

Taking the High Road in Prince George's County

The Role of Worker Representation in Economic Development Strategies

Executive Summary & Introduction

As Maryland communities plan for the future, they face a choice about the type of economic development policies they pursue and the kind of growth these policies will foster. A “low-road” approach focused solely on cutting business costs will have predictable effects: creating low-quality jobs and increasing concentration of wealth in a few hands. Alternatively, policymakers can take a “high-road” approach focused on enabling advanced, high-quality businesses to thrive. The evidence is clear that the high road is the most effective path toward sustainable, broadly shared growth.

The benefits of the high-road approach are greatest when workers have the opportunity to join together in the form of a labor union. When employees at new development projects—both during and after construction—have union representation, it means they can work together to fight for fair wages, which results in higher paid jobs, more productive workers, and increased spending at local businesses. The result is a healthier economy that works for everyone.

Using the recently opened MGM National Harbor Casino as a case study, the Maryland Center on Economic Policy estimated several of the potential benefits from union representation for workers at new development projects that receive public funding. Prince George's County, where the MGM is located, demonstrates both why the high-road development approach is needed and how this approach can benefit the community.

Prince George's has many promising opportunities for growth—from tourism at National Harbor to the regional medical center expected to break ground in the near future—and the county's location near the nation's capital is a valuable asset. However, strong, equitable growth will not happen on its own. By pursuing a high-road development strategy that allows workers to come together so employers hear their collective voice, local policymakers can ensure that new businesses create high-quality jobs and the benefits of growth are shared among the businesses' hardworking employees. Unions help make this possible.

Context: The MGM National Harbor and Labor Relations

The MGM National Harbor opened in late 2016 as the last of six casinos in the state, and is expected to employ about 4,000 workers. As required by Maryland law for prospective casinos, this project included labor peace agreements between the developer and local service and hospitality unions. The developer also signed a project labor agreement covering the construction of the casino. These agreements change the way unions and employers interact, with both parties giving up certain rights to ensure a stable relationship.

Local and state governments often require developers to enter into labor peace agreements and project labor agreements with local unions to reduce the potential for conflict between management and labor (see box on page 5). When governments have a proprietary interest in a project—such as dedicated revenues or an investment of public resources—these agreements can mitigate some risks to the project’s success and thereby protect the government’s investment. In addition, these agreements frequently include provisions that give workers the opportunity to organize without fear of intimidation.

While the labor peace agreements at the MGM were required under state law, Prince George’s County also has local ordinances concerning labor peace agreements and project labor agreements. Under these ordinances, the county executive is required to determine whether the county has a proprietary interest in development projects and whether labor peace agreements would be appropriate to protect that interest. When projects meet these conditions, the county can require developers to enter into labor peace agreements with local unions. In addition, the county executive is authorized to execute project labor agreements on any county construction project valued at \$1 million or more. Ordinances like the ones in Prince George’s County can help local governments protect their investments in development projects.

BENEFITS OF UNION REPRESENTATION

If all eligible workers at the MGM National Harbor are represented by a labor union, the potential benefits to workers and the economy are substantial:

- **REPRESENTED CONSTRUCTION WORKERS** earn an additional **\$9,000** per year.
- **REPRESENTED ACCOMMODATION WORKERS** earn an additional **\$6,000 to \$19,000** per year.
- Union workers **SPEND MORE AT LOCAL BUSINESSES**, adding **\$23 MILLION to \$74 MILLION IN EARNINGS** to the local economy.
- Increased spending translates into **INCREASED EMPLOYMENT**, adding **111 to 360 NEW JOBS** to the local economy.

Findings in Brief

Because there is limited public information on the number of represented workers at the MGM or on the details of their contracts, this report compares two hypothetical situations. In one scenario, all eligible workers in the construction and operating phases of the project are represented by labor unions. In the second, no workers have union representation. To the extent that workers at the MGM have union representation, the resulting benefits will be similar to the estimates presented here.

According to MDCEP's analysis, the potential benefits to workers and the economy if all eligible workers at the MGM have union representation are substantial.¹

- Union representation is expected to increase annual earnings for an average construction worker at the MGM by about \$9,000. For hotel and gaming workers, the average gain is expected to be between \$6,000 and \$19,000 per worker.
- As workers at the MGM spend their earnings at local businesses, the higher wages they gain from union representation are expected to filter through the economy, boosting others' incomes along the way. During each year of the construction phase, union representation for construction workers at the MGM would have led to about \$23 million in higher earnings for workers throughout the Washington metropolitan area. Now that the hotel and casino are open for business, union representation could increase local workers' earnings by between \$31 million and \$74 million.
- The higher salaries for represented workers are expected to lead to higher spending, and therefore create new jobs as businesses hire workers to meet increased demand. Representation for construction workers at the MGM would likely have resulted in 111 new jobs throughout the Washington area. Representation for hotel and gaming workers is expected to create 151 to 360 jobs. These numbers are above and beyond employment at the MGM itself.
- Finally, workers and the economy would see other benefits that are more difficult to measure. Workers represented by unions would gain better benefits such as health insurance and retirement benefits. Workers at the MGM would likely become more productive. Employers throughout the Washington area who compete with the MGM for workers would likely offer slightly higher wages.

1. High Road Development and Labor Unions

As local and state governments respond to the increasing pressure to foster job growth and attract new businesses to a region, they can take two broad approaches to economic development.² These approaches, often referred to as the *low road* and the *high road*, have different implications for the kinds of policies that are conducive to development and the kind of jobs they create.

On the low road, regions and businesses compete on the basis of price. Low-road strategies require cutting costs and wages, generally leading to low-quality development and low-quality jobs. These strategies include policies like tax cuts, deregulation, opposition to labor unions, and targeted corporate subsidies. A

¹ The numbers presented here are the predicted gain in earnings and employment resulting from union representation at the MGM. These are above and beyond any benefits from the existence of the casino itself.

² Bill Schweke, "A Progressive Economic Development Agenda for Shared Prosperity: Taking the High Road and Closing the Low," *cfed*, June 2006, http://beta.accessstofinancialsecurity.org/sites/default/files/HighRoadEconomicDevelopment_C FED-1354525948.pdf.

large body of research has shown this approach to be ineffective in the United States.³

On the high road, government seeks to create an environment where advanced, high-quality businesses can thrive. Because these businesses rely on skill and innovation rather than low costs, high-road strategies also tend to create high-wage, high-quality jobs. To create and retain the skilled workforce these businesses demand, the high-road approach requires strong investments in essential public services like education and modern transportation. Successful high-road strategies also involve effectively managing new development to ensure that the benefits are widely shared by workers and the public. This approach is a natural fit for regions, such as the Washington, D.C., area, that already have a well-educated workforce, provide a high quality of life, and offer distinctive qualities that make them stand out from other locales.

Consequently, Prince George's County is an ideal candidate for high-road development because of Maryland's high incomes and high education levels, and the county's proximity to the nation's capital. In addition, the Washington region can count on steady tourism business because of its unique historical and cultural offerings. That means local businesses face limited price-based competition from other regions.

To take full advantage of these assets, Prince George's County should ensure that its economic development policies follow the high-road approach. In broad terms, this means strong investment in the key public services that skilled workers and high-quality businesses demand.

