



Outstanding Business Information Sources 2023

Introduction

Each year, the [Business Information Sources Committee](#) of the [Business Reference and Services Section \(BRASS\)](#) selects the outstanding business information sources published since May of the previous year. This year, the committee reviewed twelve entries; of these, two were designated as “Outstanding” and three as “Notable.” Works are examined for the following: ease of use; reputation of the publisher, author, or editor; accuracy; appropriate bibliography; organization; comprehensiveness; value of the content; currency or timeliness; uniqueness; quality and accuracy of index or cited references; and quality and usefulness of graphics and illustrations. This year’s titles mirror some of the most current and topical trends impacting today’s national and global business environment. These publications cover an array of issues, including innovations and developments in transformative technologies such as artificial intelligence (AI); the sustainable development of metal and minerals industries; challenges and opportunities in microchip production; and the power and value of entrepreneurship in creative industries.

BRASS Business Information Sources Committee contributing members: Sara F. Hess and Amy Jansen, selections co-editors; Amanda Belantra and Senta Sellers, committee co-chairs; Regina M. Beard, Stephen A. Fadel, Wayne Finley, Kelly S. Janousek, Zoeanna Mayhook, Peter Z. McKay, Judy A. Opdahl, Barbara S. Petersohn, Roberta L. Tipton, Halley Todd, and Timothy Tully.

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Outstanding

Chip War: The Fight for the World's Most Critical Technology. Chris Miller. New York, NY: Scribner, an Imprint of Simon & Schuster, 2022. 464 p. Hardcover \$30.00 (ISBN: 9781982172008). Contact the publisher for e-book pricing (ISBN: 9781982172022).

Chip War, by historian Chris Miller [1], recounts the history and development of microchips and their impact on the world. Microchips (or “chips”) are semiconductors with integrated circuits that power modern devices, from smartphones to missiles. Chips have disrupted industries and fostered the development of innovative technologies and applications, such as personal computers, mobile phones, the Internet, artificial intelligence, the Internet of Things (IoT), and digital currencies. Chips have enabled unprecedented connectivity, productivity, creativity, and security in the modern world. Miller analyzes the competition and cooperation among the Great Chip Powers—the US, Japan, Taiwan, China, the UK, and Europe—for market share, technological advancement, strategic influence, and national security. Moore regards China as the top competitor to the continued US dominance of the chip industry. He explores future challenges and opportunities for chip innovation, considering new and emerging technologies and trends.

The history of the chip industry began in Mountain View, California, in 1956. In 1957, a group of eight engineers, known as the “traitorous eight,” left Shockley Semiconductor to start Fairchild Semiconductor. Two of them, Gordon Moore and Robert Noyce, later co-founded Intel in 1968. Moore formulated Moore’s Law [2], which predicts that the number of transistors on a chip will double every two years. Moore’s Law has guided the semiconductor industry for six decades.

Chip War examines how each major chip power developed its capabilities and strategies in response to internal and external factors. The US faced competition from Japan in the 1970s and 1980s and responded by imposing trade sanctions, forming consortia, investing in research and development, and fostering cooperation among chip makers. Taiwan became a global chip leader in the late 1980s and early 1990s thanks to government support, entrepreneurship, diaspora networks, foreign alliances, market opportunities, and technological expertise. Taiwan faces a dilemma between maintaining its competitive edge and managing its complex relationship with China.

China pursued its chip ambitions from Mao Zedong’s vision of self-reliance to Deng Xiaoping’s economic reforms and opening, continuing to the present day. China faced

many challenges: the need for more capital, talent, market access, intellectual property rights, and innovation capacity. China achieved a breakthrough in the late 1990s and early 2000s thanks to political support, state funding, market demand, foreign partnerships, talent recruitment, technology acquisition, and industrial policy. China competes with the US and other chip powers for economic and geopolitical goals, such as developing its domestic industries, expanding its global presence, modernizing its military, and advancing its digital sovereignty.

Will Moore's Law continue to hold? Or will it reach its physical limits? Chip makers are trying to overcome the technical and economic challenges of scaling down chip size and increasing chip performance. New and emerging technologies and trends are shaping the future of chips: quantum computing, neuromorphic computing, edge computing, cloud computing, artificial intelligence, the Internet of Things (IoT), and 5G.

