than a college-for-all approach with a universal academic focus.

Economic, demographic, and policy changes together have made a narrow focus on education and training an insufficient basis for workforce development. There are good reasons to consider everything from the growing demand for highly educated workers with technical skills in math and sciences to the barriers to labor force participation faced by low-income youth with limited literacy or individuals with substantial physical or mental health issues. And issues of child care, family leave, and other family-friendly policies can hardly be ignored in a world where most mothers of young children work and where we have largely replaced a system of cash subsidies for lowincome single mothers with a time-limited workfirst approach. However, the economic analysis and policies required to understand and address these issues vary widely. The question of where to focus and where to draw the line is a basic tension in workforce development policy and is also apparent in this volume. The book includes essays on the basic building blocks of the current education and training systems (including traditional job training for less-skilled workers and the hard to employ, career-focused education and training for youth, and higher education), issues posed by important demographic changes (particularly immigration and the aging population) and health and work-family policies that shape the labor market. The reader is left understanding that a better-developed workforce development strategy is necessary but will not be sufficient.

The underlying issue of labor market inequality emerges in a number of the chapters. For example, Burtless argues that it is an important contributing factor in the inadequacy of our employment-based health insurance system, as health care costs overwhelm wages for low-wage workers. Waldfogel makes a related argument regarding family-friendly employment policies, which may be most critical to low-wage workers, who likely have the least access. Freeman makes a broader point in suggesting that, while increases in employment and training may appear to be relatively easy "win-win" policy options, addressing growing labor market inequality due to the differential impact of global competition may be both more difficult and more important. While the issue is mentioned in many of the chapters, growing inequality in labor market outcomes and related policy trade-offs are not explored in depth.

The expression "we have our work cut out for us" has its origins in tailoring; the magnitude of the task was apparent when the pieces of cloth were all cut out but not yet assembled. The authors of this volume have done an admirable job mapping out many of the key pieces of the problem and some solutions that we must consider if the changing American workforce is going to be helped to effectively engage with the challenges of our dynamic economy. The reader is left with a much clearer understanding of what we do and do not yet know about the nature of the problem and potential policy solutions. The essays assembled here leave no doubt that both policy analysts and policymakers have their work cut out for them in designing and implementing an effective workforce development policy. With this book, Holzer and Nightingale have provided an important resource for this effort.

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L Industrial Organization

The Bottom Line: Observations and Arguments on the Sports Business. By Andrew Zimbalist. Philadelphia, Pa.: Temple University Press, 2006. Pp. viii, 304. \$64.50, cloth; \$22.95, paper. ISBN 1-59213-512-9, cloth; 1-59213-513-7, pbk. JEL 2007-0199

The Bottom Line weighs in at an impressive blog-like 118 chapters. That's right sports fans, one hundred and eighteen rounds. Fighting in the heavyweight division, Andrew Zimbalist pulls no punches, writing in a deliberately provocative style that will no doubt have some cheering with every jab and upper cut and others screaming about blows below the belt.¹

There was a lot happening in the sports world when these articles were first published in 1992–2006. With exploding media rights fees, labor unrest in Major League Baseball (MLB), the National Basketball Association (NBA), and the

¹ Full Disclosure 1: In a previous life, I worked for about fifteen years on a number of sports-related litigation matters, typically on behalf of the major U.S. professional sport leagues. I know that Professor Zimbalist was retained by opposing parties in many of those matters.

National Hockey League (NHL), renegotiations of collective bargaining agreements, an extraordinary wave of arena and stadium construction (with significant public funding), the advent of public ownership of professional sports teams, explosive developments in the entertainment market, salary caps, revenue sharing, luxury taxes, and so forth, Professor Zimbalist was not exactly starving for material.

