Wages in Las Vegas and Reno: How Much Difference Do Unions Make in the Hotel, Gaming, and Recreation Industry?

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Abstract

A significant union presence in the Las Vegas, Nevada Hotel, Gaming, and Recreation (HGR) industry juxtaposed to the near absence of unions in the Reno, Nevada segment of the same industry is used to study how unions affect wages both within the industry and in a much less unionized sector, the Wholesale and Retail Trade (WRT) industry. The results indicate that median wages of highly unionized occupations in the Las Vegas HGR industry are significantly higher than wages of identical occupations in Reno. Little difference in wages is observed in the WRT industries of the two regions. In light of recent government scrutiny of gaming in the United States, managers must become more sensitive to alleged negative socio-economic impacts of their operations. Higher wages as a result of unionization may mitigate one element of such alleged effects.

Keywords: Hotel and Casino Industry; Union Wage Effects; Service Sector Employment

Introduction

Recently, the National Gaming Impact Study Commission (1999), established by Public Law 104-169, investigated the multidimensional impacts of gaming on customers, workers, and communities across the United States. Many industry analysts predicted that the Commission's findings would become a catalyst for extending federal regulation into the industry based on findings and perceptions that unacceptably high social and economic costs accompany the operation of gaming enterprises. According to some researchers, such costs range from psycho- and socio-pathologies related to compulsive gambling to labor market distress because of the abundance of jobs created in the hotel-casino sector that are potentially unstable, part-time, low paying, and offer few fringe benefits (Alexander, 1998; Thomson, Gazel, and Rickman, 1997; Waddoups, 2000a).

In light of the Commission's findings, it appears that owners and managers of hotel-gaming operations may find it in their self interest to become more sensitive to the impact of their enterprises on social and economic well-being of the communities in which they operate. More importantly, industry leaders must pay more attention to potential negative external effects of their enterprises and find methods to minimize such costs. A strategy of denial or avoidance of self-

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scrutiny is likely short-sighted, and may invite costly economic and political fallout similar to that recently experienced by the tobacco industry.

Of course, managers of hotel-gaming operations must be sensitive to a complex array of overlapping and often conflicting interests, which include interests of stockholders, political leaders, community groups, workers, unions, and their customers. If a critical mass of community interests comes to believe that gaming enterprises generate more social and economic costs than benefits for their communities, increased government intervention and control will likely follow.

When socio-economic costs are examined in the context of gaming, the discussion generally has focused on pathological gambling and the accompanying costs borne by the community. In contrast, the present study addresses social and economic costs and benefits from the perspective of employees. If a substantial proportion of hotel-casino employees work in jobs that pay at or below the poverty level, socio-economic costs stemming from inadequate health care, lack of affordable housing, family instability, lack of resources for child care, among others, are borne by the workers, their dependents, and the community.[1] Such costs are especially salient for communities with a relatively large proportion of employment attributable to the gaming industry.

More specifically, the present study addresses the ability of labor unions to increase wages of front-line hotel-casino workers. By comparing occupational wages in a highly unionized (Las Vegas) with a location virtually union-free (Reno), union impact on wages is assessed. If substantially higher wages are observed in the unionized location while poverty level wages are observed in the less unionized area, then unions may be understood, in part, as institutions that reduce the social and economic costs connected with low wage employment.

Undoubtedly managers are reluctant to accept contractual restrictions that unionization places on their ability to operate. Furthermore, stockholders generally prefer higher short-term profits that generally accrue in the absence of unions. However, if increased economic stability for a significant portion of the community's residents accompanies union scale wages and benefits, then social and economic costs that may otherwise have been borne by the community can be avoided. Reduction in such costs will likely increase the industry's acceptability to community residents, which in turn raises the probability that it will continue to thrive economically in the long term.

The findings reported in the present study are relevant to hotel-casino managers and union leaders, who both have a direct interest in maintaining the long run viability of the industry. In addition, policy makers, who make regulatory decisions affecting the industry, and academic researchers, who study managerial and socio-economic issues connected with the hospitality industry, should also find the study of interest.

Unions and Wages from the Perspective of Economic Studies

Economists and industrial relations scholars have demonstrated quite conclusively that unions raise the wages of the workers they represent (Freeman & Medoff, 1984; Hirsch & Macpherson, 1997). Evidence of the union wage effect on workers without union coverage, however, is not so clear. Such ambiguity arises because unions in a labor market affect nonunion wages while they raise union wages. For example, citing the union threat effect, some economists have suggested that firms that prefer to remain nonunion will increase wages of nonunion workers strategically to reduce the probability

[1] For example, Waddoups (1999a) studied patterns of uncompensated health care among patients and guarantors at the local public hospital in Las Vegas, which provides approximately one-half of the uncompensated health care in the area. As the location's only safety-net hospital, it must treat patients regardless of their ability to pay. The study revealed that workers employed in hotel-casino jobs at "Strip" properties, a highly unionized location, were substantially more likely to pay their medical bills than workers employed in off- "Strip" hotel-casinos, which are mostly nonunion. The lack of affordable benefits for workers and their dependents in off- "Strip" establishments is the likely reason for the difference. Costs associated with uncompensated health care are transferred from firms, which pay low wages and provide no benefits, to the community through higher prices for medical care, higher insurance premiums, and higher taxes than would otherwise be observed.

of a successful union organizing drive.[2] Unions may also raise the relative wages of nonunion workers through increased consumer demand at nonunion firms. The demand for nonunion workers is theorized to increase because consumers shift from goods and services produced in the (presumably) higher cost union sector toward goods and services produced in the (presumably) lower cost nonunion sector. Such a substitution is expected to increase the demand for nonunion labor and put upward pressure on wages in the nonunion sector, other things equal.

