POLITICAL ECONOMY OF INNOVATION

(This reading list is adapted from classes taught by Professor Victor Menaldo at the University of Washington)

This reading list serves as an introduction to the political economy of innovation. The readings explore the causes and consequences of innovation—including both efficiency and distributional issues. The questions that will be examined are several; here is a small sample of the bigger ones:

- What was the Great Economic Divergence in which modern, industrial economic growth was ignited and "the West" began to outpace the so-called Rest?
- Why should we care about the aforementioned phenomenon?
- What is innovation? What is technology? What is science? How are they different?
- How does innovation, technology, and science interact with the other mechanics of development—capital accumulation, education/training, and greater specialization through trade—to fuel prosperity and generate different distributions of income, assets, and opportunities?
- Have there been distinct "industrial revolutions" over history and what sets them apart?
- Are there different causes behind each of the industrial revolutions?

In examining these questions, the readings explore the role of institutions, culture, the state, property rights, policies, politics, and business strategy. The readings also cover these specialized topics:

- Capitalism & creative destruction
- Intellectual property rights
- Financial markets
- Basic scientific research
- Research and development
- Industrial strategy
- General Purpose Technologies
- Technological diffusion & the transfer of technology across borders
- The development of steam engines & textile automation
- The development of steel, electricity & mass-produced automobiles
- Computers, microprocessors & the internet
- Digital platforms, wireless networks, the Internet of Things & artificial intelligence

In doing all this, this readings lists embraces a multidisciplinary approach that combines insights from economics, economic history, business history, the history of technology, management studies, sociology, political science, and futurology. The readings explore both developed and developing countries, with a bit more emphasis on the former, and take both a cross-national and historical approach, with a bit more emphasis on the latter.

Required Texts

1) Acemoglu and Robinson, Why Nations Fail
2) Acemoglu, Modern Economic Growth
3) Bessen, Learning by Doing
4) Brynjolfsson and Mcafee, The Second Machine Age
5) Christensen, The Innovator's Dilemma
6) Goldin and Katz, The Race Between Education and Technology
7) Gordon, The Rise and Fall of American Growth
8) Lamoreaux and Sokoloff (eds.), Financing Innovation in the United States, 1870 to the Present
9) McCloskey, Bourgeois Dignity
10) Porter, Competitive Strategy
11) North, Wallis and Weingast, Violence and Social Orders
12) Perez, Technological Revolutions and Financial Capital
13) Schumpeter, Capitalism, Socialism and Democracy
14) Schwab, The Fourth Industrial Revolution

WEEK 1: The Great Divergence, Industrialization & Modern Economic Growth and Modern Life

1. Brynjolfsson and Mcafee, 2014 (The Second Machine Age), Chapter 1
2. McCloskey, 2010 (Bourgeoise Dignity), pgs. 1-6
3. Acemoglu, (Modern Economic Growth), Chapter 1
4. Goldstone, 2002 (stop at page 367).
5. McCloskey, 2010 (Bourgeoise Dignity), Chapters 11-13
6. Allen, 2012 (Technology and the great divergence: Global economic development since 1820)
7. Perez, 2002 (Technological Revolutions & Financial Capital), Chapters 1-6
8. Gordon, 2017 (The Rise & Fall of American Growth), Chapter 1
9. McCloskey, 2010 (Bourgeoise Dignity), Chapters 6-8
10. Brynjolfsson and Mcafee, 2014 (The Second Machine Age), Chapter 2
11. Bessen, 2015 (Learning by Doing), pgs. 1-5

WEEK 2: What Is Innovation and How to Think About It?

1) Acemoglu, 2009 (Modern Economic Growth), Chapter 2
2) Schumpeter, 1942 (Capitalism, Socialism and Democracy), Chapters 5-11
3) McCloskey, 2010 (Bourgeoise Dignity), Chapters 9-10
4) Arrow, 1962 (Economic Welfare and the Allocation of Resources for Invention)
5) Nelson, 1959 (The Simple Economics of Basic Scientific Research)
6) Acemoglu, 2009 (Modern Economic Growth), Chapter 12—only 411 to 422
7) Stephan, 2010 (The Economics of Science)
8) Romer, 1993 (Idea gaps and object gaps in economic development)
9) Dosi and Nelson, 2010 (Technical Change and Industrial Dynamics as Evolutionary Processes)

WEEK 3: The Role of the State, Intellectual Property Rights, Antitrust, Education, Government R&D, Government Procurement & Insurance

1) North, Wallis and Weingast, 2009 (Violence & Social Orders), Chapter 4
2) Rockett, 2010 (Property Rights and Invention)
3) Acemoglu et al, 2016 (State Capacity and American Technology: Evidence from the Nineteenth Century)
4) Barnett, 2008 (Maximizing Welfare Through Technological Innovation)
5) Goldin & Katz, 2008 (The Race Between Education & Technology), Chapters 4-7
6) Feldman & Kogler, 2008 (The Contribution of Public Entities to Innovation and Technological Change)
7) Bessen, 2015 (Learning by Doing), Chapter 10