Pregame Show

Zimbalist focuses on many of the major Sports Economics topics of the day, including: sports leagues competing for the entertainment dollar, and the importance of *competitive balance*, and audience demographics and reach in achieving that success; reconciling extraordinary franchise sales prices (soon to cross the \$1 billion threshold) with cash flows that are in many cases said by some to be negative; the public benefits from professional sports leagues, and the extent to which those justify the significant public financial support that teams receive (especially in the financing of new stadiums, arenas, and related infrastructure development); the importance of stable player relations in driving professional sports league success; player salaries, how those salaries relate to performance and how they have been, and might be, impacted by the various proposed and implemented competitive balance remedies; and the role of athletics in higher education and, when evaluating the NCAA, puzzling over whether the word athlete always needs to be preceded by the word *student*.

A Short Commercial Break

Before reviewing the lineup, allow me a commercial break to address the audience new to Sports Economics. Textbooks in the subject were a novelty a decade ago; now new ones appear every year.² And just as with the Law and Economics wave in the 1980s, I suspect that Sports Economics will be a standard offering in most colleges and universities by the end of this decade.

There are at least three forces driving this growth.

First, the subject fascinates one and all—no other discipline within the Economics profession captures the public interest or imagination the way Sports Economics does, with controversy everywhere, and no shortage of opinions. If you don't believe me, just add up column inches in the sports section of your local daily newspaper, turn on your AM radio, or ask your kids if they'd rather talk about the Yankees payroll or Social Security reform.

Second, and perhaps more importantly for an economist, is the amazing abundance of publicly available data (especially impressive given that professional sports franchises are almost all privately owned). For example, for the major North American professional sports leagues, the following data are readily available online: franchise revenues and costs; ticket prices and attendance; broadcast revenues and rights fees; sponsorship, licensing, and merchandise revenues; franchise transaction value and capital structure figures; player and other labor costs and contract structures; and a vast array of performance data at the player, franchise, and league levels. What other industry comes close?

And third, it's a subject that covers a remarkably broad range of fields in Economics and related disciplines, including, Industrial Organization and Antitrust, Public Finance, Accounting, Finance and Valuation, Marketing, Labor Economics, Education Economics, and Statistics and Econometrics. The water's warm; jump on in!

The Line-Up

Back to the action! In reading and reviewing these articles, it's important to understand their original audience. With just one exception, these articles were first published in the popular press and written for readers who by and large wouldn't begin to know how to spell heteroskedasticity, let alone explain it. And while there is often quite of bit of Sports Economics research and literature underlying each topic, accompanied, of course, by the usual debate that so often occurs when more than one economist is working on an issue, that research and debate stays behind the scenes. That's a strength as well as a weakness. It's a strength in that the articles provide an efficient, accessible and at the time they were written,

² For those looking for a good introduction to the field, see the two textbooks by Rodney D. Fort (2006) and Michael A. Leeds and Peter von Allmen (2007).

timely, survey of much of the Sports Economics landscape as viewed by Professor Zimbalist. And it's a weakness in that the reader will have little sense of the competing views and no idea where to find the academic research that surrounds each topic.³

Focus

There's plenty of room for judgment here, but my call is that almost 90 of the 118 articles focus on the major North American professional sports leagues. In that Division, MLB is in first place with .572 of the articles (certainly not surprising given Professor Zimbalist's longstanding passionate focus on baseball). The NCAA, in second place, merits its own "part" of the book and gets twenty-two hits (.186). Of the remaining six articles, NASCAR and the XFL (Fox's 2001 one-hit football wonder) warm the bench with just one at-bat each.

Frequency

While the essays in this book were originally published between 1992 and 2006, the overwhelming majority (113 of 118, or .958) appeared in the 1998–2005 timeframe. 2001 was Zimbalist's best year, with eighteen appearances at the plate. (It was also the year that Barry Bonds hit seventy-three HRs.)

Venues

While Zimbalist can hit to all fields, in *The Bottom Line* he's primarily a pull hitter with eighty-seven (.737) of the articles taken from his *Sports Business Journal* appearances. Of the remaining thirty-one hits, thirteen (.110) first appeared in the *New York Times*, four (.034) debuted in the *Wall Street Journal*, and the remainder were all scratch singles.

Time of Possession

Chapters in the book range in length from less than a page to seven pages long. The mean and median lengths are 2.00, the standard deviation of page length is .686, and 99 of the 118 (.839) are between 1.5 and 2.5 pages in length. So, yes, each article is a fairly quick read.