PROJECT LABOR AGREEMENTS AND LABOR PEACE AGREEMENTS: A PRIMER

In general, local and state governments can require developers to enter into construction project labor agreements and post-construction labor peace agreements when the government has a *proprietary interest* in a project that could be put at risk if there is a conflict between management and labor. Examples of proprietary interests include capital budget expenditures to help finance project construction, special revenues like the gaming revenue generated by a casino, or the investment of public resources like loan guarantees and property tax abatements. Ordinary government interests in economic development—such as property tax revenue or job creation—are not proprietary interests.

To gain approval from the state, MGM National Harbor developers were required to enter into labor peace agreements with local unions that might seek to represent the project's workers post-construction. This requirement, which under Maryland law applies to all casinos in the state, protects the government's interest in the project by reducing the likelihood of conflict between management and labor. Without these agreements, labor disputes could potentially reduce the casino's business, resulting in less gaming revenue for the state.

Given the size, complexity, and tight timetable for opening the MGM, the developers also chose to enter into a project labor agreement (PLA) for construction of the project. PLAs are single-site collective bargaining agreements between building trade unions and project contractors that govern the conditions of employment for all craft labor on the project. Developers often execute PLAs to promote quality, safety, timely delivery, and cost-efficiency. These agreements provide access to a reliable local supply of highly trained, skilled construction craft labor; include dispute resolution provisions to prevent labor disputes and related delays; and establish uniform rules that translate into lower

³ Michael Leachman and Michael Mazerov, "State Personal Income Tax Cuts: Still a Poor Strategy for Economic Growth," *Center on Budget and Policy Priorities*, May 14, 2015, <http://www.cbpp.org/research/state-budget-and-tax/state-personal-income-tax-cuts-still-a-poor-strategy-for-economic>.

Robert Tannenwald and Iris J Lav, "The Zero-Sum Game: States Cannot Stimulate their Economies by Cutting Taxes," *Center on Budget and Policy Priorities*, March 2, 2010, <http://www.cbpp.org/research/the-zero-sum-game-states-cannot-stimulate-their-economies-by-cutting-taxes?fa=view&id=3100>.

Elise Gould and Will Kimball, "'Right-to-Work' States Still Have Lower Wages," *Economic Policy Institute*, April 22, 2015, <http://www.epi.org/publication/right-to-work-states-have-lower-wages/>.

More narrowly, it means taking steps to ensure that whenever the public invests its own resources in new developments, its investment results in high-quality, good-paying jobs.

Unions have an important role in creating high-quality jobs. When workers are represented by unions, they earn higher wages and better benefits, and often work more productively. They are able to spend more at local businesses, boosting the local economy. Finally, by closing the “low road” of competition on the basis of price, unions put the region on a path toward sustainable, broadly shared growth.

2. Unions Bring Higher Wages

Wages of Represented Workers

The most visible way unions benefit workers and the economy is by negotiating with employers to raise wages. For example, a 2002 study that compared workers with similar characteristics and adjusted for several potential sources of bias found that union representation raises wages by 23.2 percent, on average.⁴ Depending on the local labor market, union representation can sometimes bring even greater gains in wages. After the Gaylord Hotel opened as the first unionized hotel in Prince George’s County in 2008, average annual earnings for traveler accommodation workers in the county jumped upward by more than \$6,000 (see Figure 1). Because this number includes both represented and non-represented workers, the increase for represented workers was likely significantly larger. This one-year jump in earnings implies that unionization raised wages by about 68 percent.⁵ Although gains of this magnitude are not guaranteed in future projects, the increase in wages following the Gaylord’s opening suggests that unionization can bring large benefits in Prince George’s County.

These estimates suggest that development projects in which workers have union representation are likely to deliver greater economic benefits to the community. MDCEP applied estimates of the union wage effect—that is, the

administrative costs. PLAs have been used in the public and private sectors for more than 75 years.

In Prince George’s County, a local ordinance requires the county executive to determine whether the county has a proprietary interest in development projects and whether labor peace agreements would be appropriate to protect that interest. When projects meet these conditions, the county can require developers to enter into labor peace agreements with local unions. A separate ordinance allows the county executive to execute a project labor agreement on any county construction project with an estimated value of \$1 million or more.

Note: For more information on labor peace agreements, see John Logan, “Innovations in State and Local Labor Regulation,” in *The State of California Labor 2003*, ed. Ruth Milkman (Los Angeles: University of California, 2003), 183–187. For more information on project labor agreements, see Gerard Waites, “Project Labor Agreements: Promoting Successful Project Delivery,” *C.H.O.I.C.E.*, 2009, <http://www.choiceworks.org/CHOICE/media/BTCD/Project%20Labor%20Agreements/A-PLA-Primer.pdf>. Maryland’s state law requiring labor peace agreements at casinos is located at Md. State Code §9-1A-07 (c)7 (v). The Prince George’s County labor peace ordinance is located at Prince George’s Cty., Md. Code of Ordinances Subt. 10, Div. 18, §10-293. The Prince George’s County Project Labor Agreement ordinance is located at Prince George’s Cty., Md. Code of Ordinances Subt. 10A, Div. 6, Subdiv. 13, §10A-158.

⁴ Barry Hirsch and Edward Schumacher, “Unions, Wage, and Skills,” *Journal of Labor Economics*, 2002, quoted in Matthew Walters and Lawrence Mishel, “How Unions Help All Workers,” *Economic Policy Institute*, August 26, 2003, http://www.epi.org/publication/briefingpapers_bp143/.

⁵ See the Section 1 of the Technical Appendix for details on how this union wage effect was estimated.

percent gain in wages that unions bring to represented workers—to calculate how much workers in the construction and operation of the MGM National Harbor casino would gain if all eligible workers were represented by a union.

Using Occupational Employment Statistics (OES) and nationwide unionization data from the Bureau of Labor Statistics, MDCEP estimated average annual pay for non-represented workers in the Washington metropolitan area who work in either nonresidential building

construction or casino hotels. Applying estimates of the union wage effect to workers in non-managerial, nonsupervisory occupations provides an estimate of average annual pay if all eligible workers were represented. The results are shown in Table 1.⁶ Construction workers’ annual pay is estimated to increase by about \$9,000 as a result of unionization. Depending on the assumed union wage effect, hotel workers’ average annual pay is estimated to increase by between \$6,000 and \$19,000.⁷

