



# Asia Pacific Graduate Education

Comparative Policies and  
Regional Developments

Edited by  
Deane E. Neubauer  
&  
Prompilai Buasuwan



EAST-WEST CENTER  
COLLABORATION • EXPERTISE • LEADERSHIP



# International and Development Education

Series Editors

W. James Jacob  
University of Pittsburgh  
Pittsburgh, Pennsylvania, USA

John Hawkins  
East-West Center  
Honolulu, Hawaii, USA

The International and Development Education series focuses on the complementary areas of comparative, international, and development education. Books emphasize a number of topics ranging from key international education issues, trends, and reforms to examinations of national education systems, social theories, and development education initiatives. Local, national, regional, and global volumes (single authored and edited collections) constitute the breadth of the series and offer potential contributors a great deal of latitude based on interests and cutting edge research.

More information about this series at  
<http://www.springer.com/series/14849>

Deane E. Neubauer • Prompilai Buasuwan  
Editors

# Asia Pacific Graduate Education

Comparative Policies and Regional Developments

palgrave  
macmillan

*Editors*

Deane E. Neubauer  
University of Hawaii, Manoa  
Honolulu, USA

Promptilai Buasuwan  
Kasetsart University  
Bangkok, Thailand

International and Development Education

ISBN 978-1-137-54782-8

ISBN 978-1-137-54783-5 (eBook)

DOI 10.1057/978-1-137-54783-5

Library of Congress Control Number: 2016936104

© The Editor(s) (if applicable) and The Author(s) 2016

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use. The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Cover illustration © Krystyna Szulecka Photography/Alamy Stock Photo

Printed on acid-free paper

This Palgrave Macmillan imprint is published by Springer Nature  
The registered company is Nature America Inc. New York

## ACKNOWLEDGMENTS

The authors would like to acknowledge the Royal Melbourne Institute of Technology University which graciously hosted the Asia Pacific Higher Education Research Partnership (APHERP) Senior Seminar in March 2014, which served as the basis for the chapters that have emerged as this book.

We would also like to thank the East-West Center in Honolulu for its continuing support of these seminars, many of which have been developed into volumes in this series. Within the Center, we would like to acknowledge Penny Higa, Audrey Minei, and Cheryl Tokita whose considerable efforts assured the success of the seminar and in Cheryl's case the preparation of the manuscript. Ellen Waldrop provided editorial assistance and compiled the index. And, finally, we would like to acknowledge James Jacobs and John N. Hawkins, editors of this series, for their continuing support and encouragement.



# CONTENTS

|               |   |           |
|---------------|---|-----------|
| <b>1</b>      | <b>Introduction: Situating Graduate Education in a Rapidly Changing Higher Education Environment</b>                | <b>1</b>  |
|               | <i>Deane E. Neubauer and Prompilai Buasuwan</i>   |           |
| <b>Part 1</b> | <b>Changing Dynamics of Asia Pacific Graduate Education</b>   | <b>17</b> |
| <b>2</b>      | <b>The Expansion of Cross-Border Graduate Education in the Asia Pacific: Developmental and Financial Challenges</b> | <b>19</b> |
|               | <i>Christopher Ziguras</i>  |           |
| <b>3</b>      | <b>Graduate Education in Asia Pacific Higher Education: Changing Roles and Purposes</b>                             | <b>37</b> |
|               | <i>Edilberto C. de Jesus</i>  |           |
| <b>4</b>      | <b>Graduate Degrees in the Emergent Political Economy of Contemporary Globalization</b>                             | <b>57</b> |
|               | <i>Deane E. Neubauer</i>  |           |
| <b>Part 2</b> | <b>Graduate Education in Comparative Country Settings</b>   | <b>71</b> |
| <b>5</b>      | <b>An Examination of Employment Outcomes for Graduate Education at the University of Hawaii</b>                     | <b>73</b> |
|               | <i>Pearl Imada Iboshi, Ming Zhang, Sanford Beppu, and Winnie Wu</i>   |           |



