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Extreme Minimum Wages: Effects on the U.S. hotel industry

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Abstract

The subject report analyzes literature regarding minimum wages to explore the potential effects of what could be described as extreme increases in the minimum wage on the American hotel industry. The current presidential administration as well as several large municipalities are actively seeking, or recently passed laws that increase the minimum wage by an extreme amount. The subject report quantifies the forecasted effect on the U.S. hotel industry. The study concludes that the hotel industry in the U.S. would have a negative economic impact estimated at \$2.53 billion if the current national minimum wage proposal is approved.

Introduction

Employment and careers compose a key function in modern society and communities, and they significantly benefit the people who have them. According to the Robert Wood Johnson Foundation¹ employment has been linked to relatively healthier lives, healthier home environments, safer neighborhoods, better nutrition, higher quality childcare, and more educational opportunities. Conversely, unemployment and underemployment (inconsistent or unstable work) lead to negative outcomes such as increases in blood pressure, unhealthy coping behaviors, and increased depression² Additionally, laid-off Americans are 83 percent more likely than their fully employed counterparts to develop stress-related health conditions.³

Employment also leads to positive psychological benefits. Graetz found that those who were employed reported a 23 percent lower level of psychological distress than those who were unemployed.⁴ Reemployment may reverse the negative psychological effects caused by unemployment, including reducing depression.⁵ A recent report, commissioned by the National Institutes of Health, suggested that gaining employment and consequently getting off of welfare programs, reduced mothers' drinking problems and rates of depression.⁶ Damaske suggested

¹ Robert Wood Johnson Foundation. (2013). *Stable jobs = healthier lives* [Brochure]. Retrieved from http://www.rwjf.org/en/blogs/new-public-health/2013/01/stable_jobs_health.html.

² Robert Wood Johnson Foundation (2013).

³ Robert Wood Johnson Foundation (2013).

⁴ Graetz, B. (1993). Health consequences of employment and unemployment: Longitudinal evidence for young men and women. *Social Science & Medicine* 36 (6): 715 – 724.

⁵ Kessler, R. C. Turner, J. B. & House, J. S. (1988). Effects of unemployment on health in a community survey: Main, modifying, and mediating effects. *Journal of Social Issues* 44(4): 69 – 85.

⁶ Zabkiewicz, D. & Schmidt, L. A. (2009). The mental health benefits of work: do they apply to welfare mothers with a drinking problem? *The Journal of Behavioral Health Services & Research* 36 (1): 96 – 110.

that employment has positive familial outcomes beyond income, such as strengthening familial bonds and creating a sense of contribution to the family by each worker.⁷

While employment plays a role in a community's psychological and physical health, it also influences the economic vitality of a community. Wages play a role in how people are able to gain employment and can influence job losses. A report by the U.S. Congressional Budget Office (U.S. CBO) (2014) of the U.S. Congress, estimated the current administration's proposed extreme minimum wage increase to either \$10.10 or \$9.00 per hour would increase levels of unemployment and negatively affect the nation's budget deficits.⁸ This report discusses the potential benefits and pitfalls of increasing the U.S. minimum wage by such an amount, and presents economic impact analyses.

Background

Evidence of both positive and negative effects of raising minimum wages has been reported both within and outside the U.S. This report focuses on the American perspective regarding the economic impacts that could result from significant increases in minimum wages, i.e., extreme minimum wage increases. This perspective focuses on effects specific to the hotel industry, an industry that in some geographic areas has been singled out for local minimum wage increases.⁹ Information on the benefits and drawbacks of a minimum wage in the general economy and in the hotel industry are outlined in Appendix 1; in Appendix 2, two different hotel markets are analyzed and compared for the resulting effects of an extreme minimum wage increase at a local level.

Summary Regarding Extreme Wage Rate Increases

Legislation which proposes extreme minimum wage increases could have detrimental effects on the hotel industry, and as the examples of Biloxi and Los Angeles show later in this report, these effects would not be uniform. Hotel prices would increase while profitability would decrease as a result of national or local extreme minimum wage laws. Additionally, due to lower profitability, the industry would be forced into layoffs, and/or to maintain profitability, hotel

⁷ Damaske, S. (2011). *For the Family: How Class and Gender Shape Women's Work*. New York, N.Y.: Oxford University Press.

⁸ U.S. Congressional Budget Office. (2014). *The effects of a minimum wage increase on employment and family income*. Retrieved from <http://www.cbo.gov/sites/default/files/cbofiles/attachments/44995-MinimumWage.pdf>.

⁹ Rainey, J. (2014a, February 18). L.A. council to consider hiking minimum wage to \$15.37 at big hotels. *Los Angeles Times* Retrieved from <http://www.latimes.com/local/lanow/la-me-ln-minimum-wage-20140217,0,1713172.story#axzz2thzfluUz>.

guests would experience higher prices. Even if higher prices were to be charged, the potential exists for hotels to lose guests to competitors, as is likely in such cities as Biloxi and Los Angeles. Even more detrimental to the hotel industry would be if rates are increased, and as a result, trips are canceled altogether. If there are fewer travelers, all markets and hotels would lose out on revenues, hamstringing the industry across the nation.

If hotel managers in such cities as Biloxi and Los Angeles were unable to adjust their rates according to their new cost structures, employment would suffer as more expensive labor would need to be cut. Some hotels may not be able to survive the new environment and would close their doors altogether, negatively affecting employment and tax revenue.

An additional detrimental outcome may be a slowing of hotel construction in local areas. Profitability has been linked to the market value of hotels,¹⁰ and therefore, with relatively low profit margins, newly constructed hotels would have decreased market values and could be sold at lower prices, further stunting local economies. If the industry's business model produces lower returns, business for hotel brokers, construction workers, hotel workers, food suppliers, guest room amenity suppliers, laundry companies, etc., could suffer, especially in the case of hotel closures. Ultimately, investment in hotels would decrease, and the value of existing properties would decline, further contributing to sluggish industry performance. O'Neill¹¹ found that the net operating income (a common metric for measuring hotel unit profitability) determines a hotel market value by a product of 5.615, so every \$1,000 loss in profitability would result in a \$5,615 value decrease per hotel guest room. Lower profitability of hotels would produce lower levels of employment in the industry, lower levels of employment in the industries that support and are supported by the hotel industry, lower levels of investment in hotels, and lower tax revenues for the municipalities in which hotels are located. An estimate of the economic impact is presented in the next section of this report.

