

WYOMING DEPARTMENT OF EMPLOYMENT

Assessing the Impact of Raising Wyoming's Minimum Wage

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Section I: Purpose

Research and Planning (R&P) was asked to determine the impact of raising Wyoming's minimum wage. To assess the impact, this report first asks how many workers would be affected by an increase, then narrows its focus to ask how an increase would affect employment, hours and wages. This report investigates minimum wage increases from the viewpoint of the traditional economic model of supply and demand. Alternatively, using a subset of Wyoming Fast Food restaurants as a case study, the report explores the issue of a minimum wage increase within a broader context of current, national and international research.



Section II: Results in Brief

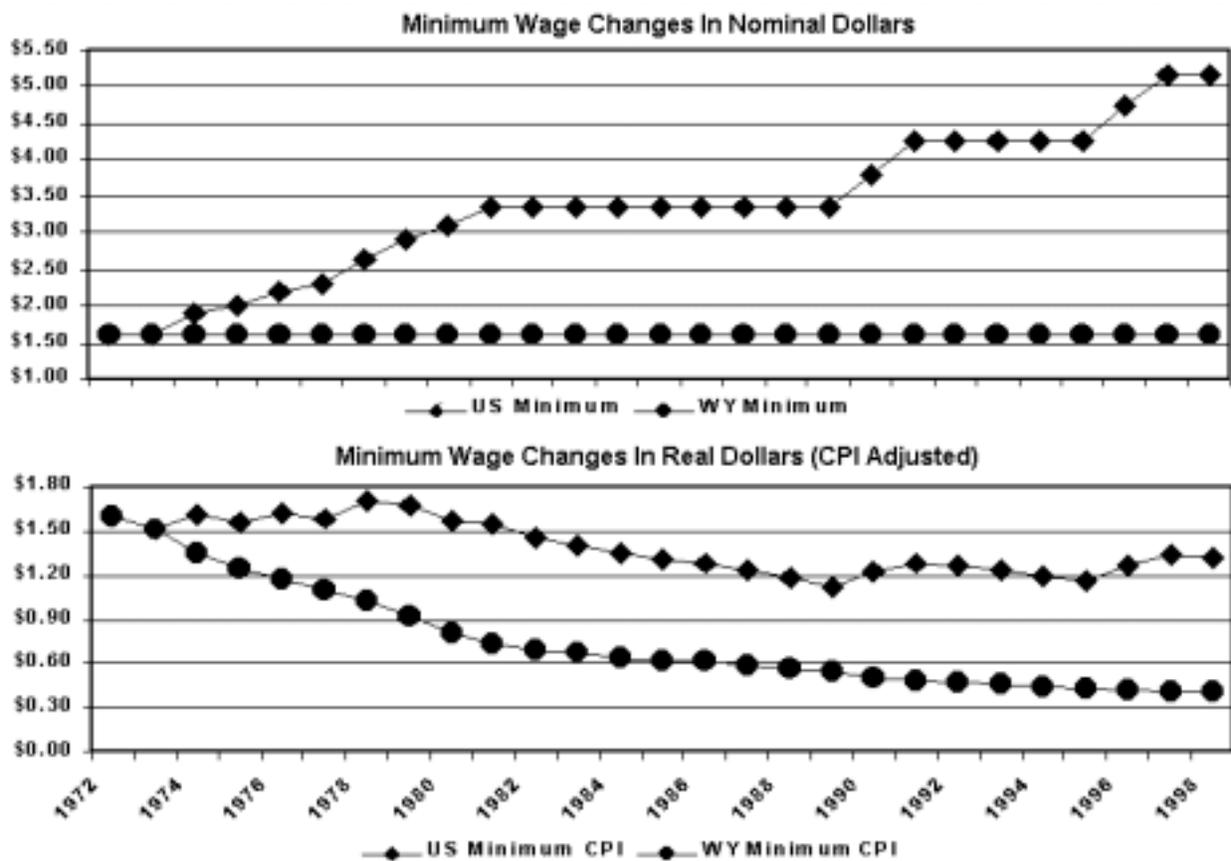
Less than 8 percent of Wyoming's labor force would be impacted by a change in the State minimum wage. Further evidence generated by R&P suggests that less than 3.4 percent of Wyoming employees covered by Unemployment Insurance (UI) would feel the impact.

The majority of research reviewed in this report holds that raising the minimum wage decreases both employment and hours worked. Research conducted by R&P on the impact of the Federal minimum wage increase which occurred in the third quarter of 1997 (97Q3) mirrored these findings. An 8-10 percent increase in the minimum wage decreased employment by 1-3 percent. R&P offers factors other than a minimum wage increase to explain these employment decreases.

Section III: Introduction

Wyoming is one of eight states that currently has a minimum wage below the Federal minimum of \$5.15 per hour. The last change to Wyoming's minimum wage occurred in 1972 bringing it to the Federal level at that time of \$1.60/hr. Since 1972, the Federal minimum wage has been increased 12 times in attempts to keep pace with inflation, while Wyoming's minimum wage has remained at \$1.60/hr. Figure 1 presents both the Federal and State minimum wages in nominal and real dollars. Real dollars were calculated using the Consumer Price Index (CPI) for base year 1972. Since 1972, the value of the Federal minimum wage in real dollars, even with 12 increases, decreased 17.5 percent. The value of Wyoming's minimum wage, which remained \$1.60/hr, decreased 74.4 percent during the same 26 year period.

Figure 1: Federal and Wyoming Minimum Wage Changes 1972 - 1998



To identify the number of affected workers, R&P reviewed both the exemptions to the Fair Labor Standards Act (FLSA), which define the employers excluded from paying Federal minimum wage, and employment estimates generated by the U.S. Department of Labor. R&P used Wage Records and ES-202 databases to identify Wyoming workers possibly exempt from the Federal minimum wage.

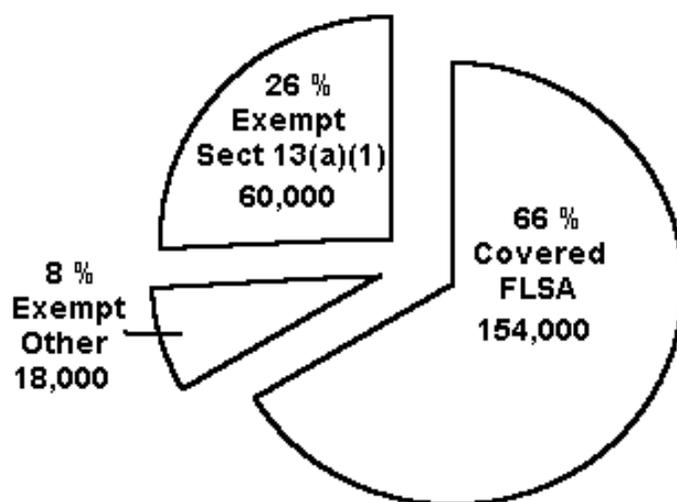
To address how an increase would affect employment, hours and wages, R&P studied the traditional economic model of labor demand and supply. R&P also reviewed current research literature on minimum wage implementation. These studies provided a context within which to look at the various impacts of raising the minimum wage. As a case study, R&P researched the impact of the Federal minimum wage increase in the fourth quarter of 1997, on a sample of Fast Food chains in Wyoming.