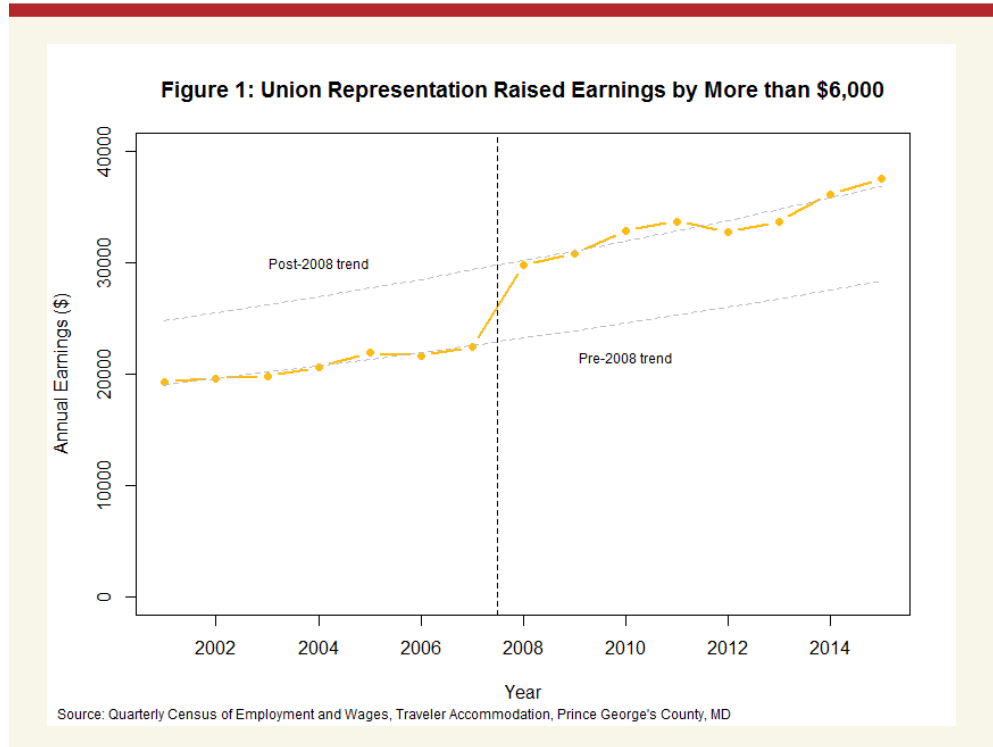


TABLE 1. ESTIMATED EFFECT OF UNION REPRESENTATION ON AVERAGE ANNUAL PAY

		ALL ELIGIBLE WORKERS REPRESENTED		GAIN FROM REPRESENTATION	
		Published Estimate	Local Estimate	Published Estimate	Local Estimate
Nonresidential Construction	\$66,620	\$76,060	N/A	\$9,440	N/A
Casino Hotels	\$37,636	\$44,303	\$57,036	\$6,666	\$19,399

⁶ See Section 2 of the Technical Appendix for details on these calculations.

⁷ Because the Bureau of Labor Statistics considers casino hotels to be a part of the traveler accommodation industry, “hotel workers” in this report refers to workers in both hotel occupations and gaming occupations. In Table 1, estimates of annual pay assume that pay for all workers in non-managerial, nonsupervisory occupations increases by the assumed union wage effect and pay for managerial and supervisory workers is unchanged. “Published estimate” refers to Hirsch and Schumacher 2002, cited in Walters and Mishel 2003. “Local estimate” refers to a MDCEP analysis of Quarterly Census of Employment and Wages data described in the Technical Appendix. Average annual pay for each industry was estimated by adjusting OES data on wages by occupation using the Bureau of Labor Statistics 2015 Union Members Summary and Bureau of Economic Analysis Regional Price Parities. This calculation is described in the Technical Appendix.

Wages of Non-Represented Workers

Unionized workers are not the only ones to benefit when more workers gain representation. Research shows that unions can raise wages for other workers in the same industry through several channels, collectively known as spillover effects:⁸

- As more people in a given industry gain union representation, nonunion employers have to raise wages to compete for workers who prefer to work at better-paid union jobs.
- If employers prefer to avoid organizing drives among their own employees, they may offer higher wages to reduce the incentive for workers to organize. They are more likely to do this if unions are a stronger force in the local labor market.
- Unions serve as part of a norm-setting process in which workers and employers set expectations for the conditions of work. As more workers in an industry join together to negotiate for better pay, the standard for what is considered a reasonable wage increases.

A 2003 study estimated the size of union spillover effects for workers with different levels of education using relatively conservative methods.⁹ This study found that if 25 percent of local workers in an industry are represented, wages for nonunion workers with a high school diploma rise by between 2 percent and 5.5 percent as a result. This implies that each percentage-point increase in the share of represented workers is expected to result in about a 0.15 percent increase in wages for nonunion workers.¹⁰

MDCEP applied this estimate to the construction and accommodation industries in the Washington metropolitan area to determine the effect unionization at the MGM National Harbor could have on nonunion wages. If all eligible workers at the MGM casino were represented, union density in the construction industry would increase by about 3.8 percentage points, and union density in the accommodation industry would increase by about 7.4 points. This implies a wage gain of about 0.6 percent for construction workers whose highest level of education is a high school diploma and about 1 percent for accommodation workers.¹¹

⁸ Walters and Mishel, “How Unions Help all Workers.”

⁹ Henry Farber, “Nonunion Wage Rates and the Threat of Unionization,” *NBER Working Paper Series* 9705, May 2003, <http://www.nber.org/papers/w9705.pdf>.

¹⁰ This estimate assumes a spillover effect in the middle of the range found by the researchers: 3.75 percent higher wages when a quarter of local workers in an industry are unionized. The estimate applies only to nonunion workers whose highest level of education is a high school diploma.

¹¹ Data from the Current Population Survey indicate that between 2011 and 2015, 9.6 percent of construction workers and 13.9 percent of accommodation workers in the region were represented. “IPUMS-CPS,” *University of Minnesota*, 2016, www.ipums.org. Multiple years were used to obtain an adequate sample size. Broad industries were used in this analysis because information on more detailed industries is not available in CPS microdata samples. Post-MGM represented shares were estimated using QCEW data on construction and accommodation employment in the Washington metropolitan area. This estimate assumes 2,000 construction workers the MGM during the construction phase and 4,000 accommodation workers during operations, with all non-managerial, nonsupervisory workers assumed to be represented.

For each industry, MDCEP calculated the resulting change in average annual pay in the region by applying the spillover estimates to all workers other than those in management, professional, and related occupations.¹² The results are shown in Table 2.¹³

TABLE 2. ESTIMATED SPILLOVER EFFECT OF UNION REPRESENTATION ON NONUNION PAY

Industry	AVERAGE ANNUAL PAY OF NON-REPRESENTED WORKERS		
	Pre-MGM	Post-MGM	
Construction	\$60,848	\$61,124	\$276
Accommodation	\$35,097	\$35,383	\$286

3. Unions Bring Better Benefits

People rely on their employers for many important benefits other than wages. Employer-provided health insurance helps workers access medical care when they need it, retirement plans ensure workers can make ends meet as they age, and paid leave guarantees that workers don't have to choose between their jobs and their health or caring for their families. Workers in the construction, accommodation, and food service industries have less access to many types of benefits than other workers. Union representation makes it more likely that workers receive these types of benefits.

Compared to private-sector workers overall, construction industry workers are less likely to have a retirement plan, dental or vision coverage, paid sick days, and other types of paid leave.¹⁴ They are less than half as likely as other workers to have paid personal or family leave. Workers in the accommodation and food service industries are less than half as likely as other workers to have a retirement plan, health coverage, or paid sick, personal, or family leave.¹⁵ Table 3 compares workers in these industries to private-sector workers overall for several types of benefits.

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¹² Management, professional, and related occupations were used as a proxy for workers who attended college and therefore would not be expected to benefit from spillover effects, according to the Farber estimate. This amounts to assuming that all management, professional, and related workers have completed at least some college and all other workers graduated high school but did not attend college. Occupational shares and average pay were obtained from OES and adjusted using BLS national unionization data as well as BEA regional price parities. This calculation is similar to the one described in Section 2 of the Technical Appendix.

¹³ In Table 2, estimates of annual pay assume that pay for all workers not in management, professional or related occupations increases by the assumed spillover effect and pay for management, professional or related occupations workers is unchanged. Average annual pay for each industry was estimated by adjusting OES data using the BLS 2015 Union Members Summary and BEA Regional Price Parities. This is calculation is similar to the one described in Section 2 of the Technical Appendix.