Labor economists have also formulated the wage relativity hypothesis to explain why union and nonunion workers' wages do not diverge more than is currently observed. For example, Freeman & Medoff (1981) suggested that nonunion workers in an industry with substantial unionization observe wages in the union sector and set their labor supply price accordingly. Nonunion firms are forced to raise wages closer to the union scale to elicit the necessary effective labor supply. Workers who see the union scale as fair will not provide the same level of quality adjusted work for significantly less compensation.

Researchers have also hypothesized that unions affect nonunion wages through a spillover effect. The spillover hypothesis suggests that if unions increase the price of labor, one would expect disemployment in the union sector. Reduced demand for workers in the union sector in turn increases the supply of labor available to the nonunion sector, which is expected to depress wages of nonunion workers relative to their unionized counterparts. Although the disemployment envisaged in the union spillover model may remain within the highly unionized industry, it may also be diffused broadly across industries that demand labor of similar skill levels (Cain, Becker, McLaughlin, & Schwenk, 1981, pp. 225-226). Herz (1990), for example, reported that one-half of the workers displaced in 1983-88 (not necessarily because of high union wages) who later became re-employed, took jobs in another industries. Thus, if disemployment occurs because of high union wages, increased labor supply may be observed in the nonunion sector, not only in the industry in question, but in an array of industries that use the same quality of labor as the highly unionized industry.

In industries outside the highly unionized industry, where the threat of unionization may not be credible, the spillover effect may be a more dominant factor. The predicted net effect would be a relative decline in wages in such industries. Declining wages as a result of the spillover effect would be especially likely if collective bargaining were structured along industrial lines, as is the case in Nevada's Hotel, Gaming, and Recreation (HGR) industry.

The HGR Sector in Nevada

The above review of how the presence of unions in an industry may affect wages suggests that such effects run through a number of channels. A case study of union wage effects was conducted that focuses specifically on two industries and two cities — The HGR and Wholesale and Retail Trade (WRT) industries in Las Vegas and Reno, the two metropolitan areas of Nevada.[3] The study of unions and wages in these two local industries and cities is compelling for a number of reasons. First, the structure of the two industries and their patterns of unionization make it amenable for examining how occupational wages in a less

[2] Hundley (1987) presented a formal model of firm behavior in response to the union threat. Curme & Macpherson's (1991) findings provide empirical support for the model.

[3] The WRT industry is chosen as a comparative because its occupational configuration most closely matches the configuration in HGR. Other industries defined in the state wage survey data that proved less useful for comparison purposes are "Mining," "Manufacturing," "Transportation, Communications and Public Utilities," "Finance, Insurance and Real Estate," "Services (excluding HGR)," "State Government," and "Local Government."

unionized labor market, like the HGR industry in Reno, differ from HGR wages in Las Vegas, a more highly unionized sector.

Both locations owe a substantial part of their employment to the HGR industry. In Clark County, home of Las Vegas, 26.4 percent of direct employment is located in the HGR industry (Nevada Department of Employment, Training and Rehabilitation (NDETR), 1996).[4] Of the estimated 144,979 jobs in the HGR industry at the time nearly 45,000 were covered by union contracts.[5] Workers in Las Vegas's hotel industry who were not covered under a union contract also benefit from working in a highly unionized branch of the industry. Nonunion workers in Las Vegas earned approximately 40 percent more than their nonunion counterparts elsewhere in the U.S., while their unionized counterparts earn similar wages to other *unionized* hotel workers elsewhere in the U.S. (Waddoups, 1999c). The resulting union-nonunion wage differential for workers outside of managerial, professional, and technical employment in Las Vegas is virtually nonexistent. The relative equality of wages across union and nonunion establishments suggests that some combination of the threat, nonunion demand, and wage relativity effects outweigh the spillover effect. Thus wages of union and nonunion workers in Las Vegas converge at a relatively high level.[6]

In stark contrast to the highly unionized HGR industry in Las Vegas, the industry in Reno located approximately 500 miles to the northwest is largely nonunion, and provides a unique opportunity for a comparative analysis. An interview with a union official in Reno revealed that only one hotel property (Circus Circus) with a bargaining unit of approximately 500 workers operated under a union contract in 1996. Five-hundred workers fill about 1.6 percent of the HGR jobs in Reno, a number that amounts to an estimated 30,584 (see Table 1). Compare a 1.6 percent union coverage rate in Reno to Las Vegas, where roughly 31 percent of the entire HGR workforce is covered. Although the HGR industry accounts for proportionally less employment in Reno, its estimated 18 percent share of employment is not trivial, and clearly makes it a major center of hotel-casino employment in both the state and the nation.

Second, the configuration of the two industries and labor markets allows one to address whether the high level of unionization in Las Vegas's HGR sector exerts any discernable impact on wages in the WRT industry through threat, nonunion demand, wage relativity, or spillover effects. The WRT industries in both locations are not highly unionized and compete for less-skilled labor with the HGR industries from the same local labor markets.[7] If threat, nonunion demand, and/or wage relativity effects extend across industry boundaries and outweigh spillover effects, then one would expect occupational wages in the Las Vegas's WRT industry to be higher than wages in Reno's branch of the industry. On the other hand, if spillover effects dominate, higher wages in Reno's WRT industry are expected, other things equal.

Employment in the WRT sector in Clark County is smaller than employment in the HGR industry, but still accounted for 95,954 jobs in 1996. The WRT industry in Reno has an estimated 36,065 jobs, which makes it slightly larger than its HGR sector (30,584 jobs). Nonetheless, both industries in each location are quite large as a proportion of total employment. Third, the present study differs from recent research on union wage effects, because occupational level data from a state wage survey are used rather than individual level data from a nationally representative sample.[8] Kochan & Helfman (1981) suggested

[4] Throughout the article Clark County and Las Vegas are used interchangeably, as are Washoe County and Reno.

[5] The employment figures were obtained from NDETR (1996, p. 75). Figures on union coverage were obtained from union officials and reflect coverage as of 1996.