Small things can have big impacts. *Chip War* breathes life into the history of microchips, explaining the technology that connects the modern world. *Chip War's* excellence earned its selection as the *Financial Times* 2020 "Business Book of the Year." [3] Recommended for all readers, public and academic libraries. –*Peter Z. McKay, University of Florida*

References

[1] Chris Miller is an associate professor of international history at the Fletcher School of Diplomacy at Tufts University.

[2] Investopedia. "What Is Moore's Law and Is It Still True?" 2023. <https://www.investopedia.com/terms/m/mooreslaw.asp>. Accessed 6/21/2023.

[3] FT Interactive Graphics. (2022). *Year 2022 (list) – Best Business Books*. FT Business Book of the Year Award. <https://ig.ft.com/sites/business-book-award/books/2022/> Accessed 7/28/23.

Routledge Handbook of the Extractive Industries and Sustainable Development. Edited by Natalia Yakovleva and Edmund Nickless. New York, NY: Routledge, 2022. 704 p. Hardcover \$270 (ISBN: 9780367429959). Contact publisher for e-book pricing (ISBN: 9781003001317).

This new handbook provides up-to-date international coverage on the metals and mineral industries through the lens of sustainability. Editors Yakovleva (Professor of Strategy,

KEDGE Business School) and Nickless (retired Executive Secretary, Geological Society of London, and current Chair of the Resourcing Future Generations initiative) organize content into three parts that focus on trends, technology, and the economic, environmental, and social aspects of the mining industry.

Editors enlisted over seventy contributors with scholars and professionals drawn from institutions and agencies located around the world. Scope is broad with coverage of topics such as critical raw materials; energy transition materials and climate change; ethical supply chains; exploration of deeply buried ore deposits; mining impacts on land and water; oil and gas company environmental transparency; scandium production technology; and urban mining.

The twenty-nine chapters are well organized, detailed, and easy to read. Figures and tables are often included. For example, in Chapter 11, Construction Materials and Sustainable Development (19 pages), Patrick Junior (PhD candidate) and Daniel M. Franks (Professor)—both from the Sustainable Minerals Institute, University of Queensland—open with an overview of construction materials, then examine topics including sand extraction and use, construction materials and the environment (e.g., water contamination), and construction materials and social issues (e.g., child labor). They then review building materials and economic development, local material supplies, alternative construction materials (e.g., recycled asphalt), and close with a case study on the use of cobblestones and local labor in Ethiopian road construction. The authors end with a list of references, in this case eighty-five sources citing mainly scholarly journal articles and technical reports with dates ranging from 1964 to 2021. The writers also include four figures (e.g., Figure 11.2 Global Sand Production Estimates, 2017) and five tables (e.g., Table 11.3 Employment and Economic Contribution of Development Minerals in Selected Countries).

Finding a comparable comprehensive resource to the Routledge handbook presents a challenge. The *Handbook of Sustainable Politics and Economics of Natural Resources* [1] covers broader territory with a focus on policy formation and development. *The Critical Metals Handbook* [2] is more similar in scope but dated. There are minor weak spots. For example, chapter headings and subheadings look frustratingly similar. However, this handbook fills a gap in the reference literature and is outstanding for its broad scope, currency, and ease of use. It should appeal to undergraduates up to faculty as well as policymakers, professionals in the field, and the general public. Highly recommended for

academic libraries, big and small, as well as public libraries. –*Stephen Fadel, California State University Monterey Bay*

References

[1] Stella Tsani and Indra Overland, eds., *Handbook of Sustainable Politics and Economics of Natural Resources* (Cheltenham, UK; Northampton, MA: Edward Elgar Publishing, 2021).

[2] Gus Gunn, ed., *Critical Metals Handbook*, 1st edition (Hoboken, New Jersey; Chichester, West Sussex, UK: American Geophysical Union, 2014).

Notable

Entrepreneurship in the Creative Industries: How Innovative Agents Skills and Networks Interact. Phillip McIntyre, Janet Fulton, Susan Kerrigan, and Michael Meany. Cham, CH: Palgrave Macmillan, 2023. 251 p. Hardcover \$129.99 (ISBN: 9783031194542). Contact the publisher for e-book pricing (ISBN: 9783031194559).

What is to be creative? What do creatives make that is valued by the rest of society? How can creatives live off their passions and not have to take random jobs in the current economic climate? How has entrepreneurialism appeared through time? These are a few questions that *Entrepreneurship in the Creative Industries* seeks to answer within its 251 pages.