|   |            |
|---|------------|
| <b>6 The Postgraduate Research Student Experience in Malaysia</b>   | <b>93</b>  |
| <i>Koo Yew Lie and Vincent Pang</i>   |            |
| <b>7 Learning Outcomes Assessment in Graduate Education:<br/>A Comparative Overview between the<br/>United States and ASEAN</b>       | <b>117</b> |
| <i>Stewart Sutin and Somkiat Kamolpun</i>   |            |
| <b>8 Challenges and Strategic Development of PhD<br/>Education of Fu Jen Catholic University</b>                                      | <b>135</b> |
| <i>Shang-Shing P. Chou, Chih-Hsien Yang, and Gregory S. Ching</i>   |            |
| <b>9 Improving the Quality of Contemporary Graduate<br/>Education: A Proposal for Nurturing Future<br/>Civic-Minded Professionals</b> | <b>147</b> |
| <i>Farrah Dina Yusop</i>  |            |
| <b>10 Industry-Oriented Graduate Programs in Thailand:<br/>A Review</b>   | <b>161</b> |
| <i>Bundit Fungtammasan</i>  |            |
| <b>11 Diploma Disease in Thai HE</b>  | <b>173</b> |
| <i>Promptilai Buasuwan and Michael E. Jones</i>   |            |
| <b>12 Exploring Researcher Motivation: Implications<br/>for PhD Education</b>   | <b>199</b> |
| <i>Robyn Barnacle, Denise Cuthbert, and Richard Laurie</i>  |            |
| <b>13 Conclusion: The Multiplying “Texts” of<br/>Graduate Education</b>   | <b>217</b> |
| <i>Promptilai Buasuwan and Deane E. Neubauer</i>  |            |
| <b>Index</b>  | <b>225</b> |

## ABOUT THE CONTRIBUTORS

**Robyn Barnacle** is a senior research fellow at the School of Graduate Research, RMIT University, Melbourne, Australia, where she is responsible for higher degrees by research supervisor training and professional development programs. Barnacle holds a PhD in philosophy from Monash University, Melbourne, Australia. Her interests are in the fields of researcher development and doctoral pedagogy. Her articles have appeared in *Studies in Higher Education* and other respected journals and have been widely cited. Barnacle is a coeditor of the 2012 collection *Supervising Practices for Postgraduate Research in Art, Architecture and Design*.

**Sanford Beppu** is an analyst at the University of Hawai'i (UH's) Institutional Research and Analysis Office (IRAO). He holds a master of urban planning degree and a bachelor of Geography, both from the University of Washington. In addition to supporting the institutional research needs of the ten-campus UH system, he has worked on analyzing employment outcomes for recent UH graduates and has been involved in IRAO's continuing commitment to make frequently used university data easily accessible to both the university and general communities.

**Promptilai Buasuwan** is an associate professor in the Program of Educational Administration, Faculty of Education at Kasetsart University and is also an assistant to the vice president of international affairs at Kasetsart University. Her main research interests are quality of education, partnership in education, internationalization of education, and educational policy analysis and evaluation. She has undertaken various projects with international organizations, research funding agencies, university networks, and consortiums. She is a coordinator of the Kasetsart Initiative international network

for partnership and collaboration with participating members from over 20 countries and is also a core member of the Thailand Evaluation Network and the Comparative and International Education Society of Thailand.

**Gregory S. Ching** holds a PhD in education from the National Cheng Chi University, Taiwan, and is an assistant professor at the Graduate School of Educational Leadership and Development, Fu Jen Catholic University, Taiwan. His research interests include technology and education, globalization, higher education issues, international student mobility, and student engagement.

**Shang-Shing P. Chou**, holds a BS in Chemistry from Fu Jen Catholic University (1971) and a PhD from the University of Michigan (1979) also in Chemistry. He has done postdoctoral research at the University of Texas (Austin) during the period 1979-1980. He has been employed at Fu Jen Catholic University subsequent to that where he has been an associate professor (1980-1984) and professor (1984-present). At Fu Jen Catholic University he has served as chairman of the Chemistry department (1986-1990), dean of the College of Science and Engineering (1990-1996), dean of General Affairs (1996-2000), director of the Holistic Education Center (2000-2002), vice-president for administration (2002-2003), dean of Continuing Education (2008-2012) and vice-president for academic affairs (2012-present). His research interests include organic synthesis, natural product synthesis and materials chemistry.

