



Los Angeles Area
Chamber of Commerce

A better L.A. is our business



Global Initiatives Council

**CHAIR: Elizabeth Glynn,
UCLA Extension**

Wednesday, August 18
9 a.m. Registration & Networking
9:30 – 11 a.m. Program

MEETING AGENDA

I. Welcome Remarks

Carlos Valderrama
Senior VP, Global Initiatives
L.A. Area Chamber

Elizabeth Glynn
Chair, Global Initiatives Council
UCLA Extension

II. Presentation

Ross DeVol
Milken Institute: Executive Director of
Economic Research &
Executive Director of the Centers for Health
Economics, Regional Economics and
California

III. Questions & Answers

Elizabeth Glynn

Adjourn.

CO-CHAIR – Los Angeles World Trade Fair:
Norman Arikawa, International Trade Development Manager,
Port of Los Angeles

CO-CHAIR – International Trade Policy:
Brian Peck, Adjunct Professor, University of Southern California

CO-CHAIR – Trade Commissioners Networking Group:
Monica Banken, Outreach Programs Coordinator, RAND Corporation

Ross DeVol

Executive Director of Economic Research
Executive Director of the Centers for Health Economics, Regional Economics and California
Milken Institute

Ross DeVol oversees the Institute's research on the dynamics of comparative regional growth performance, technology and its impact on regional and national economies and health-related topics such as chronic disease. He is an expert on the intangible economy and how regions can prepare themselves to compete in it. He was the principal author of "*An Unhealthy America: The Economic Burden of Chronic Disease*" which brought to light for the first time what is often overlooked in the discussion of the impact of chronic disease — the economic loss associated with preventable illness and the cost to the nation's Gross Domestic Product (GDP) and American businesses in lost growth. The study is the first of its kind to estimate the avoidable costs if a serious effort were made to improve Americans' health.

DeVol authored the ground-breaking study, *America's High-Tech Economy: Growth, Development, and Risks for Metropolitan Areas*, an examination of how clusters of high-technology industries across the country affect economic growth in those regions. He also created the *Best Performing Cities Index*, an annual ranking of U.S. metropolitan areas that shows where jobs are being created and economies are growing. Other recent work involves the study of biotechnology and other life-sciences clusters, and the impact these industries have on regional economies. He was the lead author of *Mind-to-Market: A Global Analysis of University Biotechnology Transfer and Commercialization* released in September, 2006. This study looked at the transfer and commercialization of university-developed intellectual property on a global basis with particular focus on the field of biotechnology.

Prior to joining the Institute, DeVol was senior vice president of Global Insight, Inc. (formerly Wharton Econometric Forecasting), where he supervised their Regional Economic Services group. He was the firm's chief spokesman on international trade. He also served as the head of Global Insight's U.S. Long-Term Macro Service and authored numerous special reports on behalf of the U.S. Macro Group. He is ranked among the "Super Stars" of Think Tank Scholars by International Economy magazine.

Manufacturing, exports and jobs for California and America

Policies for economic growth and competitiveness

Global Initiatives Council
Los Angeles Area Chamber of Commerce
August 18, 2010

Ross DeVol

Executive Director, Economic Research

(310) 570 4615

rdevol@milkeninstitute.org

www.milkeninstitute.org

Presentation Outline



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- **Manufacturing 2.0: The state of California manufacturing**
- **Current California manufacturing and export performance**
- **Jobs for America (and California)**
- **Summary**

Manufacturing 2.0

Presentation Outline



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- I. **Goals of the report**
- II. **The state of California manufacturing**
- III. **Why manufacturing matters**
- IV. **State case studies**



I. Goals of the report

- **Assess the condition of California's manufacturing industry (2000 to 2007)**
- **Conduct a retrospective simulation to show where the industry *could* have been if the state sustained the same share of manufacturing employment as in 2000**
- **Identify the California manufacturing industry's competitive challenges**
- **Compare the decline of the California manufacturing industry to other states**
- **Provide recommendations to enhance the competitiveness of California's manufacturing industry**

II. The state of California manufacturing

Share of the California economy

	2000	2007	change
Employment	12.8%	9.7%	-24.2%
Earnings	15.0%	11.7%	-22.0%
Real output	14.2%	11.1%	-21.8%

Sources: BLS, Moody's Economy.com, Milken Institute.

II. The state of California manufacturing



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Ranked by absolute change in employment, 2000-2007

	Change in No. of Jobs	Percent Change
Biggest gainers:		
Beverage	9,900	29.9%
Pharmaceutical and Medicine	6,400	16.8%
Other Food	4,200	23.7%
Cement and Concrete Product	1,900	9.1%
Dairy Product	1,100	7.2%
Biggest decliners:	Change in No. of Jobs	Percent Change
Cut and Sew Apparel	-45,000	-40.2%
Semiconductor and Other Electronic Component	-39,900	-27.7%
Computer and Peripheral Equipment	-30,300	-34.7%
Printing and Related Support Activities	-23,500	-28.7%
Aerospace Product and Parts	-18,400	-20.3%

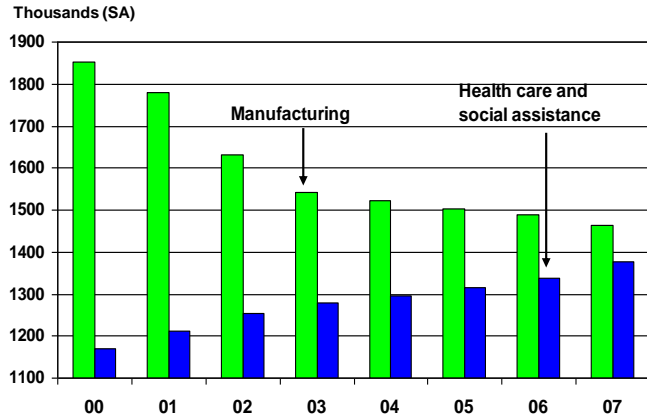
Sources: U.S. Bureau of Labor Statistics, Moody's Economy.com, Milken Institute.