[6] The average union-nonunion differential in U.S. hotel industry for nonmanagerial, nonprofessional/technical workers is 18.7 percent. In Las Vegas the differential ranges from -3.8 to 4.6 percent depending on the specification of the wage equations used in multi-variate statistical analysis (Waddoups, 1999b).

[7] Data used came from the Current Population Survey - Outgoing Rotation Group (CPS-ORG) files for 1995 and 1996 to generate point estimates of union density for the WRT industry statewide and in Clark and Washoe Counties. The estimates were 7.6 percent statewide, 8.2 percent in Clark County, and 10.2 percent in Washoe County. Small sample sizes may produce some measurement error in the estimates, but they conform to expectations in light of national figures from Hirsch & Macpherson (1997). The CPS data are commonly used to generate familiar labor market statistics such as the monthly unemployment rate.

[8] Use of aggregated occupational and industry data to test for union wage effects was common in earlier studies cited in the classic work of Lewis (1963).

Table 1

Standard Industrial Classifications for Industries and Other Information on the Data Used in the Analysis

HOTELS, GAMING AND RECREATION (HGR)			WHOLESALE AND RETAIL TRADE (WRT)		
Hotels, Rooming Houses, Camps and Other Lodging Places			Wholesale Trade:Durable Goods		
Amusement and Recreation Services			Wholesale Trade: Nondurable Goods		
			Building Materials, Hardware, Garden Supply, Mobile Home Dealers		
			General Merchandise Stores		
			Food Stores		
			Automotive Dealers and Gasoline Service Stations		
			Apparel and Accessory Stores		
			Home Furniture, Furnishings, and Equipment Stores		
			Eating and Drinking Places		
			Miscellaneous Retail		
SAMPLE INFORMATION			SAMPLE INFORMATION		
Clark County (Las Vegas)			Clark County (Las Vegas)		
	Firms	Employees		Firms	Employees
Industry Size	823	144,979	Industry Size	6,225	95,954
Survey Size	186	135,481	Survey Size*	653	49,649
Survey Responses	54	34,678	Survey Responses	141	9,163
Response Rate	29.0%		Response Rate	21.6%	
Washoe County (Reno)			Washoe County (Reno)		
	Firms	Employees		Firms	Employees
Industry Size	386	30,584	Industry Size	2,609	36,065
Survey Size	62	28,616	Survey Size	235	18,925
Survey Responses	21	11,280	Survey Responses	80	7,716
Response Rate	33.9%		Response Rates	34%	

Source: Nevada Wages: An Occupational Wage Survey of Selected Nevada Regions and Industries, Nevada Department of Employment, Training and Rehabilitation, 1996.
*Surveys given only to firms with 30+ employees.

that neither the approach using occupational nor individual level data is inherently superior; although they pointed out that the two approaches provide different information. The more common approach focuses on the individual as the unit of analysis and estimates what a worker at a given point in time with a given set of characteristics would earn in the presence of, and absence of, union coverage. To the extent that such estimates of the union wage effect do not account for changes in hiring, training, and other human resource policies that may have occurred over time in response to the union presence, estimates of the union wage effect may be biased, arguably downward.

In contrast, using occupational level data allows the researcher to assess how changes in human resource practices that occur as a result of unionization may have affected wages connected to jobs (rather than individuals) over time. Such a methodology makes it more conducive to estimating the total historical effects of unionism on wages. Consider how firms alter human resource policies in response to higher union wages. It is likely that firms begin to screen applicants more carefully and consequently hire more productive workers. Firms may also offer additional training so that wages and productivity are in closer alignment. If some of the changes in productivity-related characteristics originating from altered human resource practices are observed in the data at the individual level and are controlled for in multi-variate analysis (a technique commonly used to assess union wage effects), then the impact of unions on wages will be understated. For example, the source of higher wages may be attributed to more education or increased training. However, because the *occupational wage* incorporates employers' responses to unionism over time, it allows the researcher to obtain a better measure of the total historical effects of unions on wages, a measure which is better

suited for estimating what may have occurred in the absence of unions, or what may occur if unionization disappeared and human resource policies drifted back to a nonunion configuration.[9]

Finally, as discussed in the introduction, the present study holds currency because the spread of legalized gambling and its effects on the nation's social and economic health has resulted in more interest generally in HGR industries around the nation. The formation of a National Gaming Impact Study Commission itself suggests that research on HGR's growing importance to local, regional, and the national economies is becoming increasingly timely.

Unionization in Nevada's HGR Industry

Unionization is an important institutional feature of the labor market in Las Vegas, where the HGR industry employed 26.4 percent of the workforce as of the 1996 survey, many of which are represented by the Culinary Union, Local 226 and the Bartenders Union, Local 165. Affiliated with the Hotel Employees and Restaurant Employees International Union, the two locals represented nearly 40,000 workers as of 1996, mostly at major Las Vegas "Strip" properties. Other unions such as the International Union of Operating Engineers (stationary), the International Brotherhood of Teamsters, International Association of Theatrical and Stage Employees, the Carpenters Union, and the Musicians Union of Las Vegas represent maintenance workers, front-desk clerks, drivers, stage hands, and musicians, among others. In all, over 48 percent of Clark County's nonmanagerial, nonprofessional, and nontechnical workers in the HGR industry were unionized in 1996 compared to an estimate of 19 percent of the same group of workers nationwide (Waddoups, 1999c).

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A majority of establishments on the Las Vegas "Strip," such as Caesar's Palace, Circus-Circus, The Mirage, and The MGM Grand are unionized, as are a substantial proportion of major "Downtown" properties located on and around Fremont Street. An expanding segment of "Neighborhood" hotel-casinos has also emerged away from the tourist corridor. Such properties generally attract a higher proportion of their patrons from the local area and have little union presence. Pockets of isolated nonunion hotel-casino development are also found in Clark County on the California-Nevada border (about 40 miles southwest of Las Vegas), in Laughlin near the Arizona border (about 70 miles southeast of Las Vegas), and in Mesquite on the Arizona border near Utah (about 90 miles northeast of Las Vegas). In contrast, as stated above, only one property representing approximately 500 workers was unionized in Reno as of 1996.