WEEK 4: Firm Strategy and the Commercialization of Innovation

1) Porter, 1980/1998 (Competitive Strategy), Chapters 1-2 & 6 & 8 & 10-11 & 14-16
2) Christensen, 1997 (The Innovator's Dilemma), Chapters 1-5
3) King & Baatartogtokh, 2015 (How Useful is the Theory of Disruptive Innovation?)
4) Teece, 2010 (Technological Innovation and the Theory of the Firm)
5) Arora & Gambardella, 2010 (The Market for Technology)
6) Spulber, 2015 (How Patents Provide the Foundation for the Market for Inventions)

7) Lamoreaux and Sokoloff, 2007 (Financing Innovation), Chapter 9

8) Hall and Lerner, 2010 (Financing of R&D and Innovation)
9) Perez, 2002 (Technological Revolutions and Financial Capital), Chapters 7-11

WEEK 5: R&D, Learning by Doing, General Purpose Technologies, and Diffusion

1) Powell and Giannella, 2010 (Collective Invention and Inventor Networks)
2) Cohen and Levinthal, 1990 (Absorptive Capacity)
3) Bessen, 2015 (Learning by Doing), Chapters 1-4
4) Sinclair et al, 2000 (What's Experience Got to do with it?)
5) Nelson et al, 2004 (Why and how Innovations get adopted)
6) Rosenberg, 1972 (Factors Affecting the Diffusion of Technology)
7) David, 1990 (The Dynamo and the Computer)
8) Bajar, 2019 (The hardship of long-distance relationships)

WEEK 6: TECHNOLOGY TRANSFER ACROSS BORDERS

1) Menaldo, Forthcoming
2) Lucas, 2009 (Trade and Diffusion)
3) Pack & Westphal, 1986 (Industrial Strategy and Technological Change)
4) Saggi, 2002 (International Technology Transfer)
5) Aghion et al, 2019 (Spreading knowledge around the world)

WEEK 7: THE FIRST INDUSTRIAL REVOLUTION

1) Acemoglu & Robinson, 2011 (Why Nations Fail), pgs. 84-139 & 199-261
2) Mokyr, 2005 (The contribution of economic history to the study of innovation)
3) Goldstone 2002: pages 367-377.
4) Mokyr, 2009 (Intellectual Property Rights)
5) Allen, 2011 (Why the Industrial Revolution was British)
6) Allen, 1983 (Collective Invention)
7) McCloskey, 2010 (Bourgeoise Dignity), Chapters 2-3 & Chapters 14-46

WEEK 8: THE SECOND AND THIRD INDUSTRIAL REVOLUTIONS

1) Lamoreaux and Sokoloff, 1999
2) Lamoreaux and Sokoloff, 2007 (Financing Innovation), Chapters 1-5
3) Gordon, 2017 (The Rise & Fall of American Growth), Chapters 2-7 & 11
4) Wright, 1990 (The Origins of American Industrial Success)
5) Nelson & Wright, 1992 (The Rise and Fall of American Technological Leadership)
6) Gordon, 2017 (The Rise & Fall of American Growth), Chapters 13 & 17
7) Lamoreaux and Sokoloff, 2007 (Financing Innovation), Chapters 7-8 & 6
8) Greenstein, 2010 (Innovative Conduct in Computing and Internet Markets)

WEEK 9: THE FOURTH INDUSTRIAL REVOLUTION

1) Barnett, 2011 (Intellectual Property as a Law of Organization)
2) Osenga, 2018 (Ignorance over Innovation)
3) Campbell-Kelly et al, 2015 (Economic and Business Perspectives on Smartphones as multi-sided platforms)
4) Brake, 2018 (Economic Competitiveness and National Security Dynamics in the Race for 5G between the US and China)
5) Gordon, 2016 (The Rise & Fall of American Growth), Chapter 12
6) Brynjolfsson & Mcafree 2014 (The Second Machine Age), 2014, Chapters 3-6
7) Schwab, 2016 (The Fourth Industrial Revolution), Chapters 1-2
8) Brynjolfsson et al, 2017

WEEK 10: Effects of Innovation & Forecasting the Future

1) Bessen, 2015 (Learning by Doing), Chapters 5-9
2) Goldin & Katz, 2008 (The Race between Education & Technology), Chapters 1-3 & 8
3) Gordon, 2017 (The Rise & Fall of American Growth), Chapter 8
4) Dao et al, 2017 (Why is Labor Receiving a Smaller Share of Global Income)
5) Brynjolfsson & Mcafree, 2014 (The Second Machine Age), Chapters 9-12
6) Schwab, 2016 (The Fourth Industrial Revolution), Chapters 3
7) Webb, 2020 (The Impact of Artificial Intelligence on the Labor Market)

8) Atkinson & Wu, 2017 (False Alarmism: Technological Disruption and the US Labor Market)