Beyond the business side of the hotel industry, there is a human element, as well. The hotel industry is one where entrepreneurs can get started, and where hard work and humble beginnings turn into massive success stories. Take Isadore Sharp and Four Season Hotels as one such example of entrepreneurial success. On March 20, 1961, Mr. Sharp entered the hotel

¹⁰ O'Neill, J. W. (2004). An automated valuation model for hotels. *Cornell Hotel and Restaurant Administration Quarterly* 45 (3): 260 - 268.

¹¹ O'Neill (2004).

industry while still in his 20s with a 125-room motel in Toronto, Canada.¹² It took Mr. Sharp more than five years to get enough investors behind his vision to start his hotel career, and through persistent work and dedication, he was able to turn that single motel into one of the most recognizable luxury brands in the world. Creating a less profitable environment through extremely high minimum wages may prevent people such as Isadore Sharp from convincing investors to create the next great hotel company.

The hotel industry is more than a vehicle for entrepreneurship because there is a strong tradition of promoting and progressing careers from within. For example, Bob McCarthy, Marriott International's chief operations officer who retired in 2014, spent 38 years with the company starting as an hourly waiter in a Marriott hotel restaurant in the Philadelphia area.¹³ Such entry-level roles as Mr. Sharp and Mr. McCarthy held, are seen as traditional "routes to the top" in the hotel industry where there are numerous egalitarian stories of people starting in hourly positions and rising to high level, executive leadership positions.¹⁴

The next section of this report outlines the estimated economic impact of an extreme national minimum wage on the hotel industry. It is important to note that markets may eventually adjust to new sources of demand, regulatory requirements, and geopolitical conflicts, in addition to extreme increases in the minimum wage. However, small, consistent, and predictable increases to the minimum wage may keep the market from having to absorb a shock, at all. If the minimum wage were to increase with the cost of living, the consumer price index, or GDP growth every year, there may be no need for the markets to absorb the shock of an extreme minimum wage whenever the government decides that the wages of the nation's lowest earners need to be increased. In fact, having a slow, steady, and predictable growth to wages may be the best way for workers to achieve the living wage that Pollin advocated.¹⁵ To highlight the negative effects of a sudden and extreme increase in the minimum wage, the next section of this report estimates the effects for the first year of the proposed wage's implementation.

¹² Four Seasons History (2014). Retrieved from http://www.fourseasons.com/about_four_seasons/1960_to_1969/.

¹³ Marriott News Center (2013). Retrieved from <http://news.marriott.com/2013/09/marriott-chief-operations-officer-robert-bob-mccarthy-to-retire-in-february.html>.

¹⁴ Cleveland, et al. (2007).

¹⁵ Pollin (2002; 2008).

An Estimate of the Economic Impact of an Extreme National Minimum Wage Increase on the U.S. Hotel Industry

According to the U.S. Congressional Budget Office, the effects of extreme increases in the minimum wage would be both positive and negative.¹⁶ Overall, real family income¹⁷ would increase by \$2 billion, with 16.5 million workers being directly affected by having their wages increase; however, per person, this increase amounts to only \$121 per worker in real income. The U.S. Congressional Budget Office report also suggests that 900,000 people would be raised above the poverty line by an increase of the minimum wage to \$10.10 per hour, while 500,000 would lose their jobs. The same report suggests that there also would be 15.6 million workers who would experience wage rate increases, but who still would not pay federal income taxes, due to relatively low family income. The U.S. CBO anticipates corporate profits to decline due to slimmer profit margins which would reduce tax revenues overall through reductions in corporate income and personal income taxes paid by those who own businesses. Higher prices for goods and services would decrease demand, and lower demand might also reduce local sales taxes, such as hotel occupancy taxes. Additionally, more workers would become eligible for federally subsidized health insurance under the nation's new Affordable Care Act, and in states that have not accepted the insurance exchanges, the workers would remain eligible for Medicaid.¹⁸

Based on the proposed minimum wage increases, hotels in Biloxi and Los Angeles, for example, would experience average daily rate increases of between 2.7 percent and 6.4 percent,¹⁹ assuming rates could be increased. If rates were successfully raised, demand would decrease resulting in lower occupancies for hotels in those areas. Demand nationally may decrease, as well, as hotel prices become more expensive overall. If prices were not increased, then profit margins would decrease as a product of more expensive labor costs. As a result of reduced demand and/or profitability, hotel values would decrease and development would slow.

A study on price elasticity in the U.S. lodging market found that lodging demand would be reduced by 16 percent of an average daily rate increase, absent economic growth.²⁰ As

¹⁶ (U.S. CBO, 2014).

¹⁷ Family income after adjusting for inflation and taxes.

¹⁸ (U.S. CBO, 2014).

¹⁹ Aaronson (2001) found that prices increase 7% of the increase in the wage floor; i.e., in Biloxi, a 39% increase in the minimum wage from \$7.25 to \$10.10 per hour, multiplied by 7%, equals a 2.7% increase in prices ($0.39 \times 0.07 = 0.027$, or 2.7%); in L.A., a 92% increase in the minimum wage from \$8.00 to \$15.37 per hour, multiplied by 7%, equals a 6.4% increase in prices ($0.92 \times 0.07 = 0.064$, or 6.4%).

