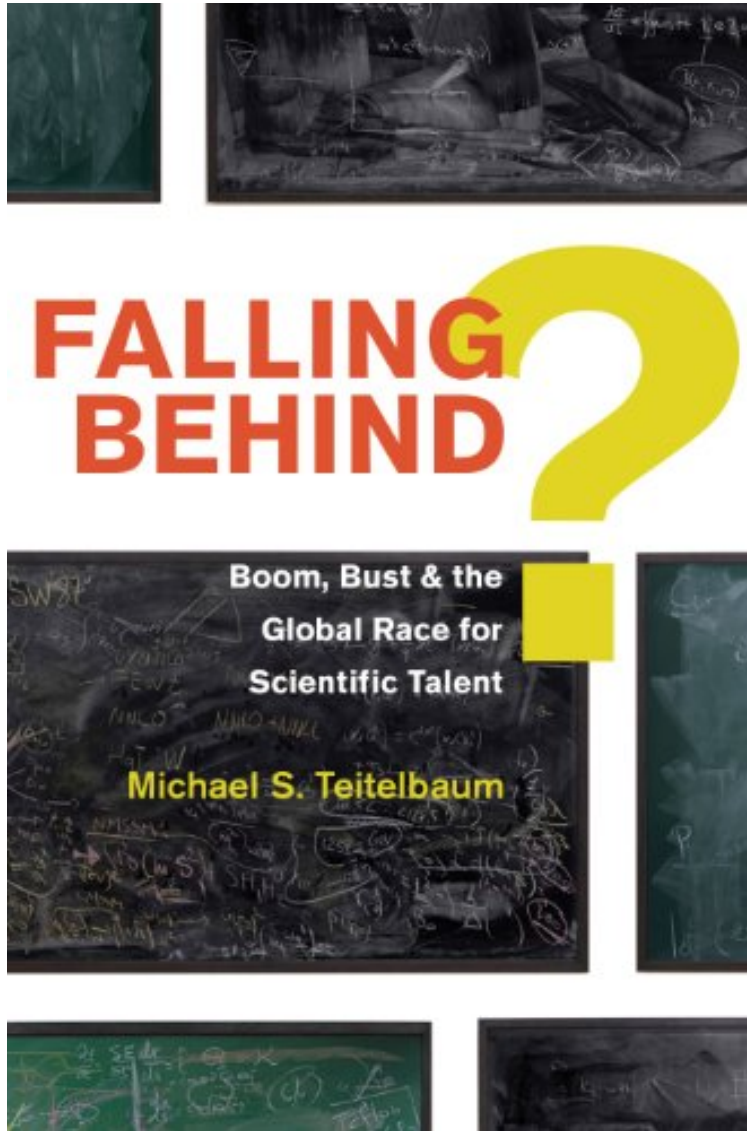


(Read now) Falling Behind?: Boom, Bust, and the Global Race for Scientific Talent

Falling Behind?: Boom, Bust, and the Global Race for Scientific Talent

Michael S. Teitelbaum
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Michael S. Teitelbaum : Falling Behind?: Boom, Bust, and the Global Race for Scientific Talent before purchasing it in order to gage whether or not it would be worth my time, and all praised Falling Behind?: Boom, Bust, and the Global Race for Scientific Talent:

2 of 2 people found the following review helpful. Does America have too few scientists, too many, or just right?By A. ReaderMike Teitelbaum has the credentials to settle this question once and for all: is there a critical shortage of American scientists and engineers as big business contends when they try to import more foreigners? Or is there a glut