Play-by-Play

The book divides into six *parts*. The first five are roughly equal in length, ranging from nineteen to twenty-eight articles. With the game well in hand, part 6 rests its starters with just six essays.

Part 1: Team Management, Finances, and Value

The winner in part 1 is the topic of franchise valuation, which hits .667 with fourteen of the twenty-one articles. Zimbalist focuses on the well-known challenge of reconciling low, often negative, reported cash flows with extraordinary franchise sales prices. His take on things: don't trust the reported cash flows, as they are often incomplete and ignore related-business cash flows. Accordingly, when valuing franchises Zimbalist advocates the use of revenue multiples rather than, say, a discounted cash flow approach. All of this matters because team revenues and values affect revenue sharing and salary cap negotiations, as well as negotiations between teams and local governments.

Part 2: League Structure, Design, and Performance

There is a broad range of topics in the twenty-eight articles in this part 2 (this section wins the article count competition). Almost half address competitive balance and the various institutions that leagues have established to promote said balance, including revenue sharing, salary caps, luxury taxes, and reverse-order-of-finish drafts. Sports economists will be familiar with Zimbalist's analysis here and his suggestion that shared revenues should be tied to market potential to avoid the shirking incentives under more common revenue sharing rules. Though the topic receives little playing time, those unfamiliar with the structure of European soccer leagues will be interested in Zimbalist's brief compari-

³ A good place to start your literature search is the *Journal of Sports Economics*; Professor Zimbalist is a member of the journal's Editorial Board.

⁴ Revenue sharing can dampen incentives for teams to invest in and develop the product in the local and, perhaps, national and international marketplaces.

son of open-league and closed-league structures and the competitive balance implications of relegation and promotion systems under the open-league structure.⁵

Part 3: Stadiums: Financing, Mega-Events and Economic Development

Virtually all of the nineteen articles in part 3 look at the economic impact of stadiums and arenas, and the related issue of the extent to which construction and related infrastructure costs are and should be borne by the public rather than by teams or leagues.⁶ Because stadiums generally cost more and receive more public funding, the focus here is much more on stadiums than arenas, and so the NFL and MLB get the majority of the ice time (this is the only section in which another league receives more playing time than MLB). Professor Zimbalist's observations on this topic are well-known to sports economists, but always news to the outside world. There has been a large amount of empirical work in the area of valuing new net local economic activity (as well as new economic development) associated with professional sports franchises. Those studies generally find limited measurable new net impacts. Importantly however, studies also typically find substantial nonpecuniary benefits of orders of magnitude that easily swamp the public funding amounts in question.⁷ Some readers will be surprised to learn in this section of the ways in which the NFL and MLB now partially fund stadium construction costs.

Part 4: Antitrust and Labor Relations

The NFL gets shut out in part 4. The NBA now joins MLB on center court (.778 of the NBA

⁵ Under *relegation* and *promotion*, the bottom teams in an *open-league* are relegated the next season to a lower level league, replaced by teams promoted from that league to the higher level league.

⁶ This was a period of explosive stadium and arena construction. Jordan Rappaport and Chad Wilkerson (2001) note that "by 2004, more than two thirds of the 111 major league teams in the United States will be playing in venues that were either opened or were heavily renovated in the previous ten years."

⁷As Zimbalist asks in one of his articles, would the citizens of Miami be willing to pay \$16/yr per household for a new ballpark?

articles in the book are here). Zimbalist focuses on the collective bargaining playing field and, importantly, on the various institutions that have been developed in the pursuit of the *Holy Grail* of league-wide *competitive balance*. Given the timeliness of the issue, MLB's now-you-see-it-now-you-don't *contraction* proposal also gets prime time coverage. Throughout, Zimbalist is highly and passionately critical of many of MLB's policies, though interestingly, he proposes a similar arsenal of *competitive balance* institutions to help the NHL better address some of its current challenges. While the title of this section heading advertises "antitrust," most of that discussion is in the specific context of labor issues.