This report concludes by identifying the applicability of these various models and methods to the question of whether or not to raise the State minimum wage. Suggestions as to the magnitude of the population affected, relevance of the literature and research presented and the size of the impact of a State minimum wage increase in light of other economic conditions are discussed.

Section IV: How many workers would be affected by an increase in the State minimum wage?

A 1998 U.S. Department of Labor publication entitled “Minimum Wage and Overtime Hours Under the Fair Labor Standards Act” identifies by state the types of employees covered by and exempt from the Federal minimum wage. Figure 2 reveals that 66 percent of the employees in Wyoming are covered by the minimum wage laws of the FLSA. A sizeable proportion of Wyoming employees (26 percent) fall in the category “executive, administrative and professional” and are exempt from both the current State and Federal minimum wage laws. Many of the employees in these occupations were earning a salary above the current Federal minimum wage. The remaining 8 percent constitute employees not covered by the FLSA

Figure 2: Wyoming Employees Covered by FLSA 1996



(Appendix A, Sect 13). Some of these are exempt from the current State minimum wage laws (Appendix B, Article 2) as well, for example those employed in Agriculture and domestic service. The review of data provided by the U.S. Department of Labor suggests a change in the State minimum wage will affect less than 8 percent of Wyoming’s workers.

R&P utilized two databases for analysis. The Wage Records database reports the quarterly earnings of all UI covered employees. The second database, ES-202, reports monthly the number of jobs and total wages paid by the employer.¹ The third quarter of 1997 (97Q3) was used as reference quarter, because it is the last verified quarter of Wage Records available and is the quarter with the highest employment during the year. Using these databases, R&P identified the number of employees who were paid at or near the State minimum wage of \$1.60/hr. An important limitation of these databases is they do not report an hourly wage rate (dollars/hr) or the number of hours the employee worked. In the absence of explicit hourly wage data, R&P selected the following criteria to differentiate those workers likely to be earning near the State minimum wage from those earning above the Federal minimum wage:

1) A \$832 cap was set to select employees working full time for \$1.60/hr during the quarter (40hrs/wk, 13 weeks). Similarly, an employee working 20 hrs/week for \$3.20/hr would be included in this data set. This cap excludes from our analysis employees earning the Federal minimum wage who work more than 13.5 hours per week.

2) Only employees who worked for the same employer in the quarter preceding and following 97Q3 were included. The purpose of this criteria is twofold:

a) it excludes from the analysis short-term employees who are not impacted by a minimum wage increase; and

b) it excludes employees who worked for only a short period within a quarter and earned less than \$832, such as a automotive mechanic who worked for only one week. The Wage Records database does not provide the time frame for earnings within the quarter; therefore, only people who showed some continuity of employment were included in the analysis.

3) If the employer paid total wages greater than \$500,000 during 97Q3, the employee was removed from the analysis. R&P assumed that when wages during one quarter exceeded \$500,000, annual business would also exceed \$500,000, thereby subjecting the employer to the FLSA.

4) All Federal, State and Local Governments are subject to the FLSA; therefore, their employees were removed from the analysis.

Of the 234,634 UI covered employees who appeared in Wage Records during 97Q3, 154,995 had the same employer in the preceding and following quarter. Of these only 5,283 (3.4 percent) met the above criteria. Some overlap occurs between employees in this 3.4 percent and those earning the Federal minimum wage. Examples include:

1) Employees paid the Federal minimum of \$4.75/hr who work less than 13.5 hours during 97Q3.

2) Employees whose wages are supplemented by tips such as restaurant servers earning the Federal minimum of \$2.13/hr and working 30 or fewer hours.

3) Consultants working spot jobs for the same employer in the three consecutive quarters.

Over half of these 5,283 employees worked in industries likely to have exemptions to the Federal minimum wage: restaurants, hotels, daycares, drinking establishments and various agriculture related industries. However, these industries also employ numerous individuals working part time at the Federal minimum wage rate. Many conduct interstate commerce by using credit card machines that transmit across state lines; thus, they are subject to FLSA provisions. R&P formulated its selection criteria to allow a larger subset of low-end wage workers. The 3.4 percent estimate represents the high end of the range of employees impacted by a State minimum

wage increase. This corresponds with an interview conducted with Dave Crowlie of the Wyoming Department of Employment, Labor Standards Division in which he stated that he very rarely comes across a case affected by the State minimum wage. Most minimum wage complaints are referred to the U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division, because they are covered by the FLSA.²

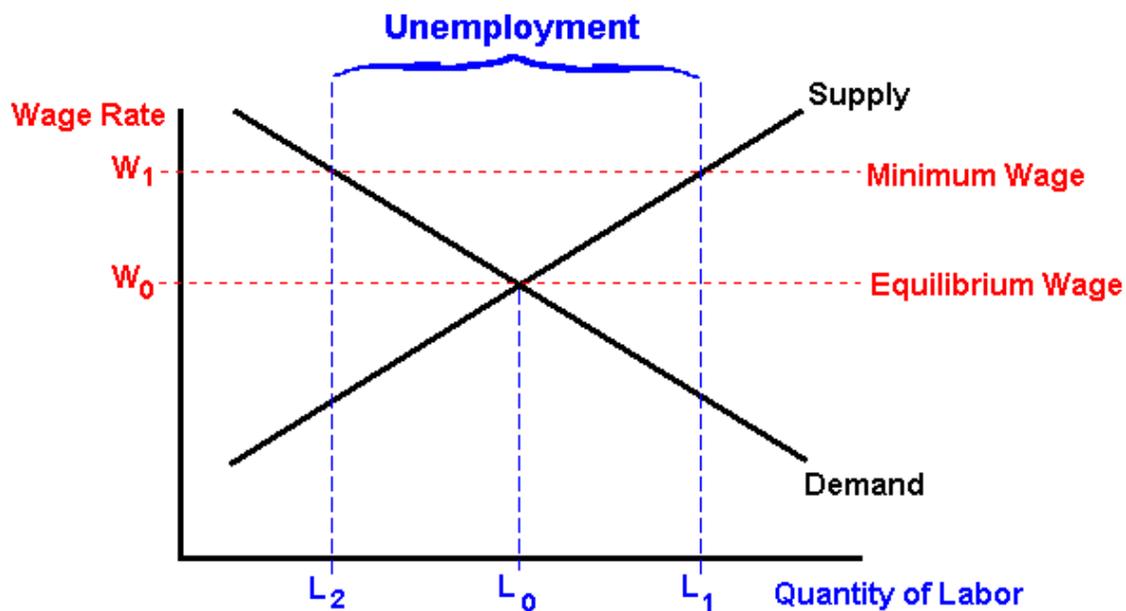
Section V: How would an increase affect employment, hours and wages?

Section V-1: Traditional Economic Model of Labor Supply and Demand

What does the traditional economic model suggest will happen when the minimum wage is increased? Figure 3 illustrates the answer. The demand for labor is downward sloping. As the price of labor (the wage rate) increases, it becomes more expensive relative to other inputs, and employers will substitute away from labor. That is, they will decrease the amount of labor they use and increase the use of other inputs, such as capital.

