudi context, where the top-level salary average is more than two and a half times that of the average entry-level figure.

In our comparative analysis, Saudi Arabia registers the highest top-level and overall average salary figures, but does sit in seventh place in the comparison of entry-level salaries. Its lower ranking on this variable may be due to the fact that we did not average a the range of figures provided to us for the lecturer rank, but assumed that the lowest entry-level figure was likely the amount most representative of the true professional starting point for Saudi academics.

On the face of it, the academic appears to be a well-compensated professional in the Saudi Arabian context. However, a more vigorous and comprehensive inquiry into the question of what faculty salaries in Saudi Arabia look like—and what they really mean— would involve looking at the difference in pay between Saudi nationals and foreign academic staff and would also require getting a sense of how academic salaries compare to the salary compensation received by other professionals in Saudi Arabia. Ultimately, given that the "Saudi higher education system is approaching huge developments in so many aspects, qualitatively and quantitatively" (Al-Ohali, personal communication, July 12, 2008), it will be important to consider how the salary landscape relates to these important changes in the near- to mid-term

South Africa

Benchmark Information

The UNDP's (2007) Human Development Index ranked South Africa 121st among 177 countries, which classifies it as a nation of "medium human development." The World Bank calculates the GDP per capita for this country at $11,110 per year (in PPP dollars), or $926 per month. Among the countries of our study, South Africa had a higher GDP per capita than China, Colombia, and Malaysia, but it ranked lower on the HDI than these countries.

Data Collection

South Africa's Department of Education (2006) served as the main source for context information for South Africa. Information about salaries was drawn from Kubler and Roberts' (2005) report on salaries in Association of Commonwealth University institutions. Their data from South Africa were based on a survey applied to six universities.

Higher Education Context

Even though a rapid growth of private education has been reported by many observers of South African higher education (Altbach, 2005a; Jansen, 2004; Mabizela, Subotzky, & Thaver, 2000; Subotzky, 2003), and by the year 2000 it was estimated that 145 private higher education institutions enrolled a total of more than 100,000 students (Mabizela Subotzky, & Thaver, 2000) in the country, the available official information includes data only from public higher education.

In 2005, there were 23 universities institutions providing higher education to 737,472 students—81.7 percent in undergraduate programs, 15.6 percent in graduate programs, and the remaining 2.7 percent in "other programs" (South Africa Department of Education, 2006). In 2006, academic staff at public universities numbered 21,185 (Sehoole, personal communication August 11, 2008, based on Department of Education, 2007). Information about part-time faculty was not available.

Salary Information

There are two basic types of employment arrangements in South Africa, permanent employment and contract work. "Permanent employment typically involves a fixed-term appointment that extends to retirement. Upon appointment, the normal probationary period is 18 months" (Koen, 2002, 412). There is a wide range of denominations for permanent academic positions, starting below junior lecturer (including senior laboratory assistant) and going up to the level of professor or director. However, many of these denominations refer strictly to teaching functions. In general, it can be said that the true academic ranks are junior lecturer, lecturer, senior lecturer, associate professor, and professor. For the two lowest ranks, a master's degree is usually required. For the upper employment ranks, universities are increasingly looking for individuals with doctoral degrees from well-known universities and with some publications in relevant academic journals, among other qualifications (Koen, 2002).

Contract work is based on temporary appointments of less than a year. These types of employment arrangements have been growing in recent years, to the point that at some institutions, fifty or sixty percent of the faculty are hired on this basis. Contract faculty typically have lower salaries than permanent employees of similar rank (Koen, 2002).

There is no collective bargaining process for academic salaries in South Africa; salaries and benefits are negotiated on an institution-by-institution basis (Kubler & Roberts, 2005). The country has been both a sender and a receiver of academic talent over time. Scholars from other parts of Africa have been attracted by South Africa's relatively generous salaries (World Bank, 1995; Mobolaji, 1996; Altbach, 2005a), while the country loses "many of its most talented academics to the North" at the same time (Altbach, 2005a).

The calculation of the salary averages for South Africa was based on the figures reported by Kubler and Roberts (2005). The entry-level figure was obtained as an average of the salaries for associate lecturer, the lowest employment rank reported in their study. The top-level average was calculated as the average of the two available salary values for the full professor rank. Our calculations yielded the results presented in Tables 28 and 29 below.

Table 28.
Average South African Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: rand)	Monthly Salary (World Bank PPP$)
Entry level (associate lecturer)	9,905	2,560
Overall average	15,772	4,076
Top level (full professor)	23,627	6,105

Table 29.
Key South African Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	2,734 : 706
Ratio: top-level salary/entry-level salary	2.4
Ratio: overall average salary/monthly GDP per capita	5.8

As indicated in the comparative findings section, the South African results were surprising in a variety of ways. Despite its relatively low HDI ranking, the country ranks fifth in the standings for top-level average salaries. Its overall-average-salary-to-monthly-GDP-per-capita ratio is the second highest in the group, and it ranks third (behind China and Saudi Arabia) in terms of the percent change in salary from entry to top levels of employment.

These may suggest that higher education faculty in South Africa may have a comfortable lifestyle. However, when compared to professionals in other sectors, observers note that faculty do not hold such an impressive advantage. In fact, the salary gap across professions in South Africa has been pointed out as an area for improvement in the country's education system (Kubler & Roberts, 2005). Meanwhile, in a context in which a majority of white males populate the academic ranks in a student body actively undergoing "Africanization" (Subotzky, 2003), the intersection of race and faculty compensation begs further exploration. This kind of analysis could be important not only in South Africa but also in many other diverse societies around the world.