II. The state of California manufacturing

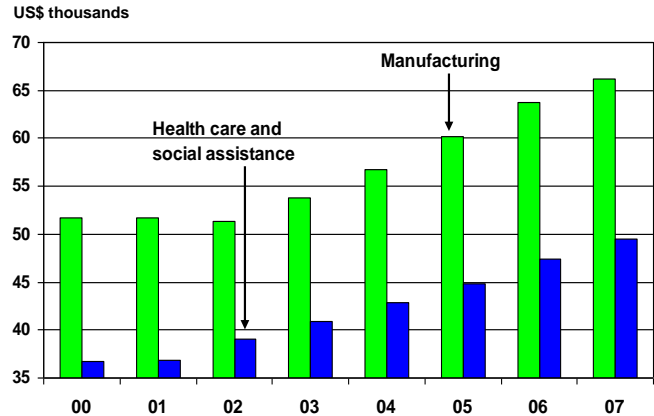
Manufacturing versus social services



Employment



Wages



II. The state of California manufacturing

High-tech contribution to manufacturing real GSP (US\$ billions)

	2000	2007	% Chg	% of mfg real GSP (‘07)
High-tech manufacturing industries				
Navigational, measuring, electromedical, and control instruments	\$15.9	\$27.9	76.1	14.1
Semiconductor and other electronic component	\$21.8	\$27.3	25.4	13.8
Computer and peripheral equipment	\$19.3	\$22.5	16.6	11.3
Pharmaceutical and medicine	\$7.6	\$9.6	27.0	4.8
Aerospace product and parts	\$5.6	\$8.6	54.6	4.3
Medical equipment and supplies	\$6.1	\$7.0	15.3	3.5
Communications equipment	\$6.6	\$6.9	4.2	3.5
Manufacturing and reproducing magnetic and optical media	\$2.1	\$1.8	-14.2	0.9
Commercial and service industry machinery	\$3.5	\$1.5	-57.1	0.8
Audio and video equipment	\$1.1	\$1.5	33.4	0.8
Total	\$89.6	\$114.8	28.1	57.8

Note: Numbers may not add up due to rounding.

Sources: Bureau of Economic Analysis, Moody's Economy.com, Milken Institute.

III. Why manufacturing matters

Retrospective simulation on California manufacturing



	Hypothetical 2007 (assuming 2000 share)	Actual 2007	Net gain
Employment (thousands)	1,939	1,463	476
Earnings (US\$ billions)	\$124.2	\$96.9	\$27.3
Real output (US\$ billions)	\$216.0	\$169.1	\$46.9

Economic impacts of simulation to broader economy

	Multiplier	Direct impact	Indirect impact	Total impact
Employment (thousands)	3.5	476	1,174	1,650
Earnings (US\$ billions)	2.8	\$27.3	\$47.8	\$75.1
Real output (US\$ billions)	2.2	\$46.9	\$54.3	\$101.2

III. Why manufacturing matters

Retrospective simulation by sub-sector

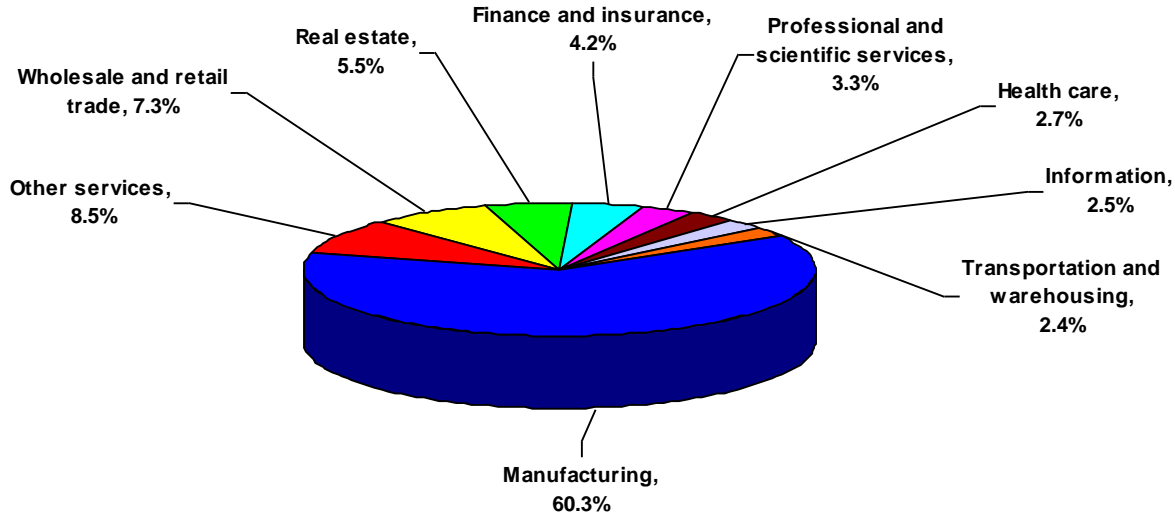


Rank	Manufacturing subsector	2000 share of nonfarm employment	2007 share of nonfarm employment	Thousands	
				Hypothetical 2007 emp (assuming 2000 share emp)	Net gain
1	Cut and sew apparel manufacturing	0.77%	0.44%	117.2	50.3
2	Semiconductor and other electronic component manufacturing*	0.99%	0.69%	150.8	46.6
3	Computer and peripheral equipment manufacturing*	0.60%	0.38%	91.4	34.3
4	Printing and related support activities	0.56%	0.38%	85.7	27.3
5	Aerospace product and parts manufacturing*	0.63%	0.48%	95.0	22.7
6	Plastics product manufacturing	0.45%	0.31%	67.7	21.2
7	Navigational, measuring, electromedical, and control instruments mfg*	0.82%	0.68%	124.3	20.5
8	Communications equipment manufacturing*	0.30%	0.17%	45.9	19.5
9	Household and institutional furniture and kitchen cabinet manufacturing	0.34%	0.23%	52.2	17.9
10	Commercial and service industry machinery manufacturing*	0.19%	0.09%	28.3	14.3

*denotes high-tech industry

III. Why manufacturing matters

Economic activity generated by manufacturing in California



Sources: BLS, BEA, Moody's Economy.com, Milken Institute.