Part 5: College Sports and Gender Equity

The Sports Business Journal is featured here, garnering twenty-one of the twenty-two articles (.955). If you didn't know better you'd think that the NCAA was in utter chaos and on the brink of disaster. The themes are consistent: 10 don't trust the figures in the bi-annual NCAA financial survey of athletic programs (school financials are not standardized and there are lots of ways to hide costs); college players are exploited and should be paid; college coaches are grossly overpaid; most of the problems with Title IX are really driven by money; cheating by schools is rampant, in part because the incentives are so great and in part because the NCAA's enforcement group is so inadequately staffed, and so forth. But don't

⁸Zimbalist sees conspiracy at every turn of the contraction saga. First he says it's to break the union. Then he says it's to drive down salaries. Later, it's to avoid compensating the Montreal Expos owner. Additionally, while Zimbalist states in one essay that there would be no impact on overall quality under contraction, elsewhere he attributes records falling in the mid-90s to expansion. Apparently, there would be no quality impact in contracting from 30 to 28 teams, but there was a substantial impact in going from 26 to 30.

⁹ While there is much reference to MLB's antitrust exemption and the Sports Broadcasting Act (leagues can negotiate national television contracts on behalf of their teams), analysis thereof is limited.

While it's not always clear in the text, Zimbalist appears in this section to be focusing almost exclusively on two sports, football and basketball. Those are the higher revenue NCAA sports, but don't forget that students in those sports constitute only about 25 percent of the overall NCAA student athlete population. Full Disclosure 2: One of my children was an NCAA Division I student athlete.

panic, Professor Zimbalist has no shortage of policy recommendations, including: reduce coaches' pay (the NCAA should lobby Congress for an antitrust exemption to facilitate this) and eliminate sneaker money, cut the number of Division I football scholarships, cut the excess number of coaches in some sports, shorten season lengths and hours devoted to sports, establish minor leagues in football and basketball with financial support from the NBA and the NFL, eliminate freshman eligibility, permit student athletes to profit from their talent during the summer months, permit some players on basketball and football teams to not matriculate as students and pay them minor league wages (with vouchers to pursue a college education in the future if they wish), and fund Title IX initiatives with savings from the above.¹¹

Part 6: Media and the Regulation of Steroids

This is the most curious combination of topics, with media and meds splitting the six articles 50/50. There are no surprises here. The three media pieces focus on media rights fees, the viewer demographics that drive those fees, and the prices that advertisers pay the media for the opportunity to pursue those viewers. And as for steroids, well it's just terribly complicated with no easy solutions. Both of these *primetime* topics are far too important to receive such little playing time. But then again, this book is already 118 chapters in length.

Postgame Wrap Up

This book is a must buy for at least two groups. Given the explosive growth of interest in this subject, many of you will be teaching and researching this field within the decade. And you'll want something that provides a quick comprehensive overview of the subject. Professor Zimbalist does just that. Just don't confuse deliberately provocative (dare I say at times gratuitously provocative in the best journalistic tradition) with fair and balanced. ¹²

12 I do wonder if Professor Zimbalist would like to

And then, when you are teaching the course, you'll want to use this book as a supplement. The Sports Economics landscape is ever-changing and you'll want your course to keep pace with all this. (Just think about how quickly the MLB contraction issue came and went; and the ratings it received whilst in the national spotlight.) A subscription to the Sports Business Journal (in which almost 75 percent of the articles featured here were first published) and/or the Sports Business Daily will also keep you on top of the more timely issues.

I have two suggestions if this book goes to another printing:

- (1) *Updates*: Seventeen of the articles in this book received updates prior to publication; of those updates, I'd say that twelve were substantial. This is a fast changing landscape on both the institutional and research fronts. Time and again I wished for updates. Some wishes were granted as subsequent articles weighed back in on issues, but many were not.
- (2) Monopoly, monopoly, monopoly: Zimbalist is quick to call sports leagues monopolists, but it's not always clear which market he's talking about. Early on in the book, he ridicules those who claim that sports leagues compete in a large entertainment industry; later he appears to have changed his mind on this. My sense is that, when Zimbalist claims that leagues have monopoly power, he is usually thinking about the bargaining games between teams and local governments that typically surround stadium or arena contracting issues. In any event, it would be helpful to clarify this.