United Kingdom

Benchmark Information

The United Kingdom is considered a "high human development" nation, ranked 10th on the UNDP's (2007) Human Development Index. According to the World Bank, its GDP per capita for the year 2005 was $31,580 (in World Bank PPP dollars), which yields a monthly amount of $2,632.

Data Collection

Statistics and context information for the United Kingdom were obtained from the Higher Education Statistics Agency (HESA) (2008a). Additional information came from Universities UK (2007a), a representative body and membership organization for the higher education sector. Salary information was obtained from Kubler and Roberts' (2005) Association of Commonwealth Universities study. A brief explanation about our decision regarding sources for this report can be found in the section on salary information below.

Higher Education Context

Higher education in the United Kingdom is essentially public in nature—there is only one private higher education institution in the country. In total, there are "168 publicly-funded HEIs, of which 106 are universities, plus the private University of Buckingham" (Locke, personal communication, July 28, 2008, based on HESA, 2008a, 2008b). The system is also comprised of further education colleges and some foreign higher education institutions (Universities UK, 2007b). In 2005, there were 2,362,815 higher education students in the United Kingdom (HESA, 2008a); of these, 559,390 (23.7 percent) were in graduate programs. In the same year, there were 164,877 academic staff members—including professors, senior lecturers and researchers, lecturers, researchers, and other grades. Among the faculty, 32.3 percent (53,310) were hired through part-time contracts (Locke, personal communication, July 28, 2008, based on HESA, 2008a, 2008b).

Salary Information

Salaries are largely established through national negotiation processes; however, institutions do have a certain degree of freedom when it comes to compensating faculty (Max Weber Programme, n.d.-c). Our main source for information on salaries was the Kubler and Roberts (2005) *2004–2005 Academics Staff Salary Survey*. For the United Kingdom, this study was based on a survey applied to ten universities, all members of the Association of Commonwealth Universities for the academic year 2004–2005. One drawback that could be associated with the use of these data for national-level analysis in the United Kingdom is that this particular study was "based on a limited sample of HEIs [higher education institutions] in the United Kingdom which is biased in favour of the 'Russell Group' (Ivy League equivalent) and other 'pre-1992 universities,' against the 'post-1992 universities' (mainly ex-polytechnics) and features no non-university HEIs" (Locke, personal communication, July 28, 2008).

We did consult additional sources for salary data, such as the University and College Union (UCU) (2008) and the Max Weber Programme's Academic Career Observatory (n.d.-c). However, we ultimately decided to use Kubler and Roberts (2005) as our main source of salary information, for three main reasons. First, it gave us a more comparable data set, considering that we used their findings for a number of the other countries included in our work. Second, the timeframe under consideration in the Kubler and Roberts' (2005) study (2004–2005) was closer to baseline year of interest (2005–2006) than what the other sources we considered could offer. Third, the methodology used by Kubler and Roberts (2005) was more compatible with the methodology that we employed in our research. For example, the Max Weber Programme data only draw from two universities, and the UCU report (2008) was based on official documentation that relates to national wage and salary negotiations, but not necessarily to actual salaries (see, for example, the College Employers' Forum, 2007).

Ultimately, our analysis of academic salaries in the United Kingdom yielded the figures presented in Table 30 and Table 31.

Table 30.
Average U.K. Salaries, by Employment Level

Employment Level	Monthly Salary (local currency: pound)	Monthly Salary (World Bank PPP$)
Entry level (associate lecturer A)	2,175	3,345
Overall average	2,823	4,343
Top level (Professor)	3,633	5,589

Table 31.
Key U.K. Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	2,770 : 2,632
Ratio: top-level salary/entry-level salary	1.7
Ratio: overall average salary/monthly GDP per capita	1.7

In our comparative analysis, the United Kingdom sits in fifth place in terms of entry-level salary figures, seventh in terms of top-level salaries, and sixth in the overall salary average standings. It outpaces the United States slightly when it comes to the percent change between entry- and top-level average monthly salaries (67 percent for the United Kingdom versus 61 percent for the United States), and is virtually equal to Germany, the United States, and Japan when comparing the ratio of overall average monthly salaries to monthly GDP per capita estimates.

Still, there are encouraging trends in the U.K. context, with significant increases in starting salaries for lecturers, growth in the proportion of individuals occupying higher-level positions, and a sense that the whole "package" of employment benefits enjoyed by faculty makes the academic profession a generally attractive one.

AN EXPERT'S PERSPECTIVE...

Individual academics' salaries may be rising even faster than the official data suggest because the proportion of academic staff employed on higher grades has increased significantly over the last decade (1995/96 to 2006/07). Excluding research grades, the proportion of full-time academics who are professors has increased from 10.9% to 19.3%.

There has also been an increase in the proportion in the next highest academic grade (senior lecturers in pre-1992 universities and the principal lecturer grade in post-1992 institutions) – from 24.4% to 38.6%, with corresponding reductions in more junior grades (based on HESA data).

[Meanwhile]... increases in starting salaries for lecturers since the framework agreement averaged 12%. Employees have also received pay increases of up to 3% on assimilation to the new pay spine. Approximately 8.5% of academics will have also received additional pay increases due to upgrading (according to UCEA).

Finally, it is the whole package that is more important than just the salary, as you point out. Flexible working arrangements, holidays and pension schemes are all advantageous when compared with most other UK employees.

WILLIAM LOCKE, *Centre for Higher Education Research & Information (CHERI)*

United States

Benchmark Information

The United States is considered the 12th most highly developed country in the world, according to the 2007–2008 Human Development Index (UNDP, 2007). The World Bank (2008) puts the U.S. GDP per capita at $41,674. Divided by 12, the country's GDP per capita per month can be estimated at $3,473.