**Denise Cuthbert** is a graduate of the Universities of Queensland and Sydney and is Dean of the School of Graduate Research at RMIT University. Cuthbert has over 30 years' experience in higher education and has held substantive appointments in Literature, Women's Studies and Sociology in the humanities and social sciences. She has over 15 years' experience in leadership in graduate research education, which has been distinguished by a Vice Chancellor's Award (Monash University) and a national citation in 2007. Cuthbert's research in higher education, focused on doctoral education and the development of research capabilities, appears in leading journals including *Studies in Higher Education*, *Higher Education Research & Development*, and the *Journal of Higher Education Policy and Management*.

**Edilberto C. de Jesus**, professor emeritus at the Asian Institute of Management (AIM), Manila, has served as president of AIM, the Far Eastern University, Manila, and the University of the Cordilleras, Baguio

City, Philippines. He was appointed Deputy Peace Commissioner in 1987 and served concurrently, from 1988 to 1992, as Presidential Adviser on Rural Development in the Cabinet of Corazon Aquino. He was Secretary of Education from 2002 to 2004 in the first Arroyo administration and served as Secretariat Director of the Southeast Asia Ministers of Education Organization in Bangkok from 2005 to 2007. He serves on the advisory committees of the Asia-Europe Education Hub and of Philippine Business for Education.

**Bundit Fungtammasan** is an associate professor at King Mongkut's University of Technology Thonburi (KMUTT), Thailand. He has a BEng (Hons I) and PhD in mechanical engineering, both from the University of New South Wales, Australia. His academic career began as a lecturer in mechanical engineering at King Mongkut's University of Technology North Bangkok. He then became head of department, dean of engineering, dean of Graduate College, and vice president for R&D. He served a brief stint as assistant director of the National Science and Technology Development Agency, Thailand before being appointed the director of the Joint Graduate School of Energy and Environment at KMUTT. His current position is Senior Vice President for Research and Innovation at KMUTT.

**Pearl Imada Iboshi** is Director of IRAO for the University of Hawaii system. In this capacity, she promotes consistent, quality data collection and reporting across all ten campuses; uses data analysis to improve student success; and provides information to enhance data-driven decision making. She previously served as the acting director for the Department of Labor and Industrial Relations and the state economist in the Department of Business, Economic Development and Tourism, Hawaii. She holds a BA in Economics from Grinnell College in Iowa, an MA in economics from Hitotsubashi University in Tokyo, and a PhD in economics from the University of Hawaii.

**Michael E. Jones** holds a PhD in international comparative education policy from Indiana University Bloomington with a minor in intercultural communication. He also holds a master of science degree in instructional systems technology from Indiana University Bloomington. Jones has worked in eight countries across three continents in the fields of education, dispute resolution, social services, and human development for more than 20 years. He is Program Manager of the International Program in Design and Architecture, Chulalongkorn University, Bangkok.

**Somkiat Kamolpun** is an education officer at the Office of the Higher Education Commission (OHEC), Thailand. He was in charge of the policy on trade in higher education services and academic cooperation under the Asia-Pacific Economic Cooperation and Asia-Europe Meeting frameworks. He graduated in August 2015. He works at OHEC and is in charge of academic cooperation under ASEAN and ASEAN Plus Three frameworks.

**Richard Laurie** is a multimedia producer, writer, and editor specializing in secondary and tertiary education in Melbourne, Australia. Laurie has worked in this field for over 30 years, writing and developing materials for CSIRO, Fairfax newspapers, AsiaLink, and RMIT University among others. As a research assistant in the School of Graduate Research at RMIT University in 2014–2015, Laurie worked with the school's research education team contributing specialist writing, project management, and analysis services.