²⁰ Corgel, J. & Lane, J. (2013). Hotel Industry Demand Curves. *PKF Consulting – Hotel Horizons: 7 – 13*.

previously mentioned, the proposed extreme minimum wage increase in Los Angeles would result in a 6.4 percent increase in hotel room rates. This increase would result in a 2.4 percent decrease in demand.²¹ In 2013, 27.2 million hotel room nights were occupied in Los Angeles.²² Thus, the decrease in occupied room nights in Los Angeles due to the proposed extreme minimum wage increase would be 652,800²³ room nights for the year. With the L.A. city average daily rate of \$162.53,²⁴ an estimated \$106.1 million would be lost in hotel room revenue, and an estimated \$16.4 million would be lost in city occupancy taxes, using the 15.5 percent hotel occupancy tax rate for L.A. To make up the expected lost revenue of \$106.1 million, hotel owners would look to reduce costs, most likely resulting in layoffs.

Demand for hotels may decline in a market with an extreme minimum wage because prices have been shown to rise with increases in the minimum wage.²⁵ The current proposal is to increase the minimum wage by 39 percent in the U.S. However, research observed that in an environment where increases to the minimum wage are occurring, the effects of raising the minimum wage also effect workers who earn up to a 10 percent premium on the new minimum, essentially raising the wage floor of low wage workers above the newly established minimum wage.²⁶ Katz and Kruegar suggest this effect occurs because employers maintain a certain amount of their wage hierarchies; therefore, the increase in the wage floor (an artificial bottom for wages in a given market, not necessarily the true minimum wage) may actually be a 49 percent increase (39% + 10% where 39% is the true increase and 10% is the assumed premium on low wage workers).²⁷ The 49 percent increase in the wage floor would be expected to raise prices in hotels by 3.4 percent.²⁸ Corgel and Lane suggested that an artificial increase in prices (an increase in prices not brought about due to increased demand or other market factors) would lower demand by a factor of 16 percent of the price increase, as previously discussed.²⁹ Based on the calculated price increase of 3.4 percent, and the assumption³⁰ of the prices for hotels being relatively inelastic at the rate of 0.16, then a 0.5 percent decrease ($0.034 \times -0.16 = -0.005$, or 0.5

²¹ $6.4\% \text{ (price increase)} \times 16\% \text{ (demand reduction)} = 2.4\% \text{ demand reduction.}$

²² Los Angeles Tourism & Convention Board. (2014, May 9). L.A. tourism board announces tourism job growth and record visitor spending during national travel & tourism week celebration. Press Release.

²³ $27.2 \text{ million room nights} \times .024 \text{ (demand reduction)} = 652,800 \text{ lost room nights.}$

²⁴ Baltin, B. (2014). GHN market report: Los Angeles County. *Global Hospitality Resources*. Proprietary Report.

²⁵ Aaronson (2001); Aaronson, et al., (2008).

²⁶ Katz & Kruegar (1992).

²⁷ Katz & Kruegar (1992).

²⁸ $0.49 \times 0.07 = 0.034$, or 3.4%, where 49% is the percent of wage increase and 7% is the Aaronson (2001) price flow through factor, as previously presented.

²⁹ Corgel & Lane (2013).

³⁰ Corgel & Lane (2013).

percent) in hotel demand would be expected where 3.4 percent is the anticipated rate at which prices would increase, and 16 percent is the Corgel and Lane finding regarding the rate at which demand would fall.

In 2013, the average daily rate for a hotel in the U.S. was \$110.33, and approximately 3,040,000 hotel room nights were occupied in the U.S. per day, or 1.11 billion room nights for the year.³¹ Therefore, based on these figures, 5,550,000 room nights would be lost due to the extreme minimum wage increase,³² and \$612,330,000 in room revenue would be lost.³³ In the U.S., local hotel room occupancy taxes range from 6.0 to 17.0 percent of the room rate, with an average of 11.5 percent (Proto Planning Travel Agency, 2014). Thus, approximately \$70.4 million would be lost in hotel room taxes nationally due to the \$612,330,000 reduction in room revenue.³⁴

As a result of wage rate increases, the hotel industry would not only earn less, but spend less as a result of lower demand. Hotels spend an estimated \$25 to \$38 per occupied room³⁵ to cover expenses. After removing estimated housekeeping labor expenses (assuming a half hour of wages at the national median wage rate for housekeepers of \$10.49 per hour as presented in Table 3), that leaves \$19.75 to \$32.75 that hotels spend per occupied room on items such as guest room amenities (soap, shampoo, conditioner, lotion, etc.), energy (electricity, water, natural gas, etc.), and laundry services (cleaning the sheets, linens, towels, etc.). Assuming that an extreme increase in the minimum wage decreases national demand for hotel rooms by an estimated 5,550,000 room nights annually as presented previously, U.S. hotels would spend an estimated \$145.7³⁶ million dollars less in the overall economy due to a reduction in need for items like soap, cleaning supplies, water, and laundry services.

A reduction in hotel demand would have deleterious effects on employment in the industry, as well. An estimated 1,586 housekeepers would lose their jobs in the U.S. due to the drop off in demand nationally.³⁷ Housekeeping would not be the only department to experience reduced employment numbers, but other rooms division positions like front office attendants,

³¹ PWC (2014, January). *PricewaterhouseCoopers Hospitality Directions*. Proprietary report.

³² 1.11 billion total room nights x 0.5% = 5,550,000 room nights lost .

³³ 5,550,000 room nights x \$110.33 ADR = \$612,330,000 lost room revenue.

³⁴ \$612,330,000 lost room revenue x 0.115 = \$70.4 million.

³⁵ Toh, R. S. DeKay, D. F. & Raven, P. (2011). Travel planning searching for and booking hotels on the internet. *Cornell Hospitality Quarterly* 52 (4): 388 – 398.

³⁶ (\$19.75 + \$32.75) / 2 (average cost per occupied room) x 5,550,000 (estimated reduction in rooms sold) = \$145.7 million.