Data Collection

Two main sources were used for data collection relevant to the United States. The *Chronicle of Higher Education* (2006a, 2007), through its annual "Almanac" publication, provided most of the information having to do with the broader context of the U.S. postsecondary system, such as student enrollment and faculty numbers; numbers and types of higher education institutions; and the breakdown of institutions, enrollment, and faculty employment by institutional type (private versus public). Most of these data refer to the academic year 2005–2006, which is the baseline year for this study. The American Association of University Professors, through its *Annual Report on the Economic Status of the Profession* (2006), was the primary source of the data relating to academic salaries.

Higher Education Context

"By almost any measure—student population size, institutional variety and quantity, physical and financial resources, research productivity, etc.—the American higher education system is arguably one of the largest, most comprehensive, and most dynamic in the world" (de Wit & Rumbley, 2008, p. 199). In 2005–2006, there were some 4,216 postsecondary institutions in the United States. Of this total, just over 1,800 were deemed "associate's colleges," conferring two-year degrees. Research institutions (made up of research and/or doctoral universities), master's colleges and universities, and baccalaureate colleges together numbered around 1,700 and jointly enroll approximately 58 percent of U.S. students. Close to 1,000 "special-focus institutions," including faith-related schools, medical schools and centers, law schools, engineering schools, art/design/music schools, and tribal colleges, round out the nation's institutional profile (*Chronicle of Higher Education*, 2006a).

Nearly 60 percent of American higher education institutions are considered private (2,516 in total), although the majority of U.S. students (75 percent) are enrolled in public higher education (*Chronicle of Higher Education*, 2006a). The American postsecondary student population totaled 17,272,044 in 2005–2006. More than 85 percent of students are enrolled at the undergraduate level, with the balance engaged in graduate and professional degree programs.

AN EXPERT'S PERSPECTIVE...

Despite the growth in the part-time faculty ranks, it is interesting to note that the four-year sector in the U.S. has been moving to reduce its dependence on part-time faculty—primarily via the increased use of fixed term, full-time appointments. These positions now constitute a majority of all new faculty appointments in the U.S.—and have been so for at least the last fifteen years. There is some preliminary evidence suggesting that the salaries of fixed-contract, full-time faculty are significantly lower than those of full-time faculty on regular, tenure eligible appointments.

MARTIN FINKELSTEIN,
co-author (with Jack Schuster) of
The American Faculty: The Restructuring of Academic Work and Careers *(2006)*

Some 1,290,000 faculty members are working in higher education in the United States, of whom around 65 percent are employed in public higher education. More American faculty members are employed on a full-time rather than part-time basis; full-timers account for 52 percent of the overall academic staff (*Chronicle of Higher Education*, 2007). However, the percentage of part-time faculty doubled in the period 1971–2003, growing from 23 percent to 46 percent during this time (AAUP, 2006). Today, part-timers account for 48 percent of all postsecondary faculty in the United States and are "disproportionately located in the two-year college sector" (Finkelstein, personal communication, June 28, 2008).

Salary Information

Using data tables produced by the AAUP (2006), we focused our attention on salary information relevant to doctoral, master's, and baccalaureate institutions. It is important to note that the salary figures presented by the AAUP (2006) "cover full-time members of the instructional staff except those in medical schools... are adjusted to a standard nine-month work year... [and] are based on data from 1,473 institutions representing 1,977 campuses"

(*Chronicle of Higher Education*, 2006b, n.p.). These data also represent public, private, and church-affiliated institutions. Although much of the data collected from other countries represent public higher education exclusively, and even in the United States more academics work in the public versus the private sector, we argue that there is value in exploring the private higher education data in this analysis. More than a third of U.S. faculty work in the private sector and there is, generally speaking, fairly fluid movement of academics between public and private employers in this country.

The AAUP provides salary averages for employment at five different ranks: lecturer, instructor, assistant professor, associate professor, and professor. However, given that the positions of assistant, associate and full professor are typically understood to represent the primary "career" ranks in American academia, we focus our salary analysis on these three employment levels. Furthermore, at American master's, doctoral and baccalaureate institutions, the full-time teaching staff fall overwhelmingly into these three categories of employment. Indeed, instructors and lecturers represent, on average, just 6.5 percent of the full-time academic workforce at these kinds of institutions.

As a first step in our salary analysis, we averaged the annual salaries for the three employment levels across the three types of institutions (master's, doctoral, and baccalaureate) and within the two distinct sectors of American higher education (public and private; note here that we combined the salary data from church-affiliated institutions with that from all other private institutions). We then divided by twelve to obtain an average monthly salary for each of the levels of employment. Finally, we calculated a simple overall average by summing the three average monthly salaries and dividing by three. Again, the entry-level figures below draw from the data for salaries of assistant professors. The top-level salary figures reflect information for the academic staff holding the rank of professor. The results using this methodology can be seen in Table 32 below,[9] while salary progression and GDP comparison information is presented in Table 33.