Data and Methodology

To examine how unions affect wages in Nevada's HGR and WRT industries, Nevada's state wage survey is used. The survey is conducted annually by the NDETR to gather data on wages and employment from a sample of private sector employers with 30 or more employees. Table 1 (panel 1) contains a listing of the types of enterprises that compose the two industries. Nearly 1,100 employers representing a broad cross-section of industries participated in the 1996 survey. Because of Nevada's unique industrial structure, the NDETR formed HGR as a separate industrial category within a more

[9] Important prerequisites for the wage survey to be an effective data source for studying union wage effects in the present study are small union-nonunion wage differentials in Las Vegas, the virtual absence of unionism in Reno's branch of the industry, and a similar level of unionization in both locations in the comparison (WRT) industry.

broadly defined "Services" industry. The WRT industry was judged by the author to contain employers competing for similarly skilled workers in the same labor markets, and thus was chosen as a comparison group to the HGR industry.

To obtain its sample of wages in HGR and WRT firms, the NDETR developed a random selection criterion that gave larger firms a higher probability of receiving a survey. Recipients of the survey were asked to list the number of workers who fit a particular occupational definition, the number of hours each employee worked, the individual rate of pay excluding tips and other compensation as of March 1, 1996, and to classify each worker as "entry-level" or "journey-level." Only data on "journey-level" workers -- those capable of working without direct technical supervision -- were disaggregated by county; therefore, only journey-level workers were the focus of the study. The NDETR sent follow-up letters to non-respondents after six weeks encouraging their participation. They obtained total response rates of 29.0 percent in Clark County and 33.9 percent in Washoe County for the HGR industry and 21.6 percent in Clark County and 34.0 percent in Washoe County for the WRT industry. Table 1 (panels 2 and 3) displays information on the sample, including industry size, the number of firms who received a survey, and response rates.

The official description of the data described no attempts by the NDETR to test for any non-response bias. It appears, however, that no patterns of non-response bias emerged with respect to firm size. The average size of non-respondents was slightly smaller in Las Vegas than the size of respondents, while just the reverse was true of non-respondents in Reno.

Of the HGR firms in Clark County who were *sent* the survey, the mean number of employees was 728. The mean for WRT was 76 employees, clearly a smaller number. The analogous numbers for employees in firms *responding* to the survey averaged 642 and 65, respectively in the HGR and WRT industries in Washoe County, following the same pattern as in Las Vegas with respect to firm size. No information on the distribution or dispersion of firm sizes was provided, making it difficult to statistically test for differences in the two distributions or differences in average firm size within the two industries. The responding firms, however, represented 24 percent of the HGR jobs in Clark County's sampling universe and 10.5 percent of the WRT jobs in Clark County. The analogous figures for Washoe County are 36.9 for HGR and 19.9 for WRT.

Another potential source of non-response bias is under- or over-representation of firms by union status. The NDETR reported no information on union status. While lack of such information is not a problem in Reno because of the near absence of unionization, circumstances are different in Clark County. One piece of evidence suggesting that unionized firms were probably not undercounted was that median wages of many of the key, highly unionized occupations were identical with the union wage scale in typical contracts (Waddoups, 2000b, Table 2). Whether such firms were over-represented in the sample is more difficult to determine. The fact that not all median wages of generally unionized occupations in the survey corresponded exactly with the union scale, however, does suggest a significant participation of nonunion firms in the survey. The lack of data on firm characteristics makes it difficult to say anything definitive about non-response bias along the union dimension.

From employers' survey responses, the NDETR calculated means, medians, and interquartile ranges of a wide array of occupational wages in the two counties. To facilitate comparison, only occupations whose wages appeared in both locations were included, which left 51 pairs of occupation-industry median wages from HGR and 35 pairs from WRT in the final sample.

Median wages for occupations in Clark and Washoe County's HGR industry are compared in Table 2. For most occupations outside the Managerial and Professional categories the sample sizes are quite large, which increases the precision of the estimates of median wages. Notice also that the sample sizes are substantially larger in Las Vegas because of the larger size of the industry. In addition to information on median wages in

Las Vegas and Reno, Table 2 contains the difference and percent difference in the median wage for each occupation. The percent difference is calculated using Reno's wage as the denominator (the practice of placing the nonunion wages in the denominator is common in the literature measuring union-nonunion wage differentials). The final column in Table 2 indicates occupations where a substantial union presence exists. Of the 51 occupations listed for the HGR industry, 21 are considered "highly unionized" in Clark County.[10]

Table 2
Comparison of Median Occupational Wages in Clark County (Las Vegas) and Washoe County (Reno) (Hotel, Recreation, and Gaming)

Occupation	Num. of Firms Clark	Num. of Workers Clark	Median Clark	Num. of Firms Washoe	Num. of Workers Washoe	Median Washoe	Diff.	Perc. Diff.	Union in Clark Cty
Managerial and Administrative Occupations									
Chefs, Executive	15	17	29.38	10	14	21.92	7.46	34%	no
Managers, Casino	13	26	19.94	7	15	20.03	-0.09	0%	no
Managers, Financial and Controllers	28	50	23.04	14	23	24.87	-1.83	-7%	no
Managers, Food and Beverage	26	99	13.52	10	21	15.18	-1.66	-11%	no
Managers, General and Top Executives	16	35	48.08	8	19	57.69	-9.61	-17%	no
Managers, Hotel	16	20	25.05	11	14	19.71	5.34	27%	no
Managers, Marketing, Advert., Pub. Relations	18	30	19.23	8	17	21.15	-1.92	-9%	no
Managers, Human Resources	19	30	20.83	8	15	20.53	0.30	1%	no
Average		307	24.88		138	25.14	-0.25	-1%	
Professional, Paraprofessional, and Technical									
Accountants	10	21	13.86	9	21	14.42	-0.56	-4%	no
Administrative Assts.	20	36	13.37	8	29	12.41	0.96	8%	no
Casino Hosts, Executive	8	19	20.60	6	13	18.27	2.33	13%	no
Computer Programmers	6	17	15.77	6	13	18.39	-2.62	-14%	no
Average			15.90			15.87	0.03	0%	

