Fixing Higher Education

Christian Schierenbeck

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A Business Manager's Take
on How to Boost Productivity
in Higher Education

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RESEARCH

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*To the millions of aspiring students around the world
who lack access to affordable high-quality higher education.*

*And to the bold academic managers and policymakers
who are ready to do something about it.*

Preface

This book has emerged from a nagging sense that there is something amiss in traditional higher education as we know it. I am very grateful to Prof. Dr. Bernd Rolfes for letting me pursue that hunch to wherever it might lead as part of a formal Ph.D. research project at the Mercator School of Management. As my thesis advisor, Prof. Rolfes provided outstanding support throughout the entire program. I was particularly enthralled by his encouragement to pursue unconventional paths of inquiry and to tackle a research problem whose breadth must have seemed somewhat unusual in the context of a dissertation thesis.

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This book would not have been possible without the contributions from numerous interview partners who offered to share their unique perspectives on higher education. They include Mariana Bertolina from Estácio de Sá, Florian Buddemeier from AUCTUS, Björn Hagemann from McKinsey & Company, Prof. Dr. Dr. hc. mult. Wolfgang Jäger from the University of Freiburg, Michael Köhler from Phorms, Prof. Dr. Carlos Ivan Simonsen Leal from the Fundação Getúlio Vargas, Prof. Dr. Michael Lister from the Steinbeis School of Management and Innovation, Dr. Jutta Merschen from McKinsey & Company, Prof. Dr. Marcelo Leite de Moura e Silva from Ibmecc, Robert Nicola from Cisco, Bernd Öhring from INSEAD, Henrique Soárez from 7 de Setembro, and Marco Vietor from Brain Capital.

My ideas and my prose have been sharpened by the highly valuable advice from a select group of people who took the pain to read my draft manuscripts. In particular, my brother Thomas dedicated a tremendous amount of time to reading my early drafts in their entirety and offered innumerable insightful recommendations. I also owe a special debt of gratitude to Richard Matter, my “host Dad” from my times as an exchange student in Elk Mound, Wisconsin, who revised my draft manuscript with meticulous care and made countless suggestions to improve the style of my writing. Others who read early versions of my manuscript and offered helpful feedback include Alexandra Martins, Dr. Dr. Florian Otto, and Dr. Tido Roeder.

I could not have written this book without the backing of Dr. Wieland Gurlit from McKinsey & Company, who strongly supported my plans to take time off in order to enroll in a Ph.D. program and write a book about higher education. And I am also grateful to Prof. Dr. Marcelo Cabús Klötzle from IAG, the business school of the Pontifícia Universidade Católica, who offered logistical support throughout my research project.

Finally, I would like to express my deep gratitude to my parents who have not only supported this research project in countless ways, but who have also provided the seeds and the nourishment for my academic interests throughout my life.

Christian Schierenbeck

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Introduction

Today, perhaps to a greater extent than ever before in human history, the economic prosperity of individuals and entire nations depends largely on access to knowledge and skills, rather than on access to physical or financial assets. This is largely due to the rise of the knowledge society, in which industrial blue-collar workers are gradually being replaced by knowledge workers as the dominant group in the economy.¹ In the United States (U.S.), for example, the proportion of knowledge workers in many industries has more than quadrupled over the last 50 years.² Similar trends can be observed in many developing countries.³ Knowledge workers around the world not only account for a large and rising share of the global workforce, but they also hold most of the jobs that have a disproportionate impact on overall economic value creation, such as scientific research and corporate management. At the same time, knowledge-intensive jobs typically offer much higher degrees of freedom in how the work is performed, leading to tremendous discrepancies in labor productivity. By implication, even small educational investments in a knowledge worker can sometimes lead to dramatic productivity gains. The difference in productivity between well-trained software engineers and average ones, for example, may not be ten percent or even 100 percent, but 1,000 percent or more.⁴ Finally, as a result of factors such as falling trade barriers and new communication technologies, the stakes in the pursuit of knowledge and skills have been raised considerably. After all, an ever smaller discrepancy in knowledge and skills is sufficient for companies to justify moving their business activities from one region to another. India and the former Eastern Bloc countries, for example, have been able to attract substantial foreign direct investments, thanks largely to their deep talent pools in fields such as engineering, science, and information technology.⁵ Beyond these purely economic considerations, broad access to knowledge and skills has been linked to a number of desirable social consequences, such as improved social cohesion, reduced crime rates, and higher life expectancy⁶. For institutions of

¹ See Drucker, P. F. (2001), pp. 304-309.