³⁷ 5,550,000 room nights (estimated reduction in national demand per year) / 14 (number of rooms a housekeeper cleans in an average day) = 396,429 shifts; 396,429 / 250 (number of shifts worked in a year based on 5 shifts per week for 50 weeks per year) = 1,586 people.

bellhops, and concierges would be cut, as well. Additionally, support departments like reservations may experience a decline in employment levels to adjust the costs appropriately for lower demand. Finally, with fewer guests in hotels, fewer meals would be served, reducing food and beverage staff, and possibly elimination of struggling services like room service. The loss in revenue in food and beverage may contribute to even more job losses through continuing the trend of eliminating the service from hotels altogether.³⁸ An estimated \$214.3 million would be lost in hotel food and beverage revenue as a result of lower hotel demand in the U.S.³⁹ To compensate for the reduced food and beverage revenues, hotels in the U.S. would need to eliminate 21.2 million wage hours at the \$10.10 rate, or 10,609 food and beverage jobs would be lost.⁴⁰ In summary, 12,195 jobs would be lost (1,586 + 10,609) in U.S. hotels.

In addition to the negative effects of job losses, lower revenues, less money being circulated back into the economy by paying suppliers, and reduced hotel room tax collections, the hotel industry would suffer from a loss of hotel valuation. For every percentage point in occupancy lost, a hotel value would drop by \$690 per room.⁴¹ The previously discussed 0.5 percent reduction in national hotel demand would result in a 0.3 percent reduction in occupancy based on the 2013 U.S. occupancy level of 62.3 percent,⁴² or a \$207 loss in value per room.⁴³ Based on the 4.92 million hotel rooms in the U.S.,⁴⁴ the reduction in value would be \$1.02 billion.⁴⁵

On average, every one percentage point in occupancy equates to \$61,864 in hotel profitability.⁴⁶ Given the previously discussed 0.3 percent reduction in occupancy, hotel profitability would be reduced by \$18,559.⁴⁷ Given the 52,529 hotels in the U.S.,⁴⁸ the total profitability reduction in the U.S. would be \$974.9 million.⁴⁹ Assuming a 15 percent corporate tax rate, if U.S. hotel profitability decreased by \$974.9 million, corporate taxes would be reduced by \$146.2 million.

³⁸ Canina & Carvell, (2005).

³⁹ \$612,330,000 (total estimate of annual lost rooms revenue to the hotel industry) x 35% (average percent of F&B revenue to rooms revenue; Schmidgall, 2006) = \$214,320,000 in lost F&B revenue.

⁴⁰ \$214.3 million / \$10.10 per hour = 21.2 million wage hours / 40 (hours worked per week) / 50 (number of weeks worked per year) = 10,609 F&B jobs lost.

⁴¹ O'Neill, J. W. (2003). ADR rule of thumb: Validity and suggestions for its application. *Cornell Hotel and Restaurant Administration Quarterly* 44 (4): 7-16.

⁴² PWC (2014).

⁴³ 62.3% x 0.5% = 0.3%.

⁴⁴ (PWC, 2014).

⁴⁵ \$207 value loss per room x 4.92 million rooms = \$1.02 billion.

⁴⁶ O'Neill & Mattila (2007).

⁴⁷ \$61,864 x 0.3 = \$18,559.

⁴⁸ STR, 2013.

⁴⁹ \$18,559 x 52,529 hotels = \$974.9 million.

The total economic impact of an extreme minimum wage increase would be a significant strain on the U.S. economy, and could result in sluggish hotel industry performance. Table 1 outlines the total estimated economic impact to the U.S. hotel industry as a result of an extreme minimum wage increase to \$10.10 per hour.

Table 1. Economic Impact on the U.S. Hotel Industry from Extreme Minimum Wage Increase

Affecting Factor	Impact	Result in Dollars
Lower Demand	Reduced annual guest room revenue	\$612.3 million
Lower Demand	Reduced annual food & beverage revenue	\$214.3 million
Lower Demand	Fewer guest rooms occupied resulting in less money spent for supplies	\$145.7 million
Lower Demand	Loss of housekeeping and F&B staff (total job loss at 12,195) ⁵⁰	\$320.2 million
Lower Demand	Loss of hotel values	\$1.02 billion
Lower Demand	Lower hotel occupancy taxes collected	\$70.4 million
Lower Profitability	Lower corporate taxes paid	\$146.2 million
Total		\$2.53 billion

In summary, the total estimated initial economic impact to the U.S. hotel industry as a result of the proposed extreme minimum wage increase from \$7.25 to \$10.10 per hour, considering loss of revenue, loss of jobs, loss of money going back into the economy, i.e., “trickle-down effect,” loss in property value, and the reduction in payment of hotel and corporate taxes would equate to roughly \$2.53 billion dollars.⁵¹ Such impact does not include the likely effects of extreme minimum wage increase on promoting an underground economy, i.e., “under-the-table” work. Further, these figures represent estimated economic impact during the initial year; total effects probably would be greater.

⁵⁰ 12,195 (number of lost jobs) x \$21,008 (full-time annual salary at \$10.10 per hour) x 1.25 (the calculation assumes a 25% premium for benefits at the new \$10.10 minimum wage rate) = \$320,200,000.

⁵¹ Note that this estimate is a conservative one assuming the national \$10.10 minimum wage increase is passed, and no higher local minimum wage legislation goes into effect. Also, other local taxes were not considered in the national number; therefore, the total economic impact is likely greater than \$2.53 billion.

Appendix 1

Benefits of a Minimum Wage Increase

Raising the minimum wage has recently been heralded as a way to aid labor markets and the overall economy in the U.S. Claims in the popular press have been made that raising the minimum wage will reduce poverty (Konczal, 2014), increase employment (Berman, 2013), and provide relief for workers earning a low wage (Rainey, 2014b). Claims of benefits of an extremely high increase in the minimum wage are reported to be grounded in empirical data.

One reported benefit of a higher minimum wage is positive effects on employment conditions. A rise in the minimum wage may increase the ratio of permanent to temporary workers in organizations as they convert more workers to full-time status (Dolado, Kramarz, Machin, Manning, Margolis, Teulings, & Keen, 1996). Dolado et al (1996) posit the reason for this conversion is an attempt by employers to increase the output of each person on the payroll when wages are relatively high. Unlike temporary workers, permanent workers have a significant cost of severance, which tends to lead to relatively higher employment levels in slumping organizations. Dolado et al (1996), however, are silent as to the effect regarding those who are not converted from part-time to full-time status within an organization; it is possible that those who do not get converted to full-time employment lose employment altogether.