**Koo Yew Lie** is an honorary professorial associate at the School of Oriental and African Studies, University of London, UK; adjunct professor at the School of Education, Charles Darwin University, Australia; associate research fellow at the National Higher Education Research Institute, Malaysia; and has been Professor of Language Studies and Linguistics at the National University of Malaysia. She researches, teaches, and publishes in the areas of language, culture, and literacy in multilingual/cultural contexts, as well as in the area of higher education with special interest in Malaysia and ASEAN countries. She has led and/or worked in national and international research projects in language and literacy as well as in higher education policy funded by Mitsubishi Foundation; Ministry of Higher Education, Malaysia; International Institute for Educational Planning; Research Grants Council of the Hong Kong government; Institute of Youth Research, Ministry of Youth & Sports, Malaysia; Institute of Strategic and International Studies, Malaysia; and Center of Strategic and International Studies, Washington DC, USA.

**Deane E. Neubauer** is Professor Emeritus of Political Science and Co-Director of the Asia Pacific Higher Education Research Partnership, headquartered at the East-West Center in Honolulu, Hawaii. His work has explored comparative democratic practices at the nation state level, the political economy of health and food, globalization, and more recently, the varied dynamics and expressions of higher education, particularly in the Asia Pacific Region.

**Vincent Pang** holds a doctorate in education from RMIT University, Australia. He is a professor of education in the Faculty of Psychology and Education and Dean of the Centre for the Promotion of Knowledge and Language Learning, Universiti Malaysia Sabah. He is also an honorary professorial fellow at Charles Darwin University, Australia, and an associate research fellow of the National Higher Education Research Institute Malaysia. He has conducted research and consultancy projects for UNESCO; UNICEF; Malaysian Examination Syndicate; Malaysian Qualifications Agency; Department of Higher Education, Ministry of Education, Malaysia; Department of Human Resource Department, Sabah; Public Service Department, Sabah; and State Public Service Training Institute, Sabah. He is an editor of the *Malaysian Journal of Learning and Instruction*. He has been a visiting scholar at National Pingtung University, Taiwan. Pang's research areas are curriculum, assessment, evaluation, and higher education.

**Stewart Sutin** is Clinical Professor of Administrative and Policy Studies at the University of Pittsburgh, where he is also Associate Director of the Institute for International Studies of Education. He is a former president of Community College of Allegheny County, president of Bank of Boston International, and senior vice president and international department head of Mellon Bank. While in banking, Sutin served as president and board chairman of the Banker's Association for Foreign Trade. He is a senior editor and coauthor of *Increasing Effectiveness of the Community College Financial Model* (Palgrave Macmillan, 2011) and coauthor of *Value Based Education: A Vision for a Higher Education Business Model* (2012).

**Winnie Wu** is an IT specialist in IRAO for the University of Hawaii system. She holds a bachelor's degree in business administration from the University of Hawaii and has previously worked as a decision support analyst for a medical insurance carrier. She is now working with workforce, human resource and student data as well as generating online reports for the IRAO.

**Chih-Hsien Yang** holds a PhD in sport administration from Temple University, USA, and is a professor in the Department of Physical Education and Dean of the College of Education of Fu Jen Catholic University, Taiwan. He was appointed to several administrative positions in the past, including head of the department of physical education, athletic director, associate dean of academic affairs, director of admissions, and dean of general affairs.

**Dr. Farrah Dina Yusop** is the Deputy Director of the University of Malaya's Curriculum Development Center. She holds a PhD in Curriculum and Instructional Technology (CIT) and Human Computer Interaction (HCI) from Iowa State University. Dr. Farrah actively researches and publishes in the areas of higher education, Web 2.0, social media, educational games and mobile learning. She is especially known for her Civic-Minded Instructional Designer (CMID) conceptAUI framework which has reframed current ways of educating professionals for the purpose of improving public life. She has published internationally. Her recent 2014 BJET article has won the Outstanding Journal Article Award 2014 from the world renowned American Association for Educational Communications and Technology (AECT).

She also serves as international board member for the Malaysian Online Journal of Educational Technology (MOJET) and the Turkish Online Journal of Educational Technology (TOJET), as well as advisor for Iowa State University's Learning Design Solutions. She also is engaged in various trans-disciplinary national and international collaborative research projects in Australia, the USA, Thailand and the Philippines.

**Ming Zhang** is an institutional analyst in the IRAO for the University of Hawaii system. He holds a PhD in economics from University of Hawaii. He has worked in health statistics (at the Hawaii State Department of Health) and census data and tourism statistics (at the Hawaii State Department of Business, Economic Development and Tourism) before moving into institutional education research. His current research focuses on enrollment forecasting, student cohort longitudinal analysis, and predictive modeling.