The supply of labor is upward sloping. As the wage rate increases, more individuals will enter

Figure 3: Effect of Minimum Wage on Labor Market for Occupations Paying Below the Minimum Wage



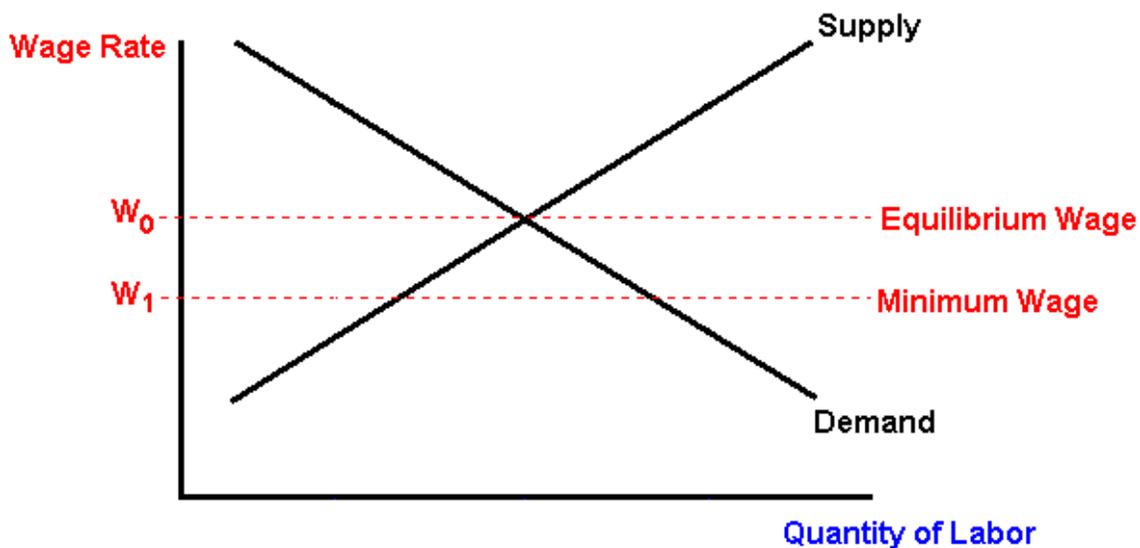
the labor force, or be willing to work more hours. According to the “labor-leisure” model of labor supply each individual has a fixed amount of time. It can be spent in two areas--work in the labor market, or leisure (non-labor market activities). As the wage rate increases, the opportunity cost of leisure increases and individuals will substitute earnings for leisure. When the labor market is in equilibrium, the quantity of labor supplied equals the quantity of labor demanded. This is the point where the supply and demand curves cross each other. In Figure 3 the quantity of labor is L_0 and the wage rate is W_0 (the equilibrium wage).

If a minimum wage is set above the equilibrium wage, the quantity of labor supplied will increase to L_1 , but the quantity demanded will fall to L_2 . The difference between supply and demand at the minimum wage, as shown in Figure 3, is unemployment. Thus, in this model, an

increase in the minimum wage above the equilibrium wage causes a decrease in employment and an increase in unemployment. Those who are still working, however, will receive the higher wage (W_1).

What are the assumptions behind this model? The largest assumption is that the minimum wage is increased above the equilibrium wage. The equilibrium wage is the wage set by the market. In other words, the market-clearing wage is set by the demand and supply of labor. So, for an

Figure 4: Effect of Minimum Wage on Labor Market for Occupations Paying Above the Minimum Wage

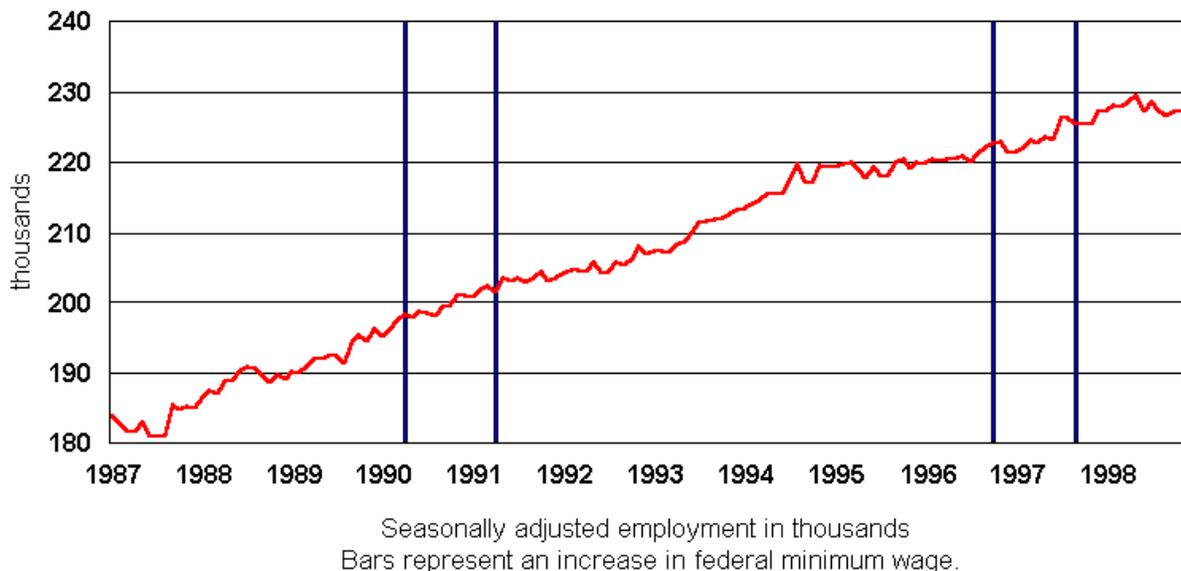


occupation which typically pays wages above the minimum, the model predicts that the minimum wage has no effect on the employment or wages in that occupation. This case is illustrated in Figure 4.

The impact of a minimum wage increase will be felt disproportionately by those occupations that pay the lowest wages. The 1997 Wyoming Wage Survey identified 73 occupations with entry level wages less than \$6.00 per hour (Appendix C). Some of these occupations might be affected by an increase in the minimum wage. It is unlikely, however, that the other 383 occupations identified by the complete Wage Survey, which make up over two-thirds of employment, would be affected.

This model assumes that the supply and demand curves are fixed. A different result would be obtained in a model where the curves are constantly shifting outward (as evidenced by the

Figure 5: Wyoming Nonagricultural Employment 1987 - 1998



increasing employment and wages in Wyoming³). If employment is increasing, the effect of a small increase in the minimum wage is likely to temporarily slow the increase in employment, rather than to cause employment to fall. Figure 5 shows Wyoming nonagricultural employment from 1987 to 1998. The Federal minimum wage increased four times during this period and bars are placed in the graph to show the timing of the increases. This figure shows that there is no clearly identifiable decline in employment following any of the minimum wage increases.

Section V-2: Review of the Research on the Impact of Increasing the Federal Minimum Wage

Much has been written about the impact of increasing the Federal minimum wage. Due to the limited scope of this paper, only 12 studies are presented. Appendix E lists the research findings. A article in the Casper Star-Tribune (27 April, 1999) briefly presented a major concern of raising the Federal minimum wage when it stated “that the last minimum wage increase coincided with a decline in job growth in eating and drinking establishments.”⁴

A literature review of research on recent minimum wage increases offers contradictory support that an increase in the minimum wage results in both a slight decrease in employment and no change in employment (see Appendix E). Most studies apply a supply-demand model to labor which predicts that increasing the minimum wage will decrease the quantity of labor demanded. Others find, by applying the same techniques, that an increase in the minimum wage has no impact on employment. One article found the increase in the minimum wage had a positive impact on employment.