Table 32.
Average U.S. Salaries, by Sector and Employment Level

Employment Level	Monthly Salary Public and Private HE	Monthly Salary Public HE only	Monthly Salary Private HE only
Entry-level (assistant professor)	4,589	4,524	4,757
Overall average	5,816	5,651	6,113
Top level (full professor)	7,385	7,053	7,869

Table 33.
Key U.S. Salary Indicators

Key Indicators	
Monthly GDP per capita	3,473
Ratio: top-level salary/entry-level salary (public+private)	1.6
Ratio: overall average salary (public+private)/monthly GDP per capita	1.7

A consideration of these results must take into account some important methodological decisions on our part. While it is true that the AAUP salary data we draw from pertain to annual salaries adjusted for a nine-month work year, we chose to calculate a monthly salary figure by dividing by 12, for two main reasons. The first is to remain consistent with our standard practice throughout this study of calculating monthly salaries from annual amounts through division by 12. At the same time, while we are cognizant of the fact that many U.S. faculty may choose to receive just ten paychecks per year (thereby earning more per month) and could supplement their base pay with other types of activities both during the academic year and the summer, we are primarily interested in the value per month of academics' basic salaries over the course of a year.

9 Note that these monthly salaries are all in U.S. dollars and are not converted to World Bank PPP$, as this is a one-to-one conversion.

Our analysis indicates that the monthly salary averages for full-time faculty in private higher education are slightly higher than for those employed in the public sector, although these differences are fairly minimal. The private-public divide is of some concern to others, however, who note that "the scope and strength of the private sector in the United States and the relative decline in state support for public institutions... has placed them at a competitive disadvantage *vis-à-vis* the private sector in faculty recruitment and compensation" (Finkelstein, personal communication, June 28, 2008).

Meanwhile, our data show that the overall average full-time academic salary in the United States is anywhere from 1.6 to 1.8 times the amount of the estimated monthly GDP per capita figure. Likewise, the potential growth in salary over a career hovers around 1.6 across both of the institutional sectors in the United States—public and private—as one moves from an entry-level to a more top-level position on the academic employment ladder.

On the face of it, these data indicate, if not extremely high levels of earning potential, then at least no obvious crisis in faculty remuneration in this country. However, many in American academia worry that faculty salaries are in trouble. The AAUP, for example, points to the critical for need U.S. institutions "to attract the nation's brightest scholars to their faculties" (AAUP, 2006, p. 25), in order to keep pace with expanding societal demands to prepare students for a rapidly changing economic context, yet worries openly about "the devaluing of higher education" in light of the failure of academic salaries to keep pace with increases in inflation (AAUP, 2006), among other considerations. Comparing academic salaries in the United States against the compensation levels of other highly-trained professionals, and key indicators such as inflation, would provide much-needed insight into the real meaning of the salary data presented here. Furthermore, this study was not designed to take into consideration the potentially dramatic differences in faculty compensation across the various academic disciplines, which begs serious consideration. Finally, as the ranks of part-time and non-tenure track faculty grow in this country, it will be important to understand the effects of their employment arrangements on the salary conditions of the American academic profession as a whole.

AN EXPERT'S PERSPECTIVE...

The sensitivity of salaries to market forces in different academic fields first emerged during the 1960s and early 1970s during the most intensive phase of expansion of American higher education and recruitment of faculty in professional fields outside of the traditional arts and sciences. A second order marketization by field seems to be occurring in the past decade. At the extreme, this results in an entry level professor of accounting earning more than a full professor of English with twenty-five years of experience. It results as well in a professor of surgery earning more than the University president – and almost as much as the football coach!

MARTIN FINKELSTEIN,
co-author (with Jack Schuster) of
The American Faculty: The Restructuring of Academic Work and Careers *(2006)*

Special Case: Palestine

Benchmark Information

Palestine's situation is very different from any of the other countries included in the study. While the United Nations includes it in its reports as the "Occupied Palestinian Territories," the World Bank, the International Monetary Fund, and the U.S. Central Intelligence Agency's *World Factbook* do not make mention of it in their reports. Palestine is included in the UNDP's (2007) Human Development Index but it is not possible to reference the PPP of its currency, since it is not included in the major PPP indexes. This situation forced us to exclude Palestine from most of our comparisons. However, on the basis of some relevant data available to us through some recent research on the academic profession in Palestine, it is included as a special case in this study.

According to the UNDP's Human Development Index (2007), Palestine is considered among the "medium human development" nations, ranked 106th among 177. Its annual GDP per capita is $2,056 (UNDP, 2007), or $171 per month.

Data Collection

Data for Palestine came from two main sources. Official statistics were obtained from the Palestinian Ministry of Education and Higher Education (2005, 2007), while information about salaries came from a doctoral dissertation on the academic profession in Palestine (Taweel, 2008).

Some distinctions should be made between the scope, purpose, and methodology of Taweel's (2008) doctoral research and our comparative study.

1. Taweel looked at the academic profession in general, while salary details were just a small part of her study.
2. Information on salaries was obtained using a survey applied to a large number of professors from all the institutions in the country, excluding Al-Quds Open University and Al-Aqsa University.
3. The survey was applied during December 2006 and January 2007, and the information collected corresponds to 2006, whereas the data for most other countries in our study is for 2005.
4. Taweel collected salary data in the form of salary ranges (in U.S. dollars) rather than as precise figures associated with specific employment ranks.

Higher Education Context

Higher education is mostly public in Palestine. However, there are 11 private institutions, including universities, community colleges, and university colleges. Public institutions are financed with public monies but they are autonomous in their management and governance. Government-run institutions are also financed with public monies but the government has a larger role in their management and governance. United Nations-run Institutions (UNRWA) are a special category unique to Palestine in our sample. Though these institutions, located in refugees camps, are financed by the U.N. and not by the Palestinian Authority, they are considered public for the purposes of this study.

In 2005, Palestine had 10 traditional universities (eight public, one government-run, and one private); one open university; and 32 additional institutions, including 19 community colleges (nine public, eight private, one run by the government, and one run by the UNRWA). The system is rounded out by 13 university colleges (two private, two run by UNRWA, and nine run by the government).