**Christopher Ziguras** is an associate professor in the School of Global, Urban and Social Studies at RMIT University. His research focuses on globalization processes in education, particularly the regulation of cross-border provision. He oversees a wide range of international projects at RMIT as a deputy dean, International, and is Vice President of the International Education Association of Australia. He received the RMIT University Vice Chancellor's Distinguished Teaching Award in 2011 and was Tony Adams Visiting Senior Scholar at the Centre for Higher Education Internationalisation at Università Cattolica Del Sacro Cuore, Milan, in 2013. His latest book is *Governing Cross-Border Higher Education*.

# LIST OF FIGURES

|           |   |     |
|-----------|---|-----|
| Fig. 3.1  | Number of HEIs school years from 2009–2010 to 2013–2014 (based on CHED’s “Higher Education Data: 2014”)   | 42  |
| Fig. 3.2  | Dominant fields of postgraduate studies (based on CHED’s “Higher Education Data: 2014”)   | 44  |
| Fig. 3.3  | Number of enrollees and graduates in master’s and doctoral programs in school years from 2005–2006 to 2010–2011   | 50  |
| Fig. 3.4  | Number of master’s and doctoral program enrollees and graduates, school year 2011–2012  | 50  |
| Fig. 3.5  | Overall Examination Takers  | 54  |
| Fig. 5.1  | Median earnings/change from Year 1 to Year 3, by CIP program area   | 81  |
| Fig. 5.2  | Predictor Importance  | 85  |
| Fig. 5.3  | Earnings of Males and Females by Degree Level   | 87  |
| Fig. 5.4  | Earnings of Degree Holders by Age   | 87  |
| Fig. 6.1  | Ten scales as conceptualized in MyPREQ  | 100 |
| Fig. 11.1 | Comparing number of graduates by degree types from 1999 to 2012. Source: Data from ONEC (2004, 2006, 2007, 2009, 2010, 2012, 2013). Table created by authors  | 179 |
| Fig. 11.2 | Comparing number of higher education students by degree types, 2003–2012. Source: Data from Office of National Education Council (2004, 2006, 2007, 2009, 2010, 2012, 2013). Table created by authors | 180 |





# LIST OF TABLES

|            |   |     |
|------------|---|-----|
| Table 2.1  | Internationally mobile students and postgraduates from selected countries | 20  |
| Table 4.1  | Synthetic lifetime earnings by educational attainment (in USD)            | 66  |
| Table 5.1  | Employment records summary  | 75  |
| Table 5.2  | Largest CIP categories, by total number of graduates                      | 77  |
| Table 5.3  | Largest NAICS industries, by number employed in year 3                    | 80  |
| Table 5.4  | List of variables used in regression on earnings                          | 82  |
| Table 5.5  | Parameter estimates   | 84  |
| Table 6.1  | Reliability test for each dimension                                       | 101 |
| Table 6.2  | Overall postgraduate research student experience                          | 101 |
| Table 6.3  | Supervision experience  | 103 |
| Table 6.4  | Intellectual climate  | 104 |
| Table 6.5  | Research skill development  | 104 |
| Table 6.6  | System, infrastructure, and research resources                            | 106 |
| Table 6.7  | Roles and responsibilities  | 107 |
| Table 6.8  | Professional development of students as knowledge workers                 | 108 |
| Table 6.9  | English language communication needs and support in a research context    | 109 |
| Table 6.10 | International exposure in research environment                            | 110 |
| Table 6.11 | Intercultural communication needs and support                             | 111 |
| Table 6.12 | Proposal defense and thesis examination                                   | 112 |
| Table 8.1  | Participants of the study   | 138 |
| Table 8.2  | Students' major concerns and issues                                       | 139 |
| Table 8.3  | Administrators' concerns  | 140 |
| Table 8.4  | Administrators' (FG2) responses to students' concerns and suggestions     | 142 |
| Table 11.1 | Categories and enrollment of Thai HE institutions                         | 177 |

|            |  |     |
|------------|--|-----|
| Table 11.2 | First placement salaries by degree level | 183 |
| Table 11.3 | Salaries of graduates by degree          | 183 |
| Table 12.1 | Demographic codes                        | 204 |
| Table 12.2 | Motivating themes                        | 205 |