Table 2 (cont.)
Comparison of Median Occupational Wages in Clark County (Las Vegas) and Washoe County (Reno) (Hotel, Recreation, and Gaming)

Occupation	Num. of Firms Clark	Num. of Workers Clark	Median Clark	Num. of Firms Washoe	Num. of Workers Washoe	Median Washoe	Diff.	Perc. Diff.	Union in Clark Cty
Sales and Related Occupations									
Cashiers, Casino Cage	30	486	10.01	15	185	7.04	2.97	42%	no
Change Persons, Gaming	28	1312	8.72	15	416	6.75	1.97	29%	yes
Clerks, Currency Counting	24	332	8.46	10	68	7.43	1.03	14%	no
Salespersons, Retail	13	277	7.50	5	60	7.04	0.46	7%	no
Average			8.67			7.07	1.61	23%	
Clerical and Administrative Support									
Bill and Account Collectors	12	30	11.71	6	16	9.17	2.54	28%	no
Clerks, Accounting	23	164	9.00	9	60	9.07	-0.07	-1%	no
Clerks, Hotel Desk	29	531	11.45	9	78	8.00	3.45	43%	yes
Clerks, Payroll	22	81	10.00	6	12	8.50	1.50	18%	no
Clerks, Personnel	17	48	9.00	6	12	8.43	0.57	7%	no
Clerks, Traffic, Shipping and Receiving	13	37	9.69	4	10	8.00	1.69	21%	yes
Computer Operators	6	34	11.73	5	18	10.72	1.01	9%	no
Secretaries, Except Legal and Medical	19	88	10.45	9	54	10.29	0.16	2%	no
Switchboard Operators	17	235	11.25	8	57	7.04	4.21	60%	yes
Average			10.48			8.80	1.67	19%	

[10] Occupations were assigned "highly unionized" status based on an examination of union contracts and after consultation with a former human resource executive of a major unionized hotel. In Table 2, "Union in Clark" heads this column.

Table 2 (cont.)
Comparison of Median Occupational Wages in Clark County (Las Vegas) and Washoe County (Reno)
(Hotel, Recreation, and Gaming)

Occupation	Num. of Firms Clark	Num. of Workers Clark	Median Clark	Num. of Firms Washoe	Num. of Workers Washoe	Median Washoe	Diff.	Perc. Diff.	Union in Clark Cty
Service Occupations									
Baggage Porters and Bellhops	22	393	7.67	6	61	5.22	2.45	47%	yes
Bakers, Bread and Pastry	8	78	12.37	8	52	9.62	2.75	29%	yes
Bartenders	31	559	11.88	13	239	6.60	5.28	80%	yes
Casino Hosts, Nonexecutive	11	52	13.44	4	24	10.84	2.60	24%	yes
Chefs	21	92	14.38	11	44	14.27	0.11	1%	yes
Cooks, Restaurant	26	469	12.07	13	262	8.48	3.59	42%	yes
Cooks, Short Order	10	94	10.53	6	95	7.75	2.78	36%	yes
Dealers, Blackjack	23	2211	4.58	12	1174	5.14	-0.56	-11%	no
Dealers, Craps	17	718	4.65	7	208	4.75	-0.10	-2%	no
Dining Room Attendants Bartender Helpers	21	634	7.21	11	290	4.75	2.46	52%	yes
Food Preparation and Service Workers (fast food)	16	215	7.91	10	78	6.50	1.41	22%	yes
Guards, Security and Watch (unarmed)	23	775	10.88	12	270	8.50	2.38	28%	no
Hosts, Hostesses	16	197	10.92	7	94	6.25	4.67	75%	yes
Housekeepers	19	238	8.75	12	38	6.41	2.34	37%	yes
Janitors and Cleaners	30	1112	9.52	14	428	6.90	2.62	38%	yes
Keno Runners	11	82	6.50	5	36	5.90	0.60	10%	no
Keno Writers	14	135	7.50	10	132	6.75	0.75	11%	no
Kitchen Helpers, Porters, Dishwashers	28	815	9.37	17	342	6.00	3.37	56%	yes
Maids and Room Cleaners	29	2254	9.25	12	444	6.39	2.86	45%	yes
Supervisors, Gaming	22	565	19.69	12	281	15.00	4.69	31%	no
Supervisors, Slots	27	493	10.41	15	238	7.63	2.78	36%	no
Waiters and Waitresses	25	1141	7.44	15	554	4.90	2.54	52%	yes
Average			9.86			7.48	2.38	32%	

Table 2 (cont.)
Comparison of Median Occupational Wages in Clark County (Las Vegas) and Washoe County (Reno)
(Hotel, Recreation, and Gaming)

Occupation	Num. of Firms Clark	Num. of Workers Clark	Median Clark	Num. of Firms Washoe	Num. of Workers Washoe	Median Washoe	Diff.	Perc. Diff.	Union in Clark Cty
Production, Construction, Operating, Maint. and Material Handling Occupations									
Maintenance Repairers, General Utility	26	256	19.22	11	123	12.42	6.80	55%	yes
Parking Lot Attendants	13	207	7.44	4	93	4.25	3.19	75%	yes
Slot Machine Repairers	26	210	16.52	12	99	12.28	4.24	35%	no
Supervisors, Maintenance Workers	19	65	16.94	8	18	16.52	0.42	3%	no
Average			15.03			11.37	3.66	32%	
Overall Average			13.11			11.41	1.70	24%	
Average Unionized in Clark County			10.50			7.49	3.01	40%	
Average not Unionized in Clark County			14.94			14.16	0.78	6%	

Source: Nevada Wages: An Occupational Wage Survey of Selected Nevada Regions and Industries, Nevada Department of Employment, Training and Rehabilitation, 1996.