There were 150,274 students (4,363 graduate and 145,911 undergraduate) and 4,592 academic staff in 2005. The largest proportion of students was enrolled in traditional universities (54 percent), followed by the Open University (35 percent), community colleges (7 percent), and university colleges (4 percent).

Salary Information

Academic ranks in Palestine include lecturer, assistant professor, associate professor, and professor. However, given the methodology used by Taweel (2008) we were not able to match up the salary figures she collected with the respondents' specific academic ranks. In the absence of this kind of information, we employed a decidedly simplistic approach to making sense of these data. We calculated the overall salary average by adding the lowest ($5,000) and the highest ($40,000) income values on Taweel's (2008) salary survey and dividing them by two.

This yielded a median salary of $22,500. However,, according to Taweel's analysis, the majority of Palestinian faculty earn incomes between $10,000 to $20,000 per year. This amount is below our calculated average; however, we kept the average of $22,500 in order to be consistent with the methodology used in countries where more information was available, and where the final value was the result of a simple average and not a weighted average. Our findings are presented in Tables 34 and 35 below.

Table 34.
Average Palestinian Salaries, by Employment Level

Employment Level	Monthly Salary (currency: U.S. dollars)	Monthly Salary (World Bank PPP$)
Entry level	625	N.A
Overall average	1,875	N.A
Top level	2,917	N.A

Table 35.
Key Palestinian Salary Indicators

Key Indicators	
Monthly GDP per capita (local currency : World Bank PPP$)	N.A
Ratio: top-level salary/entry-level salary	4.7
Ratio: overall average salary/monthly GDP per capita	N.A

Taweel (2008) pointed out that academic salaries in Palestine are very low compared with western standards. However, she also indicated that under the very particular conditions of this territory, academic salaries are considered to be good in light of a social and political situation in which "just being paid a salary is considered a blessing"(Taweel, 2008).

Ziad Aljabari, a faculty member at Hebron University who reviewed our findings, considered our data "almost accurate" but highlighted several factors that might affect our findings, cautioning us not to make overly broad generalizations. For example, he stressed the possible impact of differences in internal regulations from university to university and the omission of a consideration benefits from our analysis (Ziad Aljabari, Mohammad, personal communication, July 13, 2008).

According to our data, Palestine has the largest difference between the entry-level and the top-level salary. The 4.7 ratio that we obtained by dividing the top-level average salary by the entry-level average salary is bigger by far than the next biggest ones, which can be seen in China and Saudi Arabia, with ratios of 2.7 and 2.69, respectively. However, the previously reported methodological limitations force us to be cautious with these and any other conclusions about faculty salaries in Palestine, especially in a comparative context. In addition, as with countries such as China and Colombia, limitations in our capacity to access highly accurate data for the highest level salaries for this study force us to be very conservative with the analysis in this area.

CONCLUSION

This exploratory effort to compare average academic salaries within and across a diverse group of countries represents a small but meaningful contribution to the enhanced understanding of faculty compensation around the world. Our work joins a growing body of research that is moving educational salary comparisons beyond the realm of primary and secondary education and into what may arguably be a much more complex environment at the postsecondary level.

Unlike other salary comparison studies, many of which focused on sets of countries that share a common bond or profile (for example, the Association of Commonwealth Universities, or the European Union), our project provides a window on an extremely broad range of national contexts. This kind of global analysis is becoming increasingly important. While many might argue that there are higher education "powerhouse" countries or regions (for example, the United States and Europe) that dominate the discussion relevant to higher education trends around the world, there is truly a global dynamism in higher education today. At both national and institutional levels around the world, there is a growing sense that the horizon for higher education extends well beyond national borders. This is expanding the sense of what it means to be informed about key issues in higher education. By compiling and jointly considering very diverse, and often difficult to obtain, pieces of data about academic salaries in 15 very different countries, we are contributing important new information to the global conversation about the academic profession.

In the process, we have learned some significant lessons. First, and perhaps most importantly, it is in many cases quite difficult to find complete, accurate, timely, and fairly standardized data on faculty salaries around the world. This is probably much less true than it was just 15 years ago, given the enormous wealth of higher education data now publicly accessible—particularly online. Still, getting good data is challenging, and then finding ways to translate across very different higher education contexts presents another layer of enormous complexity. Of course, faculty salary comparisons will likely always be seriously challenged by the nuanced and highly contextualized nature of higher education systems and compensation packages around the world. Still, we believe that this study, despite its notable design methodological limitations, has done an admirable job of bringing many different kinds of very contextually-bound information into meaningful alignment. But, we also understand that our work raises many more questions than answers. There is a need for a great deal more research around faculty salaries worldwide, and in order to advance this agenda, and to do it well, several important issues need to be addressed.

Primary among these is the need for more and better data on faculty salaries. In addition, we believe that significant interdisciplinary expertise must be leveraged for future research. Credible salary comparison studies require both the perspectives of economists and higher education specialists. Experts on specific systems of higher education make it possible to understand the nuances of diverse national contexts and the unique aspects of different kinds of faculty compensation schemes. A consideration of tax structures is also critical for any serious analysis of this sort. Ultimately, leveraging such expertise will require time, careful planning, and not insignificant resources.