IV. State case studies

Methodology



California is compared to seven “peer states” chosen based on:

1. **Increasing share – the state’s share of U.S. manufacturing employment increased from 2000 to 2007**
2. **High-tech – the state’s share of U.S. high-tech manufacturing employment also increased during the same time period**
3. **Above average – The state’s share of U.S. high-tech manufacturing employment in 2007 either matched or exceeded the national average of 2 percent.**

***Texas did not meet all three criteria, but was included in the analysis because of its large share of U.S. manufacturing and similarity and proximity to California.**

IV. State case studies

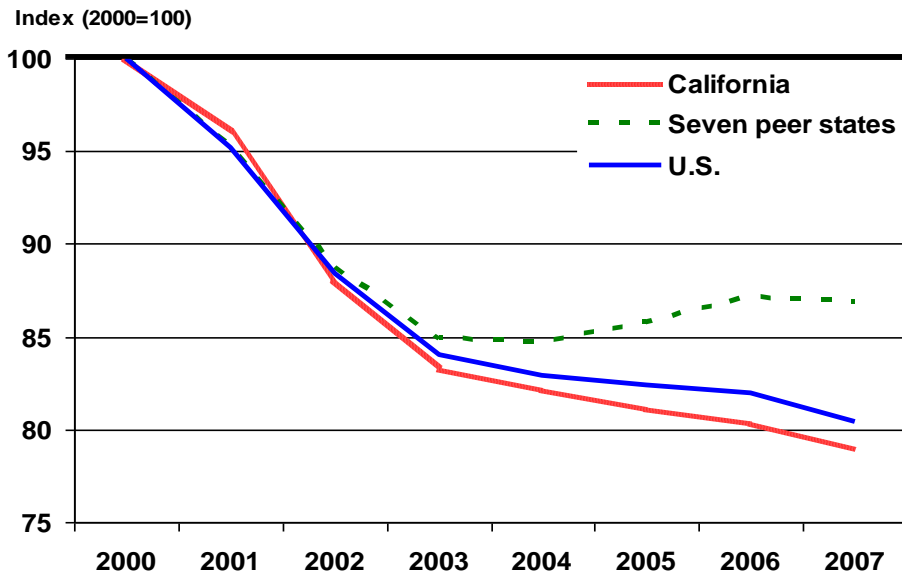
Analysis categories



- **Economic climate – GDP growth, per capita income, exports**
- **Business climate – tax rates, per capita tax burden, government debt, business start-ups**
- **Business and economic rankings – selection of leading benchmarking studies**
- **Manufacturing indicators – share of real GDP, output, high-tech employment, research and development**
- **Public incentives – leading incentive programs from peer states are analyzed**

IV. State case studies

Manufacturing employment since 2000



Note: The peer states include Arizona, Indiana, Kansas, Minnesota, Oregon, Texas, and Washington.

Sources: BLS, Moody's Economy.com, Milken Institute.

IV. State case studies

Peer states' shares of U.S. high-tech manufacturing jobs

Peer states	2000	2007	Change (+/-)
California	20.5%	19.7%	-
Texas	7.8	7.5	-
Washington	4.1	4.5	+
Minnesota	2.9	3.1	+
Arizona	3.0	3.1	+
Indiana	2.3	2.8	+
Kansas	1.9	2.2	+
Oregon	1.8	2.0	+

Sources: BLS, Moody's Economy.com, Milken Institute.

IV. State case studies



Key findings

1. **Employment – California is losing a larger share of manufacturing employment overall, in high-tech in particular, and at a faster rate compared to these other states**
2. **Performance – California has a wide gap between its capacity for ingenuity and entrepreneurship and its ability to efficiently commercialize innovation in manufacturing**
3. **Taxes and Regulation – This gap continues to widen in part due to the burden of an onerous regulatory climate and some of the highest taxes in the United States**
4. **Reputation – California has a reputation for being a state that is unfriendly to business, which harms its overall competitiveness**
5. **Incentives – Peer states are using targeted incentives to keep and lure manufacturers away from California**

Top 10 California export markets



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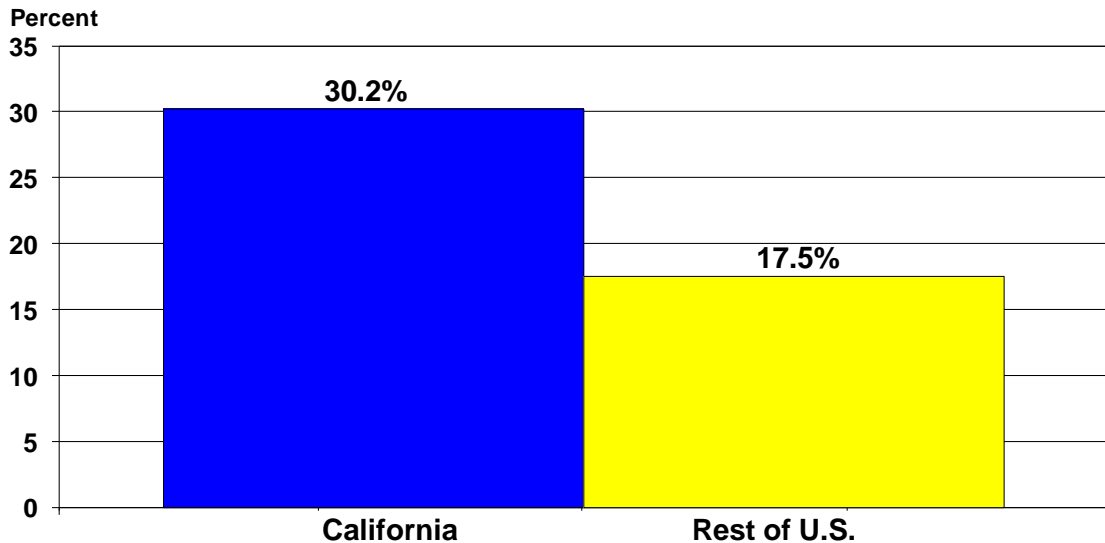
Ranked by value of exports

Country	Value (\$ mill.)	Share of CA (%)	Share of U.S. (%)
Mexico	17,474	14.6	12.0
Canada	14,315	11.9	19.0
Japan	10,902	9.1	5.0
China	9,744	12.9	9.0
South Korea	5,913	4.9	3.0
Germany	4,441	3.7	4.0
Taiwan	4,120	3.4	2.0
United Kingdom	3,916	3.3	4.0
Netherlands	3,566	3.0	3.0
Australia	3,445	2.9	2.0
<i>Top Asian countries</i>	24,091	33.1	21.0

Source: U.S. Census Bureau.