To assess the quality of the research, R&P reviewed the data upon which the analysis was generated. Studies 2, 3, 4, 5, 6, 7, 9 & 11 (see Appendix E) were all based on survey data. Many used the Current Population Survey (CPS) which is generated by the combined efforts of the Bureau of Labor Statistics and the U.S. Census Bureau. The CPS provides a wealth of

information on the labor force characteristics of the United States. All surveys have limitations related to the validity and reliability of the data produced.

For example, the CPS survey is voluntary. Households refusing to participate are replaced with other households, which causes the self-selection problems encountered by many survey methodologies. With this approach, data represent only the people who wish to participate.

A second problem with surveys is that most do not have a mechanism to test the reliability of the data, such as checking the response against other administrative databases to see if the data collected are accurate. The CPS goes to great lengths to provide error estimates for each segment of the population. These error estimates are compounded when disaggregating the data to a specific group, for example teenage employees earning the Federal minimum wage. To their credit, the researchers who produced the above-mentioned studies acknowledged these limitations and other issues related to data quality.

Studies 1, 8, 10 and 12 use some form of administrative database for analysis. As with survey research, there are strengths and weaknesses to using administrative databases. Not all jobs and individuals are covered under the current UI database collection. The databases only report net wages paid and do not offer insight into hours worked or wage rate. Moreover, they do not provide data on compensation other than wages. Lastly, labor market behavior cannot be generalized to other areas outside of the geographic region of analysis, for there is no systematic linking of databases across state lines. Even with these disadvantages, database use corrects many of the shortcomings associated with survey research. It facilitates looking at a reliable universe as opposed to a statistically selected sample and helps identify accurate earnings of those covered. Database linkage minimizes incorrect reporting and non-response errors associated with survey research. A few of the studies listed in Appendix E are worth mentioning in greater detail.

Study 1: “The Highs and Lows of the Minimum Wage Effect: A Time Series Cross Section Study of the Canadian Law” Benjamin, D. & Stanger, S. (1999).

The study compared the effect of an increase in the minimum wage to the percent of youth employed across nine Canadian provinces. Minimum wage laws were controlled and implemented at the provincial level allowing researchers to conduct a quasi-experiment and compare the impact of minimum wage increases that occurred at different times in different provinces. By contrast, in the United States, Federal minimum wage laws as dictated by the FLSA occur at the same time and nationwide. This does not allow the researcher to observe what would occur with respect to employment in the absence of a minimum wage increase. For example, Canada went through recessions in 1982 and 1991 which corresponded to a drop in youth employment. Knowing the times corresponding to minimum wage increases, which were different across provinces, the researchers were able to determine the percent decrease in employment associated with the recession and the percent related to minimum wage increases. This study found that a 10 percent increase in the minimum wage resulted in a 2.5 percent decrease in employment among the youth of Canada.

Study 8: “The Effect of New Jersey’s Minimum Wage Increase on Fast-Food Employment: A

Re-Evaluation Using Payroll Records” Neumark, D. & Wascher, W. (1995).

Neumark & Wascher collected payroll data from the fast food restaurants under study in New Jersey (minimum wage increase) and Pennsylvania (State minimum wage already exceeded Federal wage requirements). The data collected included the number of hours worked, wage rate and total wages paid before and after a minimum wage increase. The use of micro-level data allowed the researchers to conclude that the increase in the minimum wage corresponded to a significant decrease in employment in the fast food restaurants. The study does have limitations. Providing data was not mandatory and several of the restaurants asked to participate declined.

Study 12: “A Reanalysis of the Effect of the New Jersey Minimum Wage Increase on the Fast-Food Industry with Representative Payroll Data” Card, D. & Krueger, A. (1998).

Card and Krueger used the ES-202 data mentioned earlier in this paper to conduct a study of the impact of a minimum wage increase in New Jersey relative to Pennsylvania (already exceeded Federal minimum wage). The scope of the data available from the ES-202 is broader than that collected by Neumark and Wascher; however, the depth of the data was not as rich. In other words, Card and Krueger were able to collect data on even those restaurants refusing to participate in the Neumark and Wascher study, but they were not able to collect data on hours worked and wage rate. The use of ES-202 data leads to some interesting problems, because it only reports on the number of jobs in a given month and total wages paid quarterly. Card and Krueger found that an increase in the minimum wage corresponded to a slight, non-significant increase in employment or no change.

Of the research on the impact of a minimum wage increase, the majority supports the predictions of the supply-demand model. The predicted outcome of a minimum wage increase is a decrease in employment. Next, R&P presents evidence using the ES-202 and Wage Records databases that concurs with these findings to some degree.

Section V-3: Case Study of Impact of Federal Minimum Wage Increase on Fast Food Restaurants in Wyoming

Research conducted by R&P tracked employees using Wage Records for five Fast Food restaurant chains in Wyoming from 1993 to 1997. Fast Food restaurant chains were chosen as they were easily identified and predominantly pay minimum wage. Due to the extreme variations in wage levels, employees in the top 10 percent of annual wages for each year were removed. These employees accounted for nearly 45 percent of the total wages. They included managers, owners and others who were not likely to be affected by the minimum wage rate increase.

The sample was further reduced by selecting only individuals who worked in at least three consecutive quarters for the Fast Food chains under analysis. This removed individuals who worked for the restaurants less than one quarter, for example those who would have worked three weeks and quit. Further tightening the range of wage levels from the bottom allowed R&P to select the subset of Fast Food employees most likely to be impacted by Federal minimum wage changes.

The analysis is based on inflation adjusted (1992) amounts to hold the effect of inflation constant over the time period of the analysis. The Federal minimum wage rate increased from \$4.25/hr (a real wage of \$3.80) to \$4.75/hr (\$4.15 CPI adjusted) during the fourth quarter of 1996. Table 1 below, reveals that the increase in the minimum wage rate corresponded to a statistically significant 6.1 percent increase in the average annual wages from 1996 to 1997. This increase in annual wages bolstered R&P's confidence that it selected the correct subset of employees

earning the Federal minimum wage (Figure 6). Although the number of employees decreased 2.6 percent from 1996 to 1997, the decline in employment was not significant, largely due to seasonal variation in employment.

