Innovation Policy and the Economy: 
Introduction to Volume 12*

This volume is the twelfth annual volume of the National Bureau of 
Economic Research (NBER) Innovation Policy and the Economy (IPE) 
group. The appreciation of the importance of innovation to the economy 
has increased over the past decade. There is an active debate regarding 
the implications of rapid technological change for economic policy and 
the appropriate policies and programs regarding research, innovation, 
and the commercialization of new technology. This debate has only 
intensified as policy makers focus on new sources of innovation and 
growth in the light of the continuing economic downturn and the asso-
ciated focus on enhancing growth.

The IPE group seeks to provide an accessible forum to bring the work 
of leading academic researchers to an audience of policy makers and 
those interested in the interaction between public policy and innova-
tion. Our goals are:

• to provide an ongoing forum for the presentation of research on the 
  impact of public policy on the innovative process;
• to stimulate such research by exposing potentially interested research-
ers to the issues that policy makers consider important; and
• to increase the awareness of policy makers (and the public policy 
  community more generally) concerning contemporary research in eco-
  nomics and the other social sciences that usefully informs the evalua-
tion of current or prospective proposals relating to innovation policy.

This volume contains revised versions of the papers presented in the 
group’s meeting in Washington, DC, in April 2011.

The first two papers take a sober look at recent events in the United 
States economy and their implications for innovation and growth. The 
opening essay focuses on one of the most contentious issues: the role of 
financial innovation in the financial crisis. Simon Johnson and James
Kwak suggest that any assessment of financial innovation, and in particular the development of instruments such as collateralized debt obligations (CDOs) and credit default swaps (CDSs), must focus not simply on whether they passed a near-term “market test” (i.e., adoption and diffusion) but instead on whether these novel products actually enhanced beneficial financial intermediation (e.g., promoting the allocation of capital to more productive uses). Johnson and Kwak offer a range of evidence that, while there may have been significant value in earlier and simpler types of financial innovation (e.g., credit cards, venture capital), the evidence for the benefits of recent financial innovation is lacking (and the evidence for significant costs, grounded in agency problems and imperfect information and decision making, is considerable). They argue that a balanced evaluation of financial innovation would include calculations involving increased transaction costs, the costs of monitoring and oversight, and the risks of unanticipated consequences (including those borne by third parties). Despite the prospects for significant macroeconomic risk that can arise from the unforeseen consequences of financial innovation, the prospects for the regulation of such innovations are hampered by the significant political influence exercised by the financial industry.

A second vital economic question arising from the financial crisis has to do with the anemic pace of job creation. John Haltiwanger examines this question, highlighting how important an understanding of the complex churning of firms and jobs in the economy is. While the downside of job churning is evident to all—the trauma of job loss and business failure—there are also real economic benefits. Because one of the key drivers of productivity growth—which in turn leads directly to greater prosperity—is the reallocation of employees and funds. Thus the dynamism of the American economy is one of its real strengths.

Having set the stage, Haltiwanger then turns to the changes in job reallocation in recent years. Since 2007–08, there has been a sharp drop in both job reallocation and in job creation from new businesses: in particular, the latter has fallen to its lowest level since at least 1980. Job creation for small (young) businesses took an especially large hit in the recession and has been very slow to recover. These changes—if continued in upcoming years—have worrisome implications for future U.S. productivity and employment growth.

In light of the persistent sluggishness in the labor market that Haltiwanger documents, policy makers and innovation scholars have increasingly focused on the role of employment policy and labor market regulations. In particular, there has been increased attention to the
possibility that labor market rigidities may limit entrepreneurship, particularly for innovators who seek to develop a spin-off after working at a more established firm.