Hi-tech share of exports

2009



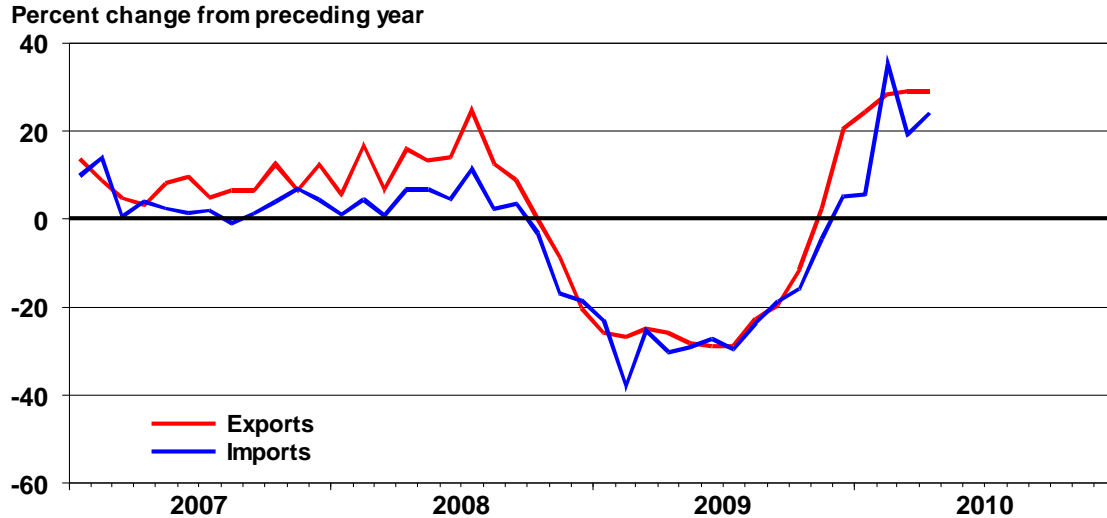
Sources: U.S. Census Bureau, Moody's Economy.com.

Movement through California's ports

Annual growth



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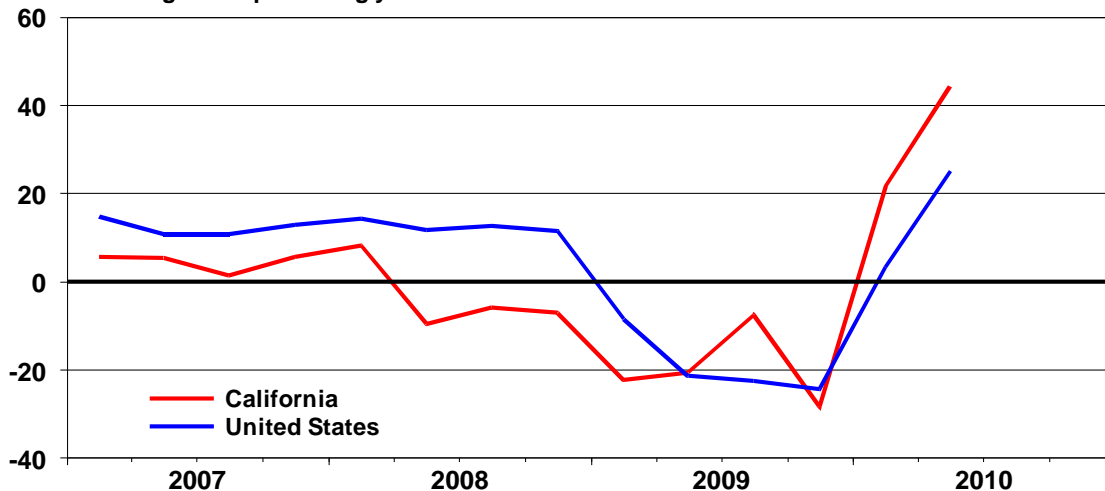


Source: California Department of Finance.

California exports rebounding faster than U.S.