² For employment generated by exports, for example, the exact proportions were 5.2 percent in 1950 and 21.4 percent in 2000; for employment generated by imports, the corresponding figures were 4.4 percent and 19.2 percent, respectively; see Wolff, E. N. (2006), p. 213.

³ In a reflection of the sharp increase in the need for knowledge workers, for example, China has launched an aggressive expansion of its system of higher education; between 2002 and 2006, for example, the number of bachelor's degrees in engineering and technology awarded by Chinese institutions of higher education has shot up from around 252,000 to around 575,000; U.S. institutions, by contrast, award 129,000 such degrees every year; these numbers have been corrected for differences in the types of graduates and the quality of degrees being awarded; see Gereffi, G. et al. (2008), pp. 15-17; it should be noted that the term "developing country" is used broadly in this book to also include so-called "emerging markets".

⁴ According to Bill Gates, the founder of Microsoft, a strong software engineer is worth 10,000 times the price of an average software engineer; the value of a strong lathe operator, by contrast, is much more similar to that of an average lathe operator; see Halperin, J. L. (1996), p. 58; according to a study conducted in the late 1960s, different programmers varied in their productivity in ratios ranging from five to one (in terms of program size) to 25 to one (in terms of debugging time); see Sackman, H./Erikson, W. J./Grant, E. E. (1968).

⁵ See Farrell, D./Puron, A./Remes, J. K. (2005), p. 104.

⁶ See Institute for Higher Education Policy (1998), pp. 17-19.

higher education⁷, all these trends represent an exciting opportunity: To the extent that knowledge and skills become society's most prized assets, they have a chance to turn themselves into society's most valuable organizations.

Unfortunately, however, higher education as an engine of social and economic progress shows clear signs of sputtering. Much criticism has been heaped on traditional (i.e., public and private nonprofit⁸) institutions of higher education for their stodgy bureaucracy and apparent inefficiency⁹, for their self-satisfaction and change resistance¹⁰, and for their alleged disregard of the students they supposedly serve¹¹. Warning signs of a looming productivity crisis in traditional higher education seem to be sprouting up everywhere – from reports about escalating tuition levels in the U.S.¹² to abysmal participation rates in many developing countries¹³ to a suspicious absence of evidence on student learning outcomes¹⁴.

These tensions between the rising demands placed on institutions of higher education as pillars of today's knowledge society and the emerging cracks in the edifice of traditional higher education around the world point to a fundamental question faced by mankind at the dawn of the 21st century: *How can we boost productivity in higher education so as to ensure broad access to affordable and high-quality educational services?* This overarching question, in fact, comprises three sub-questions: To what extent is there an opportunity to significantly improve productivity in higher education across the globe? What exactly should academic managers¹⁵ do in order to exploit this opportunity? And how could policymakers¹⁶ set incentives for academic managers and students to act in ways that further the goal of improving productivity?

⁷ The term “institution of higher education” is used broadly and in close analogy to the definition of Title IV eligible institutions in the U.S. Higher Education Act of 1965, which regulates access to federal student aid programs; it essentially includes any accredited institution that limits enrollment to applicants who have at least the equivalent of a high school diploma; see Snyder, T. D./Dillow, S. A./Hoffmann, C. M. (2009), p. 680.

⁸ The term “nonprofit” is used in close analogy to the definition of 501 (c) (3) organizations as defined by the U.S. tax code; such organizations must pursue a charitable purpose, their assets must be permanently dedicated to this purpose, and they cannot distribute excess revenues to their owners; see Internal Revenue Service (2008b), pp. 22-23.

⁹ See Ortmann, A. (2006), p. 158 and p. 161.

¹⁰ See Bok, D. C. (2003), pp. 157-158.