¹⁴ "National Compensation Survey," *Bureau of Labor Statistics*, March 2016, http://www.bls.gov/ncs/ebs/benefits/2016/ownership_private.htm.

¹⁵ Accommodation and food service is the most specific industry that includes casino hotels for which National Compensation Survey estimates are published.

TABLE 3. ACCESS TO BENEFITS BY INDUSTRY

Type of Benefit	PERCENT WITH ACCESS		
	All Workers	Construction	Accommodation and Food Service
Retirement	66%	55%	31%
Medical Coverage	67%	67%	30%
Dental Coverage	42%	30%	18%
Vision Coverage	24%	19%	14%
Paid Sick Days	64%	47%	31%
Paid Vacation	76%	68%	41%
Paid Personal Leave	40%	18%	11%
Paid Family Leave	13%	5%	5%

Source: Bureau of Labor Statistics, National Compensation Survey, March 2016.

Research shows that workers who are represented by unions have more access to important benefits as a result. Compared to similar workers, those with representation are about 3 percent more likely to have any type of paid leave, 18 percent more likely to have employer-provided health insurance, and 23 percent more likely to have a retirement plan.¹⁶ Not only do union workers have more types of benefits, their benefits tend to be more generous than those of nonunion workers. For example, union health plans have lower employee premiums and deductibles, on average, and represented workers earn about 22 hours more paid time off per year.¹⁷ These benefits add up to measurable improvements in workers' economic stability and quality of life. One study found that unions raise total compensation—that is, wages plus the monetary value of benefits—by 27.5 percent, more than their impact on wages alone.¹⁸ When the jobs created through economic development projects are unionized, workers are significantly more likely to have access to adequate health care, paid leave, and retirement benefits.

4. Unions Bring Higher Productivity

In addition to improving compensation for workers, unions can also benefit employers by increasing worker productivity and reducing recruitment and training costs due to turnover. In the case of publicly financed development projects, this means more sustainable jobs, more secure revenues, and a better return on the public's investment.

Businesses where workers are represented often run more efficiently for several reasons:

¹⁶ Brooks Pierce, "Compensation Inequality," *Office of Compensation and Working Conditions, Department of Labor Working Paper No. 323*, 1999, quoted in Walters and Mishel, "How Unions Help All Workers."

¹⁷ Thomas Buchmueller, John Di Nardo, and Robert Valletta, "Union Effects on Health Insurance Provision and Coverage in the United States," *NBER Working Paper Series 8238*, quoted in Walters and Mishel, "How Unions Help All Workers."

¹⁸ Pierce, "Compensation Inequality."

- Workers who are well paid and have an advocate in the workplace are less likely to leave their jobs. This means lower recruitment and training costs and a more experienced workforce.
- When workers feel that they are treated fairly and have a say in the decisions that affect them, they work harder and cooperate more closely with their coworkers and their supervisors.
- Unions increase the likelihood that employers will make the investments in training and technology needed to maximize efficiency.

One of the most important ways unions improve productivity is through reduced turnover. Because searching for a new job involves time, effort, and risk, workers are less likely to do it if they are satisfied at their current job.¹⁹ People may be dissatisfied with their jobs for a number of reasons. Their wages may be so low that they can't afford necessities. They may not have access to health insurance, or have insurance that doesn't cover necessary care. They may have no way to advocate for their needs at work without fear of retaliation.²⁰ An employee facing any of these conditions may choose to find another place to work. When workers quit, it costs employers: increased overtime to cover shifts, hours spent on training rather than other tasks, and new employees who can take weeks or months to reach full productivity. Each of these costs can mean lower profits.

A large number of studies have found that fair pay, good benefits, and union representation lead workers to stay at the same job for longer. For example, one study found that a living wage law at the San Francisco International Airport—which also included a labor peace agreement—reduced some employers' turnover by 60 percent.²¹ The largest reductions occurred among the employers where wages rose the most.

When workers remain at their jobs longer, they gain experience and become better at their work. Employers also have more reason to invest in training, because workers are less likely to quit and take their skills with them.²² Even if they provide more training to each worker, employers' total training costs may still go down because they have fewer new employees to train each year. Workers with better training and more experience will be more productive as a result. In addition to reducing turnover, the boost in job satisfaction that comes with decent wages and a voice in the workplace can have a direct effect on

Unions can benefit employers by increasing worker productivity and reducing turnover. This means more sustainable jobs, more secure revenues, and a better return on the public's investment.

¹⁹ John Schmitt, "Why Does the Minimum Wage Have No Discernable Effect on Employment?" *Center for Economic and Policy Research*, February 2013, 21, <http://cepr.net/documents/publications/min-wage-2013-02.pdf>.

²⁰ Richard Freeman and James Medoff, *What Do Unions Do?* (New York: Basic Books, 1984), quoted in Dale Belman, "Unions, the Quality of Labor Relations, and Firm Performance" in *Unions and Economic Competitiveness*, ed. Lawrence Mishel and Paula Voos (New York: M.E. Sharpe, 1992), <https://msu.edu/~drdale/Publications/Labor%20Relations/Unions.%20the%20Quality%20of%20Labor%20Relations%20and%20Firm%20Performance.PDF>.

²¹ Michael Reich, Peter Hall, and Ken Jacobs, "Living Wage Policies at San Francisco Airport: Impacts on Workers and Businesses," *IRLE Working Paper* 98-03, November 2003, <http://irle.berkeley.edu/files/2003/Living-Wage-Policies-at-San-Francisco-Airport.pdf>.

²² Paula Voos, "How Unions Can Help Restore the Middle Class," *Economic Policy Institute*, March 10, 2009, http://www.epi.org/publication/how_unions_can_help_restore_the_middle_class/.

productivity. Research shows that people at high-quality jobs often put in more effort and work more effectively with their colleagues.²³

The result is a measureable improvement in performance. In a survey of managers at the San Francisco International Airport following the living wage and labor peace agreement there, nearly half reported improvements in morale, disciplinary issues, and customer service.²⁴ More than a third reported improvements in overall performance.

Union representation may be especially important for efficient management of construction projects—particularly if unions and management are parties to a project labor agreement. Like labor peace agreements, project labor agreements require unions to waive their right to strike or engage in other labor actions, which reduces conflicts on the work site. In addition, these agreements often include important provisions concerning the supply of workers and the coordination of work.²⁵ Access to union hiring halls and apprenticeship programs can guarantee a stream of qualified workers, and coordination among union locals can mean fast access to extra labor when it is needed. Harmonized schedules, work rules, and responsibilities promote smooth operations and prevent conflicts before they arise. Cooperation between labor and management through safety committees can reduce injuries. These provisions are especially vital in light of the unique organizational structures and dangerous work sites that are common in construction.²⁶ Economic research has confirmed the outsized benefits of unions in construction. One study found that unions increase construction productivity by between 16 and 51 percent, depending on the type of project. Gains were generally larger on bigger, more complex projects.

While unions can bring significant improvements in productivity, these improvements depend on the quality of the relationship between management and labor. While cooperative relationships can enhance efficiency, frequent conflict has the potential to reduce it. For example, studies of labor relations in coal mines and hospitals found that workplaces with more indicators of conflict also had lower productivity and higher costs.²⁷ To maximize the payoff from union representation, it is important to ensure that labor disputes do not jeopardize public investments in development projects. One way to mitigate this risk is to require developers of publicly supported projects to enter into construction project labor agreements and post-construction labor peace agreements.