Value of shipments

Percent change from preceding year

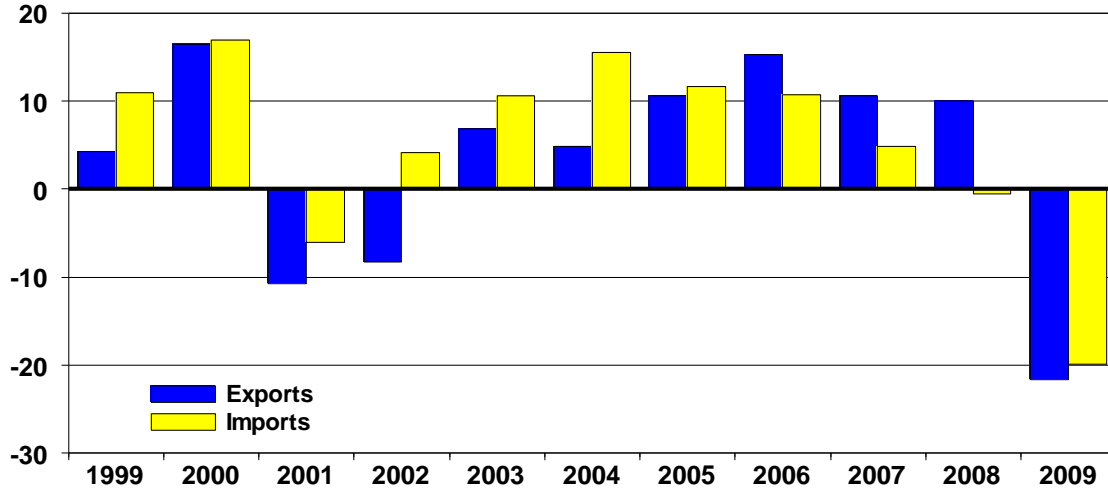


Movement through LA customs district

Annual growth



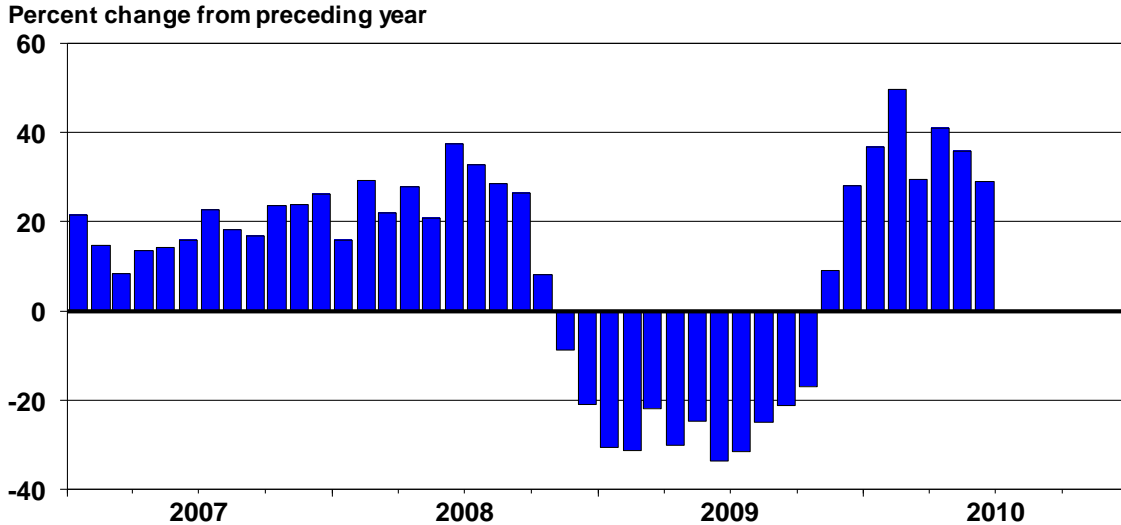
Percent change from preceding year



Sources: Los Angeles Economic Development Corporation, U.S. Census Bureau.

Exports through LA customs district

Value of shipments by sea



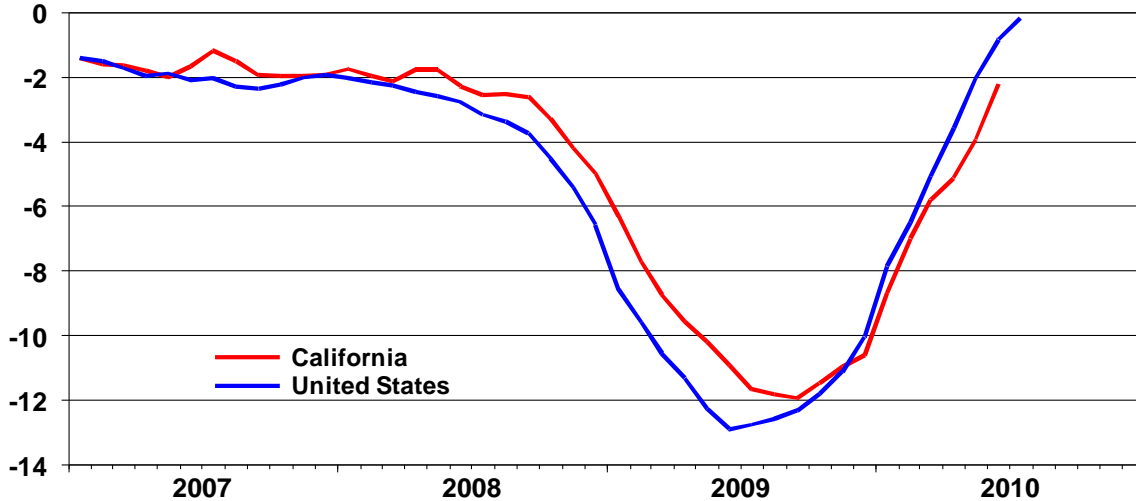
Sources: U.S. Census Bureau, Moody's Economy.com.

Rate of manufacturing decline slows

Manufacturing employment



Percent change from preceding year



Sources: Bureau of Labor Statistics, IHS Global Insight.

Introduction: Jobs for America

Project outline



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Improving economic and tax policy

- **Reducing the U.S. corporate income tax rate to match the OECD average**
- **Increasing the R&D tax credit by 25 percent and making it permanent**
- **Modernizing U.S. export controls on commercially available technology products**

Improving economic and tax policy

Methodology



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- **Macro-econometric growth model of U.S. economy**
- **Long term tied to productive potential of economy**
 - **Human capital**
 - **Physical capital**
 - **Energy usage**
 - **Technological progress – R&D investment**
- **Short-run cyclical movements converge to long-run equilibrium**
- **Compare policy change scenario to a baseline projection without adjustment**

Implications of high corporate income taxes

Background



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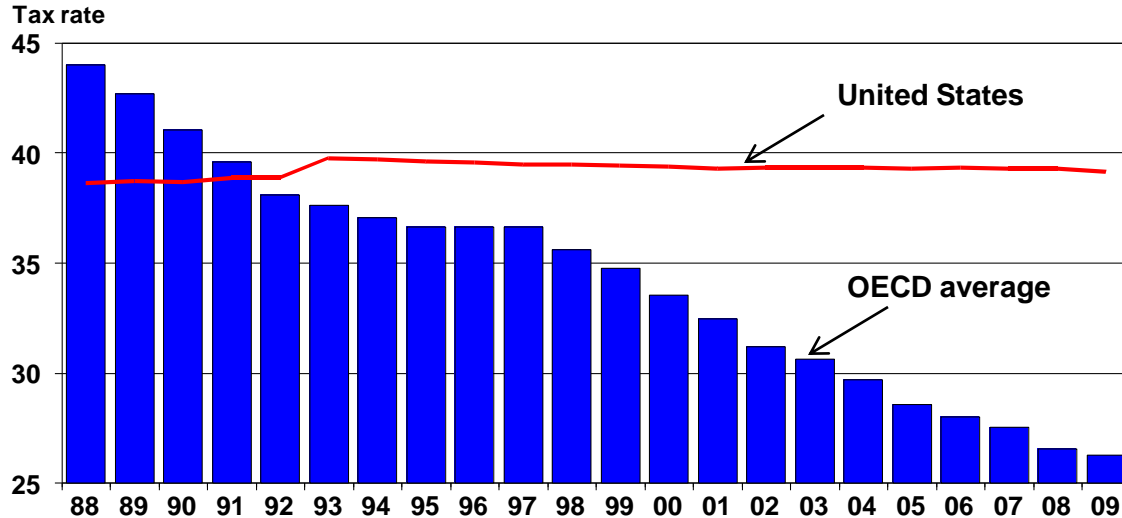
- **Globalization has altered the importance of tax and economic policy considerations.**
- **International differences in corporate income tax rates are a factor when firms determine where to locate operations.**
- **If U.S.-based multinational corporations do not find a favorable tax policy environment here, they will choose to produce more goods abroad and export fewer manufactured goods from the United States.**
- **A higher corporate tax rate lowers the hurdle rate, decreasing the long-run optimal capital investment.**
- **Internationally, a high corporate tax rate reduces the efficiency of investments.**

Statutory corporate income tax rates

OECD average vs. United States



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Sources: OECD, Milken Institute.