Nearly identical information from the WRT industry in Las Vegas and Reno is compiled in Table 3. Notice that relatively large sample sizes for each occupation suggest that estimates of the population medians are likely to be quite reliable. Unlike Table 2, Table 3 does not contain a "Union in Clark" column, because union densities are virtually the same in both sectors and do not represent a substantial proportion of workers in occupations within the WRT industry in either Clark or Washoe Counties (see footnote 8).

Table 3
Comparison of Median Occupational Wages in Clark County (Las Vegas) and Washoe County (Reno)
(Wholesale and Retail Trade)

Occupation	Num. of Firms Clark Cty	Num. of Workers Clark Cty	Median Clark Cty	Num. of Firms Washoe	Num. of Workers Washoe	Median Washoe	Diff.	Perc. Diff.
Managerial and Administrative Occupations								
Managers, Fast Food	11	64	11.54	10	54	8.95	2.59	28.9%
Managers, Financial and Controllers	34	44	27.69	14	14	23.6	4.09	17.3%
Managers, Food and Beverage	24	64	15.00	12	20	13.30	1.70	12.8%
Managers, General and Top Exec.	51	89	28.85	37	65	28.37	0.48	1.7%
Managers, Marketing, Advert. etc.	15	18	23.45	5	10	20.48	2.97	14.5%
Managers, Sales	37	118	22.45	21	44	18.79	3.66	19.5%
Managers, Warehouse	21	28	16.27	19	28	18.94	-2.67	-14.1%
Average			20.75			18.92	1.83	9.7%
Professional, Paraprofessional, and Technical Occupations								
Accountants	16	22	14.42	9	14	16.56	-2.14	-12.9%
Buyers, wholesale, Retail Except Farm Products	14	19	16.45	7	13	14.95	1.50	10.0%
Average			15.44			15.76	-0.32	-1.4%

The Impact of HGR Unions on Wages

The results in Table 2 clearly demonstrate a substantial wage premium for workers in Las Vegas employed in highly unionized occupations in the HGR industry. The wage premium for such occupations averages 40 percent. That is, the typical worker in Las Vegas working as, for example, a baggage porter, kitchen helper, or guest room attendant (maid), among other highly unionized occupations, earns an average of 40 percent more in hourly wages than his or her counterparts in the identical occupations in Reno.

Are there differences in industry characteristics in Las Vegas that generate such a wage premium independent of unions? If such differences exist and lead to higher wages independent of union status, then one may expect workers in occupations not classified as highly unionized in Las Vegas's HGR industry to also earn substantially higher wages than their counterparts in Reno. Results in Table 2 indicate that such workers enjoy only 6 percent higher median wages on average relative to their co-workers in identical occupations in Reno. Thus some differences in wages across the two regions may arise from a difference in the structures of the HGR industries in the two cities favoring Las Vegas; however, the magnitude of the differences between the union and nonunion occupations (40 percent compared to 6 percent) suggests that union representation of workers in Las Vegas is very likely to remain a major component of a reasonable explanation of higher wages observed there.

Notice also that differences in median wages for some occupations listed in Table 2 are quite remarkable. For example, maids and room cleaners (an untipped occupation) in Las Vegas enjoy a 45 percent wage premium over the same occupation in Reno. Kitchen helpers, porters, and dishwashers (also untipped) are typically paid 56 percent more than workers in the identical occupations in Reno. The largest premium, however, goes to workers in tipped occupations. For example, bartenders in Las Vegas receive an 80 percent wage premium over bartenders in Reno.

Hourly wages in the NDETR data do not include tips, which likely causes an overstatement of the Las Vegas-Reno differential for bartenders and other tipped employees. To see why an upward bias may occur, consider figures in Table 2 showing food servers in Reno earning $4.90 per hour while their counterparts in Las Vegas earn $7.44 per hour, a 51.8 percent premium for workers in Las Vegas. Now, add a hypothetical $10.00 per hour in tips to each wage. The wage premium drops to 17 percent. Table 2 shows that tipped occupations generally exhibit the largest wage differentials, which suggests that using only the base wage may overstate the union effect. The NDETR data, however, also do not include fringe benefits, which likely tends to offset any upward bias from the exclusion of tips. Furthermore, Waddoups (1999c) demonstrated that differences in the distribution of median wages among occupations with a union presence in Las Vegas and the identical occupations in Reno was statistically significant.

A finding of higher wages in Las Vegas compared to Reno is not particularly surprising in light of previous research demonstrating that the extent of unionization in an industry positively affects wages (Belman & Voos, 1993; Cain, Becker, McLaughlin, & Scwhenk, 1981; Delaney, 1981; Freeman & Medoff, 1985; Perloff & Sickles, 1991). But the studies cited above used individual level data and were able to control for productivity-related characteristics such as experience, education, and job tenure. The present study partially controls for variation in such characteristics by using the median wage of an occupation as the unit of analysis. For example, it is doubtful that sufficient differences exist in the characteristics of the median guest room attendant in Las Vegas compared to her counterpart in Reno that would warrant a 45 percent wage premium. Other differences in the two markets that may be responsible for differences in wages will be discussed below.

Results in Table 2 leave little doubt that union representation among occupations in Las Vegas's HGR industry has a profound effect on wages and the wage structure within the HGR industry. Higher wages and benefits that are provided for in union contracts

increase living standards and reduce social costs associated with higher levels of employment at poverty level wages (refer back to footnote 2 for an example).