By establishing definitions of creatives and entrepreneurialism using theoretical overviews and debates and examining the socio-historical context that has contributed to the current gig-economy through a systematic approach, the authors seek to guide current creatives in harnessing pragmatic business skills and concepts. Their goal is for creatives to be able to monetize their skill sets, services, and products in order to create a viable income stream instead of surviving off gigs. The authors culminate their examination with several case studies that offer real life applications of the theories introduced in order to give future creatives a framework and inspiration to cultivate their own entrepreneurial mindset, which the authors posit is essential to exist in the current creative industries as they stand.

The four authors are currently or were formerly affiliated with the University of Newcastle Australia in Callaghan, Australia. They previously published, with additional colleagues, *Educating for Creativity within Higher Education: Integration of Research into Media Practice*.

This book consists of fourteen chapters divided into three parts. Part I, “The Context for Creative Industries Entrepreneurship”, explores the reasons underlying the prominence of entrepreneurship in creative industries. Part II, “How You Do It: Taking Care of Business,” seeks to help creatives discover pragmatic business tools and techniques, like business plans and models, to ensure their creative endeavors can become financially solvent and create income. Part III, “Case Studies: Profiles of Successful Entrepreneurs in a Variety of Creative Industry Contexts,” provides successful case studies that showcase how to put Part II in action. It covers the following seven industries: publishing; music and radio; film and screen; visual and performing arts; advertising and public relations; design, fashion and architecture; and gaming and IT.

The book ends with musing on the “Conclusions and Caveats of Entrepreneurship” that addresses some of the obstacles and challenges that entrepreneurial creatives encounter. They often must take risks, and some of the risk-taking does end in failure. The authors explore the challenges that creatives face, such as copyright issues, legislation, and economic events, and argue that resilience, innovation, and the use of business strategies are essential for bringing new and innovative products and services to fruition.” This book seems intended for several audiences: creatives that need to learn business structures or ways to monetize their skills in order to live; those that help support these creatives (such as academic or public libraries, secondary or tertiary schools); and those that to seek to understand how creatives could be considered entrepreneurial. It will help introduce a structure and inspire creatives to learn basic business concepts and skills to continue their work in industries they are passionate about, and learn how to bring and add value to their existing skill set. One limiting element of this book is that the case studies are focused on Australian examples, which makes sense given the authors’ backgrounds. However, the theories and industries do have international reach which can be adapted to any country. This text is highly recommended for schools and universities that offer entrepreneurial minors within creative departments, have large creative departments in music, art and design; and for public libraries located in or near locales that host entrepreneurial or creative industries. —Halley Todd, *University of Virginia Darden School of Business*

Handbook of Research on Artificial Intelligence in Human Resource Management.

Edited by Stefan Strohmeier. Cheltenham, UK: Edgar Elgar Publishing, 2022. 416 p.

Hardcover \$270.00 (ISBN: 9781839107528). Contact publisher for e-book pricing (ISBN: 9781839107535).

The *Handbook of Research on Artificial Intelligence in Human Resource*

Management aims to provide an interdisciplinary, comprehensive overview of current research on and applications of artificial intelligence (AI) in human resource management (HRM). In his introductory chapter, editor Stefan Strohmeier (professor and chair of Management Information Systems at Saarland University, Germany) establishes AI in HRM as an emerging field of research that, to date, has been scattered across different disciplines. The multidisciplinary nature of the field is seen in the volume's contributors. They are researchers in fields such as human resources, psychology, management information systems, computer science, and law.

The *Handbook* consists of four parts. Part I, "Applications of Artificial Intelligence in Human Resources" examines AI in HRM using three guiding dimensions: data types including text, audio and visual media, and social media; functions of HRM, including recruiting, staffing, and personnel selection; and AI conventions, including machine learning, robotic process automation, and affective computing. Part II, "Consequences of AI in Human Resources," is focused on the impacts of AI on the field of HRM. Part III, "Normative Issues of Artificial Intelligence in Human Resources," looks at explainability, fairness, accountability, and legitimacy of AI in HRM, constituting a deep dive into social, ethical, and legal issues in the field. The handbook concludes with Part IV, "Research Issues of Artificial Intelligence in Human Resources," which looks at the research design of studies of AI in HRM as well as how artificial intelligence can aid in HRM research.