Empirical evidence of economic impacts of corporate tax rates



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- **Changes in international corporate tax rates have provided a rich environment for research to test impacts.**
- **Inward foreign direct investment and quality of investment.**
- **Disproportionately affect productivity growth in the economy.**
- **High rates reduce wage growth.**
- **Strong link between corporate tax rate and overall economic growth.**

Corporate income tax policy simulation



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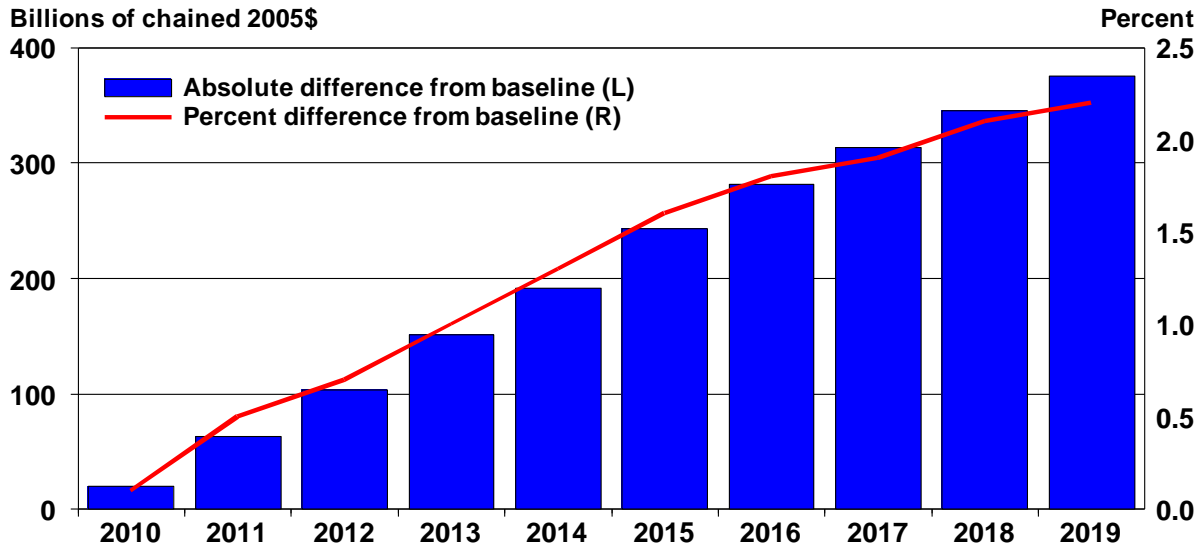
- Reduce the U.S. statutory rate to OECD average.
- Federal rate cut by 13 percentage points to 22 percent over five years.
- We compare the scenario where rates are reduced to a baseline economic projection without an adjustment.
- User cost of capital is cut making the U.S. a more attractive location to invest.
- Within two years businesses adjust investment plans.

Corporate income tax policy simulation

Impact on real GDP



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Sources: U.S. Bureau of Economic Analysis, Milken Institute.

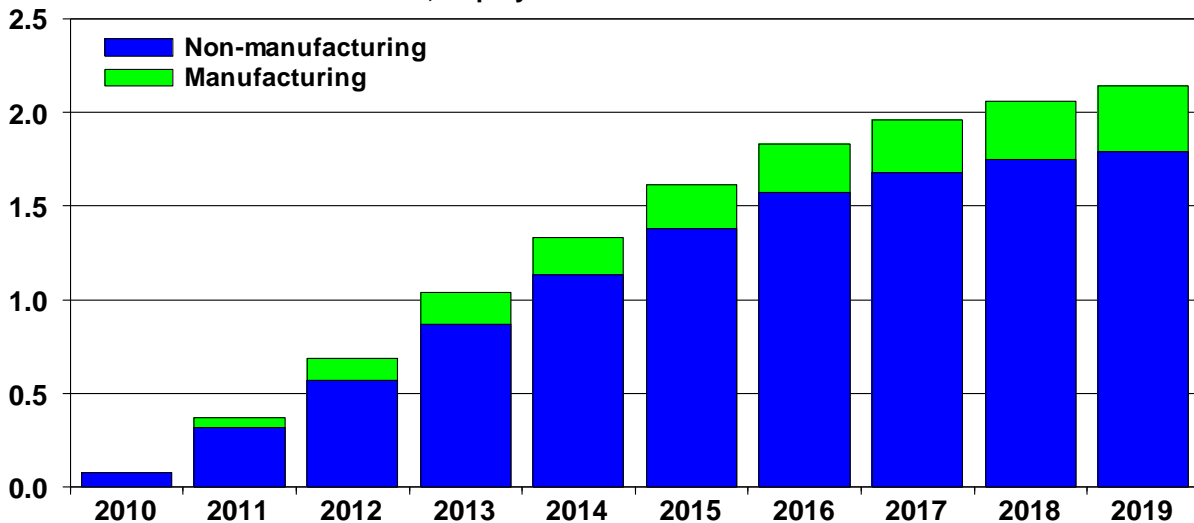
Corporate income tax policy simulation

Impact on employment



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Absolute difference from baseline, employment in millions



Sources: U.S. Bureau of Labor Statistics, Milken Institute.

Implications of R&D tax credit

Background



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- Innovation is increasingly important in a knowledge-based economy.
- Continuous research and development is essential for sustainable growth.
--Subject to regulatory, innovation and monetary risks
- R&D tax credits encourage innovation.
- Allowing R&D tax credits to expire discourages investment in innovation.

Tax subsidy rate for US\$ 1 of R&D

OECD countries, large firms and SMEs, 2008



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Rank	OECD countries	Large firms	SMEs
1	France	0.43	0.43
2	Spain	0.35	0.35
3	Portugal	0.28	0.28
4	Czech Republic	0.27	0.27
5	Turkey	0.22	0.22
6	Norway	0.21	0.23
7	Canada	0.18	0.33
8	Korea	0.18	0.16
9	Hungary	0.16	0.16
10	Denmark	0.14	0.14
19	United States	0.07	0.07
	OECD average	0.11	0.12

Source: Warda, J. (2009) "An Update of R&D Tax Treatment in OECD Countries and Selected Emerging Economies, 2008-2009".