Our effort to make sense of salaries across currencies and economies most certainly enhanced our understanding and appreciation for the principles behind PPP exchange rates. What has become even more apparent to us, however, is that an international "academic PPP" tool could provide a much more relevant way to reflect how salaries relate to the needs and expenses of the academics who receive them. For example, an "academic PPP" could include in its basket of considered goods the cost of a standard desktop computer, the annual subscription cost to two professional journals, and the cost of attending one national and one international academic conference. Making the PPP calculation more closely connected to the issues and products of central concern to the academic profession worldwide could lend itself nicely to enhanced international salary comparisons. We do, of course, remain exceedingly sensitive to the problems inherent in crafting any such specialized PPP tool, which could easily be skewed toward products and services that are most relevant for wealthier, more developed countries. We do consider the idea worth exploring, however.

In addition, we strongly believe that future comparative salary studies need to take into account the changing nature of the academic profession. Even though in most of the countries we studied there is a clearly discernible trend toward more part-time faculty and fewer full-time faculty, part-timers remain virtually invisible in the large majority of the cases. Among those countries that keep any kind of statistics about part-time faculty, only a few keep records in terms of full-time equivalents, which would help to reduce multiple counting of those academics who work in several institutions simultaneously. But in many cases, there is no information at all about this

growing group. The same may be said for faculty employed in private higher education around the world.

Finally, we hope that more attention will be paid to an understanding of how faculty salaries compare to those paid to other highly skilled professionals, within and across countries. This study was not able to address this issue, but we are clearly cognizant of its relevance and importance.

Despite daunting complexity and unavoidable gaps, we believe that there is both merit and interest in continued attention to these and other aspects of international faculty salary comparisons.

APPENDIX: DATA TABLES

Table 36.
Contextual Information, All Study Countries

	Argentina	Australia	Canada	China	Colombia	France	Germany	India
Institutions								
Public	45	37	243	1,542	81	N.A.	233	10,253
Private	56	155	170	250	191	N.A.	114	7,720
Total	101	192	413	1,792	272	124	347	17,973
Students								
Public	1,352,334	949,782	N.A.	N.A.	583,417	N.A.	1,858,663	3,752,000
Private	293,912	7,394	N.A.	N.A.	596,497	N.A.	82,228	6,729,000
Graduate	62,870	263,504	153,600	978,610	56,380	521,124	0	1,572,150
Undergraduate	1,583,376	665,526	803,500	22,631,151	1,123,534	764,284	0	8,908,850
Total	1,646,246	957,176	957,100	23,609,761	1,212,037	2,254,000	1,979,043	10,481,000
Faculty								
Public	117,393	38,952	N.A.	N.A.	33,956	89,698	N.A.	N.A.
Private	N.A.	N.A.	N.A.	N.A.	46,830	N.A.	N.A.	N.A.
Full time	N.A.	38,952	34,017	1,072,692	20,563	N.A.	215,761	471,931
Part time	N.A.	N.A.	N.A.	866,403	61,103	N.A.	N.A.	N.A.
Total	117,393	38,952	34,017	1,939,095	80,786	89,698	215,761	471,931
HDI								
Rank	38	3	4	81	75	10	22	128
Classification	High	High	High	Medium	Medium	High	High	Medium
GDP per Capita (local currency)								
Per year	14,050	45,589	42,444	14,114	6,822,461	27,272	27,542	31,188
Per month	1,171	3,799	3,537	1,176	568,538	2,273	2,295	2,599
GDP per Capita (WB PPP$)								
Per year	11,063	32,798	35,078	4,091	6,306	29,644	30,946	2,126
Per month	922	2,733	2,923	341	526	2,470	2,579	177

Table 36.
Contextual Information, All Study Countries *(continued)*

	Japan	Malaysia	New Zealand	Palestine	Saudi Arabia	South Africa	UK	US
Institutions								
Public	993	99	33	29	160	23	N.A.	1,700
Private	1,217	561	480	14	20	N.A.	N.A.	2,516
Total	0	660	513	43	180	23	168	4,216
Students								
Public	N.A.	N.A.	295,884	N.A.	N.A.	737,472	N.A.	12,980,112
Private	N.A.	N.A.	54,969	N.A.	N.A.	N.A.	N.A.	4,291,932
Graduate	3,554,935	N.A.	26,515	4,363	26,532	115,589	545,370	2,491,414
Undergraduate	3,798,959	N.A.	350,853	145,911	576,468	602,612	1,790,745	14,780,630
Total	0	407,567	350,853	150,274	603,000	737,472	2,336,110	17,272,044
Faculty								
Public	N.A.	N.A.	11,237	N.A.	N.A.	N.A.	N.A.	838,500
Private	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	451,500
Full time	0	N.A.	6,625	2,635	27,900	N.A.	109,980	670,800
Part time	N.A.	N.A.	4,612	1,957	N.A.	N.A.	52,915	619,200
Total	0	N.A.	11,237	4,592	27,900	21,185	162,895	1,290,000
HDI								
Rank	8	63	19	106	61	121	16	12
Classification	High	High	High	Medium	High	Medium	High	High
GDP per Capita (local currency)								
Per year	3,924,070	19,836	37,813	N.A.	51,140	32,806	20,527	41,674
Per month	327,006	1,653	3,151	N.A.	4,262	2,734	1,711	3,473
GDP per Capita (WB PPP$)								
Per year	30,290	11,466	24,554	N.A.	21,220	8,477	31,580	41,674
Per month	2,524	956	2,046	N.A.	1,768	706	2,632	3,473

Note: N.A. denotes data not available.

Table 36 Notes

The following notes provide insight into the information contained in Table 36. Related explanations of data and calculations can be found in the various country-specific reports contained in this publication. One of the main discrepancies that can be noted in the data tables is lack of a perfect match in many cases between totals and the sums of discrete parts—for example, the lack of agreement between the total number of enrolled students and the sum of students in public and private institutions or at the undergraduate and graduate levels. In these cases, we picked what we felt to be the more accurate or relevant figures, based on an analysis of the sources. At the same time, we kept the disaggregated information in the tables in order to provide as much useful data as possible to readers.