¹¹ The Boyer Commission on Educating Undergraduates in the Research University, for example, likened undergraduate students to guests at a banquet who pay their share but only receive the leftovers; see Boyer Commission on Educating Undergraduates in the Research University (1998), p. 25.

¹² See Ehrenberg, R. G. (2002), pp. 3-11; Blumenstyk, G. (2008a), p. A1; and College Board (2008), p. 4.

¹³ In India, for example, only seven percent of people aged between 18 and 24 years are enrolled in higher education; see Neelakantan, S. (2007), p. A52.

¹⁴ See Carey, K. (2008), p. A88.

¹⁵ The term “academic managers” is used to denote all employees of an institution of higher education with significant managerial responsibilities; examples include presidents, provosts, chief academic officers, and campus deans.

¹⁶ The term “policymakers” is used to denote politicians whose decisions affect higher education at the system level and who have a major impact on the policy framework within which institutions of higher education have to operate; they include members of the executive branch of government, such as education secretaries and their advisors, as well as members of the legislative branch, such as senators and congressmen serving on education committees.

Given the importance of these questions, it is surprising how little research has been conducted that would enable us to arrive at satisfactory answers. In academic circles, the topic of productivity is widely considered a taboo subject.¹⁷ Many prominent scholarly contributions on the subject of higher education focus instead on more philosophical questions such as “what we are and what we ought to be”.¹⁸ Authors that do focus on genuine managerial issues tend to make the implicit assumption that higher education is delivered in a research university setting and that institutional success is measured in terms of prestige.¹⁹ While their insights are certainly relevant for traditional institutions eager to climb up the rankings ladder, they may not necessarily be compatible with an overall goal of boosting productivity. The rise of for-profit higher education, by contrast, which might hold useful lessons for academic managers keen to improve productivity, has only recently begun to attract researchers’ attention²⁰ and much ground still remains uncovered²¹. What’s more, management scholars seem to be particularly apathetic about the challenges of running institutions of higher education, leaving such concerns instead to their colleagues in professional schools of education, for example, or to scholars of public policy. The vast library of case studies written by faculty members from Harvard Business School, for example, includes only a handful of issues on institutions of higher education, most of which were published in 2008 and focus on a small number of leading business schools²² – presumably not a reflection of rising scholarly interest, but of the institution’s own 100th anniversary celebration. Perhaps not surprisingly, then, much of the existing literature tends to exhibit a certain hostility toward the idea of transferring management best practices from business enterprises to the realm of higher education.²³ What’s more, scholars that do argue in favor of borrowing certain practices from business enterprises in order to improve the management of institutions of higher education sometimes lack familiarity with the underlying theories and thus run the risk of misapplying them.²⁴

¹⁷ See Groccia, J. E./Miller, J. E. (1998), p. 2.

¹⁸ See Wilshire, B. (1990), p. xxiv; similar examples of such research include Bloom, A. (1987); Shaw, P. (1989); Smith, P. (1990); Anderson, M. (1992); Readings, B. (1996); and Kimball, R. (1998); for a critical review of these scholarly contributions, see Bok, D. C. (2006), pp. 1-10.

¹⁹ See, for example, Balderston, F. E. (1995); Duderstadt, J. J. (2000); Rhodes, F. H. (2001); Shattock, M. (2003); Merschen, J. (2006); and Sperlich, A. (2008).

²⁰ Notable scholarly contributions on the topic of for-profit higher education include Sperling, J./Tucker, R. W. (1997); Sperling, J. (2000); Ruch, R. S. (2001); Kirp, D. L. (2003); Berg, G. A. (2005); Breneman, D. W./Pusser, B./Turner, S. E. (2006); Kinser, K. (2006); Lechuga, V. M. (2006); Tierney, W. G./Hentschke, G. C. (2007); and Althaus, M. (2009).

²¹ Major research gaps about for-profit higher education include its historical development, descriptive profiles of today’s institutions, the quality of students’ experiences, the efficacy of different academic models, and the topic of international expansion; see Kinser, K. (2006), pp. 128-129.

