

**Employment
Policies**

I N S T I T U T E

**Santa Fe's Living Wage Ordinance
and the Labor Market**

*by Dr. Aaron S. Yelowitz,
University of Kentucky
September 23, 2005*

The Employment Policies Institute (EPI) is a nonprofit research organization dedicated to studying public policy issues surrounding employment growth. In particular, EPI research focuses on issues that affect entry-level employment. Among other issues, EPI research has quantified the impact of new labor costs on job creation, explored the connection between entry-level employment and welfare reform, and analyzed the demographic distribution of mandated benefits. EPI sponsors nonpartisan research that is conducted by independent economists at major universities around the country.

Aaron Yelowitz is an Associate Professor at the University of Kentucky and a Research Associate at National Bureau of Economic Research. He may be reached at: University of Kentucky, Department of Economics, 335 Business and Economics Building, Lexington, KY 40506-0034. He may also be reached by email at aaron@uky.edu or by telephone at 859-257-7634. His web page is: <http://gatton.uky.edu/faculty/yelowitz/>. The data and STATA programs used in this study are available from the author.

Santa Fe’s Living Wage Ordinance and the Labor Market

Department of Economics, University of Kentucky

Table of Contents

Executive Summary	1
Introduction	3
Data Description	4
Difference-in-Difference Estimation	5
Findings from CPS Microdata.....	5
Time Series Evidence.....	6
Discussion	7
Endnotes.....	8
Table 1	9
Table 2	10
Table 3	11
Table 4	12
Table 5	12

Santa Fe's Living Wage Ordinance and the Labor Market

Executive Summary

In October, voters in Albuquerque, New Mexico will decide on a minimum wage of \$7.50 an hour for all employees in the city. If passed, Albuquerque will become the fourth city in America to institute a wage floor above the federal level¹. The first city to do so was neighboring Santa Fe, New Mexico which implemented an \$8.50 minimum wage in June, 2004.

This study, by Dr. Aaron Yelowitz of the University of Kentucky, utilizes government collected data to examine the labor market effects of Santa Fe's living wage increase. Dr. Yelowitz finds that the living wage in Santa Fe significantly increased unemployment and decreased hours worked for those who were able to keep their job. Even more troubling, this research found that almost the entire negative effect of the living wage was concentrated on the city's least-skilled and least-educated employees. These are the very individuals the living wage is purportedly helping.

While supporters of the living wage in Albuquerque have pointed to Santa Fe as a "success" story, a closer look at these claims finds that they are based on aggregate time series data, which makes no attempt to control for even the most basic economic factors. For example, living wage advocates point to an increase in overall employment in Santa Fe since the ordinance as "evidence" of success. This is a faulty analysis that fails to control for factors such as overall economic growth in the state or a growing population. The importance of controlling for these factors is the very basis of credible economic analysis and one of the first things taught in any rudimentary statistics course.

In this analysis, Dr. Yelowitz utilizes an economic model that controls for both fixed effects (factors such as Santa Fe's traditionally low unemployment rate and more vibrant economy) as well as time varying effects (such as overall employment growth). By constructing this careful model, Dr. Yelowitz is able to isolate the effect of the living wage ordinance from the confounding effects of other factors in the economy.

Utilizing United States Bureau of Labor Statistics Current Population Survey (CPS) microdata, Dr. Yelowitz found that Santa Fe's living wage ordinance is responsible for a 3.2 percentage point increase in the city's unemployment rate. While the aggregate unemployment rate for Santa Fe remains lower than many surrounding areas, this is because other factors serve to counteract a portion of the living wage ordinance's negative effect on the job market. Examining the data further, Dr. Yelowitz found that nearly the entire negative effect in terms of unemployment was felt by Santa Fe's least educated residents. Those with 12 years of education or fewer suffered an extremely large and negative effect, while those with 13 years of education or more felt virtually no statistically or economically significant effect.

These results should not be surprising. Economic research into the minimum wage has long found that the economy's least-skilled and most vulnerable populations suffer the most under a minimum wage increase. As employers react to the higher wage floor they look for more skilled and productive employees or attempt to switch to automation where possible. Simultaneously, more skilled employees are enticed into these

jobs by the higher wage rate (65 percent higher in this case). The end result is that the least skilled—people these ordinances are purportedly attempting to help—end up left out of the labor force.

For those that do keep their jobs, Dr. Yelowitz found that they end up working fewer hours than before. On the whole, the living wage ordinance reduced hours worked by 1.6 hours per week. Similar to the unemployment results, these hours reductions were felt most by the least-educated employees. Those with 12 years or fewer of education saw their hours reduced by 3.5 hours per week.