But does the existence of such an effect influence wages in other sectors of the economy? To determine the impact on other industries, refer to median wages for matched pairs of 35 occupations in the WRT industry in Las Vegas and Reno displayed in Table 3. As mentioned earlier, unions are not dominant in either geographic location in the WRT industry and the union density is comparable in both areas, thus median wages are not consistent with the union scale in either Las Vegas or Reno. Results in Table 3 indicate that in occupations listed under the "Clerical and Administrative Support," "Services" and "Production, Construction, etc." categories; that is, in occupations in which non-HGR firms are most likely to be competing for workers with HGR firms, there appears to be somewhat of a wage advantage for occupations in Reno. For example, the typical clerical worker in Las Vegas makes 8.9 percent less than his or her counterpart in Reno. The analogous figure for "Services" and "Production" categories is .9 and 6.2 percent less, respectively. Overall, workers in Las Vegas's WRT are paid 2.2 percent less than their counterparts in Reno. Waddoups (1999c) found no statistical significance at conventional levels for such differences, although results on clerical workers came close to statistical significance with a p-value of .063. Compare these results to a 24 percent wage advantage for workers in Las Vegas's HGR industry. Overall, higher union wages in the HGR industry in Las Vegas do not seem to translate into lower wages in its WRT industry via the spillover effect as defined above. Nor does the heavy unionization increase wages in the WRT as the threat, consumer demand, and wage relatively hypotheses would suggest, although the possibility remains that the two opposing forces cancel each other out.

The evidence presented here seems to contradict the findings of Kahn (1978), who also compared a highly unionized city (San Francisco) with a less unionized city (Los Angeles), finding that nonunion service sector workers in San Francisco earned significantly lower wages than their nonunion counterparts in Los Angeles. Other studies either found no evidence of inter-industry effects (Hirsch & Neufeld, 1987; Hundley, 1987) similar to the present study, or a positive correlation between union density and wages of nonunion workers (Curme & Macpherson, 1991; Neumark & Wachter, 1995). It must be remembered that even though some workers in the WRT industry are unionized, because the union density is quite low, the median occupational wage most likely reflects pay resembling a nonunion wage.

It appears that higher union wages in the HGR industry do not obviously come at the expense of other similarly-skilled workers outside the industry. Such a finding is important for policy makers, community leaders, union leaders, and managers in the gaming sector, who must consider the complexities of the union wage effects on the social and economic well-being of the community as a whole.

Discussion and Conclusions

Higher wages in a vast majority of cases translate into higher living standards. Workers in the HGR industry where wages are higher and fringe benefits are more readily available are more stable, less likely to rely on services provided at the community's expense, and more likely to be active participants in the economy and society. To the extent that a union wage premium encourages such outcomes, fewer social and economic costs are likely to be borne by the community. Thus from a socio-economic perspective, especially in the HGR industry with its abundance of jobs at the lower end of the skill hierarchy, union representation and the accompanying wage

It appears that higher union wages in the HGR industry do not obviously come at the expense of other similarly-skilled workers outside the industry.

premium may alleviate some (though certainly not all) of the socio-economic costs that would otherwise be borne by the community.

Any conclusions derived from the present analysis must be interpreted in light of differences in the economies of Las Vegas and Reno that may affect wages independent of unionization. Because only two regions and two industries are the subject of study, the discussion must remain qualitative. Examples of factors that may cause wages to differ are the regulatory environment, industry structure, employment composition, employment and population growth, unemployment, cost-of-living, city size, and variation in non-pecuniary amenities.

The Nevada State Gaming Control Board regulates gaming operations in Nevada according to a uniform set of rules consistently applied to hotel-casinos throughout the state, rendering the regulatory playing field in Las Vegas and Reno level. Differences in wages, therefore, are not influenced by variation in regulatory policy.

In the present context, industry structure refers to the degree of market power hotel-casinos enjoy in their respective regions. Previous research has demonstrated that oligopolistic market structures are generally characterized by higher than normal profit margins. Because higher profits reduce firms' will to resist union wage demands and allow union negotiators to push for increased wages with fewer negative employment effects, workers in such industries often capture a portion of extra-normal profits through higher wages (Stewart, 1990).

A readily available measure of market power for hotel-casinos in the two regions is profitability. Hotel-casinos in Reno generated higher profit margins than their counterparts in Las Vegas for 5 of the 7 years between 1990 and 1996, indicating the possible existence of monopoly rents for capture by HGR workers in Reno. On the other hand, figures describing revenue-per-employee are substantially lower in Reno, suggesting that hotel-casinos may not have the cash flow to pay higher wages in Reno, or perhaps that casinos in Las Vegas have substituted capital for relatively expensive union labor (Nevada Gaming Control Board, 1990-96).

Though hotel firms in Reno are definitely smaller than their counterparts in Las Vegas, the top 10 firms with respect to employment in both locations each employ more than 500 workers, which was a figure used by Podgursky (1986) as the lower bound in the definition of "large" firms.[11] The industry structure in Las Vegas and Reno differs to some extent, but no compelling evidence emerges to indicate that market structures in the two areas diverge to the point that comparison of wages in the two areas becomes unduly problematic.

Employment composition in the local labor market may also affect wages in the two areas (Kahn, 1978). Using national data, Hirsch & Macpherson (1997) demonstrated that wages vary substantially by industry. If a region has a high concentration of employment in high wage industries, other things equal, wages in lower paying industries may be bid upwards. The most notable differences in employment composition between Clark and Washoe Counties are in the construction, manufacturing, HGR, and public administration industries. Washoe County employs a greater share in manufacturing and public administration and Clark County employs a larger proportion in construction and HGR. According to Hirsch & Macpherson (1997), average hourly wages in construction and manufacturing were $13.66 and $14.33, respectively, while wages in public administration averaged $16.06. The average wage in the service industry, which includes HGR, is $13.29. The fact that employment in Las Vegas tends toward lower paying industries (construction and services) points to greater upward pressure on wages in Reno's branch of the HGR industry. Such results suggest that industry composition is not a compelling explanation of the observed wage differentials.