Strohmeier's introduction provides valuable context on human resource management and artificial intelligence. For his explanations of key technical concepts in AI, he relies on Russell & Norvig's *Artificial Intelligence: A Modern Approach*, a highly cited text [1]. His examination of the current state of AI in HR is grounded in part in Gartner's Hype Cycle methodology [2] to show the heterogeneity of HRM adoption of AI technologies. He argues that "...it is necessary that research does not follow the volatile ups and downs of public opinion, but instead conducts constant and sober work on what AI can or cannot really do in HR," [3] thus setting the tone of the rest of the volume.

One of the *Handbook's* strengths is its coverage of social, ethical, and legal issues involved in AI in HRM. The chapters in Part I of the volume do vary in their treatment of these issues, with some chapters taking a more detailed approach than others. Multiple chapters discuss the paucity of empirical studies into the use of AI in HRM and cite data protection concerns as one explanation. These issues are covered in-depth in Part III, but the handbook would have benefited from a more uniform examination across chapters in Part I, particularly since one of the goals of the volume was to provide an interdisciplinary look at the field. It is also notable that all contributors are based in either the United States or western Europe; the perspective of researchers from other areas including the Global South, East Asia, and Eastern Europe would have been welcome.

The *Handbook's* preface indicates it was organized to either be a comprehensive overview of the field or read as individual, standalone chapters. The introductory chapter's overview of AI in general and in HRM is written in language easily understood by researchers who are not experts in the technical aspects of AI. Throughout the handbook, tables are included that summarize existing literature; these provide starting points for further research into specific areas or aspects of AI in HRM. In all, the handbook is well suited for academic libraries. –Sara F. Hess, *Pennsylvania State University*

References

[1] Stuart J. Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (Hoboken, NJ: Pearson, 2021).

[2] “Gartner Hype Cycle.,” Gartner, Inc., accessed June 20, 2023, <https://www.gartner.com/en/chat/gartner-hype-cycle>. [3] Stefan Strohmeier, “Artificial Intelligence in Human Resources—an Introduction,” in *Handbook of Research on Artificial Intelligence in Human Resource Management*, ed. Stefan Strohmeier (Cheltenham, UK: Edward Elgar Publishing, 2022), 14.

Power and Prediction: The Disruptive Economics of Artificial Intelligence. Jay Agrawal, Joshua Gans, Avi Goldfarb. Boston, MA: Harvard Business Review Press, 2022. 288 p. Hardcover \$30.00 (ISBN: 9781647824198). Contact publisher for e-book pricing (ISBN: 9781647824204).

Power and Prediction, a new book by economists, AI experts and AI entrepreneurs Agrawal, Gans, & Goldfarb, takes readers on a journey at the threshold of AI adoption.

Power and prediction, contains helpful illustrations, relatable examples, and is written in six parts: The Between Times, Rules, Systems, Power, How AI disrupts, and Envisaging New Systems. Each part contains three chapters, each of these ending with a brief 'key points' section to drive the information home (or to refresh yourself of concepts). The authors contend we are in "the between times" where we know what AI can do and its broad adoption.

The work starts with the use of electricity, as an example of a 'radical technology,' and how it was applied as each, a point solution, an application solution, and a systems solution. In implementing solutions, we often start with the easiest straight across change – my example, out with the slide rule and in with the calculator. Being able to move past these "point solutions" readers will find that transformation from AI comes through the building of innovative systems. Businesses should be looking for point solutions – these are real opportunities for AI.

It is notable that the work is itself a tool for being able to identify opportunities for AI that are perhaps difficult to see. Those who are familiar with Osterwalder and Pigneur's Business Model Canvas—a single page tool that provides a visual framework for collecting information on a business idea or product [1] – will find that Agrawal, Gans, and Goldfarb provide their own "AI systems discovery canvas." Their canvas is designed to gather and record information as a visual organizer for thinking and making decisions. Putting the AI systems discovery canvas into action is surely going to lead to new thinking and systems solutions. Overall it is a great read for innovators, business leaders, and those curious about how artificial intelligence (AI) is going to change the future. Public libraries and institutions of higher education with communities engaged in economics, business, innovation, and entrepreneurship will have interested readers. —*Judy Opdahl, California State University San Marcos*

References

[1] Alexander Osterwalder and Yves Pigneur, *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers* (Hoboken, NJ: John Wiley & Sons, 2010).