²² This series of case studies includes Datar, S. M./Garvin, D. A./Knoop, C.-I. (2008a); Datar, S. M./Garvin, D. A./Knoop, C.-I. (2008b); Datar, S. M./Garvin, D. A./Knoop, C.-I. (2008c); Datar, S. M./Garvin, D. A./Weber, J. (2008a); and Datar, S. M./Garvin, D. A./Weber, J. (2008b).

²³ See, for example, Birnbaum, R. (2001); Geiger, R. L. (2004); Washburn, J. (2005); and Krautz, J. (2007).

²⁴ George Keller, for example, author of the celebrated *Academic Strategy*, which introduced strategic planning into academia, made the puzzling assertion that Berkeley serves as a typical example of Michael Porter’s generic strategy of overall cost leadership; see Keller, G. (1983), pp. 161-162; for an overview of

This book aims to fill these gaps in our understanding by looking at productivity in higher education from the fresh perspective of a business manager – somebody versed in the theory and practice of management, unencumbered by the traditions that permeate higher education, and ready to turn conventional wisdom about the provision of educational services on its head. It attempts to provide a comprehensive answer to our central question of how to boost productivity in higher education and ensure broad access to affordable and high-quality educational services. The conclusions from this book are aimed, above all, at two groups of readers: academic managers, such as presidents, provosts, and campus deans; and policymakers, such as education secretaries and legislators serving on education committees. After all, academic managers and policymakers are in charge of the key decisions that determine the level of productivity in higher education. In this book, academic managers will find a wealth of concrete managerial practices they can apply within their institutions, as well as numerous case studies that range from traditional institutions such as the venerable Harvard Business School to for-profit institutions such as Brazil's Anhanguera and India's National Institute of Information Technology (NIIT). Policymakers will find a thorough diagnosis of the underlying factors that restrict access, drive up cost, and undermine quality, as well as specific policy recommendations aimed at both the supply side and the demand side of higher education. In addition to academic managers and policymakers, this book is also aimed at a scholarly audience as well as at general readers with a broad interest in higher education. Since this book challenges many of the paradigms in the field of higher education, it is likely to spark a spirited interdisciplinary discussion among researchers of higher education, public policy, management, and economics. Scholarly readers will find extensive footnotes with additional evidence, references, and excurses. Since this book is also aimed at a wider audience, however, a deliberate effort has been made to ensure that the main body of the text can easily be read without looking up a single footnote.

This book is divided into three parts, each of which addresses one of our three sub-questions outlined above. Part I explores to what degree there is indeed an opportunity to substantially improve productivity in higher education. It presents a new way of looking at productivity in higher education; discusses symptoms, causes, and societal implications of declining productivity; and points to a gaping productivity gap in traditional higher education. Part II, which forms the core of the book, draws up hypotheses about the specific levers academic managers need to pull in order to close the productivity gap. It provides an overview of selected management best practices applied by the world's leading business enterprises, contrasts these practices with the managerial shortcomings observed in traditional higher education, and offers specific recommendations on how to translate the best practices into the sphere of higher education. Finally, part III explores ways for policymakers in higher education to encourage academic managers to actually implement these practices. It also

the three generic strategies of cost leadership, differentiation, and focus, see Porter, M. E. (1998a), pp. 11-26; and Porter, M. E. (1998b), pp. 34-46.

discusses policy interventions designed to ensure that students make productive educational investment decisions.

As should be evident from the outline, the focus of this book is on breadth rather than on depth. It attempts to offer a fresh and comprehensive perspective on the topic of productivity in higher education, rather than a conclusive treatment of a narrow and well-defined sliver. The hypotheses put forward in this book rest on conceptual reflections buttressed by anecdotal evidence, rather than elaborate statistical analyses. As such, they should be seen as an invitation for more rigorous empirical testing. While many of the hypotheses drawn up in this book are likely to be perceived as controversial or even outrageous by many stakeholders in traditional higher education, it is hoped that their provocative nature serves as a stimulus for further contributions from scholars and practitioners. Society clearly stands to reap huge dividends from a sharpened understanding of how to boost productivity in higher education. After all, social and economic progress in the 21st century will largely depend on the productivity of a vibrant higher education industry.