Empirical evidence of economic impacts of R&D tax credits



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- Strong relationship between R&D tax credits and R&D activities.
- R&D tax credits generated greatest change in R&D spending relative to other incentives.
- Across industrialized countries, increase in GDP is greater than the costs of credits.
- A study in France showed more than a tripling in R&D activities through tax credits.
- Evidence across state/provincial show a robust relationship between R&D tax credits, R&D investment and economic performance.

R&D tax credit policy simulation

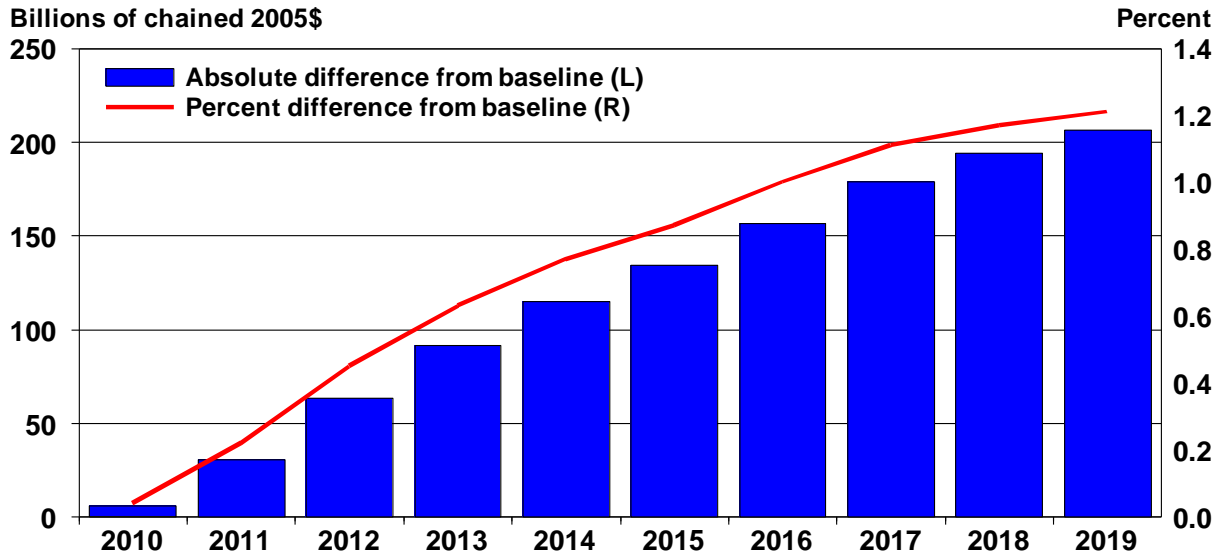


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- **Make R&D tax credit permanent and increase by 25 percent.**
- **We compare the scenario where the credit is increased to a baseline economic projection without an adjustment.**
- **After tax cost of R&D activities reduced encouraging greater investment.**
- **Dynamic feedback mechanism on economic activity.**

R&D tax credit permanent and increased by 25 percent policy simulation

Impact on real GDP



Sources: U.S. Bureau of Economic Analysis, Milken Institute.

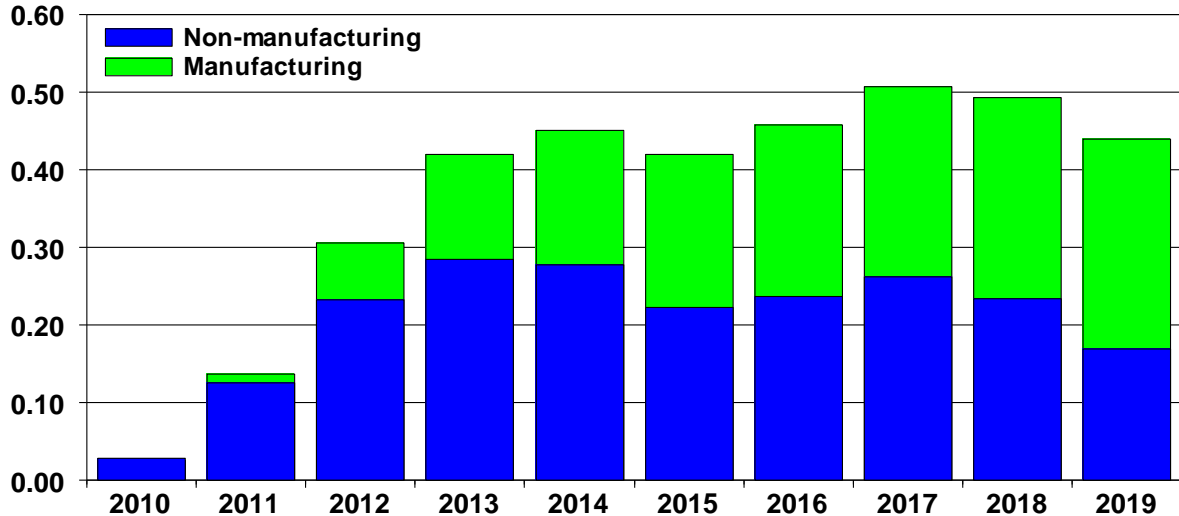
R&D tax credit permanent and increased by 25 percent policy simulation

Impact on employment



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Absolute difference from baseline, employment in millions



Sources: U.S. Bureau of Labor Statistics, Milken Institute.

Modernizing export controls in the U.S.

Background



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- **Globalization has provided the opportunity for exporting countries to tap vast new markets.**
- **For legitimate national security reasons, the U.S. placed export controls on dual-use goods and sensitive technologies.**
- **However, many of these controls reflect a Cold-war mentality.**
- **Modernizing U.S. export controls might allow:**
 - Greater exports of widely available technology to countries around the globe.**
 - Increasing technology exports that build strong linkages with user nations, creating a positive feedback loop.**
 - Maintaining a competitive edge in the world market through multilateral trade agreements rather than unilateral trade agreements.**

Trade value of electronic integrated circuits and micro-assemblies

China and world, 2008



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	China's imports		World imports
	Amount (US\$ billions)	Share (percent)	Share (percent)
World	130.8*	100	100**
Leading exporting countries			
United States of America	7.3	5.6	11.0**
Chinese Taipei	29.5	22.6	10.6
Republic of Korea	23.0	17.6	14.0
Japan	14.2	10.9	8.7
Malaysia	12.9	9.9	1.6
Philippines	12.0	9.2	3.6
Singapore	3.8	2.9	16.7
Thailand	2.8	2.1	1.9
Costa Rica	2.2	1.7	0.3
Hong Kong	1.8	1.4	11.7
Germany	1.3	1.0	3.5

*China's share of World imports was 30.4 percent.

