



CONNECT INNOVATION INSTITUTE

Innovation, Production, and Sustainable Job Creation:
Reviving U.S. Prosperity

America's Two Systems of Innovation: Recommendations for Policy
Changes to Support Innovation, Production and Job Creation

EXECUTIVE SUMMARY

Dan Breznitz and
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From The College of Management
and the Sam Nunn School of International Affairs, Georgia Institute of Technology
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**America's Two Systems of Innovation: Recommendations for Policy Changes to Support
Innovation, Production and Job Creation***Executive Summary*

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Innovation is the key to America's competitiveness. However, innovation needs to be understood more broadly than it typically has been. Conventional conversations about innovation focus on breakthrough novel developments that give rise to "game-changing" technology. This type of innovation has been the hallmark of the American economy since the beginning of the industrial revolution and has been the source of enormous wealth and value for the nation. Current trends towards globalization of design, production, sophisticated manufacturing, and distribution require a new, expanded approach to innovation—in processes and production, as well as incremental product innovation—in order to avoid the risk of losing jobs and industrial capabilities essential to the overall competitiveness of the U.S. economy.

A strategy for manufacturing products and production innovation must recognize the growing interdependence of services and manufacturing in the new global landscape. The focus should be on these four building blocks: 1) shared production assets: firms need to fund and use assets held in common by a variety of contractual and institutional mechanisms; 2) effective innovation network structures: markets, contracts, and firms no longer provide an adequate "glue" for effectively linking together pools of innovators; 3) flexible business models: restructuring the traditional definitions of supply and demand functions in markets is often as important as an innovative product; 4) specialized financial institutions: risk assessment capacity and lending/investment models appropriate to different types of innovation are necessary

On February 22, 2012, the CONNECT Innovation Institute released a package of several research studies addressing these issues and analyzing the state of American production at the Brookings Institution program entitled "Why—and Which—Manufacturing Matters: Innovation and Production in the U.S." Recommendations will be offered regarding specific actions that can ensure competitiveness, particularly at the regional level, in order to amplify the benefits of innovation across society.

The preliminary public policy ideas that require further study and potential legislative development fall into three main categories: production models, production financing, and production workforce development. The following synopsis outlines the policy recommendations.

I. Production Models

The new innovation economy's manufacturing and financing demands have eclipsed the traditional model where individual companies are able to build and finance their own production facilities. Other countries have adopted different models that have the potential to succeed in the U.S. and provide new production flexibility for emerging companies. These models provide major advantages to both incremental product innovation and production.

Policy Recommendations:

- Create an American version of the industrial design institutes and technology transfer programs successfully used in partnering with small- and medium-sized firms in such countries as Germany, Israel, and Taiwan.
- Incentivize the growth of contract manufacturing organizations (CMOs) in the U.S., including policies that will attract foreign CMOs to expand their operations in the U.S.
- Encourage states, counties, and cities to collaborate as regional entities to explore regional manufacturing platforms including redeployment of abandoned or underutilized production facilities.
- Fund a SWAT team approach to address opportunities for newly announced plant closings with the intent of turning them into CMOs wherever feasible.

II. Production Financing

Innovative financing options are necessary to facilitate new manufacturing models along with revitalizing existing production assets in the U.S.

Policy Recommendations:

- Create new public-private investment banks for specialized technology sectors and their unique production demands.
- Change tax policy to incentivize American corporations to deploy their cash stockpiles, both foreign and domestic, in U.S. manufacturing expansion and venture investment.
- Remove regulatory financing barriers and adjust tax policies to make capital more readily available for investment in production.
- Allow Intellectual Property (IP) rights to be valued as an asset for federal lending and grant programs.

III. Production Workforce Development

New product and production models must be supported by a highly skilled, well-trained workforce.

Policy Recommendations:

- Increase specialized industry-designed regional training schemes.
- Encourage education systems to engage industry to match graduate students in STEM fields (science, technology, engineering, and mathematics) with production needs for small and medium enterprises (SMEs).



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NOTES:

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The CONNECT Innovation Institute was founded in July 2010 as a think tank to focus exclusively on innovation policy and competitiveness in the global economy. The CONNECT Innovation Institute publishes timely thought papers from San Diego leaders for use in addressing federal policy issues, and it raises funds for larger scale policy projects involving leading scholars of innovation.

CONNECT is a non-profit that has assisted in the formation and development of more than 3,000 companies in the San Diego region and is widely regarded as one of the world's most successful organizations linking inventors and entrepreneurs with the resources they need for commercialization of innovative products in high tech and life sciences. The program has been modeled in more than 50 regions around the world. CONNECT has been recognized by *Time*, *Inc.* and *Entrepreneur* magazines and in 2011 won the national State Science and Technology Institute's 2011 Excellence in Tech Based Economic Development Award for Building Entrepreneurial Capacity. In 2010, CONNECT was the recipient of the Innovation in Economic Development Award from the U.S. Department of Commerce for creation of Regional Innovation Clusters. CONNECT manages the San Diego, Imperial Valley, Inland SoCal Innovation Hub (iHub) designated by the state of California Governor's Office of Business & Economic Development in 2010. Key to our success has been the unique "culture of collaboration" between research organizations, capital sources, professional service providers and the established industries.

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