While aggregate time series data often masks the underlying dynamics of the labor market—specifically the potential effects of policies such as the living wage—if properly controlled, they can serve as important support for microdata results. Dr. Yelowitz constructed an aggregate time series model that used populations in other areas of New Mexico as control groups to account for factors other than the living wage that

may have affected employment. Dr. Yelowitz found that the minimum wage increased the overall unemployment rate in Santa Fe by nearly 0.7 percentage points. This result is both statistically and economically significant. This increase amounts to a roughly 16 percent increase in the unemployment rate and the loss of approximately 540 jobs. This analysis only serves to support Dr. Yelowitz’s microdata results.

Overall, the results of this complete economic analysis show that the living wage in Santa Fe had an indisputable negative effect on the labor market. As a result of the increase in the wage floor, unemployment is significantly increased in the city and individuals who were able to keep their jobs are being forced to work fewer hours. Most troubling, though, is the fact that the least skilled employees are those who are being most hurt by this ordinance. Voters in other areas considering an increase in the minimum wage must consider these unintended consequences that end up hurting those who the law is supposed to help.

¹While over 110 cities and localities have passed “living wage” mandates, these more limited ordinances apply only to city employees, city contractors, and/or businesses receiving economic assistance from the city. Only Santa Fe, San Francisco, and Madison, Wisconsin have passed local minimum wages that apply generally.

Introduction

In February 2003, the Santa Fe City Council approved the most expansive living wage ordinance to date. After sixteen months of legal wrangling, on June 24, 2004, a New Mexico state court judge upheld Santa Fe's "living wage" law, and the ordinance immediately went into effect. Unlike most living wage ordinances, the Santa Fe living wage ordinance (hereafter, "LWO") required all businesses within city limits with at least 25 workers to pay workers \$8.50 an hour, rather than just businesses with city contracts. Hourly pay rates will increase to \$9.50 on January 1, 2006, to \$10.50 on January 1, 2008, and will be indexed to inflation starting on January 1, 2009.

More than a year has passed since the LWO was enacted and it is appropriate to explore the labor market impact. The idea that the LWO could affect the labor market is well grounded in the economic literature. Santa Fe's ordinance raised the wage floor from \$5.15 per hour to \$8.50, a 65 percent increase. Even with a fairly modest employment elasticity (such as the -0.22 elasticity estimate found in Neumark and Wascher's (2000) compelling study), such a large change in the minimum wage is still likely to lead to substantial job loss.

Nonetheless, living wage advocates in Santa Fe paint a rosy picture of the law's impact. The home page of the Santa Fe living wage advocacy group proclaims:

"Two Reports Show Living Wage Working in Santa Fe. Since the Santa Fe Living Wage has come into effect, public assistance is down sharply and employment is up."¹

As evidence, they cite aggregate time-series data on welfare caseloads and employment. For example, their proof on the labor market effect is:

"According to the New Mexico Department of Labor, Montly [sic] News Release, Employment & Unemployment, August 25, 2005, job growth for Santa Fe was 2.0 percent, adding 1,200 jobs. The State had the same job growth rate, which makes it the 13th highest in the country. Most important, for the Santa Fe hospitality industry, which has the largest number of low-wage workers, the growth rate was even higher, 3.2 percent, or 300 new jobs."

This conclusion should be surprising to those familiar with the minimum wage literature, since virtually all advocates for minimum wage increases claim they have zero effect on employment; virtually no serious economist would argue that a 65 percent increase in the wage floor would lead to employment growth. A key problem (true of time-series studies in general) is that other, unaccounted time-varying factors could create the illusion that the living wage is having a zero (or even a positive!) effect, when in reality the ordinance is having a negative effect. For example, a growing statewide economy could mask the true negative effects of the ordinance.²

This study provides a more careful examination of Santa Fe's ordinance. I explore the impact of the Santa Fe LWO on the labor market, drawing on publicly available microdata from the Current Population Survey (hereafter, "CPS"). To examine the impact of the LWO, my research examines more than 21,000 individuals aged 16 to 64 who were in the labor force in New Mexico. A key contribution is that individuals outside the Santa Fe metropolitan area (and those in Santa Fe before the LWO) serve as "control groups." Such control groups provide a much more credible framework for evaluating the LWO than the evidence currently offered by living wage advocates. Having these con-

trol groups allows me to separately disentangle the effects of the LWO from other confounding factors (such as statewide economic growth or the fact that Santa Fe’s labor market is different from other areas of the state). In addition, I show that aggregate time-series data from Santa Fe and three other localities lead to the same conclusions.³

The results from the empirical models confirm the straightforward predictions from recent, credible minimum wage studies: higher wage floors hurt the labor market. I find that the likelihood of being unemployed increases and that usual hours worked decreases. Both results are statistically significant and economically meaningful. Moreover, the CPS reveals that the entire disemployment effect was concentrated amongst individuals with 12 or fewer years of education—precisely the group for whom the 65 percent increase in the wage floor should be the most binding.