Brenner (2005) echoes the positive employment benefit of relatively high minimum wages by suggesting that in conditions of relatively high minimum wages, firms may be more likely to employ relatively fewer part time employees and engage more full-time workers. Reducing part-time employment for the sake of full-time employment may be beneficial; however, it could lead to detrimental outcomes for certain members of communities. Many women after child rearing are either forced or choose to “pull back” from the workforce by taking on part-time employment (Damaske, 2011). Damaske (2011) explains that programs like the FMLA (Family and Medical Leave Act), which affords parents with only unpaid leave, in the U.S. coupled with scant access to subsidized child care make it particularly difficult for low-wage earners to return to work after child care costs are considered. In some instances, the cost of childcare is greater than the wages earned, and often it is the mothers in families that leave the workplace “for the family.” Low-wage earning mothers are not as well-suited to take advantage of unpaid programs like the FMLA, and often need to reduce the amount of hours worked to stay in the labor force. Additionally, 78 percent of young adults with autism who were able to

graduate from high school, were only able to find part-time employment (Taylor & Seltzer, 2011).

Working women and autistic individuals are examples of populations that could be adversely affected by the reduction of part-time employment opportunities in the labor market. It is possible that other groups, such as students or retirees looking to stay active or supplement their income, would also suffer from a reduction in part-time employment opportunities. If an increase in the minimum wage converts part-time employment to full-time, communities may suffer as mothers, autistic individuals, and others who seek part-time work may find it more difficult to secure suitable employment.

Currently, what is being proposed at the federal level and has been approved in some municipalities such as Los Angeles, SeaTac (Seattle airport area) and the city of Seattle, is an extreme increase in minimum wage levels (Wilson, 2013). Washington State's minimum wage is currently over \$9.00 per hour, and is the highest in the country. Based on the latest change passed in Seattle, the minimum wage will increase by 61 percent. In Los Angeles, the increase in the minimum wage applies to workers employed at hotels of 150 rooms or more, and increases the minimum wage rate from the state minimum of \$8.00 to \$15.37 per hour, for a 92 percent increase (Rainey, 2014a). The San Diego city council proposal to increase the minimum wage to \$13.09 per hour would result in a 64 percent increase (Horn, 2014), and the proposal being considered by the Providence, RI, city council to increase the minimum wage to \$15.00 per hour for hotel workers would result in an 88 percent increase (Fredericks, 2014). The federal proposal would increase the minimum wage by 39 percent from the current level of \$7.25 to \$10.10 per hour (U.S. CBO, 2014).

Another reported benefit of an extreme increase in the minimum wage is the increased earnings, and in turn, spending power of those who are employed at the higher wage rate. In a study at the San Francisco airport (where a 22 percent increase in the minimum wage took place in 2000) conducted after the substantial minimum wage increase, workers were reported to have had lower levels of absenteeism and turnover, and higher levels of morale and productivity (Reich, Hall & Jacobs, 2005). A reduction of turnover and absenteeism is a logical outcome, in this instance, as the workers could easily see that similar employment anywhere else in the city would result in an earnings reduction. However, an extreme increase in the minimum wage may not have the same effect at the state or national level.

It has been reported that a proposed 39 percent increase in the federal minimum wage from \$7.25 to \$10.10 per hour would raise an estimated 900,000 people out of poverty (U.S. CBO, 2014), and an increase (similar to that of the San Francisco airport workers) of 24 percent to \$9.00 per hour, would raise an estimated 300,000 people out of poverty (U.S. CBO, 2014). Being able to legislate a reduction in poverty levels is tempting, but the same report indicates that doing so would reduce overall employment, suggesting an extreme rise in the minimum wage may merely cycle different people in and out of poverty. Economists have observed this issue for decades. As Stigler (1946, p. 363) stated, “The connection between hourly wages and the standard of living of the family is thus remote and fuzzy. Unless the minimum wage varies with the amount of employment, number of earners, non-wage income, family size, and many other factors, it will be an inept device for combatting poverty even for those who succeed in retaining employment. And if the minimum wages varies with all these factors, it will be an insane device.”

Another point of view defines an extreme minimum wage as a wage which would help people work with dignity and participate in civic life (Pollin, 2002). In his book, *A Measure of Fairness: The Economics of Living Wages in the USA*, Pollin (2008) outlines the various benefits of an extreme, or as he puts it, living wage for workers. However, Pollin (2002; 2008) brings forth evidence from municipalities like New Orleans and Santa Monica and expresses how the wages would differ based on cost of living. In fact, in Pollin’s (2002) paper, he expressed how the wage rate to allow a person to work with dignity, participate in civic life, and ultimately be raised out of poverty would need to be adjusted by geographic area based on the number in a family, and the amount of people working in that family. These concerns echo Stigler’s (1946) conclusion that a minimum wage in a country as large and diverse in the U.S. would have to vary with too many factors to be effective. While the authors of this report agree with Pollin that full-time workers in the U.S. should be able to work with dignity and participate in civic life, trying to legislate that outcome through extreme minimum wage laws may be too complex to be feasible.

It has been suggested that improved earnings of workers would contribute in a small way to reducing federal budget deficits in the short term by decreasing the number of people eligible for federal assistance programs (U.S. CBO, 2014). The caveat to this short-term reduction of the federal budget deficit is that in the long term, the deficit is expected to increase if those who lose

their jobs are unable to secure new employment in the labor market with the higher minimum wage (U.S. CBO, 2014).

