

THE AI ECONOMY: BUSINESS STRATEGIES AND POLICY ISSUES

UNIVERSITY OF BASEL
SUMMER 2022

Stephen Weymouth
Provost's Distinguished Associate Professor
McDonough School of Business
Georgetown University
stephen.weymouth@georgetown.edu

COURSE OVERVIEW

New business strategies driven by digitalization, big data, and artificial intelligence (AI) are disrupting economies and sparking new types of political conflict. On one hand, these technologies promise an economic transformation ripe with novel conveniences, more efficient production, and material and cultural bounty. On the other hand, technology will also fundamentally change manufacturing processes and services delivery, potentially eliminating jobs and increasing inequality. Unless properly managed, this economic transformation may create deep political conflicts between its beneficiaries and those left behind. These divisions threaten crises in governance, global capitalism, and geopolitics.

In this course, we survey the impact of the digital transformation on business, governments, and society. In the first week, we evaluate the new business tools and strategies relying on digitalization. We explore the digital value chain, and examine how digitally native firms create value in new ways. We then examine how firms making the transition to digital automation can integrate machine learning into their organizations to cut costs and generate new sources of revenue. In the second week, we study the social and political implications of the digital transformation. We interrogate the ways in which AI and automation could eliminate jobs and alter the future of work. We explore political and governance pitfalls that may emerge from the digital transformation: unemployment and widening inequality, the destruction of personal privacy, trade conflicts, and environmental degradation. We develop and evaluate policy proposals to forestall these concerns.

The class will be highly interactive and each student is expected to participate in each meeting. Successful contributions to the course require that you complete the readings prior to the session for which they are assigned.

REQUIREMENTS AND GRADES

The grades are computed as follows:

Contribution to the class (individual)	25%
Presentations (group)	40%
Short paper (group)	25%
Quiz (individual)	10%

CONTRIBUTION TO THE CLASS

I invite your participation at every session. In-class participation grades will be allocated based on the quality and quantity of your participation, with more emphasis on the former. Excellent participation means enhancing the experience for your classmates by answering questions that I ask of you in an insightful manner, making relevant comments and posing good questions to your colleagues that deepen the discussion. There is no substitute for in-class participation; no extra credit will be offered. No communication in any form outside of the classroom discussion will count towards your participation.

Your attendance is essential given the importance of class participation. If some other activity demands your attention more than the class, please let me know ahead of time. There is no “make-up” work if you miss a session.

STUDENT PRESENTATIONS

Note: The following is a summary of the presentations and papers (collectively called the group “project”). Additional information on the specific requirements will be provided in a project briefing.

The group project is a focus of the course. Groups will develop either: 1) a [business idea](#) for the AI economy, OR 2) a policy solution to global challenges caused by AI. The concluding event of the course is a brief presentation by each team during the final scheduled class session. The short paper will provide additional details on your business proposals or policy solutions. The paper must not exceed five pages (double-spaced) and will be due on 19 August 2022 before 18:00 Basel time. Please email the paper to stephen.weymouth@georgetown.edu with the subject line: AI Economy Paper.

READING MATERIALS

We will read articles and book chapters, which are linked below. Please read all assignments in advance of the day for which they are assigned.

COURSE TOPICS AND READING ASSIGNMENTS

SESSION 1: INTRODUCTION TO AI

Introduction to AI and related technologies
Recent advances in AI

Required Reading

- Brynjolfsson, Erik and Andrew McAfee. 2017. [“The Business of Artificial Intelligence”](#) Harvard Business Review.
- The Economist. [“Huge ‘Foundation Models’ are Turbocharging AI Progress.”](#) June 11, 2022.
- Iansiti, Marco and Karim R. Lakhani. 2020. [“The AI Factory.”](#) Chapter 3 of *Competing in the Age of AI: Strategy and Leadership When Networks Run the World*. Harvard Business School Press.

Group Presentation Lottery

SESSION 2: DATA AND THE GLOBAL DIGITAL ECONOMY

Data as a factor of production
Digital value chains and digital trade
Group activity: How businesses monetize data

Required Reading

- Weymouth, Stephen. 2022. [“The Global Digital Economy.”](#) Chapter 2 of *Digital Globalization*.
 - Taulli, Tom. 2019. [“Data.”](#) Chapter 2 of *Artificial Intelligence Basics: A Non-Technical Introduction*.
-

SESSION 3: MACHINE LEARNING

Introduction to machine learning
Group Activity: Task suitability for machine learning

Required Reading

- Taulli, Tom. 2019. [“Machine Learning.”](#) Chapter 3 of *Artificial Intelligence Basics: A Non-Technical Introduction*.
 - Taulli, Tom. 2019. [“Deep Learning.”](#) Chapter 4 of *Artificial Intelligence Basics: A Non-Technical Introduction*.
-

SESSION 4: AI IMPLEMENTATION IN BUSINESS

AI Implementation strategies

Required Reading

- Fountaine, Tim, Brian McCarthy, and Tamin Saleh. 2019. [“Building the AI-Powered Organization.”](#) Harvard Business Review. July-August.
- Taulli, Tom. 2019. [“Implementation of AI.”](#) Chapter 8 of *Artificial Intelligence Basics: A Non-Technical Introduction*.

SESSION 5: IMPLICATIONS OF THE AI ECONOMY: ENVIRONMENT, ECONOMY, AND SURVEILLANCE

Technological change and income

The future of work

Environmental impact of the digital economy

Group Activity: How much surveillance is too much?

Required Reading

- Candelon, François, Rodolphe Charme di Carlo, and Steven D. Mills. 2021. [“AI-at-Scale Hinges on Gaining a ‘Social License.’”](#) MIT Sloan Management Review.
- Crawford, Kate. 2021. [“Earth”](#) Chapter 1 of *The Atlas of AI*. Yale University Press.
- Zuboff, Shoshana. [“You are Now Remotely Controlled.”](#) New York Times. 24 January 2020.

SESSION 6: GOVERNANCE OF THE GLOBAL DIGITAL ECONOMY

Digital trade barriers

Politics of digital globalization

Group Activity: prospects for digital trade and tax agreements

Required Reading

- Weymouth, Stephen. 2022. [“Policy Impediments to Digital Globalization.”](#) Chapter 3 of *Digital Globalization*.
- Weymouth, Stephen. 2022. [“Digital Globalization Politics.”](#) Chapter 4 of *Digital Globalization*.

SESSION 7: WILL COUNTRIES COOPERATE OVER DIGITAL GLOBALIZATION?

AI superpowers debate

International economic cooperation

Required Reading

- Lee, Kai-Fu. 2018. [“A Tale of Two Countries.”](#) Chapter 4 of *AI Superpowers: China, Silicon Valley and the New World Order*.
- Weymouth, Stephen. 2022. [“Digital Globalization.”](#) Chapter 5 of *Digital Globalization*.

SESSION 8: BUSINESS AND POLICY IN THE AI ECONOMY

Presentation workshop

Student presentations

Quiz (in class) covering material from sessions 1-7.