Table 1: Wyoming Fast Food Restaurant Chain Employees, Hours and Wages 1993 - 1997

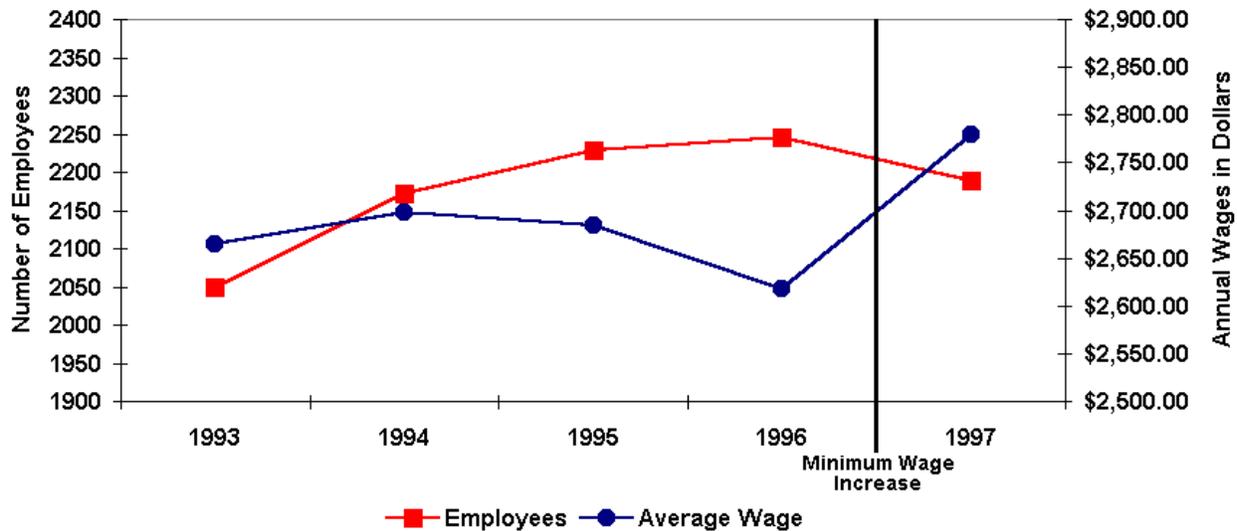
Year	Average Annual Wage	Wage Change from Prior Year		Fast Food Employees	Employee Change from Prior Year		Annual Hours Worked	Hours Change from Prior Year	
		\$	%		n	%		hr	%
1993	\$2,664.00	N/A	N/A	2050	N/A	N/A	642	N/A	N/A
1994	\$2,698.00	\$34.00	+1.2%	2172	122	+5.9%	671	29	+4.5%
1995	\$2,684.00	\$-14.00	-5%	2229	57	+2.6%	687	16	+2.4%
1996	\$2,618.00	\$-66.00	-2.5%	2246	17	+7%	689	2	+3%
1997	\$2,779.00	\$161.00	+6.1%	2188	- 58	-2.6%	670	- 19	-2.8%

The minimum wage rate increased 8.9 percent in real dollars from 1996 to 1997, while the average annual wage level only increased 6.1 percent, a difference of 2.8 percent. Although hours worked were not among the data available, this 2.8 percent difference can be explained. Assuming that employees were paid the Federal minimum wage rate, as discussed in the previous paragraph, hours worked per year are easily calculated by dividing the average annual wages by the CPI adjusted minimum wage rate for those years. For the period 1996 to 1997, this formula reveals a decrease of 19 hours worked by an employee. Multiplied by the adjusted minimum wage rate for 1997 of \$4.15/hr, the total equals \$78.85. The loss of \$78.85 creates a 2.8 percent decrease in the level of the average annual wage for the employees of the Fast Food restaurant chains.

When faced with a minimum wage increase, some employers may choose to offset their losses by decreasing both the number of employees and the number of hours worked by the remaining employees. This tactic corresponds to the expectations of the supply-demand model. Less productive workers are let go, and those who remain are encouraged to become more efficient and productive.

The current research looks at a very specific group in Wyoming's labor market. There are many issues it does not address. For example, what other factors of Wyoming's economy could have

Figure 6: Fast Food Restaurant Employees and Average Annual Wage 1993 - 1997



precipitated a change in the number of employees and hours worked? Conditions imposed on the Fast Food restaurant chains studied, due to factors other than the minimum wage increase, possibly exerted greater influence on the hours worked and number of employees. Also the research presented lacks a control group, one not subject to the minimum wage increase during the same period. Without a control group, R&P could not determine if the effects in employment reflected the minimum wage increase or external factors affecting all industries, such as a slowdown in the economy.

Section VI: Conclusions

The U.S. Department of Labor publication discussed earlier estimated that less than 8 percent of Wyoming's labor force would be impacted by a change in the State minimum wage. Further evidence generated by R&P suggests less than 3.4 percent of the UI covered employees in Wyoming could feel this impact. The percent of individuals affected depends on the scope of any legislated change. For example, if the Wyoming Legislature adopts the standard model set forth by the FLSA, then the expectation that the impact affects less than 3.4 percent holds true. If State minimum wage laws incorporated industries currently exempt from both State and Federal requirements such as Agriculture or seasonal recreation industries, the impact on the labor force would rise.

The second major section of this report addressed the impact of raising the minimum wage on employment, hours and wages. The majority of research reviewed in this report holds that raising the minimum wage decreases employment and hours worked. Research conducted by

R&P on the impact of the 97Q3 Federal minimum wage increase mirrored these findings. An 8-10 percent increase in the Federal minimum wage decreased employment by 1-3 percent. R&P offered factors other than a minimum wage increase to explain these employment decreases.

Therefore, increasing Wyoming's minimum wage would affect only a small portion of Wyoming's labor force in a marginal way.

However, the research presented on the impact of raising the Federal minimum wage reflects the response of larger companies that were able to diffuse the effects of the increase. For example, they reduced the number of their employees, decreased hours worked per employee, or increased product price. How Wyoming's smaller businesses will respond to increases in the minimum wage are unknown. They have fewer options and less market power. They are less able than larger companies to redirect resources or pass price increases on to the customer.

Notes

1. Mike Evans, "Understanding the Different Employment Measures," Wyoming Labor Force Trends 35, no. 4 (1998): 1-3.
2. Dave Crowlie, personal interview conducted in Casper, by Tony Glover and David Bullard. 22 April 1999. Dave is a manager at Wyoming Department of Employment Labor Standards Division which enforces state labor laws.
3. David Bullard, "Total Payroll as a Tool for Identifying Business Cycles in Wyoming" and "Wyoming Employment 1994-1998: A Tale of Two Series," Wyoming Labor Force Trends 36, no. 5 (1999): 6-7; 10. Nonagricultural employment in Wyoming, as measured by the CES program, has been increasing steadily since 1988. Wages, as measured by the ES-202 program, have been growing in real terms (adjusted for inflation) since third quarter 1996.
4. David Espo, "GOP Faces Minimum-wage Increase, Wants Help for Business," Casper Star-Tribune, 27 April 1999, sec. A.

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Appendix A: Federal Minimum Wage Exemptions

United States Code

TITLE 29 - LABOR

CHAPTER 8 - FAIR LABOR STANDARDS

Sec. 213. Exemptions

(a) Minimum wage and maximum hour requirements

The provisions of sections 206 (except subsection (d) in the case of paragraph (1) of this subsection) and section 207 of this title shall not apply with respect to -

(1) any employee employed in a bona fide executive, administrative, or professional capacity (including any employee employed in the capacity of academic administrative personnel or teacher in elementary or secondary schools), or in the capacity of outside salesman (as such terms are defined and delimited from time to time by regulations of the Secretary, subject to the provisions of subchapter II of chapter 5 of title 5, except that an employee of a retail or service establishment shall not be excluded from the definition of employee employed in a bona fide executive or administrative capacity because of the number of hours in his workweek which he devotes to activities not directly or closely related to the performance of executive or administrative activities, if less than 40 per centum of his hours worked in the workweek are devoted to such activities); or

(2) Repealed. Pub. L. 101-157, Sec. 3(c)(1), Nov. 17, 1989, 103 Stat. 939.