Drawbacks of a Minimum Wage Increase

While some benefits of an extremely high minimum wage have been posited, significant drawbacks have also been reported. One such drawback is increased prices to consumers. In two studies regarding the restaurant industry, minimum wage increases resulted in increased prices for consumers (Aaronson, 2001; Aaronson, French & MacDonald, 2008). Aaronson et al (2008) concluded that every one percentage point increase in the lowest wage results in a .07 percent increase in prices. For businesses with a relatively higher proportion of employees earning the minimum wage, such as fast food, the estimated price increase is 1.6 percent for every 10.0 percent increase in the minimum wage. Aaronson (2001) suggested that in markets where prevailing low-skill wages far exceed minimum wages, minimum wage increases have limited effects on market wages and costs; however, where the opposite is true, the effect is significant.

In a study of the San Francisco airport area, additional costs were passed on as a result of a minimum wage hike. The companies who serviced the airport charged higher fees to the airlines flying into and out of San Francisco at the rate of an additional \$1.42 per arriving passenger (Reich, Hall & Jacobs, 2005). In a study of firms in Boston after the city passed a minimum wage increase that applied only to firms with a large portion of revenues from city contracts, prices did not increase, but rather profitability declined (Brenner, 2005). It appears that the affected firms in Boston may not have had the ability to increase prices due to the nature of their business contracts with the city. In conclusion, there appears to be a consistent relationship between an increase in the wage floor and an increase in prices to consumers. Even nominal increases to the minimum wage are expected to flow through either to consumers or the profit margins of companies.

In the current debate regarding minimum wage increases, governmental entities are proposing what could be classified as extreme minimum wage increases. Minimum wage hikes approved in Seattle will increase the minimum wage by 61 percent (Wilson, 2013), and increases approved in Los Angeles will increase the minimum wage by 92 percent (Rainey, 2014b); increases proposed in San Diego would increase the minimum wage by 64 percent (Horn, 2014),

in Providence by 88 percent (Fredericks, 2014), and nationally by 39 percent (U.S. CBO, 2014). The stark increase may have unique outcomes in the national and local economies, especially as it pertains to employment levels.

The typical effect of a relatively high minimum wage is an adverse impact on employment. Economists have long understood the link between high minimum wage increases and increases in unemployment. Stigler (1946) suggested that the link was present because the cost of labor increases, which in turn decreases the amount that is produced by an individual per dollar in wages. An established minimum wage above the wage equilibrium level has been shown to lead to a fall in employment in the U.S. (Brown, Gilroy and Kohn 1982; Card, Katz, and Drueger, 1993). Stewart (2004) showed a link that for all workers (men and women, youth and adult), an increase in the minimum wage reduced employment, and did so even for those who were earning greater than a ten percent premium over the minimum wage prior to the increase. Evidence from Russia (a nation experiencing rapid increases in minimum wages) shows that every 1.0 percent increase in the Kaitz ratio⁵² leads to a 0.047 percent increase in unemployment (Muravyev & Oshchepkov, 2013). Russia experienced increases of the Kaitz ratio of approximately 100 percent in one year due to increases in the minimum wage, resulting in an overall 4.7 percent increase in unemployment (Muravyev & Oshchepkov, 2013).

An increase in the U.S. minimum wage to \$10.10 per hour would change the American Kaitz ratio from .35 to .49,⁵³ or a 40 percent increase. If the minimum wage were increased to \$10.10 per hour, an estimated 500,000 people would lose their jobs, and if the minimum wage increased to \$9.00 per hour, an estimated 100,000 people would lose their jobs (U.S. CBO, 2014). An historical example of how the minimum wage can adversely affect employment can be found in the Americas when Puerto Rico increased its minimum wage to be consistent with the mainland U.S. In the late 1970s and early 1980s, the extreme minimum wage increase significantly increased unemployment, particularly in low wage sectors of the Puerto Rican labor market (Castillo-Freeman & Freeman, 1992). Migration from Puerto Rico to the mainland U.S. increased during this time from the unemployed population after the minimum wage hike, particularly among relatively uneducated and low-skilled migrants (Castillo-Freeman & Freeman, 1992).

⁵² The Kaitz ratio is the ratio of the minimum wage to the average wage.

⁵³ The Kaitz ratio was calculated using the average wage in the United States based on the Social Security Administration's estimation.

Muravyev and Oshchepkov (2013) found that when unemployment occurs due to increases in the minimum wage, people take on more informal, i.e., “under-the-table” work, where they do not pay taxes or receive legal protections, and typically earn below the minimum wage. Informal work increased in Russia when minimum wages increased (Muravyev & Oshchepkov, 2013). Increasing informal work may lead to immeasurable outcomes, such as a lack of access to affordable health care. After the Supreme Court of the U.S. upheld the individual mandate of the Affordable Care Act requiring all citizens to have health insurance (Sacks, 2012), those who have gained informal work will have to pay out of pocket to become compliant. Additionally, engaging in informal work will put people at risk by not having access to workers compensation claims, unemployment benefits, and they may not be able to cite their experience on their resumes when searching for better jobs.

Wage growth actually slowed in the United Kingdom during periods following minimum wage increases (Stewart, 2004). When the federal minimum wage increased in the U.S. in 1991, the restaurant industry in Texas experienced a narrowing of the wage dispersion (Katz & Krueger, 1992). This narrowing occurred largely because those workers who were earning the lowest wages received a raise, but managers were reluctant to increase the wages of the highest paid workers. Wage growth is only one part of remuneration that could decrease as a result of an extreme minimum wage increase.

Along with wages, hotel employers such as Hilton and Hyatt offer their full-time employees in the U.S. benefits such as health insurance, paid time off, job training, free or subsidized meals, and retirement plans. However, low-wage workers are less likely to have access to most types of employment benefits than high-wage workers as outlined in Table 2. As a result, the previously discussed creation of relatively more low-wage workers in the U.S. hotel industry as a result of wage rate increases could mean that relatively more hotel workers would be vulnerable to the effects of benefit decreases.