²³ George Akerlof and Janet Yellen, “The Fair Wage–Effort Hypothesis and Unemployment,” *The Quarterly Journal of Economics* 105, no. 2, May 1990, 255–83. Belman, “Unions, the Quality of Labor Relations, and Firm Performance.”

²⁴ Reich, Hall, and Jacobs, “Living Wage Policies at San Francisco Airport.”

²⁵ Matthew Bodah and Dale Belman, “Building Better: A Look at Best Practices for the Design of Project Labor Agreements,” *Economic Policy Institute*, August 12, 2010, http://www.epi.org/publication/building_better_a_look_at_best_practices_for_the_design_of_project_labor/.

²⁶ Ibid.

²⁷ Belman, “Unions, the Quality of Labor Relations, and Firm Performance.”

While union representation brings many visible benefits to workers, the benefits to employers and public sponsors of development projects are no less important. Research shows that productivity often improves and turnover costs decline when workers gain representation. By minimizing disruptions and promoting constructive relationships between labor and management, labor peace and project labor agreements can maximize the gains in productivity and safeguard public investments in development projects.

5. Unions Bring a Stronger Economy

When union representation puts more money into the hands of workers—especially relatively low-wage workers who are the most likely to spend this money on necessities—it means more sales at local businesses and a boost to the economy. MDCEP estimated the economic impact of increasing unionization during the construction and operation of the MGM National Harbor casino using economic multipliers from the Bureau of Economic Analysis. If all eligible workers involved in the casino’s construction and operation had representation, it would mean between \$23 million and \$74 million in increased earnings for workers in the Washington metropolitan area. Unionization at the MGM is also expected to create 111 to 360 new jobs in the region over time, in addition to those hired at the casino hotel.²⁸

When union representation improves workers’ wages, the resulting economic impact is a combination of three factors:

- The direct impact on affected workers’ earnings
- Additional income other workers earn when the affected workers spend money at local businesses
- Subsequent rounds of spending as the local businesses seeing increased business purchase materials and their employees spend their income. Each additional dollar of wages circulates through the economy, boosting businesses and workers along the way.

In addition to increasing workers’ earnings throughout the region, the spending made possible by higher wages also creates jobs. As workers spend their wages at local businesses and these businesses buy goods and services from other firms in the region, companies would be expected to hire more workers to meet the rise in demand. Multipliers from the Bureau of Economic Analysis indicate that every \$1 million in increased household income in the Washington region translates into seven new jobs. The total estimated economic impacts on earnings and employment of unionization at the MGM National Harbor are summarized in Table 4.²⁹

²⁸ These benefits would not necessarily come all at once, as it takes time for each dollar of additional spending to work its way through the local economy. Each year of increased wages at the MGM would bring benefits to the local economy, although those benefits may be spread over multiple years.

²⁹ See Section 3 of the Technical Appendix for details on these calculations. In Table 4, “published estimate” and “local estimate” refer to two assumptions about the effect of unions on represented workers’ wages. “Published estimate” refers to Hirsch and Schumacher 2002, cited in Walters and Mishel 2003. “Local

In addition to increasing workers' earnings throughout the region, the spending made possible by higher union wages also creates jobs.

TABLE 4. SUMMARY OF ECONOMIC IMPACTS OF WORKER REPRESENTATION

	EARNINGS	EMPLOYMENT
Construction Phase	\$22.7 million	111 jobs
Operation Phase: Published Estimate	\$31.1 million	151 jobs
Operation Phase: Local Estimate	\$73.9 million	360 jobs

The increases in earnings, spending, and employment that result from union representation also benefit state and local governments. Earnings growth leads to increases in income taxes, and spending at local businesses leads to growth in sales taxes. What’s more, when workers earn a fair wage at a union job, they are less likely to need public assistance to make ends meet. This translates into stronger finances at social service agencies and a reduced risk of cuts to vital programs. Nationwide, more than a quarter of workers at casino hotels currently do not earn enough to afford basic necessities, with income less than the federal poverty line.³⁰ This means that union representation at the MGM National Harbor would likely help hundreds of workers make ends meet by raising their incomes above the federal poverty line.³¹

6. Conclusion

Local and state policymakers should promote economic development in ways that create high-quality jobs and use public resources effectively. Research shows that high-road strategies in which businesses and regions compete on the basis of quality, rather than price, are the strongest methods to foster broad-based economic growth. Labor unions play an important role in this strategy. When workers have the right to stick together to advocate for fair pay and good working conditions, the new jobs created through economic development projects are more likely to offer fair wages, good benefits, and a voice for workers. In turn, these benefits lead to stronger growth and a healthier economy. The MGM National Harbor Casino in Prince George’s County offers an example of the potential gains from union representation:

- If all eligible workers at the MGM gained representation, employees’ average earnings would likely increase by \$6,000 to \$19,000.

estimate” refers to a MDCEP analysis of Quarterly Census of Employment and Wages data described in Section 1 of the Technical Appendix. See Section 3 of the Technical Appendix for details on the estimation of economic impacts.

³⁰ According to BLS Occupational Employment Statistics, the 25th percentile of annual pay in the casino hotels industry is \$19,740, or almost \$5,000 less than the federal poverty line for a family of four.

³¹ If 4,000 people are employed at the MGM National Harbor once it opens, about 1,000 would be expected to earn a poverty wage absent representation. If the majority of these workers gained representation and saw significant wage gains as a result, it is reasonable to expect several hundred to be lifted above the poverty line. The exact number would depend on both the union wage effect and on individual workers’ family structure.

- Unions can boost spending in the local economy and create additional jobs as a result. At the MGM National Harbor, these effects potentially range from \$23 million to \$74 million in increased earnings for workers across the Washington metropolitan area, in addition to 111 to 360 new jobs.
- Unions can increase productivity, deliver better insurance and retirement benefits for represented workers, and bring a small raise to workers throughout the region who are not represented.

Technical Appendix

1. Estimation of Local Union Wage Effect

MDCEP estimated the effect of union representation on wages at the Gaylord Hotel using an interrupted time series approach applied to data from the Quarterly Census of Employment and Wages (QCEW). From 2001 to 2015, weekly earnings in the traveler accommodation industry in Prince George’s County grew at an average rate of 2.9 percent, with the exception of 2008. In that year—the same year the Gaylord opened as the first unionized hotel in Prince George’s—earnings jumped upward by 32.7 percent. On average, post-2008 earnings were 29.9 percent above their expected level if the 2008 increase had not occurred.³²

Assuming that no other event in 2008 explains this increase in earnings,³³ the increase can be broken down into two components:

- The union wage effect, or higher wages for represented workers due to representation, and
- Spillover effects, or higher wages for non-represented workers due to the increase in union density.

The union wage effect can be estimated if the proportion of represented workers in the county after 2008 and the size of the spillover effect are known. Specifically, the increase in earnings can be broken down according to the following equation:

$$E_2 = pUE_1 + (1 - p)SE_1,$$

In which E_1 refers to pre-2008 weekly earnings, E_2 refers to post-2008 earnings, p refers to the proportion of workers who are represented post-2008, U refers to the union wage effect, and S refers to the spillover effect (with U and S expressed as multipliers). It is known from the QCEW earnings data that E_2 is 29.9 percent greater than E_1 . With estimates of p and S it is possible to solve for U .