(3) any employee employed by an establishment which is an amusement or recreational establishment organized camp, or religious or non-profit educational conference center, if (A) it does not operate for more than seven months in any calendar year, or (B) during the preceding calendar year, its average receipts for any six months of such year were not more than 33 1/3 per centum of its average receipts for the other six months of such year, except that the exemption from sections 206 and 207 of this title provided by this paragraph does not apply with respect to any employee of a private entity engaged in providing services or facilities (other than, in the case of the exemption from section 206 of this title, a private entity engaged in providing services and facilities directly related to skiing) in a national park or a national forest, or on land in the National Wildlife Refuge System, under a contract with the Secretary of the Interior or the Secretary of Agriculture; or

(4) Repealed. Pub. L. 101-157, Sec. 3(c)(1), Nov. 17, 1989, 103 Stat. 939.

(5) any employee employed in the catching, taking, propagating, harvesting, cultivating, or farming of any kind of fish, shellfish, crustacea, sponges, seaweeds, or other aquatic forms of animal and vegetable life, or in the first processing, canning or packing such marine products at sea as an incident to, or in conjunction with, such fishing operations, including the going to

and returning from work and loading and unloading when performed by any such employee; or

(6) any employee employed in agriculture (A) if such employee is employed by an employer who did not, during any calendar quarter during the preceding calendar year, use more than five hundred man-days of agricultural labor, (B) if such employee is the parent, spouse, child, or other member of his employer's immediate family, (C) if such employee (i) is employed as a hand harvest laborer and is paid on a piece rate basis in an operation which has been, and is customarily and generally recognized as having been, paid on a piece rate basis in the region of employment, (ii) commutes daily from his permanent residence to the farm on which he is so employed, and (iii) has been employed in agriculture less than thirteen weeks during the preceding calendar year, (D) if such employee (other than an employee described in clause (C) of this subsection) (i) is sixteen years of age or under and is employed as a hand harvest laborer, is paid on a piece rate basis in an operation which has been, and is customarily and generally recognized as having been, paid on a piece rate basis in the region of employment, (ii) is employed on the same farm as his parent or person standing in the place of his parent, and (iii) is paid at the same piece rate as employees over age sixteen are paid on the same farm, or (E) if such employee is principally engaged in the range production of livestock; or

(7) any employee to the extent that such employee is exempted by regulations, order, or certificate of the Secretary issued under section 214 of this title; or

(8) any employee employed in connection with the publication of any weekly, semiweekly, or daily newspaper with a circulation of less than four thousand the major part of which circulation is within the county where published or counties contiguous thereto; or

(9) Repealed. Pub. L. 93-259, Sec. 23(a)(1), Apr. 8, 1974, 88 Stat. 69.

(10) any switchboard operator employed by an independently owned public telephone company which has not more than seven hundred and fifty stations; or

(11) Repealed. Pub. L. 93-259, Sec. 10(a), Apr. 8, 1974, 88 Stat. 63.

(12) any employee employed as a seaman on a vessel other than an American vessel; or

(13), (14) Repealed. Pub. L. 93-259, Sec. 9(b)(1), 23(b)(1), Apr. 8, 1974, 88 Stat. 63, 69.

(15) any employee employed on a casual basis in domestic service employment to provide babysitting services or any employee employed in domestic service employment to provide companionship services for individuals who (because of age or infirmity) are unable to care for themselves (as such terms are defined and delimited by regulations of the Secretary); or

(16) a criminal investigator who is paid availability pay under

section 5545a of title 5; or

(17) any employee who is a computer systems analyst, computer programmer, software engineer, or other similarly skilled worker, whose primary duty is -

(A) the application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software, or system functional specifications;

(B) the design, development, documentation, analysis, creation, testing, or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

(C) the design, documentation, testing, creation, or modification of computer programs related to machine operating systems; or

(D) a combination of duties described in subparagraphs (A), (B), and (C) the performance of which requires the same level of skills, and

who, in the case of an employee who is compensated on an hourly basis, is compensated at a rate of not less than \$27.63 an hour.

(b) Maximum hour requirements

The provisions of section 207 of this title shall not apply with respect to -

(1) any employee with respect to whom the Secretary of Transportation has power to establish qualifications and maximum hours of service pursuant to the provisions of section 31502 of title 49; or

(2) any employee of an employer engaged in the operation of a rail carrier subject to part A of subtitle IV of title 49; or

(3) any employee of a carrier by air subject to the provisions of title II of the Railway Labor Act (45 U.S.C. 181 et seq.); or

(4) Repealed. Pub. L. 93-259, Sec. 11(c), Apr. 8, 1974, 88 Stat. 64.

(5) any individual employed as an outside buyer of poultry, eggs, cream, or milk, in their raw or natural state; or

(6) any employee employed as a seaman; or

(7) Repealed. Pub. L. 93-259, Sec. 21(b)(3), Apr. 8, 1974, 88 Stat. 68.

(8) Repealed. Pub. L. 95-151, Sec. 14(b), Nov. 1, 1977, 91 Stat. 1252.

(9) any employee employed as an announcer, news editor, or chief engineer by a radio or television station the major studio of which is located (A) in a city or town of one hundred thousand population or less, according to the latest available decennial census figures as compiled by the Bureau of the Census, except where such city or town is part of a standard metropolitan statistical area, as defined and designated by the Office of Management and Budget, which has a total population in excess of one hundred thousand, or (B) in a city or town of twenty-five thousand population or less, which is part of such an area but is at least 40 airline miles from the principal city in such area;

or

(10)(A) any salesman, partsman, or mechanic primarily engaged in selling or servicing automobiles, trucks, or farm implements, if he is employed by a nonmanufacturing establishment primarily engaged in the business of selling such vehicles or implements to ultimate purchasers; or

(B) any salesman primarily engaged in selling trailers, boats, or aircraft, if he is employed by a nonmanufacturing establishment primarily engaged in the business of selling trailers, boats, or aircraft to ultimate purchasers; or

(11) any employee employed as a driver or driver's helper making local deliveries, who is compensated for such employment on the basis of trip rates, or other delivery payment plan, if the Secretary shall find that such plan has the general purpose and effect of reducing hours worked by such employees to, or below, the maximum workweek applicable to them under section 207(a) of this title; or

(12) any employee employed in agriculture or in connection with the operation or maintenance of ditches, canals, reservoirs, or waterways, not owned or operated for profit, or operated on a sharecrop basis, and which are used exclusively for supply and storing of water for agricultural purposes; or

(13) any employee with respect to his employment in agriculture by a farmer, notwithstanding other employment of such employee in connection with livestock auction operations in which such farmer is engaged as an adjunct to the raising of livestock, either on his own account or in conjunction with other farmers, if such employee (A) is primarily employed during his workweek in agriculture by such farmer, and (B) is paid for his employment in connection with such livestock auction operations at a wage rate not less than that prescribed by section 206(a)(1) of this title; or

(14) any employee employed within the area of production (as defined by the Secretary) by an establishment commonly recognized as a country elevator, including such an establishment which sells products and services used in the operation of a farm, if no more than five employees are employed in the establishment in such operations; or

(15) any employee engaged in the processing of maple sap into sugar (other than refined sugar) or syrup; or

(16) any employee engaged (A) in the transportation and preparation for transportation of fruits or vegetables, whether or not performed by the farmer, from the farm to a place of first processing or first marketing within the same State, or (B) in transportation, whether or not performed by the farmer, between the farm and any point within the same State of persons employed or to be employed in the harvesting of fruits or vegetables; or

(17) any driver employed by an employer engaged in the business of operating taxicabs; or

(18), (19) Repealed. Pub. L. 93-259, Sec. 15(c), 16(b), Apr. 8, 1974, 88 Stat. 65.