Table 2: Employment Benefits Access by Wage Group

Benefit	Low-Wage Workers	Mid-Wage Workers	High-Wage Workers
Health coverage for an individual	42%	87%	94%
Health coverage for individuals and families	34%	78%	87%
Paid time off for illness	39%	74%	90%
Paid vacation	51%	89%	88%
Paid holidays	46%	86%	89%
Defined benefit pension	16%	39%	48%
Retirement plan with employer contributions	32%	72%	87%
Job training or education	45%	64%	81%

Adopted from: Families and Work Institute, 2006

In countries such as the United Kingdom and Japan, where the government regulates benefits like vacation days, paid time off for illness, and health insurance, employers have limited discretion regarding how benefits are provided, and there is no relationship between minimum wage and benefit changes (Kanki, 2013). Similarly, in France where the government regulates such benefits, the minimum wage is increased and decreased in conjunction with these “social security” benefits (Kanki, 2013). The U.S., however, does not have laws regarding most benefits and employment, with the major exception being the recent Affordable Care Act which was upheld by the Supreme Court of the U.S. (Sacks, 2012). It is conceivable given the flexibility that American employers have in paying benefits, (that employers in the United Kingdom, France, and Japan do not), that with large increases in minimum wages, benefits will be reduced. Evidence from Chile suggests that as minimum wages increase, the matching individual contribution from employers to deferred benefits like unemployment insurance for workers declines (Ferrada, 2010). Considering the evidence from Chile and the freedom American employers have to offer benefits, it is quite possible that low wage workers in the United States would experience a reduction in the total benefits to which they have access as a result of an extreme increase in the minimum wage. Low workers already have less access to fringe benefits than their mid and high wage working counterparts, and policies that put them any more at risk of gaining access to those benefits may act as another barrier to reducing poverty.

Effects on the Hotel Industry

Increasing the minimum wage would create conditions where hotels would operate under a higher cost structure. Unfortunately, even to the extent some costs could be passed along to guests in the form of higher room rates, hotel operators would be likely to experience decreased profitability. O'Neill and Mattila (2007) found that hotels with relatively higher room rates are no more profitable than hotels with lower room rates. Competent hotel managers are always trying to maximize their room rates (Noone, Kimes, Mattila & Wirtz, 2009). Under the conditions where management is already maximizing rates, they may not be able to increase rates to make up for increased labor costs resulting from an extreme minimum wage increase. If a hotel were to reduce employment levels to control costs, or to keep staffing levels in line with a decrease in business levels, the outcome may backfire, further hurting profitability. Many workers in the hotel industry work long hours and report high levels of stress, so reducing staff levels could contribute to work overloads, which in turn drive turnover (O'Neill & Davis, 2011). Furthermore, if staffing levels are reduced, employee stress levels increase in hotels as a result of longer and more unpredictable hours (Cleveland, O'Neill, Himmelright, Harrison, Crouter & Drago, 2007), contributing to a vicious cycle of high wages leading to high turnover, high stress and high health care costs. Turnover has been estimated to reduce profitability in hotels by an average of \$7,500 per hotel property for every 1.0 percent increase in turnover (Simons & Hinkin, 2001).

Such reductions in profitability may not seem to be a significant impact to large companies like Hilton Worldwide or Marriott International. However, according to STR (formerly Smith Travel Research, 2013), as of year-end 2012, Hilton Worldwide franchised 3,102 hotels while directly managing only 272 hotels, and Marriott franchised 2,404 hotels while only directly managing 697 hotels. This model of franchising their properties has evolved as the primary method of operation of American hotel companies, and most hotel companies franchise at an even higher rate than Hilton and Marriott (STR, 2013). Out of these two companies, a total of 5,506 hotels were owned and managed by entities other than the parent companies. The owners may be real estate companies like Host Hotels and Resorts, owning approximately 100 hotels, but more likely would be small business entrepreneurs who only own one or two hotels as their primary source of income. If turnover were to increase by a modest amount of five percent, a single hotel owner would see a reduction of \$37,500 in profitability, and Host Hotels and

Resorts would experience an estimated \$3,900,000 decrease.

The effects of extreme minimum wage increases may be particularly acute in certain less profitable sectors of the hotel industry. For example, hotels owners with food and beverage operations may simply close their restaurants rather than attempt to operate them in a highly unprofitable fashion. Such operations are labor intensive, so closing them could result in very high levels of unemployment.

Room service departments are becoming less profitable in today's market, due to relatively low demand and high costs (Brancatelli, 2013). Given a reduction in overall demand, entire room service departments may be cut to reduce costs, as has already occurred at the Hilton New York in response to high wage rates, and is being considered by a number of other U.S. hotel operators with food and beverage services (Brancatelli, 2013). Hotel restaurants account for a significant portion of revenue (35 percent on average) for full-service hotels (Schmidgall, 2006); however, they are often underperforming and are at risk of being eliminated from hotels in instances of rising costs (Canina & Carvell, 2005) such as wage rates. Hotel room departments typically operate at an average departmental profit margin of 74 percent, whereas food and beverage departments' profit margin is typically 32 percent, and much of that profit is in the more lucrative catering and events business, rather than in restaurant operations. Given the conditions of rising wages and reduced customer demand (Brancatelli, 2013), many hotel food and beverage operations may not survive.

Once non-departmental overhead expenses are considered, such as utility costs, marketing expenditures, maintenance expenses, and other administrative costs, typical hotel food & beverage operations barely break even. Schmidgall (2006) found that hotel restaurants are highly labor intensive. Therefore, a large increase in the minimum wage would be a particularly negative event, and it is plausible that an extreme increase in the minimum wage would hasten the elimination of restaurants and room service in hotels and corresponding job losses because many hotel owners would not continue such operations at a loss.

Appendix 2

The Cases of Los Angeles and Biloxi

The effects of extreme minimum wage increases would have different results in different cities. To provide a demonstration, two relatively generalizable metropolitan areas of different sizes and located in different regions of the U.S. are evaluated as explanatory cases in this report. Namely, in Biloxi, MS, and Los Angeles, CA, the effects of extreme minimum wage increases would be deleterious to the health of the hotel industry in both municipalities, but for different reasons.

