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# AN ANALYSIS OF CONSTRUCTION SPENDING IN THE PHARMACEUTICAL & BIOTECH INDUSTRY, 2012-2017

**Russell Ormiston, Ph.D.**

Associate Professor of Economics, Allegheny College  
Research Scholar, Institute for Construction Economic Research

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## *Supporting Organizations*

### **PHARMACEUTICAL INDUSTRY LABOR-MANAGEMENT ASSOCIATION (PILMA)**

[www.pilma.org](http://www.pilma.org)

For 15 years, the Pharmaceutical Industry Labor-Management Association has united the biopharmaceutical industry and union workers with the dual goals of fostering innovation of life-saving cures and securing high-quality union construction jobs. As the partnership has grown over the years, so has its impact. Labor and industry recognize the strength in their partnership: strong industry naturally leads to good jobs and a vibrant economy.

The pharmaceutical industry members of PILMA recognize that the most highly skilled workers are needed to construct and maintain the highest quality research and manufacturing facilities. Following each new drug trial, research facilities must be wiped clean – entire systems must be changed, surfaces must be sterilized and other equipment replaced. This requires highly skilled reliable labor that the industry can depend on to do the job right. North America's Building Trades Unions spend upwards of \$1 billion training their members each year. With state-of-the-art training facilities all over the country, the building trades are ready to meet the needs of today and the challenges of tomorrow.

### **INSTITUTE FOR CONSTRUCTION ECONOMIC RESEARCH (ICERES)**

[www.icerres.org](http://www.icerres.org)

The construction industry and its stakeholders face pressing long term issues regarding workforce sustainability, safety, productivity and integration of technology. The Institute for Construction Economic Research (ICERES) supports high quality research with the goal of finding and disseminating pragmatic solutions to these and other construction issues. The Institute for Construction Economic Research undertakes non-partisan research on issues facing the industry, collaborating with existing construction researchers and attracting new investigators into the field of construction research. The Institute also works to develop a network of researchers with ongoing programs on construction issues. In addition to its work in supporting research, the Institute disseminates this research with a working paper series, a web presence, and conferences.

## Executive Summary

The pharmaceutical and biotech industry has extended the boundaries of modern-day science to promote and advance public health for individuals and communities around the world. In the pursuit of innovative life-saving and life-enhancing health options, the industry has also become an important economic engine in the United States, employing hundreds of thousands of hard-working Americans in good-paying jobs that represent the backbone of thriving local and regional economies. While government plays a role in basic research that aids in the discovery of new medicines, it can be overlooked that the private sector independently spends billions of dollars every year to construct new research, development, and manufacturing facilities across the country to further advance public health. World-class science and medical facilities, however, require construction that meets exacting specifications. This has forged a unique partnership between the pharmaceutical and biotech industry and the skilled, experienced, and dedicated workers of America's construction labor unions.