Game Over; The Whistle Has Blown

Throughout *The Bottom Line*, Professor Zimbalist emphasizes the importance of stable labor relations for league success. But it's an entertainment market, and all the labor relations stability in the world won't help one bit if professional sports leagues can't successfully compete in that marketplace. You might as well hang up your skates. *That's* the bottom line.

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rethink his likening of MLB's contraction proposal to the purges under Stalin ("fewer but better comrades").

¹¹ Faculty members will be interested to learn that Professor Zimbalist asserts that the tax-exempt status of NCAA institutions generates higher salaries for coaches. Under the same argument, perhaps faculty are grossly overpaid as well.

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O Economic Development, Technological Change, and Growth

Volatility and Growth. By Philippe Aghion and Abhijit Banerjee. Clarendon Lectures in Economics. Oxford and New York: Oxford University Press, 2005. Pp. viii, 148. \$35.00. ISBN 0-19-924861-3. *IEL* 2006-0729

Dissatisfied with existing models of economic volatility and growth, Philippe Aghion and Abhijit Banerjee in *Volatility and Growth* advance a new theoretical framework for studying the dynamic relations between long-run economic growth and business cycle fluctuations. Based on the Clarendon lectures given in Oxford, the book unabashedly seeks to recruit researchers to join their quest to better understand the linkages between volatility and growth.

The central contribution of the book is to integrate credit constrained entrepreneurs into a Schumpeterian model of endogenous growth and demonstrate that adding this friction helps theory match the data much more closely than existing theories. Credit constraints are modeled as limits on borrowing and these limits are in turn motivated with a model of imperfect information and imperfect contract enforcement.

Ås a benchmark, the book begins by introducing productivity shocks into both the AK and Schumpeterian models of endogenous growth without incorporating credit constraints. In the AK model, greater volatility accelerates growth by increasing precautionary savings, but the drop in risk-adjusted returns from greater volatility provides an offsetting influence so that the net effect depends primarily on the intertemporal elasticity of substitution. Using U.S. data to parameterize the model, they find that greater volatility increases savings, investment, and

growth in this AK model. In the Schumpeterian model, long-run, productivity-enhancing investments determine long-run growth, not investments in directly productive endeavors. Since recessions reduce returns from short-run, directly productive activities, recessions can enhance the relative return to long-run, productivity-enhancing investments and thereby stimulate long-run growth. Aghion and Banerjee show that a mean preserving increase in productivity shocks tends to increase R&D investment and growth in the Schumpeterian model.

The problem—and hence the motivation for the book—is that the data reject the predictions emerging from these models. Volatility and growth are negatively, not positively, related. Moreover, volatility is associated with both less investment and slower productivity growth. R&D expenditures do not rise with volatility as suggested by the benchmark Schumpeterian model. A new theory is necessary to account for observed correlations.

The book next introduces credit constraints into the Schumpeterian model of endogenous growth. In the model, productivity enhancing investments require a long-run commitment of capital. Consequently, liquidity shocks that interrupt these long-term investments lower the probability that these projects will succeed. With no credit constraints, these liquidity shocks do not inhibit these long-run investments because firms can borrow. With credit constraints, however, economic downturns disproportionately reduce the appeal of long-run investments, relative to short-run, directly productive activities, because long-run investments face liquidity risk. Entrepreneurs anticipate this and reduce investment in long-run productivity enhancing investments when there are recessions. Under plausible parameters, Aghion and Banerjee show that volatility reduces long-run investment expenditures and, hence, long-run growth, especially in economies with poorly functioning financial systems.

Besides matching the observation that volatility and growth are negatively correlated, this Schumpeterian model with credit constraints makes additional, testable predictions. The theory suggests that credit constraints slow economic growth by reducing investment in long-run productivity enhancing investments. The model predicts that credit constraints make growth more sensitive to the volatility of exogenous shocks and