as underemployed post-docs believe when they try to find a job? First his chops. He is a highly respected demographer, whose career started with a Rhodes Scholarship, went on to senior jobs in the Congress, as vice president of the Sloan Foundation, and now as a researcher at Harvard. His many books have been well-received, and most recently the top journal in science, called *Science* oddly enough, recognized him as the person of the year in the field of science careers, probably because of this book. BioOn a more humble level, in January 1995 your reviewer took a job as a legislative assistant in a Texas congressman's office. As I was unpacking my briefcase, I was visited by some lobbyists wearing shiny boots. They were from Texas Instruments, and pointed with alarm at an impending crisis in engineering manpower, unless Congress provided more foreign workers via the H1B visa program. I was puzzled by this since I personally knew that jobs in engineering were not so easy to get after the end of the Cold War. Indeed, I was soon visited by another lobbyist, in scuffed loafers, who had lost his job at IBM when it brought in cheaper foreign engineers, and was taking advantage of his ample free time to report this to Members of Congress. Disclosure: I have worked at TI myself, and in 1995 I was an IEEE Congressional Fellow. The IEEE position was that the first guys were wrong, and the second guy was right. But we didn't have the evidence to prove this. Now we do, thanks to this book. Actually, it's simple. Economics 101 says that if there was a shortage in the U.S., pay and working conditions for engineers and scientists would improve to attract more. This is not happening now, but it was just the situation when I graduated during the Cold War in 1960; defense contractors flew me first class all over the country to try to recruit me into a private office, but I foolishly went to MIT on an all-expenses-paid fellowship instead. Now an engineer is lucky to get a cubicle, working as an independent contractor without benefits and with zero job security. And the pitiful science post-docs don't even get a cubicle, they just borrow a couple of square feet of a library table for their (own) laptop to try to do enough research to get a real job. The book actually covers the broader issue of the health of the U.S. scientific manpower system. Dr. Teitelbaum concludes that the system is broken, partly because the boom and bust cycles result in a glut of graduates, many of whom cannot find work that takes advantage of all those years and dollars of preparation. He offers some remedies, then decides that none of them are politically feasible, so that "we should expect a continuation of the current symptoms of malaise..." PS: Yesterday while I was finishing reading this book at the library of one of America's top research universities, I was struck that almost all of the students there seemed to be from Asia. Such graduates used to mostly stay in America to strengthen our RD, but the opportunities now are back home. Can it be that America's world-leading universities now exist primarily to prepare graduates to compete with us? Indeed our Federal agencies support of university research now funds primarily foreign grad students--take a look at the group photo of any American research group. Heretical thought: can it be that our investments in RD are so captured by our foreign competitors (and potential military adversaries), that we would be better off by cutting back? 6 of 6 people found the following review helpful. Brilliant! By Dan As a research professional in the physical sciences, I had often wondered about the obvious discrepancy between the public alarms sounded about the supply of science and engineering professionals, and the experiences of myself and my colleagues. Dr. Teitelbaum's exquisitely researched and well-written book answered all of my questions. Every chapter has several thought-provoking "aha!" moments which make it well worth the price. Dr. Teitelbaum weaves a multifaceted, coherent picture of this complex topic in a way that makes his book informative, entertaining, and easy to read. Bravo! 2 of 2 people found the following review helpful. Great book By John F. McGowan <http://math-blog.com/2015/01/12/review-of-falling-behind-boom-bust-and-the-global-race-for-scientific-talent/>

Is the United States falling behind in the global race for scientific and engineering talent? Are U.S. employers facing shortages of the skilled workers that they need to compete in a globalized world? Such claims from some employers and educators have been widely embraced by mainstream media and political leaders, and have figured prominently in recent policy debates about education, federal expenditures, tax policy, and immigration. *Falling Behind?* offers careful examinations of the existing evidence and of its use by those involved in these debates. These concerns are by no means a recent phenomenon. Examining historical precedent, Michael Teitelbaum highlights five episodes of alarm about "falling behind" that go back nearly seventy years to the end of World War II. In each of these episodes the political system responded by rapidly expanding the supply of scientists and engineers, but only a few years later political enthusiasm or economic demand waned. Booms turned to busts, leaving many of those who had been encouraged to pursue science and engineering careers facing disheartening career prospects. Their experiences deterred younger and equally talented students from following in their footsteps--thereby sowing the seeds of the next cycle of alarm, boom, and bust. *Falling Behind?* examines these repeated cycles up to the present, shedding new light on the adequacy of the science and engineering workforce for the current and future needs of the United States.

"*Falling Behind?* makes a convincing case."--Andrew Hacker, *New York of Books* [Teitelbaum's] discussion usefully pulls together previous work by him and others that shows that the existing funding model and practices of universities have uncoupled the supply of new scientists from the need for new scientists, particularly in the life sciences. . . . *Falling Behind?* also illuminates a bigger picture: Scientists must recognize that the solution to low grant acceptance rates and poor job prospects for new scientists is not increased public funding for research."--Adam B. Jaffe,