Data Description⁴

The CPS is a monthly survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics (hereafter “BLS”). The survey has been conducted for more than fifty years; the current analysis draws on the 30 months of CPS data between January 2003 and June 2005 (which is the latest available). The CPS data is free to download from the internet.⁵

According to the BLS, the CPS is the primary source of information on the labor force characteristics of the U.S. population. The sample is scientifically selected to represent the civilian noninstitutional population. Respondents are interviewed to obtain information about the employment status of each member of the household 15 years of age and older. The sample provides estimates for the nation as a whole and serves as part of model-based estimates for individual states and other geographic areas.

The CPS asks about employment, unemployment, earnings, and hours of work. Some of these labor market questions are asked of the full monthly sample, and others are only asked of one-quarter of respondents. In addition, respondents are asked about their age, sex, race, ethnicity, marital status, veteran status, and educational attainment.

Critical for this study, the CPS also provides geographic identifiers for all states, and for many large metropolitan areas. The CPS allows geographic identification of three New Mexico metropolitan areas throughout the entire 2003 to 2005 time span—Santa Fe, Albuquerque, and Las Cruces. New Mexico residents in other parts of the state, by necessity, are grouped together.^{6,7} During the period analyzed, the CPS surveyed roughly 1,800 individuals in New Mexico each month—and the 41 percent who were adults in the labor force form the sample that is analyzed. The sample ultimately consists of 21,776 observations, including 9,404 individuals with 12 or fewer years of education and 12,372 with 13 or more years of schooling.

Table 1 provides summary statistics for the sample as a whole, and broken out by educational attainment. Over the entire time period, 6 percent of individuals in the labor force were unemployed during a typical month, while those with less education were more than twice as likely to be unemployed as those with more education. Usual hours of work averaged 39.3 hours per week, with small differences by education group. Nearly three percent of the sample is classified as subject to the LWO—meaning that they participated in the labor force in the Santa Fe metropolitan area in June 2004 or later. Individuals in Santa Fe before June 2004 (as well as all individuals in other areas) are classified as unaffected by the ordinance.⁸

Nearly 7 percent of this CPS sample is located in Santa Fe, nearly 11 percent in Las Cruces, 43 percent in Albuquerque, and the remainder is dispersed throughout the rest of the state. Fifty-four percent are married, 51 percent are male, and 43 percent have, at most, a high school diploma. Nearly 40 percent are of Hispanic origin, and the average age in the sample is 39 years.

Difference-in-Difference Estimation

The basic model estimates an equation of the form:

$$y_{ict} = \beta_0 + \beta_1 LWO_{ict} + \beta_2 X_{ict} + \beta_3 D_{it} + \beta_4 D_{ic} + \varepsilon_{ict}$$

where y_{ict} is the labor market outcome (either unemployment or usual hours of work), LWO_{ict} is an indicator variable equal to one if an individual is subject to the ordinance, X_{ict} is a vector of other individual characteristics that affect work behavior, and D_{it} and D_{ic} are indicator variables for time (month and year) and location (Santa Fe, Las Cruces, and the rest of the state).⁹ In some of the specifications, the month and year dummies are replaced with a time trend, but the results are nearly identical. Individual covariates include household size, a full set of dummy variables for age (from 17 to 64, with 16 as the omitted category), and indicators for married, head of household, male, high school dropout, high school graduate, some college, white, Hispanic, and veteran status.

When LWO_{ict} , D_{it} and D_{ic} are included, the estimate on β_1 provides the “difference-in-difference” estimate of the impact of the living wage ordinance. The dummy variables for the metropolitan area account for fixed, time-invariant differences between Santa Fe and other parts of the state. For example, to the extent that Santa Fe’s economy is more prosperous or dependent on tourism (and this remains fixed), then the metropolitan area controls will account for this heterogeneity on the labor market. The dummy variables for year and month account, respectively, for state-wide growth in the economy over time and for

seasonality. By including both sets of dummy variables, the true effect of the living ordinance, β_1 is obtained. The equation above essentially estimates how Santa Fe’s labor market changed after the ordinance, relative to other parts of the state.