(20) any employee of a public agency who in any workweek is

employed in fire protection activities or any employee of a public agency who in any workweek is employed in law enforcement activities (including security personnel in correctional institutions), if the public agency employs during the workweek less than 5 employees in fire protection or law enforcement activities, as the case may be; or

(21) any employee who is employed in domestic service in a household and who resides in such household; or

(22) Repealed. Pub. L. 95-151, Sec. 5, Nov. 1, 1977, 91 Stat. 1249.

(23) Repealed. Pub. L. 93-259, Sec. 10(b)(3), Apr. 8, 1974, 88 Stat. 64.

(24) any employee who is employed with his spouse by a nonprofit educational institution to serve as the parents of children -

(A) who are orphans or one of whose natural parents is deceased, or

(B) who are enrolled in such institution and reside in residential facilities of the institution,

while such children are in residence at such institution, if such employee and his spouse reside in such facilities, receive, without cost, board and lodging from such institution, and are together compensated, on a cash basis, at an annual rate of not less than \$10,000; or

(25), (26) Repealed. Pub. L. 95-151, Sec. 6(a), 7(a), Nov. 1, 1977, 91 Stat. 1249, 1250.

(27) any employee employed by an establishment which is a motion picture theater; or

(28) any employee employed in planting or tending trees, cruising, surveying, or felling timber, or in preparing or transporting logs or other forestry products to the mill, processing plant, railroad, or other transportation terminal, if the number of employees employed by his employer in such forestry or lumbering operations does not exceed eight;

(29) any employee of an amusement or recreational establishment located in a national park or national forest or on land in the National Wildlife Refuge System if such employee (A) is an employee of a private entity engaged in providing services or facilities in a national park or national forest, or on land in the National Wildlife Refuge System, under a contract with the Secretary of the Interior or the Secretary of Agriculture, and (B) receives compensation for employment in excess of fifty-six hours in any workweek at a rate not less than one and one-half times the regular rate at which he is employed; or

(30) a criminal investigator who is paid availability pay under section 5545a of title 5.

Source: This is an excerpt for the complete Fair Labor Standards Act. Refer to: Legal Information Institute. "Chapter 8 Fair Labor Standards." <http://www4.law.cornell.edu/uscode/unframed/29/ch8.html> (19 May 1999).

Appendix B: Wyoming Minimum Wage Exemptions

TITLE 27 - LABOR AND EMPLOYMENT

CHAPTER 1 - GENERAL PROVISIONS

ARTICLE 2 - MINIMUM WAGES

27-4-201. Definitions.

(a) As used in this act [§§ 27-4-201 through 27-4-204]:

(i) "Wage" means compensation due to an employee by reason of his employment;

(ii) "Employ" includes to suffer or to permit to work;

(iii) "Employer" includes any individual, partnership, association, corporation, business trust, or any person or group of persons acting directly or indirectly in the interest of an employer in relation to an employee;

(iv) "Employee" includes any individual employed by an employer but shall not include:

(A) Any individual employed in agriculture;

(B) Any individual employed in domestic service in or about a private home;

(C) Any individual employed in a bona fide executive, administrative, or professional capacity;

(D) Any individual employed by the United States, or by the state or any political subdivision thereof;

(E) Any individual engaged in the activities of an educational, charitable, religious, or nonprofit organization where the employer-employee relationship does not, in fact, exist or where the services rendered to such organization are on a voluntary basis;

(F) All minors under eighteen (18) years of age and all part-time workers, who are employed; part-time workers being defined as persons working twenty (20) hours or less a week;

(G) Any individual employed as an outside salesman whose compensation is solely commission on sales;

(H) Any individual whose employment is driving an ambulance or other vehicle from time to time as necessity requires but who is on call at any time;

(J) Any individual who is enrolled and participating in any educational training or apprenticeship program approved by the commissioner of labor and statistics.

(v) In this act, "shall" is used in an imperative sense and "may" is used in a permissive sense.

(vi) "Occupation" means any occupation, service, trade, business, industry, or branch or group of industries or employment or class of employment in which individuals are gainfully employed.

Source: This is an excerpt. For the complete copy refer to:

Wyoming State Legislature. "Title 27 Labor and Employment, Chapter 1 General Provisions, Article 2 Minimum Wages." <http://legisweb.state.wy.us/titles/97titles/title27.htm> (19 May 1999).

Appendix C: Industries Likely to Have Exemptions to FLSA

3 Digit SIC	Industry	Employees	Percent
581	Eating and Drinking Places	1084	20.58%
701	Hotels and Motels	210	3.99%
835	Child Day Care Services	148	2.81%
799	Misc. Amusement and Recreation Services	142	2.70%
594	Misc Shopping Goods Stores	134	2.54%
864	Civic, Social and Fraternal Assoc	133	2.53%
738	Misc Business Services	106	2.01%
541	Grocery Stores	97	1.84%
554	Gasoline Service Stations	97	1.84%
832	Individual and Family Social Services	93	1.77%
021	Livestock, Except Dairy and Poultry	91	1.73%
515	Farm-Product Raw Materials	85	1.61%
271	Newspapers: Publishing, or Publishing and Printing	81	1.54%
734	Services to Dwellings and Other Buildings	79	1.50%
599	Retail Stores, Not Elsewhere Classified	75	1.42%
651	Real Estate Operators	74	1.41%
421	Trucking and Courier Services, Except Air	69	1.31%
138	Oil and Gas Field Services	66	1.25%
783	Motion Picture Theaters	66	1.25%
833	Job Training and Vocational Rehabilitation Services	64	1.22%
801	Offices and Clinics of Doctors of Medicine	59	1.12%
872	Accounting, Auditing, and Bookkeeping Services	53	1.01%
793	Bowling Centers	49	0.93%
152	General Building Contractors	47	0.89%
802	Offices and Clinics of Dentists	45	0.85%
723	Beauty Shops	44	0.84%
881	Private Households	44	0.84%
551	Motor Vehicle Dealers	42	0.80%
653	Real Estate Agents and Managers	39	0.74%
729	Misc Personal Services	39	0.74%
804	Offices and Clinics of Other Health Practitioners	39	0.74%
592	Liquor Stores	38	0.72%
811	Legal Services	38	0.72%
511	Paper and Paper Products	37	0.70%
571	Home Furniture and Furnishings Stores	37	0.70%
641	Insurance Agents, Brokers and Service	35	0.66%
726	Funeral Service and Crematories	34	0.65%
871	Engineering, Architectural and Surveying Services	34	0.65%
514	Groceries and Related Products	33	0.63%
784	Video Tape Rentals	33	0.63%

Source: Wyoming Department of Employment, Research & Planning. Wage Records and ES-202databases. (1997).