Using QCEW employment data, MDCEP applied a second interrupted time series regression to estimate the effect of the Gaylord on hotel employment in Prince George’s, finding that the hotel increased employment by 98.4 percent.³⁴ Data from the Bureau of Labor Statistics Occupational Employment Statistics

³² That is, in a regression of $\log(\text{weekly earnings})$ on time and a post-2008 dummy variable, the coefficient on *post-2008* was 0.262 (and statistically significant at the 1 percent level). When exponentiated, this coefficient indicates a discontinuous jump of 29.9 percent. As Figure 1 in the main body of the report shows, earnings appear to grow more quickly after 2008. Although it is possible that union representation increased the rate of wage growth at the Gaylord, this analysis assumes equal wage growth before and after 2008 for the sake of parsimony.

³³ In nearby Montgomery County, earnings in the traveler accommodation industry increased by only 3.7 percent in 2008, suggesting that economic trends affecting the broader region were not responsible for the increase in Prince George’s.

³⁴ In a log-linear regression, the coefficient on *post-2008* was 0.685.

indicate that 88.3 percent of workers in the traveler accommodation industry are neither managers nor supervisors, and therefore are eligible for representation under federal law. If all eligible employees at the Gaylord are assumed to be represented, this indicates that 43.8 percent of hotel workers in Prince George’s after 2008 earned a union wage.

Data from Prince George’s County do not allow direct estimation of the Gaylord’s effect on non-represented hotel workers’ wages through spillover effects. However, if the increase in union density in the local labor market is known, it is possible to apply published estimates of union spillover effects.

Because workers and employers do not compete exclusively within county lines, it would not be appropriate to estimate the spillover effect using union density in Prince George’s County alone. The Washington, DC metropolitan statistical area is a more accurate representation of the local labor market. Dividing the number of represented employees at the Gaylord—about 1,600—by 2008 traveler accommodation employment in the Washington area yields an upper-bound estimate of the increase in local union density due to Gaylord of 4.0 percent.³⁵ A 2003 study found that, if 25 percent of workers in a particular industry and local labor market are represented, wages for nonunion workers with a high school diploma increase by between 2 percent and 5.5 percent as a result.³⁶ Applying the midpoint of this range, a 1 percentage-point increase in local union density is associated with a 0.15 percent increase in nonunion workers’ wages. This implies that the Gaylord increased the wages of non-represented hotel workers in Prince George’s County (as well as the rest of the metropolitan area) by about 0.6 percent.

Substituting in estimates of the represented proportion of workers and the spillover effect, the above equation becomes

$$129.9\% \times E_1 = 43.8\% \times UE_1 + 56.2\% \times 100.6\% \times E_1.$$

Dividing both sides by E_1 and solving for U results in an estimated union wage effect of 67.5 percent.

2. Estimation of Union and Nonunion Earnings by Industry

The goal of this calculation is to estimate what average annual earnings for workers at the MGM National Harbor would be if none of them were represented

³⁵ The true increase is slightly smaller, because the Gaylord also increased the number of nonunion traveler accommodation workers in the region. However, because any increase in earnings attributed to spillover effects is not attributed to the union wage effect, an upper-bound estimate of the increase in union density leads to a conservative estimate of the union wage effect. Assuming no spillover effect results in an estimated union wage effect of 68.3 percent. Washington MSA employment in traveler accommodation is obtained from QCEW.

³⁶ Farber, “Nonunion Wage Rates and the Threat of Unionization.” The spillover estimate for workers with a high school diploma is reasonable because management, professional, and related occupations account for less than 7 percent of traveler accommodation employment, according to Occupational Employment Statistics. If this estimate overstates wage gains for nonunion workers, the implied union wage effect will be biased downward.

by unions and what average earnings would be if as many workers as possible were represented. This estimation uses Occupational Employment Statistics (OES) and the Union Members Summary from the Bureau of Labor Statistics (BLS), in addition to regional price parities from the Bureau of Economic Analysis. For concreteness, the calculation for casino hotel industry workers—that is, the employees who will work at the MGM once it opens for business—is presented here.

INADEQUATE APPROACHES

The most straightforward way to estimate the gain in earnings from unionization would be to use industry-wide wage averages provided by OES. According to OES, the average annual wage among casino hotel workers is \$32,280. We could assume that this is the average for nonunion workers and then apply an estimate of the union wage effect to obtain the average annual union wage. Using the published union wage effect of 23.3 percent, the average annual union wage is estimated to be \$39,801, for a gain of \$7,521 per worker.

Although this approach is straightforward, it is likely to be inaccurate for several reasons. Most obviously, some casino hotel workers are already represented by unions. For this reason, the industry-wide average wage is a combination of union wages and nonunion wages. It is likely to be higher than the true average nonunion wage, meaning that the estimated union wage and the estimated gain will be too high as well.

This approach can be improved by first decomposing the industry-wide average wage into an average union wage and an average nonunion wage. This can be done using the BLS Union Member Summary. The Union Member Summary includes estimates of the share of workers in each broad industry who are represented by a union. It also includes estimates of weekly earnings for a typical represented worker and a typical worker without representation in each broad industry. With these data, it is possible to estimate the industry-wide average nonunion wage by solving the following equation for E_{iN} :³⁷

$$E_i = p_i G_i E_{iN} + (1 - p_i) E_{iN}.$$

In this equation, E_i is the industry-wide annual average wage, which is provided by OES. p_i is the proportion of workers in the industry who are represented by a union, which is provided by the Union Members Summary. G_i is the industry-wide union wage gap, the average percent difference in earnings between represented and non-represented workers within the industry (expressed as a multiplier). G_i is straightforward to calculate from the Union

³⁷ This requires two important assumptions. First, casino hotels are a detailed industry, while the Union Member Summary provides information only on broader industry groups. In this case it is necessary to assume that casino hotels have the same levels of unionization and the same union wage gap as other accommodation industries. Second, while this equation is valid for comparing averages, the Union Members Summary reports median earnings by industry and union status. Therefore, we must assume that the gap in average earnings between represented workers and other workers is the same as the gap in median earnings. This could be false if unions decrease within-industry wage inequality, which would likely make the average gap smaller than the median gap.

Wage Summary.³⁸ E_{iN} is the industry-wide average annual nonunion wage, which we seek to estimate. For casino hotels, the above equation becomes the following:

$$\$32,280 = 8\% \times (\$639 \div \$532) \times E_{iN} + 92\% \times E_{iN}.$$

Solving for E_{iN} , the estimated annual average nonunion wage is \$31,769. Applying the union wage effect of 23.3 percent yields an estimated annual average union wage of \$39,171.³⁹ The average gain from unionization is now estimated to be \$7,402. As expected, this method produces lower estimates of the annual nonunion wage, the annual union wage, and the gain from unionization than the first method.

However, this is still an imperfect method for estimating the gains from unionization. By applying the union wage effect to the industry-wide average wage, we implicitly assume that all workers gain this much from unionization. In reality, the union wage effect measures how much represented workers would gain from unionization. Aside from much smaller potential spillover effects, workers who are not eligible for union representation would not be expected to see their wages rise.⁴⁰ Once again, this method likely overstates the gains from unionization.