Biloxi employment has not fully recovered from the most recent economic recession or from the two Gulf tragedies of Hurricane Katrina and the Deep Water Horizon oil spill. Biloxi's unemployment rate was at 8.2 percent in 2013, up from 5.2 percent in 2004, the year before Hurricane Katrina (U.S. BLS, 2014a). Los Angeles' employment levels have been deeply affected by the most recent recession. The unemployment level in Los Angeles was 4.8 and 5.6 percent in 2006 and 2007, respectively, however, it increased to 10.7 percent in 2013 (U.S. BLS, 2014a). Both Biloxi and Los Angeles had unemployment levels higher than the national average in 2013, which was 6.7 percent (U.S. BLS, 2014a). In fact, as of December 2013, Los Angeles had the 305th lowest level of employment and Biloxi had the 248th lowest level of employment of any metropolitan area in the U.S. (U.S. BLS, 2014b). Each of these two labor markets would be a prime candidate for employment market improvements.

Both cities also have strong hotel markets, with Biloxi being a Gulf coast resort destination, and Los Angeles being the country's second largest city, and a hub of commerce and culture. The examples of Biloxi and Los Angeles highlight how other areas of the nation may be adversely affected by extreme minimum wage increases, as well.

In Biloxi, the minimum wage would increase due to the raising of the federal minimum wage. This 39 percent increase in the minimum wage would result in higher hotel prices for this Gulf coast resort destination. Biloxi has a low wage model in the hotel industry compared to the nearby alternative of New Orleans. Both Biloxi and New Orleans offer warm weather, casino gaming, and other tourist attractions. In fact, a recent report by the State of Louisiana claimed that Mississippi and Louisiana were the third and fourth most popular gaming destinations in the country, respectively, behind only Nevada and New Jersey (Louisiana Gaming Control Board, 2013). Unfortunately, for Biloxi, the casinos, like the city's employment levels, have yet to fully

recover from their pre-Hurricane Katrina peak in 2004 (City of Biloxi, 2012). Table 3 compares the differences in median wages for hotel employees between the two cities, national median wages, and percentage change in the wage that would be required based on a proposed increase in the minimum wage to \$10.10 per hour.

Table 3: Median Wage Differences between Biloxi, MS, and New Orleans, LA

Position	Biloxi	Percent Change to \$10.10	New Orleans	Percent Change to \$10.10	National	Percent Change to \$10.10
Hotel Front Desk	\$9.60	5.2 %	\$11.13	N/A	\$10.56	N/A
Bellhops	\$8.52	18.5%	\$9.17	10.1%	\$9.64	4.8%
Housekeeping	\$9.44	7.0%	\$9.72	3.9%	\$10.49	N/A
Concierge	\$8.60	17.4%	\$9.63	4.9%	\$13.10	N/A

Source: U.S. BLS, 2014b

With an increase in the minimum wage to \$10.10 per hour, hotels in Biloxi would be affected to a far greater degree than hotels in New Orleans and would be affected more than average hotels nationally. Hotel managers in Biloxi would most likely raise their room rates, making the destination significantly more expensive. The increase in the minimum wage would narrow the gap between what hotels in New Orleans and Biloxi charge, potentially driving more business, such as conventions, holiday travelers, and incentive trips, to New Orleans, further reducing employment in Biloxi. If hotels in Biloxi were unable to raise their rates, they would be forced to lay off employees to maintain their profit margins. In either scenario, the city of Biloxi would not only lose out on hotel business and earned income tax of the workers who would lose their jobs, but the city would also lose out on occupancy tax from overnight hotel guests, and sales taxes from whatever those guests purchased while in town. If Biloxi were to lose potential first-time gamblers to New Orleans, the city of Biloxi could also forfeit revenue from an already slumping casino tax. The national minimum wage in the case of Biloxi would be detrimental, as Dolando et al (1996, p. 329) state, “a single national minimum wage is then an extremely blunt policy instrument, being set too low in some markets (employment could be raised by having a higher minimum) and too high in other markets (employment is reduced).”

Los Angeles approved a new, higher minimum wage strictly for hotel workers of \$15.37

per hour (Rainey, 2014a). The increase for Los Angeles applies only locally, so other destinations in California would not be required to comply with the new wage rate. Hotels in Anaheim, for example, would be able to maintain their profit margins and rates, while hotels in Los Angeles would be forced to either accept lower profit margins, charge higher rates, or both. If a result of the proposed wage increase in Los Angeles were to be an increase in prices at hotels, travel demand most likely would weaken as transient and group travelers would seek better deals elsewhere.

If the proposals for increases in the minimum wages for both Los Angeles and the U.S. are passed, the wages in Los Angeles would rise much higher than elsewhere in the country. Table 4 outlines how much wages would increase in hotels in Los Angeles and Anaheim based on the new minimum wage structures.

Table 4: Median Wage Differences between Los Angeles and Anaheim

Position	Los Angeles	Percent Change to \$15.37	Anaheim	Percent Change to \$10.10
Hotel Front Desk	\$10.95	40.4 %	\$11.26	N/A
Bellhops	\$9.59	54.5%	\$9.63	4.8%
Housekeeping	\$10.23	50.2%	\$14.26	N/A
Concierge	\$14.22	8.1%	\$9.98	1.2%

Source: U.S. BLS, 2014b

The increase in the cost structure would impact Los Angeles in a much more notable way than other cities in southern California. The hotels in the city of Anaheim would see a negligible increase in labor costs, while hotels in Los Angeles would experience increases of over 50 percent in some departments as noted in Table 4. Given such increases in the wages for Los Angeles hotels, hotel prices would be likely to increase, and group and transient business would be likely to go to other markets. Los Angeles has unemployment levels greater than 10 percent (U.S. BLS, 2014a), and can ill afford to put more of its population out of work. The city of Anaheim, however, may experience a windfall in occupancy, tax dollars, and employment due to higher demand in their local hotels. Other enterprises that receive business from tourists in L.A. may be negatively affected, other tax revenues would be reduced and improvements to urban infrastructure relying on tax revenues could be compromised.

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