Appendix D: Occupations with Entry Level Wages Below \$6.00/hour

OES Code	Occupational Title	Total Employment	Mean Hourly Wage	Entry Hourly Wage
68021	Ushers, lobby attendants & ticket takers	120	\$5.41	\$5.34
65041	Combined food preparation & service workers	3760	\$5.52	\$5.35
65008	Waiters & waitresses	5150	\$5.54	\$5.36
65017	Counter attendants, coffee shop, lunchroom, cafeteria	720	\$5.79	\$5.36
98905	Vehicle washers & equipment cleaners	460	\$5.81	\$5.37
65032	Cooks, fast food	1160	\$5.79	\$5.38
53911	Proofreaders & copy markers	30	\$6.06	\$5.38
57311	Messengers	70	\$5.72	\$5.39
65014	Dining room & cafeteria attendants, bartender help	980	\$5.70	\$5.40
97805	Service station attendants	540	\$6.04	\$5.41
65002	Hosts & hostesses, lounge, restaurant & coffee shop	600	\$6.06	\$5.42
98902	Hand packers & packagers	750	\$6.20	\$5.43
68038	Child care workers	1050	\$6.05	\$5.44
68023	Baggage porters & bellhops	60	\$6.07	\$5.45
68014	Amusement & recreation attendants	870	\$6.38	\$5.46
49017	Counter & rental clerks	870	\$6.37	\$5.46
65038	Food preparation workers	2250	\$6.16	\$5.46
79017	Animal caretakers	210	\$6.61	\$5.46
65099	All other food service workers	560	\$6.40	\$5.46
97117	Driver/sales workers	1220	\$9.43	\$5.48
93938	Meat, poultry & fish cutters & trimmers, hand	60	\$6.63	\$5.49
67002	Maids & housekeeping cleaners	3250	\$6.28	\$5.50
49023	Cashiers	5110	\$6.63	\$5.51
27311	Recreation workers	590	\$8.24	\$5.52
97114	Taxi drivers & chauffeurs	160	\$6.32	\$5.52
49999	All other sales & related workers	1000	\$7.34	\$5.53
49011	Salespersons, retail	6990	\$7.24	\$5.54
31521	Teacher aides, paraprofessional	1820	\$6.52	\$5.55
34028	Broadcast technicians	130	\$7.35	\$5.55
32508	Emergency medical technicians	370	\$7.44	\$5.56
92728	Pressing machine operators, textile & garment	50	\$6.57	\$5.56
34017	Announcers, radio/television	110	\$7.39	\$5.56
53808	Hotel desk clerks	700	\$6.51	\$5.57
89517	Pressers, delicate fabrics	10	\$6.62	\$5.58
85947	Coin & vending machine servicers & repairers	50	\$8.61	\$5.58
79033	Pruners	20	\$9.16	\$5.58
69999	All other service workers	870	\$8.47	\$5.58
55321	File clerks	240	\$6.97	\$5.59
49021	Stock clerks, sales floor	2050	\$6.92	\$5.60
65005	Bartenders	1380	\$6.67	\$5.62

63099	All other protective service workers	430	\$8.03	\$5.62
58017	Weighers, measurers, checkers & samplers, recordkeeping	40	\$8.59	\$5.63
92908	Photographic processing machine operators	90	\$7.32	\$5.63
68035	Personal and home care aides	160	\$6.58	\$5.63
92541	Typesetting & composing machine operators	10	\$8.60	\$5.63
92546	Bindery machine operators	60	\$7.91	\$5.64
67005	Janitors & cleaners	4050	\$7.52	\$5.67
92726	Laundry & dry-cleaning operators, except pressing	390	\$6.90	\$5.68
79011	Graders & sorters, agricultural products	30	\$7.13	\$5.68
15011	Property/real estate managers	260	\$12.81	\$5.69
92717	Sewing machine operators, garment	50	\$7.28	\$5.70
65035	Cooks, short order	610	\$6.77	\$5.72
85708	Electronic home entertainment equipment repairers	40	\$13.51	\$5.72
27502	Clergy	20	\$16.77	\$5.74
65021	Bakers, bread & pastry	400	\$7.10	\$5.74
92974	Packaging & filling machine operators	180	\$7.72	\$5.75
68017	Guides	140	\$7.92	\$5.76
53905	Teachers' aides & assistants, clerical	1040	\$6.90	\$5.80
65026	Cooks, restaurant	1500	\$7.43	\$5.82
97105	Truck drivers-light, include delivery/route workers	2440	\$9.50	\$5.82
98799	All other freight, stock, and material movers, hand	470	\$8.36	\$5.83
34038	Designers, except interior	190	\$8.92	\$5.84
89702	Hand compositors & typesetters	60	\$8.01	\$5.84
58099	All other material recording, scheduling & distributing workers	70	\$13.76	\$5.85
65028	Cooks, institution or cafeteria	1230	\$6.98	\$5.85
97111	Bus drivers, school	980	\$8.41	\$5.85
57302	Mail clerks, except machine operators	180	\$8.06	\$5.86
63044	Crossing guards	80	\$8.25	\$5.88
31321	Instructors & coaches, sports & physical training	520	\$11.15	\$5.93
79036	Sprayers/applicators	20	\$8.12	\$5.94
55347	General office clerks	3800	\$8.24	\$5.99
31303	Teachers, preschool	370	\$10.25	\$5.99
32951	Veterinary technicians & technologists	110	\$7.57	\$5.99

Source: Wyoming Department of Employment, Research & Planning. "Table 1: Wyoming Statewide Wages." From Wyoming Wage Survey. II, (1999): 5-16.

Mean Wage - A measure of central tendency. The sum of the values of all observations divided by the number of observations. It is also called the arithmetic average. If some values are far removed from the others (outlying), they can substantially influence the mean.

Entry Level Wage - Mean of the bottom 25 percent of wages reported (first quartile)

Appendix E: Studies, Findings and Data Sources Reviewed by R&P

Paper Number	Year of Study	Authors	Findings	Data Source
1	1999	Benjamin, D. & Stanger, S.	10% Increase MW, 2.5% Decrease Employment	Administrative Databases
2	1983	Brown, C., Gilroy, C. & Kohen, A.	10% Increase MW, 1% Decrease Employment, Slight increase < 2% Unemployment	Current Population Survey
3	1992	Neumark, D. & Wascher, W.	10% Increase MW, 2% Decrease Employment	Current Population Survey
4	1993	Neumark, D. & Wascher, W.	30% Increase MW, 4.5% Decrease Employment(No Subminimum), 3% Decrease Employment(With Subminimum)	Current Population Survey
5	1994	Card, D., Katz, L. & Krueger, A.	Increase MW, No Change Employment	Current Population Survey
6	1992	Card, D.	Increase MW, Increase Average Wage, No Change Employment	Current Population Survey
7	1993	Card, D. & Krueger, A.	Increase MW, Increase FF Prices, No Employment Change	Researcher Designed Survey
8	1995	Neumark, D. & Wascher, W.	Increase MW, Decrease Employment	Researcher Designed Survey
9	1992	Katz, L. & Krueger, A.	Increase MW, Increase Employment, No Change FF Prices	Researcher Designed Survey
10	1999	Dickens, R., Machin, S. & Manning, A.	Increase MW, Compresses Distribution of Earnings, No Impact Employment	Administrative Database
11	1983	Meyer, R. & Wise, D.	With No MW Increase, Employment Would Have Been Higher Among Youth 1973-1978	Current Population Survey
12	1998	Card, D. & Krueger, A.	Increase MW, No Change Employment; Possibly A Positive Impact, Average Hours/Employee Decreased	Administrative Database ES-202