Argentina

The calculation of Argentina's total number of universities does not include the one officially recognized foreign university operating in the country, and the one officially recognized international university. The calculation of the country's total number of public universities includes 38 national universities and one provincial university. The number of full-time academic staff includes data only for the national universities.

Australia

The difference between the sum of graduate and undergraduate students and the total number of students is explained by the existence of a category called "other" in the official sources (28,146). The number of students in private institutions was calculated by subtracting the number of students in public institutions from the overall national enrollment total.

Canada

The number of institutions includes universities, colleges and institutes. The number of students includes only graduate and undergraduate students; it does not include "other students" or students from "other programs."

China

The number of institutions includes universities and non-universities. The number of part-time faculty was calculated by subtracting the number of full-time faculty from the total faculty number.

Colombia

The difference between the total number of students and the sum of students in public and private institutions or the sum of graduate and undergraduate students is explained by the creation by the Ministry of Education of a category called "adjustment by omission in the report" (*ajuste por omisión en el reporte*). The total number of institutions includes universities and non-universities. For the number of faculty, we preferred the total of public and private faculty to the number of full-time and part-time faculty because the latter is more likely to include double-counted faculty.

France

The total number of students in France captures enrollment numbers for all levels of post-secondary education. However, the totals listed for undergraduate and graduate students reflect university enrollments only. The total number of institutions reflects only those university-level institutions that fall under the supervision of the French Ministry of Education.

Germany

The source for the total number of students enrolled in German higher education was taken from the German Federal Statistical Office, whereas the data on student enrollment in private higher education came from the German Rectors' Conference. The private enrollment total was calculated by adding enrollment figures from state-approved private and church-affiliated institutions.

India

The total number of institutions and students enrolled (total, graduate and undergraduate, public and private) is taken from work done by Agarwal (2006).

Japan

The total number of undergraduate students includes those enrolled in universities, as well as those pursuing education in junior colleges, colleges of technology, and specialized training colleges.

Malaysia

The number of institutions includes teacher-training colleges, polytechnics, community colleges, and universities. It does not include matriculation colleges.

New Zealand

The number of institutions and information about enrolment includes universities, polytechnics, colleges of education, and wananga. However, discriminated information from each of these categories was not available.

Palestine

The number of institutions and the enrollment numbers include traditional universities, the Open University, community colleges, and university colleges.

South Africa

The number of institutions includes 22 universities and one non-university.

United Kingdom

The number of institutions is for 2007. Other further education colleges at which higher education students may attend were not included. Full-time and part-time faculty figures include either teaching faculty, research faculty, or both. A difference of five in the totals may be explained by rounding procedures.

Table 37.
Salary Information, All Study Countries

	Argentina	Australia	Canada	China	Colombia	France	Germany	India
Salary Averages (local currencies)								
Entry-Level	2,224	5,295	6,300	2,354	2,149,607	2,998	3,278	16,890
Overall	3,879	6,666	7,923	4,077	3,057,829	3,593	3,856	22,701
Top-Level	5,016	9,132	9,670	6,366	4,413,258	4,187	4,547	30,384
Salary Averages (WB PPP$)								
Entry-Level	1,751	3,810	5,206	682	1,987	3,259	3,683	1,151
Overall	3,054	4,795	6,548	1,182	2,826	3,905	4,333	1,547
Top-Level	3,950	6,570	7,992	1,845	4,079	4,551	5,108	2,071
Key Indicators								
Ratio: Top-level Salary/ Entry-level Salary	2.3	1.7	1.5	2.7	2.1	1.4	1.4	1.8
Ratio: Overall Average Salary/ Monthly GDP per Capita	3.3	1.8	2.2	3.5	5.4	1.6	1.7	8.7
	Japan	Malaysia	New Zealand	Palestine	Saudi Arabia	South Africa	UK	US
Salary Averages (local currencies)								
Entry-Level	385,886	3,545	4,795	625	7,620	9,905	2,175	4,589
Overall	532,755	5,375	6,914	1,875	15,933	15,772	2,823	5,816
Top-Level	718,522	7,650	9,334	2,917	20,460	23,627	3,633	7,385
Salary Averages (WB PPP$)								
Entry-Level	2,979	2,049	3,114	N.A.	3,162	2,560	3,345	4,589
Overall	4,112	3,107	4,490	N.A.	6,611	4,076	4,343	5,816
Top-Level	5,546	4,422	6,061	N.A.	8,490	6,105	5,589	7,385
Key Indicators								
Ratio: Top-level Salary/ Entry-level Salary	1.9	2.2	1.9	4.7	2.7	2.4	1.7	1.6
Ratio: Overall Average Salary/ Monthly GDP per Capita	1.6	3.3	2.2	N.A.	3.7	5.8	1.7	1.7

Note: N.A. denotes data not available.