Although such a difference-in-difference estimator certainly provides more compelling evidence than time-series data alone, it does have its limitations. In particular, if there were other factors that were changing differently across cities over time, then it will be difficult to separately identify the effect of the living wage from those other factors. I have not been able to pinpoint any obvious explanations that vary in such a way (and affect employment), but the possibility does exist.¹⁰

Findings from CPS Microdata

Tables 2 and 3 present the basic results. Table 2 examines the likelihood of being unemployed in a given month with a probit model, while Table 3 examines hours of work for those who are employed.

I first look at unemployment in Table 2. As the outcome of interest, unemployment, is a binary dependent variable, a probit model is estimated. In addition, the standard errors are corrected for clustering at the city/month/year level. The first and second columns of Table 2 examine the full sample, and include all of the demographic controls mentioned above, as well as a time trend or month and year dummies. Before exploring the living wage results, it is important to note that the other independent variables have the expected impact on unemployment. In particular, being married or white is associated with large reductions in unemployment, while being Hispanic or less educated is associated with large increases in the likelihood of unemployment. The probability derivatives, in italics, show the economic magnitude of the explanatory variables. The fixed effect for Santa Fe (measured relative to Albuquerque) shows that it has a persistently lower unemployment rate (of 1.7

percentage points). Nonetheless, the LWO reversed Santa Fe's advantage—the measured impact of the LWO was to increase the unemployment rate by 3.2 percentage points.¹¹

The next two columns focus on those less educated, while the final two columns focus on the more educated. The results reveal an extremely large effect for the less educated for whom the LWO is likely to be binding, while there is no effect for the more educated (either statistically or in terms of economic magnitudes). The entire negative effect of the living wage ordinance on unemployment is concentrated amongst the less educated. This conclusion does not change with the inclusion of either a time trend or month and year dummies.

I next examine those who kept their jobs in Table 3. This table examines usual hours of work per week, which is very close to 40 hours in the full sample. The sample size is somewhat smaller than in the previous tables, because the unemployed and workers who report “variable hours” are excluded. Although some employers in Santa Fe might consolidate several part-time jobs into one full-time job in order to get under the 25-employee limit of the ordinance, the analysis shows that such an effect is clearly dominated by a reduction in hours for employees who are presumably at larger firms that are not close to the 25-employee limit. The ordinary least squares estimates show that for the sample as a whole, the LWO reduced usual hours of work by 1.6 hours per week. When broken out by educational attainment, hours fell by 3.5 hours for less educated workers, while they fell by a trivial amount for more educated workers (and that measured effect is statistically insignificant).

Time Series Evidence

Although microdata such as the monthly CPS provides the most compelling evidence about the

impact of the LWO, a number of advocates and some economists have instead relied on aggregate time-series data. Despite the limitations of this approach that were previously discussed, it is useful to demonstrate that the findings in this paper are consistent with such an approach.

The analysis in this section relies on publicly-available time-series data from the BLS (<http://data.bls.gov/cgi-bin/srgate>). First, I obtained data on unemployment rates in Santa Fe, as well as Albuquerque, Farmington, and Las Cruces, from January 2002 to July 2005. Altogether, the model has 172 monthly observations across these four localities.¹² The aggregate data was not separated out by educational attainment nor did it have measures of usual hours of work. Thus, I cannot fully explore all of the findings in the previous tables with the data.

Over the period analyzed, Santa Fe enjoyed a lower unemployment rate than other metro areas in New Mexico. For example, in the month before the ordinance was implemented, Santa Fe had an unemployment rate of 4.3 percent in May 2004, compared with a rate of 5.1 percent for Albuquerque, 5.8 percent in Farmington, and 6.5 percent in Las Cruces. The analysis in Table 1 examines the impact of the ordinance in Santa Fe, and uses the other three metropolitan areas as “control groups.” That is, the other three localities help account for other factors (besides the living wage ordinance) that would affect the unemployment rate, including seasonality and economic growth. The results in Table 4, in addition to accounting for the implementation of the living wage ordinance, also account for fixed differences between Santa Fe and other metropolitan areas that would affect the unemployment rate, as well as time-varying factors that would affect the unemployment rate.