** Total World imports were US\$ 430.2 billion.

*** Total U.S. exports were US\$ 41.94 billion.

Modernizing export controls simulation



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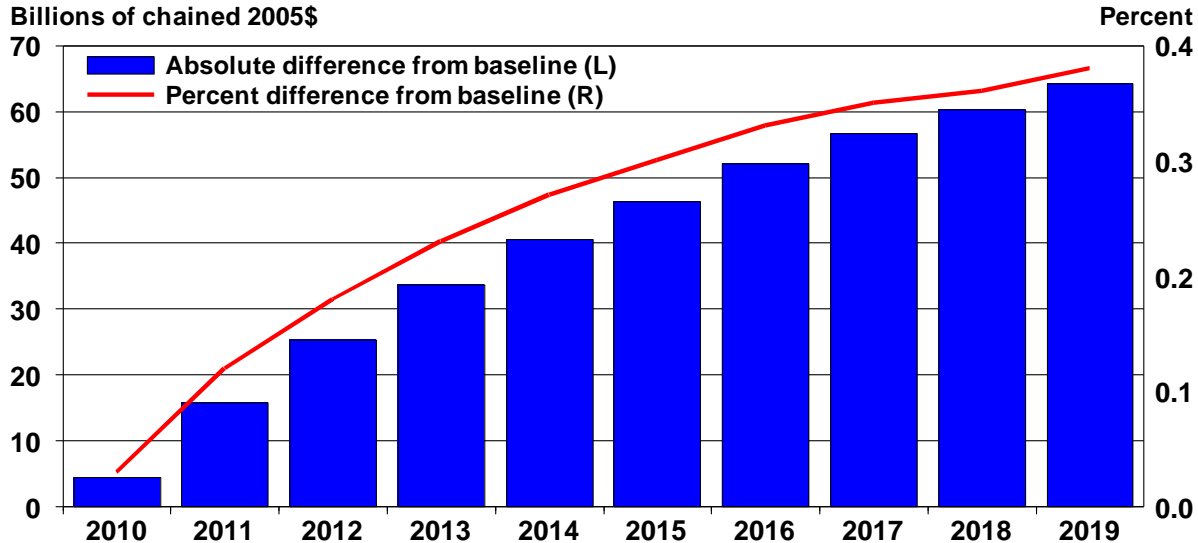
- **U.S. innovation and competitiveness in international markets improves which is an essential element of national security.**
- **Other countries will supply the commercially available technology products if the U.S. doesn't.**
- **Close the gap between U.S. market share in these nations and the world market by 50 percent.**
- **U.S. suppliers gain in third-party markets as our components would be designed into future foreign technology products which are exported.**

Modernizing export controls on commercially available technology products policy simulation



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Impact on real GDP



Sources: U.S. Bureau of Economic Analysis, Milken Institute.

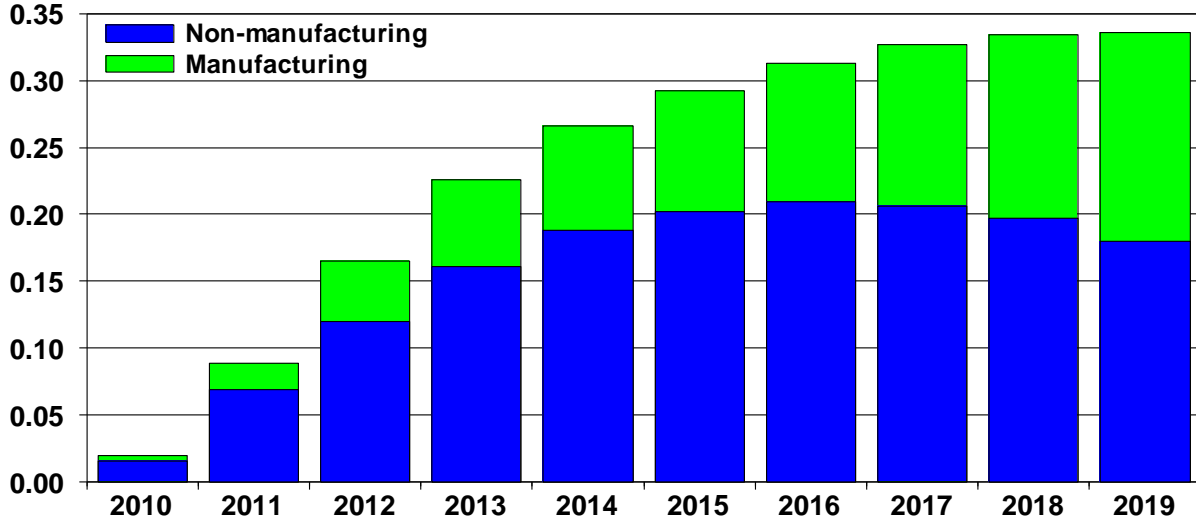
Modernizing export controls on commercially available technology products policy simulation



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Impact on employment

Absolute difference from baseline, employment in millions



Sources: U.S. Bureau of Labor Statistics, Milken Institute.

Summary 1: A Path to Prosperity

Public-Private Initiatives for California



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1. Streamline regulations, increase transparency and accountability, and encourage long-term investment through new policy tools—all of which can be achieved without relaxing a single regulatory standard.
2. Enhance public incentives through better planning, coordination across government agencies, and partnering with the private sector.
3. Launch a campaign to encourage Californians to pursue careers in manufacturing, highlighting the attributes of modern manufacturing, its importance to the economy, record of environmental stewardship and high wages.
4. Create a network of education, training, research, and business incubation centers to develop a highly qualified manufacturing work force, invent and commercialize advanced manufacturing techniques, and assist start-up businesses.
5. Develop a public-private initiative to conduct research, develop new technologies and processes, and commercialize more efficient and environmentally sustainable manufacturing practices with incentives to facilitate adoption of new standards.

Summary II: National Initiatives



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Policies to boost exports and manufacturing

1. Small businesses need access to bank credit to create jobs.
2. Push trade deals with South Korea, Colombia and Costa Rica through Congress.
3. Modernize Cold War–era restrictions on exports of technology products and services.
4. Restore the lapsed R&D tax credit (even better, expand the credit and make it permanent).
5. Reduce the U.S. corporate income tax rate to match the OECD average