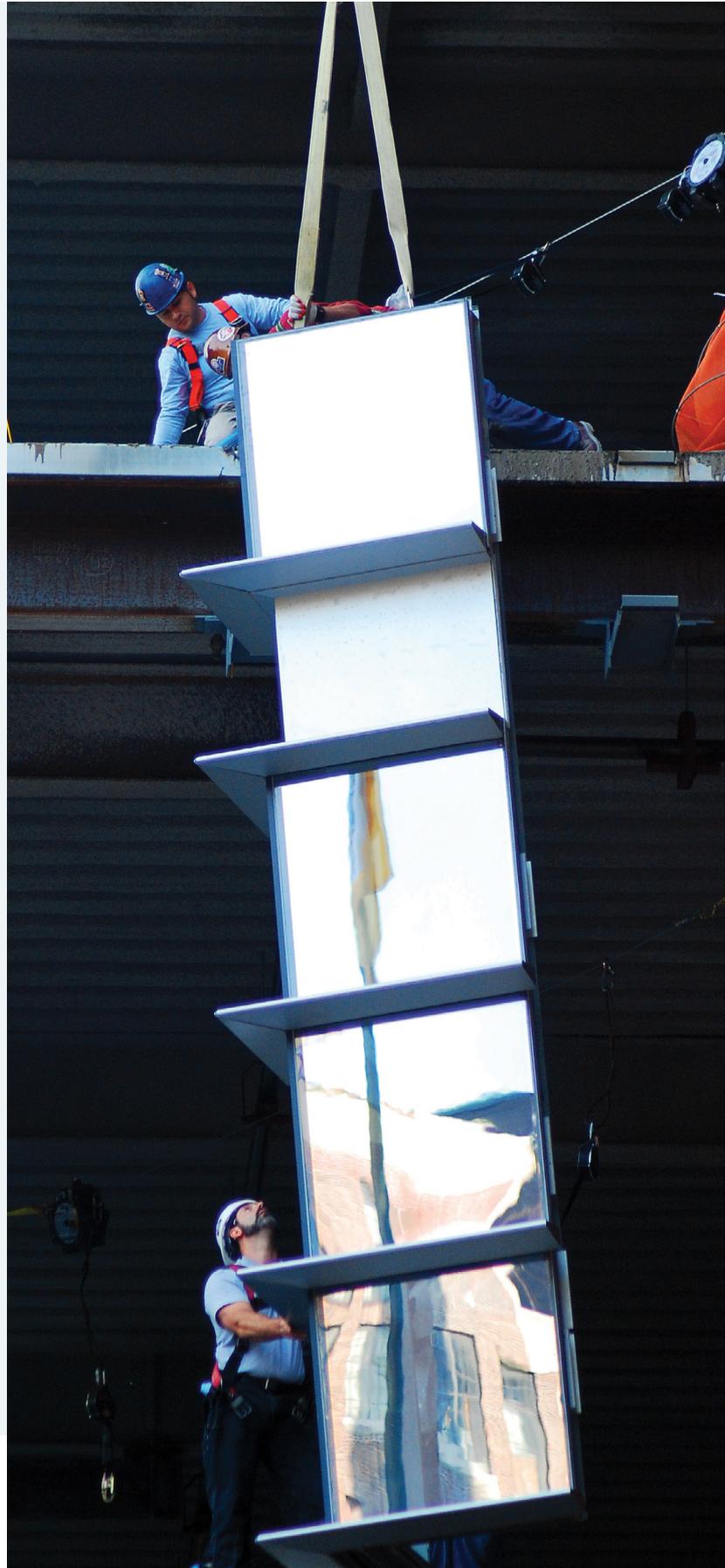
The partnership between the pharmaceutical and biotech sector and construction unions has enormous economic benefits for local workers, families, and communities. In addition to the economic impact of newly-constructed, high-tech medical and science facilities, the employment of union construction workers provides "good" jobs for thousands of local residents, including respectable wages, health insurance, and pension benefits. To demonstrate the economic impact of this partnership, this report analyzes the amount of privately-funded construction

of pharmaceutical and biotech research, development, and manufacturing facilities between 2012 and 2017 for 11 states (CA, CT, IL, MD, MA, NJ, NY, OH, OR, PA and WA) identified by the Pharmaceutical Industry Labor-Management Association (PILMA), a coalition of labor organizations and companies in the pharmaceutical industry with dual goals of fostering medical innovation and promoting high-quality construction jobs.

Relying extensively on data from Industrial Information Resources (IIR), a well-respected global consulting firm, this report concludes the following:

- There were 249 major (\$5+ million) pharmaceutical and biotech projects that were privately funded and under construction at any point between 2012 and 2017 as identified by IIR for the 11 states studied. These projects represent a combined \$14.3 billion in infrastructure investment by the industry. Pharmaceutical and biotech investment is highest in California (58 projects, \$4.8 billion) and Massachusetts (54 projects, \$3.8 billion), however there was at least \$190 million in private-sector infrastructure spending in all 11 states analyzed.
- Major pharmaceutical and biotech manufacturing projects are typically concentrated in large metropolitan areas. While the Greater Boston area features the greatest concentration of investment (53 major projects), similar clusters of infrastructure investment have developed in Chicago, Columbus, Los Angeles, New York, Philadelphia, San Diego, San Francisco, and Seattle.