The key finding is that the unemployment

rate was significantly higher in Santa Fe after the implementation of the ordinance, compared to what it would have been without such a law. The result is both statistically significant and economically important. Column (2) is interpreted as meaning that the unemployment rate would currently be 0.69 percentage points lower without an ordinance. For example, in May 2005, the unemployment rate in Santa Fe was 4.6 percent—a higher rate than May of the prior year. If the ordinance had not been passed, the rate would have been just 3.9 percent—substantially less than one year prior.

The results can also be expressed in terms of lost jobs. The total labor force in Santa Fe in May 2005 was 78,145. Roughly 539 (0.69 percent) of these individuals were displaced by the ordinance, raising the number of unemployed from 3,051 to 3,590. This is a 17.6 percent increase in the number of unemployed in Santa Fe.

Some readers might be concerned about the small number of metropolitan areas in Table 4, and the fact that the Santa Fe metropolitan area includes individuals who are not subject to the ordinance. Table 5 explores the impact of the LWO on unemployment for the ten cities that are identified by the BLS data. The cities include Santa Fe, Albuquerque, Alamogordo, Carlsbad, Clovis, Farmington, Hobbs, Las Cruces, Rio Rancho, and Roswell, from January 2002 to July 2005. Overall, the model has 430 monthly observations. The conclusions from the city-level analysis are similar in substance, but slightly smaller in magnitude, than the metropolitan-area analysis presented above.

Finally, for both the metropolitan-level and city-level analysis, I reestimated the models, but looked only at the time-series trend within Santa Fe. That is, I no longer use other metro areas or cities as a “control group.” By doing this, I found that the effect of the LWO is very sensitive to the empirical specification and that one could draw virtually any conclusions that one wanted. For example, following the Santa

Fe metro area over the 43 months (and including month dummies and year dummies) would lead to a decrease in the unemployment rate of 0.47 percentage points (with a standard error of 0.11). On the other hand, including a time trend would lead to an increase in the unemployment rate of 0.36 percentage points (with a standard error of 0.22). These divergent results emphasize the need for a control group to account for other statewide factors that are changing over time.

Discussion

Although the living wage ordinance certainly raised wages for less-skilled workers in Santa Fe who kept their jobs, it had some severe consequences for many less-skilled workers who were previously employed. It dramatically increased the unemployment rate for those with 12 or fewer years of education, and it reduced hours of work among this group as well. This hours reduction means that even for those who kept their jobs, total income rose less quickly than their wage rate. Table 1 shows that a typical less-educated worker had usual hours of work per week of 38.2 before the ordinance went into effect; afterwards it would have been 34.6 if he remained employed. For a worker previously earning \$5.50 an hour, weekly earnings would go from \$210.10 to \$294.10, an increase of nearly 40 percent. But for a worker who initially earned \$6.50 per hour, total earnings would have increased by only 18 percent, and would have fallen by 4 percent for someone initially earning \$8.00 per hour.

The findings in this study should provide a cautionary tale for other localities that are considering such an ordinance. In Albuquerque, for example, voters will soon decide whether to implement a citywide wage floor of \$7.50 per hour. In deciding how to cast their vote, these citizens should understand that there is no free lunch with living wages—they cause unemployment.