Another possible determinant of higher wages in the Las Vegas HGR industry is the higher rate of employment growth in the area. Employment grew at an average of 5.48

[11] Reno's 10th ranked hotel in terms of employment employs 850 workers (NDETR, 1998).

percent annually in Las Vegas compared to 1.95 percent in Reno over the 1989-95 period (Nevada Department of Administration, 1996). Of course, expansion in labor demand raises wages only if labor supply grows more slowly. Population expanded at a 5.40 percent annual rate in Las Vegas, a rate slightly lower than the growth of employment at 5.48 percent. Reno's population grew at a 1.96 percent rate, nearly identical to its 1.95 percent rate of expansion in employment (Nevada State Demographer's Office, 1998).[12] Using population and employment as proxies for labor supply and demand, it appears that more upward pressure on wages is expected in Las Vegas, though the slight .08 percentage point difference in annual employment and population growth rates is not particularly compelling.[13]

The unemployment rate also summarizes supply and demand conditions in a labor market. A significantly higher unemployment rate in one of the regions would lead one to expect downward pressure on wages. Over the relevant period, higher unemployment rates were experienced in Las Vegas.[14] Tighter labor markets, thus, would lead to an expectation of greater upward pressure on wages in Reno. Thus, unemployment rates remain of little use in explaining the lower wages in Reno's HGR industry.

Differences in living costs are another factor that may influence wage differentials. Other things equal, wages are expected to be positively correlated with living costs. Cost-of-living indicators unambiguously point to higher prices in Reno over the relevant period. The American Chamber of Commerce Research Association compiled cost-of-living indexes for major U.S. cities. A city with an average cost-of-living was assigned a score of 100. Compared to such a hypothetical city, Las Vegas scored 102.6, slightly higher than average, while Reno scored 114.0 (Matthews, 1997). Because prices were approximately 10.5 percent higher in Reno according to such estimates, higher wages were expected there as well. Living costs, therefore, are not a plausible explanation for lower wages in Reno.

Differences in city size may cause wages in Las Vegas and Reno to differ. Although Las Vegas and Reno were considered small cities (less than a million in population) when the data were gathered, Las Vegas was approaching medium-sized status (generally defined as 1 to 2.5 million in population). The Las Vegas metropolitan area officially passed the one million resident mark in 1997. Waddoups (1999b) found a union wage premium of 5 to 10 percent for non-managerial and nonprofessional/technical production hotel workers employed in medium-sized cities across the U.S. city size, thus, may partially explain higher wages in Las Vegas's HGR industry.

Finally, differences in non-pecuniary amenities may be responsible for the observed differences in wages. Locations with a relative abundance of non-pecuniary amenities may be able to attract workers at lower wage levels than other locations with fewer amenities. Though such an argument appears plausible, to the author's knowledge no research that addresses the relative importance of pecuniary and non-pecuniary characteristics between the two locations has been conducted. Furthermore, it can be hypothesized that higher rates of population growth and in-migration observed in Las Vegas compared to Reno may indicate a higher level of non-pecuniary amenities in Las Vegas. Additional research on the determinants of migration into Nevada that carefully differentiates between pecuniary and non-pecuniary motivation would be required to further understand the impact of non-pecuniary amenities on local wage levels.

The discussion of how factors other than unionization may influence wage differences points to the difficulty in drawing a definitive conclusion on the magnitude of union wage effects. Not only is it difficult to judge the relative importance of each factor,

[12] Because the Las Vegas area is substantially larger than Reno, a percent increase in population adds substantially more individuals to the area. For example a one percent change in Las Vegas's 1999 population translates into approximately 12,500 people. For the Reno area a one percent change means just over 3,100 people.

[13] Population may be a poor proxy for expansion of labor supply in Las Vegas because of the relatively large number of new residents who are retirees.

[14] The NDETR reports the unemployment rates in the Las Vegas metropolitan area at 5.5 percent in 1995 and 1996. In the Reno metropolitan area, the rates were 4.8 and 4.6 percent for the two years. Furthermore, during no year between 1992 and 1996 did the unemployment rate in Las Vegas fall below the rate in Reno (NDETR, 1998).

but some factors may be related to each other and to the level of unionization within the industry. For example, an oligopolistic market structure may increase profitability and wages compared to a more competitive structure, which in turn makes the profitable location a more attractive target for union organizing. Successful union organizing then generally leads to lower profitability. Although such complex interactions between economic variables make it difficult to arrive at clean estimates of union wage effects, there does not appear to be a systematic bias in the direction of higher wages in Las Vegas from factors other than unionization.

The evidence presented above suggests that unions in the HGR industry substantially influence the wage structure, raising the relative wages of non-managerial, nonprofessional/technical workers. How do the high HGR wages affect pay levels of similarly qualified workers in other less unionized industries? The data only tentatively support the possibility of a mild spillover effect that outweighs threat, nonunion demand, and wage relativity effects, which work to reduce wages of "clerical" workers in Las Vegas's WRT industry. The results, however, are quite weak and may arise from such factors as living costs, or higher demand for clerical workers stemming from a greater share of government employment in Reno, among other factors not controlled in the methodology.

To the extent that Washoe County's labor market is similar to the market in Clark County, increased union density in the HGR industry in Reno is expected to raise the wages of Washoe County's HGR industry workers. At the same time, little effect on wages of similarly skilled workers in other industries is expected. Conversely, the absence of unions in Las Vegas would likely lead to a reduction in wages of current non-managerial and nonprofessional/technical workers in the HGR's highly unionized occupations over time as firms drifted back toward wage structures and human resource practices commonly found in nonunion service sector employment. The concern first raised in this article — the existence of social and economic costs borne by communities whose employment base includes an abundance of jobs paying at or near the poverty level — would then likely become an even more important issue for communities and the industry. In addition, results of the present analysis suggest that workers within the Las Vegas HGR industry, but employed in occupations with little or no union presence, would likely see little impact on their wages in response to a steep decline in unionism. Workers in other industries (like the WRT industry) who possess similar skills to unionized HGR employees, similarly, would likely see little change in wages if the current high levels of unionism were to be substantially diminished.

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