Science"[A]n outstanding and important new book. . . . Falling Behind? . . . brings desperately needed clarity and context to a crucial issue: the nation's much-ballyhooed but essentially fictitious 'shortage' of scientific talent. Drawing on Teitelbaum's decades of experience with labor and migration issues . . . the book applies subtle analysis and encyclopedic knowledge to the task of understanding the dynamics of the scientific labor market. . . . Every politician, policymaker, advocate, and ordinary citizen who wants to understand the reality and the genuine challenges currently facing American research and researchers . . . should read and absorb what Teitelbaum terms as his book's 'core findings'. . . . Fascinating and revealing nuggets stud the book, displaying the depth and originality of Teitelbaum's research. . . . A review of this length can offer only a taste of the insight, information, and astute judgment that Teitelbaum brings to bear on the history, structure, prospects, and very real current problems of the U.S. scientific enterprise. . . . [T]he book's precise exposition and granular detail make it valuable even for those who already are well versed. For the much larger number of people who are concerned about American science but unfamiliar with the dynamics and history of the scientific labor market, this book will be revelatory . . . Teitelbaum's book should transform this important national conversation."--Beryl Lief Benderly, Science Careers

"Well-researched . . . Teitelbaum begins Falling Behind by examining the many hyperbolic claims of the current so-called science, technology, engineering, and mathematics (STEM) crisis. He expertly dissects these assertions and clearly demonstrates the weak assumptions and sloppy reasoning underlying each. . . . Especially useful is the light Teitelbaum shines on the many financial and political incentives that motivate industry, academia and government to proclaim an engineering and science crisis. . . . A very useful addition to the science and engineering crisis literature."--Robert N. Charette, IEEE Spectrum

"A rewarding read."--Alex Usher, Higher Education Strategy Associates

"Teitelbaum shows how the U.S. government's science and technology policy has been marked by groundless scares, nonsensical rhetoric, interest-group politics, stop-and-go instability, and misaligned incentives. He does this in a well-documented, restrained, academic way, which gives much weight to his stringent criticisms."--Pierre Lemieux, Regulation Magazine

"Readers with interests in science policy, careers or funding will find this book fascinating, although often disquieting. Teitelbaum's analyses of historical alarm/boom/bust cycles and (in particular) the NIH budget-doubling brouhaha are illuminating, and he has a knack for anticipating potential criticisms."--Margaret Harris, Physics World

"The book provides an interesting history of US science and engineering workforce studies and actions, and sensible recommendations and principles given the ever-changing workforce."--Deborah Stine, Chemistry World

"Despite policy differences that readers may have with Teitelbaum, the concerns he raises about booms and busts in the scientific workforce (due in large part to failures of public policy) should command broad interest."--Daniel Kuehn, Cato Journal

From the Back Cover "Detailing the varied interests driving science and engineering workforce policy, Falling Behind? demonstrates that unfortunately, scores of high-skilled workers have been on the losing end of failed education and immigration agendas. This book provides critical analysis and an opportunity to change the dialogue for these issues."--Paul E. Almeida, DPE AFL-CIO

"Teitelbaum presents an insightful and engaging history of the events and forces behind the boom-and-bust cycles experienced by America's scientific workforce, while analyzing the policies and politics behind them and the connection to contemporary debates over high-skilled immigration. Falling Behind? makes it clear there has been scant evidence to support the alarming claims of labor shortages in scientific occupations made over the past six decades."--Daniel Costa, Economic Policy Institute

"Falling Behind? thoroughly documents how vested interests take advantage of inadequate data and faulty analyses to exaggerate science and engineering labor shortages, producing boom-and-bust cycles that distort these important labor markets. This valuable book outlines measures to moderate these destructive cycles."--Ray Marshall, University of Texas, Austin

"Filled with fascinating anecdotes and information about U.S. policy toward the science and engineering workforce, this powerful book shows that officials, industry lobbyists, and leading members of the scientific establishment have time and again tried to make the case that the United States needs more scientists and engineers when there is no evidence of this. With verve and clarity, Falling Behind? raises the level of discourse on science workforce issues."--Richard Freeman, Harvard University

"Falling Behind? brings balance to the argument often put forward by special interest groups that the United States faces a shortage of scientists and engineers. It addresses the propensity of American interest groups to declare a crisis regarding the size and competency of the technical workforce, the government's response to such declarations, and the ensuing results. This book offers a refreshing and unique perspective."--Paula Stephan, Georgia State University and the National Bureau of Economic Research

About the Author Michael S. Teitelbaum is a Wertheim Fellow in the Labor and Worklife Program at Harvard Law School and senior advisor to the Alfred P. Sloan Foundation in New York. Until 2011 he was vice president of the Sloan Foundation. His previous books include *The Global Spread of Fertility Decline*, *A Question of Numbers*, *The Fear of Population Decline*, and *The British Fertility Decline*.