PREFERRED APPROACH

The inadequate approach considered above can be improved by applying the union wage effect to occupation-wide nonunion wages instead of the industry-wide average. In this way, wages for eligible workers are assumed to increase through unionization while wages for managers and supervisors remain the same. For each occupation within the casino hotels industry we solve the following equation for E_{ioN} :⁴¹

$$E_{io} = p_o G_o E_{ioN} + (1 - p_o) E_{ioN}.$$

³⁸ Note that G_i in this equation is different from U in the equation used in Section 1 of this appendix. U is the union wage *effect*, the amount by which represented workers' wages increase because they are represented by a union. Estimating U requires econometric techniques to isolate causation. G_i , the union wage *gap*, is a descriptive variable measuring the average difference in earnings between represented workers and workers without representation. G_i could be greater than U if workers in higher-paid occupations are more likely to be represented than those in lower-paid occupations. G_i could be less than U if unions raise both the wages of represented workers and the wages of other workers. G_i can be estimated by simply comparing averages.

³⁹ After using the union wage *gap* to estimate the average nonunion wage, we apply the estimated union wage *effect* to determine the average union wage. This is because the gap only measures the difference in average wages, while the effect measures the causal change in wages expected to result from unionization.

⁴⁰ Under federal law, managers and supervisors in the private sector are not eligible for union representation.

⁴¹ As with the earlier approach, this assumes that the higher-level occupations reported in the Union Members Summary have the same unionization rates and union wage gaps as the more detailed occupations available from OES. (This analysis is based on *minor* occupational groups, the broadest level of categorization that distinguishes between supervisors and nonsupervisory workers.) It is also necessary to assume that the gap between average earnings by union status is the same as the gap in median earnings.

This equation is similar to the one used in the second approach. In this equation, E_{io} is the annual average wage for the specific industry and occupation being considered. For example, this could be the annual average wage of entertainment attendants and related workers in the casino hotels industry (one of the larger occupations in this industry). p_o is the occupation-specific share of workers who have union representation, and G_o is the occupation-specific union wage gap. Note that p_o and G_o , as reported in the Union Members Summary, are not industry-specific. E_{ioN} , the variable to be estimated, is the industry- and occupation-specific average annual nonunion wage.

Consider entertainment attendants and related workers. The average annual wage for entertainment attendants and related workers in the casino hotels industry is \$20,790. These workers belong to the broader personal care and service occupations group, within which 8 percent of workers have union representation. In this occupational group, represented workers earn 5 percent more, on average, than non-represented workers. The above equation now becomes:

$$\$20,790 = 8\% \times 105\% \times E_{ioN} + 92\% \times E_{ioN}.$$

Solving for E_{ioN} , the estimated annual average nonunion wage for entertainment attendants and related workers in the casino hotels industry is \$20,707. Applying the union wage effect, the estimated annual average union wage for entertainment attendants and related workers in the casino hotels industry is \$25,532.

The next step is to build up the industry-wide nonunion annual average wage from the industry- and occupation-specific averages, using the following equation:

$$E_{iN} = S_{i1}E_{i1N} + S_{i2}E_{i2N} + \dots + S_{ik}E_{ikN}.$$

This equation is simply an average of the occupational wages. In this equation, E_{iN} is the industry-wide average annual nonunion wage. E_{i1N} is the industry- and occupation-specific average annual nonunion wage for Occupation 1, and S_{i1} is the occupation-specific employment share for Occupation 1 in the industry under consideration. E_{i2N} and S_{i2} are the same for Occupation 2, and so on. k is the number of occupations existing in the industry (the casino hotels industry includes significant numbers of workers belonging to 58 minor occupational groups). The average annual nonunion wage for each occupation is multiplied by the occupation's employment share within the industry, and summed to calculate the industry-wide average nonunion wage.

Calculating the industry-wide average union wage is slightly more complex, because only workers in non-managerial, nonsupervisory occupations are expected to see wage gains from unionization. Thus, the industry-wide average union wage is calculated by multiplying each occupation's employment share by

its average wage, but for some occupations (such as entertainment attendants and related workers) this is a union wage while for others (such as top executives) it is a nonunion wage.⁴²

This approach improves significantly on the earlier approach by removing represented workers when calculating nonunion wages and removing ineligible workers when calculating union wages. However, it still needs two adjustments. First, the unionization levels and union wage gaps derived from the Union Members Summary are occupation-wide and therefore do not reflect variation across industries. Second, all data considered so far are nationwide, and therefore do not account for geographic variation in wages.

INDUSTRY UNION ADJUSTMENT

Workers who are in the same occupation but different industries may be unionized at different rates, or may see different-sized gains in wages from unionization. For this reason, using occupation-wide data to estimate nonunion wages may yield inaccurate results. This issue is likely to be especially important when working with the high-level occupation data available in the Union Members Summary. These high-level data could hide variation within broad occupation groups.

For example, about 6 percent of workers in casino hotels are in protective service occupations, with most serving as security guards. According to the Union Members Summary, this is a heavily unionized occupational group, with nearly 39 percent of workers in this group having union representation. However, this does not necessarily imply that 39 percent of protective service workers in casino hotels have representation—the high unionization levels in the protective services group are likely due to high unionization among publicly employed police officers and firefighters.

Similarly, workers in the same occupational group but different industries may see different gains in wages from unionization. A union in a heavily unionized industry may have more power to set wages than one representing similar workers in a less-heavily unionized industry. As a result, the gap between union wages and nonunion wages may be different for workers in different industries, even if they all have the same occupation.

The high-level data in the Union Members Summary do not provide a perfect way to correct for this problem. However, it is possible to partially correct it by adjusting the occupational unionization levels and union wage gaps using industry-level data in the Union Members Summary.

If each occupation in the casino hotels industry were assumed to be unionized at the same level as that occupation nationwide, the industry would be expected to have an overall unionization level of 9.7 percent. However, data from the Union Wage Summary indicate that only 8 percent of workers in the

⁴² This calculation is expressed by the following equation, in which the first m occupations are eligible for representation and the rest are not: $E_{iU} = S_{i1}UE_{i1N} + S_{i2}UE_{i2N} + \dots + S_{im}UE_{imN} + S_{(m+1)}E_{i(m+1)N} + S_{(m+2)}E_{i(m+2)N} + \dots + S_{ik}E_{ikN}$. Here, U is the causal union wage effect.

accommodation industry are represented.⁴³ By adjusting each occupation-specific unionization level downward by 18 percent, it is possible to match the industry-wide unionization level while retaining variation in unionization levels by occupation.

Similarly, using the occupation-specific union wage gaps calculated from the Union Member Summary generates an estimated industry-wide wage gap of 23 percent. However, the industry-wide gap is only 20 percent. By adjusting the occupation-specific (multiplicative) wage gaps downward by 2 percent, it is possible to match the industry-wide union wage gap while retaining variation by occupation.

GEOGRAPHIC WAGE ADJUSTMENT

Finally, all calculations so far have been based on nationwide data, even though prices and wages differ significantly throughout the United States. Because the Washington area has higher prices and wages than many other parts of the country, nationwide data are likely to understate wages for workers in this area. To account for this, all wages were adjusted upward using the regional price parity for the Washington metropolitan area, published by the Bureau of Economic Analysis.

3. Estimation of Economic Impacts

The economic impact of unionization at the MGM National Harbor is the sum of three components:

- The direct impact of increased earnings among represented workers at the MGM and others who gain from spillover effects
- Additional income earned when the affected workers spend their income at local businesses
- Subsequent rounds of spending as local businesses purchase materials and their employees spend their income. Each additional dollar of wages circulates through the economy, boosting businesses and workers along the way.

DIRECT IMPACT

The direct impact of unionization at the MGM is calculated in four steps:

1. Calculate the total increase in annual earnings among represented workers by multiplying the increase in average earnings (main body Table 1) by the number of affected workers.