# Introduction: Situating Graduate Education in a Rapidly Changing Higher Education Environment

*Deane E. Neubauer and Prompilai Buasuwan*

## INTRODUCTION

It has become commonplace to note that one prominent feature of contemporary globalization is the “speeding up of change” (Harvey 1989). We find evidence of this assertion throughout social life and particularly in those portions of social interactions being impacted by new information and communication technologies. A companion assertion holds that education in general and higher education in particular are stressed by what is familiarly termed the “alignment dilemma” by which is usually meant the lack of fit between the kinds of education and skills required in contemporary economies and those possessed by higher education

---

D.E. Neubauer (✉)

University of Hawaii, Manoa, Honolulu, HI, USA

P. Buasuwan

Kasetsart University, Bangkok, Thailand

graduates. We have discussed this issue in various other places (e.g. in a senior seminar held in Shanghai in November 2013 on twenty-first-century work skills and competencies, see Neubauer and Ghazali 2015). We have also noted that the “disruption” movement in higher education takes form in part as an expression of this tension (in this regard, see Christensen et al. 2011). In the main, discussion along these lines has focused on undergraduate education.

The chapters that appear in this volume have been derived from a researcher’s seminar held at the Royal Melbourne Institute of Technology University in March 2014. These offerings examine a range of propositions focused on the changing nature of graduate education. Our purpose in offering these is to create a frame of reference through which graduate education can be examined in relation to the many functions and purposes it has performed in society as well as to initiate an assessment of other developments that arise within graduate education as a result of the many more general transformations occurring in higher education, especially in the Asia Pacific region.

### SOME CONTEMPORARY TRENDS

The following is intended as an introductory set of observations about graduate education as it has been increasingly affected and transformed by the processes of contemporary globalization in which it is variously located.

Interdisciplinarity in MA and PhD dissertations is rising worldwide, especially in the Asia Pacific. The key assumption underlying the investments many higher education institutions (HEIs) are making in transdisciplinary research centers and training programs is “that cross-disciplinary research and training provide a stronger basis for achieving scientific and societal advances than unidisciplinary programs” (Mitrany and Stokois 2005). These events play out against another set of variables often mentioned in the context of higher education, namely, the relative difficulty of instigating change within HEIs given the dominant role played in university structure and administration by traditional disciplines and many professional schools (Trowler 1998).

Running throughout higher education is an increased focus on Science, Technology, Engineering, and Mathematics (STEM) graduate work, especially in Asia (ICEF Monitor 2012). Throughout the world one can observe a steadily increasing awareness that societal needs, especially those

expressed through innovation derived from technological advance, are occurring most rapidly in STEM fields, and that in terms of both employability and the value-added component of higher education and graduate education, qualification in STEM fields is increasingly important as well. This awareness is very strong in Asia (especially in India, Korea, Singapore, and China), and it is widely recognized throughout the world that Asian students in general outperform others in STEM-related testing at pre-graduate levels. (For an overall assessment of STEM issues throughout education and society in addition to cross-country comparisons and their graduate education implications, see Marginson et al. 2013.)

In general, one can observe an increase in international competition for the best students at both graduate and undergraduate levels. One feature of internationalization/globalization is that in their operation, the higher education dynamics they have occasioned have generally favored the West at the expense of HEIs in Asia and the Pacific (A&P). This was represented over the decades from 1980 to 2005 by the radical imbalance of Asian countries sending cross-border students out for their experiences, especially in graduate education. This is beginning to change, as A&P HEIs get stronger and enter new stages of massification (Enders and Jongbloed 2007; Hawkins and Wu 2015).

As indicated above, a major issue in all of the tertiary education is workforce misalignment with fields of study, which is becoming increasingly an issue in graduate education. Indeed, in some instances doctoral programs are subject to intense criticism because of their length and cost and the difficulties experienced by graduates in seeking employment upon completing their degrees. In the USA, this has become an increasing critique of higher education as the proportion of teaching/research faculty hired on tenure track drops and that of contract faculty increases—the result being a “poor return on investment” in doctoral education. These dynamics in linking graduate education to workforce alignment are enhanced in an A&P context (Asian Development Bank 2012; Luzer 2013; Kezar 2013).