Table 38.
Comparison of Average Salaries Using Big Mac and World Bank Purchasing Power Parity Indexes, All Study Countries

Index	Level	Argentina	Australia	Canada	China	Colombia	France	Germany
Big Mac PPP	Entry-Level	919.25	5,234.08	5,536.42	729.71	1,062.34	3,341.43	3,652.49
	Overall	1,603.24	6,588.32	6,963.38	1,263.78	1,511.19	4,003.50	4,297.16
	Top-Level	2,073.28	9,026.04	8,498.63	1,973.32	2,181.05	4,665.57	5,066.52
WB PPP	Entry-Level	1,751.18	3,809.69	5,206.20	682.29	1,986.88	3,259.21	3,682.70
	Overall	3,054.17	4,795.40	6,548.05	1,181.66	2,826.35	3,904.98	4,332.70
	Top-Level	3,949.61	6,569.72	7,991.74	1,845.09	4,079.17	4,550.76	5,108.43
Index	Level	Japan	Malaysia	New Zealand	Saudi Arabia	South Africa	UK	US
Big Mac PPP	Entry-Level	4,699.54	2,197.88	3,554.59	2,887.13	2,179.17	3,726.15	4,588.61
	Overall	6,488.20	3,332.74	5,125.33	6,036.65	3,469.91	4,837.02	5,815.74
	Top-Level	8,750.57	4,742.75	6,919.09	7,752.07	5,197.87	6,224.68	7,384.81
WB PPP	Entry-Level	2,978.66	2,049.11	3,113.66	3,161.83	2,559.52	3,345.38	4,588.61
	Overall	4,112.35	3,107.16	4,489.57	6,611.00	4,075.53	4,342.73	5,815.74
	Top-Level	5,546.29	4,421.73	6,060.82	8,489.63	6,105.08	5,588.59	7,384.81

Note: India and Palestine were not included here, as they are not included in either one or both of the indexes.

Table 39.
2007–2008 UNDP Human Development Index

High Human Development	Medium Human Development	Low Human Development
1. Iceland	71. Dominica	156. Senegal
2. Norway	72. Saint Lucia	157. Eritrea
3. Australia	73. Kazakhstan	158. Nigeria
4. Canada	74. Venezuela, Rep. Bov.	159. Tanzania, U. Rep. of
5. Ireland	75. Colombia	160. Guinea
6. Sweden	76. Ukraine	161. Rwanda
7. Switzerland	77. Samoa	162. Angola
8. Japan	78. Thailand	163. Benin
9. Netherlands	79. Dominican Republic	164. Malawi
10. France	80. Belize	165. Zambia
11. Finland	81. China	166. Côte d'Ivoire
12. United States	82. Grenada	167. Burundi
13. Spain	83. Armenia	168. Congo, Dem. Rep.
14. Denmark	84. Turkey	169. Ethiopia
15. Austria	85. Suriname	170. Chad
16. United Kingdom	86. Jordan	171. Central African Republic
17. Belgium	87. Peru	172. Mozambique
18. Luxembourg	88. Lebanon	173. Mali
19. New Zealand	89. Ecuador	174. Niger
20. Italy	90. Philippines	175. Guinea-Bissau
21. Hong Kong, China (SAR)	91. Tunisia	176. Burkina Faso
22. Germany	92. Saint Vincent and the Grenadines	177. Sierra Leone
23. Israel	93. Fiji	
24. Greece	94. Iran, Islamic Rep. of	
25. Singapore	95. Paraguay	
26. Korea, Rep. of	96. Georgia	
27. Slovenia	97. Guyana	
28. Cyprus	98. Azerbaijan	
29. Portugal	99. Sri Lanka	
30. Brunei Darussalam	100. Maldives	
31. Barbados	101. Jamaica	
32. Czech Republic	102. Cape Verde	
33. Kuwait	103. El Salvador	
34. Malta	104. Algeria	
35. Qatar	105. Viet Nam	
36. Hungary	106. Occupied Palestinian Territories	
37. Poland	107. Indonesia	
38. Argentina	108. Syrian Arab Republic	
39. United Arab Emirates	109. Turkmenistan	
40. Chile	110. Nicaragua	
41. Bahrain	111. Moldova	
42. Slovakia	112. Egypt	
43. Lithuania		

Table 39.
2007–2008 UNDP Human Development Index (*Continued*)

High Human Development	Medium Human Development	Low Human Development
44. Estonia	113. Uzbekistan	
45. Latvia	114. Mongolia	
46. Uruguay	115. Honduras	
47. Croatia	116. Kyrgyzstan	
48. Costa Rica	117. Bolivia	
49. Bahamas	118. Guatemala	
50. Seychelles	119. Gabon	
51. Cuba	120. Vanuatu	
52. Mexico	121. South Africa	
53. Bulgaria	122. Tajikistan	
54. Saint Kitts and Nevis	123. São Tomé and Principe	
55. Tonga	124. Botswana	
56. Libyan Arab Jamahiriya	125. Namibia	
57. Antigua and Barbuda	126. Morocco	
58. Oman	127. Equatorial Guinea	
59. Trinidad and Tobago	128. India	
60. Romania	129. Solomon Islands	
61. Saudi Arabia	130. Lao, People's Dem. Rep.	
62. Panama	131. Cambodia	
63. Malaysia	132. Myanmar	
64. Belarus	133. Bhutan	
65. Mauritius	134. Comoros	
66. Bosnia and Herzegovina	135. Ghana	
67. Russian Federation	136. Pakistan	
68. Albania	137. Mauritania	
69. Macedonia, TFYR	138. Lesotho	
70. Brazil	139. Congo	
	140. Bangladesh	
	141. Swaziland	
	142. Nepal	
	143. Madagascar	
	144. Cameroon	
	145. Papua New Guinea	
	146. Haiti	
	147. Sudan	
	148. Kenya	
	149. Djibouti	
	150. Timor-Leste	
	151. Zimbabwe	
	152. Togo	
	153. Yemen	
	154. Uganda	
	155. Gambia	

Source: United Nations Development Programme (UNDP). (2007). 2007/2008 Human Development Report, Human Development Rankings http://hdr.undp.org/en/statistics/.

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