⁴³ It is possible that workers in the casino hotels industry are more heavily unionized than those in other accommodation industries. This is not possible to check using data from the Union Members Summary.

2. Calculate the increase in annual earnings through spillover effects among non-represented workers by multiplying the increase in average earnings (main body Table 2) by the number of affected workers.
3. Add the results of steps 1 and 2. This is the gross direct impact.
4. Multiply the gross direct impact by the proportion of spending at the MGM attributable to visitors from outside the analysis region (in this case, the Washington metropolitan area). Spending by visitors from inside the region might otherwise have been spent at other local businesses, and therefore should not be included in the economic impact of the increase in earnings at the MGM. This reduced impact estimate is the net direct impact.⁴⁴

Calculation of the direct impact of unionization during the construction phase of the MGM is shown in Table A-1.

TABLE A-1. CALCULATION OF DIRECT IMPACT FOR CONSTRUCTION PHASE

\$9,440	×	2,000	=	\$18.9 million
Increased earnings per MGM construction worker		MGM construction workers ⁴⁵		Increased earnings of MGM construction workers
\$276	×	29,549	=	\$8.2 million
Increased earnings per Washington-area nonunion construction worker		Washington-area nonunion construction workers ⁴⁶		Increased earnings of Washington-area nonunion construction workers
\$18.9 million	+	\$8.2 million	=	\$27.0 million
Increased earnings of MGM construction workers		Increased earnings of Washington-area nonunion construction workers		Gross direct impact ⁴⁷
\$27.0 million	×	70%	=	\$18.9 million
Gross direct impact		Estimated share of spending originating outside Washington area ⁴⁸		Net direct impact

⁴⁴ This adjustment assumes that the full cost of higher wages are borne by customers through higher prices. If some of the cost of higher wages is absorbed through improvements in productivity or reduced profits, the net direct impact may be larger.

⁴⁵ O’Connell, “Unions Go to Bat for MGM Resorts International in Bid for National Harbor Casino.”

⁴⁶ According to the Quarterly Census of Employment and Wages, there were 32,341 construction jobs in the Washington area in 2013, the year before construction of the MGM National Harbor began. MDCEP analysis of Current Population Survey data indicates that 90.4 percent of these were non-represented. The estimated 319 managers and supervisors at the MGM were added to this number, for a total of 29,549 non-represented workers.

⁴⁷ The true gross direct impact is likely somewhat larger because the value in Table A-1 does not include workers’ increased purchasing power from the value of employer-provided health insurance.

⁴⁸ It is estimated that 70 percent of revenues at the MGM National Harbor will be attributable to spending by visitors from outside Maryland (“Frequently Asked Questions,” *MGM National Harbor*, accessed November 2016, <https://www.mgmnationalharbor.com/en/faq.html>). This number includes some spending originating within the Washington region (such as spending by visitors living in Washington, DC) and excludes some spending originating outside the Washington region (such as spending by visitors living in Baltimore County, MD). This analysis assumes that 70 percent of spending originates outside the Washington region.

SUBSEQUENT ROUNDS OF SPENDING

When directly affected workers spend their increased income at local businesses, this launches subsequent rounds of spending as businesses purchase materials and their workers spend their earnings. The economic impact of these rounds of spending is calculated in two steps:

1. Multiply the net direct impact (step 4 of the direct impact calculation) by the proportion of affected workers who live in the analysis region. Because people spend most of their income close to home, spending by workers who live in the Washington area is more likely than spending by other workers to remain in the local economy. The result of this step is the net in-region direct impact.
2. Multiply the result of step 1 by an economic multiplier, which measures the per-dollar impact of workers' increased earnings. The multiplier used here is the RIMS II Type II final-demand earnings multiplier for households in the Washington-Arlington-Alexandria metropolitan statistical area.⁴⁹

Calculation of the impact of subsequent rounds of spending for the construction phase of the MGM is shown in Table A-2.

TABLE A-2. CALCULATION OF SUBSEQUENT ROUNDS OF SPENDING FOR CONSTRUCTION PHASE

\$18.9 million	×	83%	=	\$15.7 million
Net direct impact		Estimated share of workers living in Washington area ⁵⁰		Net in-region direct impact
\$15.7 million	×	0.2411	=	\$3.8 million
Net in-region direct impact		Per-dollar earnings from subsequent rounds of spending ⁵¹		Earnings from subsequent rounds of spending

TOTAL IMPACT

The total impact is calculated by adding the net direct impact and the earnings from subsequent rounds of spending. Table A-3 shows this calculation for the construction phase.

TABLE A-3. CALCULATION OF TOTAL IMPACT FOR CONSTRUCTION PHASE

\$18.9 million	+	\$3.8 million	=	\$22.7 Million
Net direct impact		Earnings from subsequent rounds of spending		Total impact

⁴⁹ This multiplier measures the impact on *earnings* in the analysis area. Other multipliers exist for outcomes such as output and GDP.

⁵⁰ "Longitudinal Employer-Household Dynamics," *US Census Bureau*, accessed November 2016, <http://onthemap.ces.census.gov/>.

⁵¹ Bureau of Economic Analysis, RIMS II Type II final-demand household earnings multiplier.

EMPLOYMENT IMPACT

When workers gain higher wages through union representation, the resulting boost in spending creates jobs as local businesses hire more workers to meet the increase in demand. To calculate the employment impact, multiply the net in-region direct earnings impact by an employment multiplier—in this case, the RIMS II Type II employment multiplier for households in the Washington metropolitan area. Table A-4 shows this calculation for the construction phase.

TABLE A-4. CALCULATION OF EMPLOYMENT EFFECT FOR CONSTRUCTION PHASE

\$15.7 million	×	7.042	=	111
Net in-region direct impact		New jobs per \$1 million in household income ⁵²		New jobs

For reference, the calculation of economic impacts of representation during the operating phase of the MGM is presented in Table A-5. This calculation assumes the local union wage effect estimated in Section 1 of the Technical Appendix.

⁵² Bureau of Economic Analysis, RIMS II Type II final-demand household employment multiplier.

TABLE A-5. CALCULATION OF ECONOMIC IMPACTS FOR OPERATING PHASE

	\$19,399 Increased earnings per MGM hotel worker	×	4,000 MGM hotel workers	=	\$77.6 million Increased earnings of MGM hotel workers
	\$286 Increased earnings per Washington-area nonunion accommodation worker	×	36,135 Washington-area nonunion accommodation workers	=	\$10.3 million Increased earnings of Washington-area nonunion accommodation workers
	\$77.6 million Increased earnings of MGM hotel workers	+	10.3 million Increased earnings of Washington-area nonunion accommodation workers	=	\$87.9 million Gross direct impact
	\$87.9 million Gross direct impact	×	70% Estimated share of spending originating outside Washington area	=	\$61.5 million Net direct impact
	\$61.5 million Net direct impact	×	83% Estimated share of workers living in Washington area	=	\$51.1 million Net in-region direct impact
	\$51.1 million Net in-region direct impact	×	0.2411 Per-dollar earnings from subsequent rounds of spending	=	\$12.3 million Earnings from subsequent rounds of spending
	\$61.5 million Net direct impact	+	\$12.3 million Earnings from subsequent rounds of spending	=	\$73.9 MILLION Total impact
	\$51.1 million Net in-region direct impact	×	7.042 New jobs per \$1 million in household income	=	360 New jobs