Another aspect of these dynamics has been the relative increase in the cost of higher education throughout the world and the related tendency to shift increasing portions of that cost on students through increases in tuition, with the result that in many instances they “own” significant amounts of debt upon receiving their degrees. In the USA this has become a major political issue with aggregate student debt having reached a trillion dollars plus. The phenomenon is intensified when associated with graduate degrees, which on the whole costs more than undergraduate

degrees. Again, this is a phenomenon that has begun to expand rapidly throughout Asia as more governments reduce their contributions to both undergraduate and graduate education, and as the role of private education looms larger (Rowan 2013).

In recent years, the public policy sector in various countries has become increasingly involved in promoting closer collaboration between HEIs, employers, and the public service realm to increase the alignment between HE and work. This phenomenon is just beginning to occur in Asia, and with a gradual realization that the issue in general extends to graduate education, but because of the persistence of the issue, one can expect an increase in the reach and rate of these endeavors (Asia Society 2011). In the USA and in a manner that may stand as a prediction for how the process will extend to other countries as well, the economic and status dilemmas facing recent graduates motivate many of them to extend their work to graduate education. In this regard, in recent years the most rapidly growing segment of US higher education has been at the MA level. Joshua A. Boldt, for example, has developed a variety of analyses of higher education focused on elements of political economy from which he argues that the relative dearth of post-BA employment contributes in a focused way to the expansion of graduate education as the expansion of MA and PhD education serves to absorb excess labor (Boldt 2013).

Regional cooperation is intensifying for graduate work within the Asia Pacific region. This has strong implications for non-Asian dominance of the best graduate students. One can advance the hypothesis that as Asian HE improves, and the relatively new and distinctive “education hubs” develop (as in Singapore and Malaysia), the best students will stay in the region, thus depriving traditional recipient nations of talented human resources (Vincent-Lancrin 2009, Cheng et al. 2011).

Some years ago Bigalke offered the proposition that when seeking to compare events that occur in US higher education with various sites in A&P, one can see that in some cases the US events act as a forerunner of similar developments that will occur in Asia; in other cases the US experience can be seen as an outlier, a series of events that have taken the form and shape they have largely because of structural features that are unique to the US, such as the fact that most higher education is authorized and regulated at the state level, not the national level as is most common in Asia (Bigalke 2009). However, even as outliers, as the largest economy in the world and as one that is situated firmly in the center of globalization dynamics, such events are often forerunners.

In this regard, *The Path Forward for Graduate Education in the US 2010* is a good summary of where graduate education is going in the US, and as such perhaps a harbinger for the rest of the world, Asia especially (Education Testing Service 2012). Specifically this report makes the following recommendations, after setting a context in which both the continued importance of higher education is emphasized as well as the probability that the current models through which graduate education is financed are not sustainable. These are to:

- improve completion rates
- clarify career pathways for graduate students
- prepare future faculty
- prepare future professionals
- establish and expand programs to identify talented undergraduate students.

Mindful of the persistence of the alignment dilemma, the report also makes recommendations to employers to:

- establish endowed graduate school chairs
- promote lifelong learning accounts
- provide tuition reimbursement accounts for graduate study
- replicate established programs that address challenges facing under-represented groups
- create industry-sponsored graduate fellowship programs
- create special incentives for small businesses to develop talent
- collaborate with universities to clarify entry points into careers
- provide internships and work-study programs for graduate students.

### DIPLOMA DISEASE (CREDENTIALIZATION)

In 1976, Ronald Dore published a study called “The Diploma Disease” in which he argued, “the ‘bureaucratization of economic life’ in all modern societies is making selection for jobs/careers by educational attainment more and more universal.” From this he argued that one could predict the flow of “credentialization” throughout an economy, for which the primary indicator was the university degree. At the time he was most concerned about Associate and Bachelor degrees. In this volume, in various ways we seek to extend aspects of his analyses to graduate education,