In “Non-compete Agreements: Barriers to Entry … and Exit,” Lee Fleming and Matt Marx consider the role of non-compete agreements in shaping labor market dynamics, the propensity for entrepreneurship, and regional migration. Non-compete clauses are agreements that limit the ability of employees to work in the same industry or found a competing firm for a specified amount of time after the end of an employment relationship. Marx and Fleming synthesize a recent and rapidly expanding body of research that documents the impact of non-compete agreements, with particular attention to the role of policies that limit the enforceability of non-compete agreements. Specifically, their research exploits a natural experiment in which Michigan inadvertently changed its non-compete policy, moving from an environment in which non-competes could not be enforced (thus enhancing the mobility options of workers) to an environment in which non-competes could be enforced.

Marx and Fleming develop striking evidence that the ability to enforce a non-compete agreement offers a bargaining advantage to employers over employees, and that these agreements reduce the level of job-hopping and entrepreneurship by innovators. Although labor market flexibility within a state may be limited by non-compete agreements, Marx and Fleming offer evidence that firms’ ability to enforce such agreements is associated with outmigration, with innovators moving to states (such as California) where such agreements cannot be enforced. Though non-compete agreements have received only limited attention in the research literature and policy debate, these new findings are likely to result in an enhanced focus on the role of non-compete agreements and other employment covenants (such as trade secrecy agreements) in shaping the labor market for innovators and the conditions supporting innovation-oriented entrepreneurship.

The next two papers focus on the consequences of technological advance, with a particular attention to advances in information technology. In the face of the relentless advance and increased centrality of digital networks and platforms, the role of individual privacy becomes salient. By and large, public debate is sparked by potential threats to privacy that arise when organizations are able to gain access to personal information (e.g., web surfing behavior, personal medical records).

Building on a recent body of empirical research in this area, Avi Goldfarb and Catherine Tucker offer a more systematic empirical analysis of these issues in “Privacy and Innovation.” In particular, Goldfarb
and Tucker consider the ways in which access to personal information can actually enhance performance and the benefits arising from participation within a digital network. For example, the ability to share electronic medical records (EMRs) among hospitals (a practice often severely constrained by privacy concerns and regulations) can not only spur adoption of EMR technologies but also enhance the ability of health care information technology to enhance patient outcomes. A similar logic holds when considering the role of privacy in online advertising markets. When firms are able to monitor online search and browsing behavior, they are able to offer more targeted and appropriate advertisements to consumers, enhancing the efficiency of advertising-supported online offerings. Presenting consumers with more targeted offerings allows them to enjoy a much less intrusive type of advertising (e.g., discreet text ads rather than more intrusive banner ads). Although additional research documenting the full range of costs and benefits of privacy regulation is still needed, Goldfarb and Tucker make a strong case that debates about privacy policy must be considered part of the innovation policy debate (and vice versa).

Joel Waldfogel’s work looks at one particularly contentious consequence of technological innovation: the impact of file sharing on the music industry. Ever since the rise of Napster, the sales of recorded music have fallen dramatically, to the point where U.S. music sales today (even after factoring in digital sales) are 30% below those in 1999. The recording industry claims that the cause of this decline has been piracy and that without stronger protection, fewer works by new artists will be introduced.

This paper takes a holistic view of the consequences of file sharing. It explores the consequences both for record company sales and for consumer welfare overall. Two somewhat opposed results are highlighted. First, the literature suggests that file sharing does indeed depress music sales. It seems that the short-run costs to society, however, are far less than the record companies’ losses suggest, because consumers benefit considerably from cheap (or free) music. The more interesting result concerns the development of new music. Waldfogel shows that the creation of high-quality new music seems to be as great as ever. One possible explanation is that while technology has facilitated file sharing, it has also made it much easier and cheaper to produce and distribute new music, thus spurring musical innovation. These results raise substantial doubts about the dire claims of the recording industry.

Together, these essays continue to highlight the importance of economic theory and empirical analysis in innovation policy analysis.
The issues involved are undoubtedly difficult. The chapters in this year’s volume suggest that contemporary research in economics informs the evaluation of current and prospective innovation policy alternatives.

Josh Lerner and Scott Stern

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