- Incorporating private-sector construction on projects that are less than \$5 million and limiting the data to spending explicitly made between 2012 and 2017, IIR estimates that the pharmaceutical and biotech industry invested \$22.4 billion in privately-funded infrastructure across the 11-state sample between 2012 and 2017. Industry construction spending has been on the upswing in the last two years, climbing from \$3.6 billion in 2015 to \$4.4 billion in 2017. This trend does not appear temporary, as IIR projects total spending to climb to \$4.6 billion in 2018 and remain above \$4.3 billion annually through 2020.
- In terms of state construction environments, this report highlights substantial growth of private-sector spending by the pharmaceutical and biotech sector in a number of states, led by Maryland, California, and New York. Additionally, IIR projects that six states (CT, IL, NJ, NY, OH, and PA) will experience a minimum of a 25% increase in construction spending by the industry between 2017 and 2020.
- Between 2012 and 2017, the pharmaceutical and biotech industry required 45.4 million labor hours from construction workers on research, development and manufacturing facilities across 14 trades as estimated by IIR; this equated to 4,447 full-time construction jobs in 2017 across the 11 states studied.



- A conservative, lower-bound estimate of union construction work indicates that the pharmaceutical and biotech industry required *at least* 15.6 million labor hours by union workers in these 11 states during this six-year period. This yields *a minimum* of \$454 million in worker earnings in addition to tens of millions of dollars in funding for union health insurance and pension benefits. The conservative nature of these estimates is due to statistical limitations; as outlined in this report, the full impact of the industry on union construction hours and earnings is likely to be substantially higher than the above projections.
- The pharmaceutical and biotech industry has helped create a financially self-sufficient pipeline of skilled labor in the construction industry. Union apprenticeship programs are largely funded by per-hour contributions by active tradespeople. Assuming conservative estimates of 15.6 million union labor hours and a contribution of \$0.30 per hour, the pharmaceutical and biotech industry was responsible for *a minimum* of \$4.7 million in funding for union apprenticeship programs in these 11 states between 2012 and 2017. These funds promote a pathway to the middle-class for blue-collar workers while strengthening a region's workforce development, all without a nickel of student debt or a dime of taxpayer money.

In sum, the partnership between the pharmaceutical and biotech industry and the highly-skilled workers of America's construction unions has enormous benefits for local communities and public health around the world. The billions of dollars in privately-funded infrastructure investment commissioned by the pharmaceutical and biotech sector provide thousands of good-paying jobs to not just researchers and scientists, but also to the dedicated blue-collar construction workers who are responsible for building the industry's world-class production facilities.

***The industry's investments—in both facilities and workforce development—represent the economic backbone of thousands of families and local economies across the United States.***



*Table ES. Summary of Pharmaceutical and Biotech Industry Construction, 11 States, 2012-2017*

	PROJECTS		SPENDING	UNION CONSTRUCTION LABOR		
State	No. of Projects (\$5M+)	Total Valuation (\$ million)	Total Spending (\$ million)	Union Labor Hours	Avg. Union Wage	Union Worker Wages
California	58	\$4,847.0	\$6,798.7	4,801,002	\$28.47	\$136,684,539
Connecticut	9	\$630.5	\$895.5	322,813	\$28.65	\$9,248,598
Illinois	11	\$723.5	\$886.4	1,037,673	\$30.73	\$31,887,695
Maryland	13	\$769.0	\$1,061.4	454,585	\$28.12	\$12,782,930
Massachusetts	54	\$3,776.6	\$4,531.6	2,513,283	\$30.73	\$77,233,195
New Jersey	20	\$618.0	\$2,197.9	1,512,525	\$31.39	\$47,478,162
New York	39	\$1,260.4	\$2,225.6	2,420,889	\$28.02	\$67,833,317
Ohio	11	\$317.0	\$703.0	473,221	\$26.42	\$12,502,505
Oregon	4	\$190.7	\$208.9	97,382	\$30.06	\$2,927,313
Pennsylvania	22	\$938.7	\$2,500.6	1,662,997	\$27.13	\$45,117,095
Washington	8	\$208.0	\$400.8	323,250	\$30.79	\$9,952,857
<b>TOTAL</b>	<b>249</b>	<b>\$14,279.4</b>	<b>\$22,410.5</b>	<b>15,619,621</b>		<b>\$453,648,206</b>

Source: Industrial Information Resources, Current Population Survey

