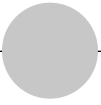

The Economics of Artificial Intelligence



**National Bureau of
Economic Research
Conference Report**



The Economics of Artificial Intelligence: An Agenda

Edited by

**Ajay Agrawal, Joshua Gans,
and Avi Goldfarb**

The University of Chicago Press

Chicago and London

The University of Chicago Press, Chicago 60637
The University of Chicago Press, Ltd., London
© 2019 by the National Bureau of Economic Research, Inc.
All rights reserved. No part of this book may be used or reproduced
in any manner whatsoever without written permission, except in the
case of brief quotations in critical articles and reviews. For more
information, contact the University of Chicago Press, 1427 E. 60th St.,
Chicago, IL 60637.
Published 2019
Printed in the United States of America

28 27 26 25 24 23 22 21 20 19 1 2 3 4 5

ISBN-13: 978-0-226-61333-8 (cloth)
ISBN-13: 978-0-226-61347-5 (e-book)
DOI: <https://doi.org/10.7208/chicago/9780226613475.001.0001>

Library of Congress Cataloging-in-Publication Data

Names: Agrawal, Ajay, editor. | Gans, Joshua, 1968– editor. | Goldfarb, Avi, editor.

Title: The economics of artificial intelligence : an agenda / Ajay Agrawal, Joshua Gans, and Avi Goldfarb, editors.

Other titles: National Bureau of Economic Research conference report.
Description: Chicago ; London : The University of Chicago Press, 2019. | Series: National Bureau of Economic Research conference report | Includes bibliographical references and index.

Identifiers: LCCN 2018037552 | ISBN 9780226613338 (cloth : alk. paper) | ISBN 9780226613475 (ebook)

Subjects: LCSH: Artificial intelligence—Economic aspects.

Classification: LCC TA347.A78 E365 2019 | DDC 338.4/70063—dc23

LC record available at <https://lcn.loc.gov/2018037552>

© This paper meets the requirements of ANSI/NISO Z39.48-1992
(Permanence of Paper).

National Bureau of Economic Research

Officers

Karen N. Horn, <i>chair</i>	Kelly Horak, <i>controller and assistant corporate secretary</i>
John Lipsky, <i>vice chair</i>	Alterra Milone, <i>corporate secretary</i>
James M. Poterba, <i>president and chief executive officer</i>	Denis Healy, <i>assistant corporate secretary</i>
Robert Mednick, <i>treasurer</i>	

Directors at Large

Peter C. Aldrich	Diana Farrell	Michael H. Moskow
Elizabeth E. Bailey	Jacob A. Frenkel	Alicia H. Munnell
John H. Biggs	Robert S. Hamada	Robert T. Parry
John S. Clarkeson	Peter Blair Henry	James M. Poterba
Kathleen B. Cooper	Karen N. Horn	John S. Reed
Charles H. Dallara	Lisa Jordan	Marina v. N. Whitman
George C. Eads	John Lipsky	Martin B. Zimmerman
Jessica P. Einhorn	Laurence H. Meyer	
Mohamed El-Erian	Karen Mills	

Directors by University Appointment

Timothy Bresnahan, <i>Stanford</i>	George Mailath, <i>Pennsylvania</i>
Pierre-André Chiappori, <i>Columbia</i>	Marjorie B. McElroy, <i>Duke</i>
Alan V. Deardorff, <i>Michigan</i>	Joel Mokyr, <i>Northwestern</i>
Edward Foster, <i>Minnesota</i>	Cecilia Rouse, <i>Princeton</i>
John P. Gould, <i>Chicago</i>	Richard L. Schmalensee, <i>Massachusetts Institute of Technology</i>
Mark Grinblatt, <i>California, Los Angeles</i>	Ingo Walter, <i>New York</i>
Bruce Hansen, <i>Wisconsin–Madison</i>	David B. Yoffie, <i>Harvard</i>
Benjamin Hermalin, <i>California, Berkeley</i>	
Samuel Kortum, <i>Yale</i>	

Directors by Appointment of Other Organizations

Jean-Paul Chavas, <i>Agricultural and Applied Economics Association</i>	Robert Mednick, <i>American Institute of Certified Public Accountants</i>
Martin J. Gruber, <i>American Finance Association</i>	Peter L. Rousseau, <i>American Economic Association</i>
Philip Hoffman, <i>Economic History Association</i>	Gregor W. Smith, <i>Canadian Economics Association</i>
Arthur Kennickell, <i>American Statistical Association</i>	William Spriggs, <i>American Federation of Labor and Congress of Industrial Organizations</i>
Jack Kleinhenz, <i>National Association for Business Economics</i>	Bart van Ark, <i>The Conference Board</i>

Directors Emeriti

George Akerlof	Franklin Fisher	John J. Siegfried
Jagdish Bhagwati	Saul H. Hymans	Craig Swan
Don R. Conlan	Rudolph A. Oswald	
Ray C. Fair	Andrew Postlewaite	

Relation of the Directors to the Work and Publications of the National Bureau of Economic Research

1. The object of the NBER is to ascertain and present to the economics profession, and to the public more generally, important economic facts and their interpretation in a scientific manner without policy recommendations. The Board of Directors is charged with the responsibility of ensuring that the work of the NBER is carried on in strict conformity with this object.

2. The President shall establish an internal review process to ensure that book manuscripts proposed for publication DO NOT contain policy recommendations. This shall apply both to the proceedings of conferences and to manuscripts by a single author or by one or more co-authors but shall not apply to authors of comments at NBER conferences who are not NBER affiliates.

3. No book manuscript reporting research shall be published by the NBER until the President has sent to each member of the Board a notice that a manuscript is recommended for publication and that in the President's opinion it is suitable for publication in accordance with the above principles of the NBER. Such notification will include a table of contents and an abstract or summary of the manuscript's content, a list of contributors if applicable, and a response form for use by Directors who desire a copy of the manuscript for review. Each manuscript shall contain a summary drawing attention to the nature and treatment of the problem studied and the main conclusions reached.

4. No volume shall be published until forty-five days have elapsed from the above notification of intention to publish it. During this period a copy shall be sent to any Director requesting it, and if any Director objects to publication on the grounds that the manuscript contains policy recommendations, the objection will be presented to the author(s) or editor(s). In case of dispute, all members of the Board shall be notified, and the President shall appoint an ad hoc committee of the Board to decide the matter; thirty days additional shall be granted for this purpose.

5. The President shall present annually to the Board a report describing the internal manuscript review process, any objections made by Directors before publication or by anyone after publication, any disputes about such matters, and how they were handled.

6. Publications of the NBER issued for informational purposes concerning the work of the Bureau, or issued to inform the public of the activities at the Bureau, including but not limited to the NBER Digest and Reporter, shall be consistent with the object stated in paragraph 1. They shall contain a specific disclaimer noting that they have not passed through the review procedures required in this resolution. The Executive Committee of the Board is charged with the review of all such publications from time to time.

7. NBER working papers and manuscripts distributed on the Bureau's web site are not deemed to be publications for the purpose of this resolution, but they shall be consistent with the object stated in paragraph 1. Working papers shall contain a specific disclaimer noting that they have not passed through the review procedures required in this resolution. The NBER's web site shall contain a similar disclaimer. The President shall establish an internal review process to ensure that the working papers and the web site do not contain policy recommendations, and shall report annually to the Board on this process and any concerns raised in connection with it.

8. Unless otherwise determined by the Board or exempted by the terms of paragraphs 6 and 7, a copy of this resolution shall be printed in each NBER publication as described in paragraph 2 above.