Endnotes

1. See <http://www.santafelivingwage.org/>, accessed September 22, 2005. In addition, a recent newspaper article cites John Talberth, an economist with the Ecology and Law Institute, as providing numbers that show a decline in unemployment since the living wage was passed, and more than 600 new jobs in the retail and restaurant sectors. To the extent he is relying on aggregate time-series levels for employment and unemployment, his analysis suffers the same problems as mentioned in the main text.
2. Later in the paper, I use aggregate time series data on unemployment rates in Santa Fe, Albuquerque, Las Cruces, and Farmington from January 2002 to July 2005 to examine the LWO. With these three metropolitan areas serving as control groups, I find that the LWO significantly increased unemployment in Santa Fe—my calculations suggest that 539 jobs were lost due to the law.
3. I also draw similar conclusions using Santa Fe and nine other New Mexico cities, rather than metropolitan areas.
4. This section draws heavily upon the Bureau of Labor Statistics description. See <http://www.bls.census.gov/cps/overmain.htm>.
5. The data used in this study is located at <ftp://www.bls.census.gov/pub/cps/basic/>. The monthly CPS questionnaire was modified in January 2003, which motivated beginning the analysis at the point. The June 2005 CPS was the latest one available at the time of this study.
6. Technically, the Santa Fe metropolitan area is more expansive than the city proper. As a result, some individuals in the CPS could incorrectly be classified as subject to the LWO when, in fact, they are not. Although living wage advocates might attempt to use that fact to undermine this study's credibility, the logic is flawed. The likely result of this misclassification is to create measurement error, which should bias the estimated coefficients toward zero. This means that the empirical estimates in Tables 2 and 3 are likely too small, not too large.
7. The empirical results are extremely similar, both in statistical significance and in economic magnitude when the rest of the state is removed, leaving only residents in Santa Fe, Albuquerque, and Las Cruces.
8. In addition to the fact that not all workers in the Santa Fe area work in the city proper, the ordinance only affected businesses with 25 or more workers. As with the misclassification with metropolitan area, this leads to measurement error and likely understates the true impact of the LWO on affected workers.
9. Albuquerque is the omitted category, and the coefficient estimates for other areas are relative to it.
10. In principle, a “triple-difference” estimator could be formed if one had access to data at the firm level. The LWO should have impacted employment at firms with 25 or more employees in Santa Fe, but had little impact on smaller firms. Thus, one could use the variation over time, across cities, and by firm size to further refine the estimate. Unfortunately, I am not aware of any easily obtainable data that would allow me to conduct such an analysis. In principle, my stratification of the sample by educational attainment provides something similar to an additional layer of control—the LWO should have a much larger impact on the less educated, because average wage levels are much lower. This is precisely what I find in Tables 2 and 3.
11. Note that in aggregate data, however, Santa Fe's unemployment rate is still lower because it differs in terms of demographics from other metropolitan areas (for example, in terms of educational attainment), and these demographic differences mask the effect of the LWO as well. This shows the frailties of relying on time-series data.
12. I use the BLS series LAUMT35107403, LAUMT35221403, LAUMT35297403, and LAUMT35421403.

Table 1 Summary Statistics			
	Full Sample	12 or fewer years of education	13 or more years of education
Unemployed during month	0.060 (0.238)	0.089 (0.284)	0.038 (0.192)
Usual hours worked per week	39.305 (12.568)	38.160 (11.779)	40.129 (13.045)
Indicator for living wage ordinance	0.029 (0.167)	0.026 (0.160)	0.031 (0.172)
Santa Fe indicator	0.069 (0.254)	0.060 (0.237)	0.077 (0.266)
Las Cruces indicator	0.108 (0.310)	0.113 (0.316)	0.104 (0.305)
Albuquerque indicator	0.433 (0.495)	0.392 (0.488)	0.463 (0.499)
Rest of state indicator	0.390 (0.488)	0.435 (0.496)	0.356 (0.479)
Married	0.543 (0.498)	0.495 (0.500)	0.579 (0.494)
Head of household	0.450 (0.498)	0.385 (0.487)	0.500 (0.500)
Male	0.519 (0.500)	0.550 (0.497)	0.496 (0.500)
High school dropout	0.144 (0.351)	0.333 (0.471)	0.000 (0.000)
High school graduate	0.288 (0.453)	0.667 (0.471)	0.000 (0.000)
Some college	0.315 (0.465)	0.000 (0.000)	0.554 (0.497)
College graduate	0.253 (0.435)	0.000 (0.000)	0.446 (0.497)
White	0.857 (0.350)	0.821 (0.383)	0.883 (0.321)
Hispanic	0.399 (0.490)	0.541 (0.498)	0.291 (0.454)
Veteran	0.105 (0.307)	0.069 (0.253)	0.133 (0.339)
Age	39.658 (12.682)	37.241 (13.082)	41.496 (12.049)
Household size	3.084 (1.526)	3.378 (1.601)	2.860 (1.427)
CPS Sample Size	21,776	9,404	12,372

Standard deviations in parentheses. Sample is drawn from the monthly Current Population Survey (“CPS”) between January 2003 and June 2005. To be included in the sample, the individual must (a) live in New Mexico, (b) be aged 16 to 64, and (c) be in the labor force. Source of data is the Bureau of Labor Statistics web site (<ftp://www.bls.census.gov/pub/cps/basic/>). Usual hours worked per week is only calculated for those who are working and do not have variable hours.

Table 2 Probit model of probability of unemployment during month						
	Full Sample		12 or fewer years of education		13 or more years of education	
Indicator for living wage ordinance	0.272 (0.135) <i>0.032</i>	0.274 (0.136) <i>0.032</i>	0.484 (0.205) <i>0.091</i>	0.501 (0.196) <i>0.094</i>	0.089 (0.183) <i>0.006</i>	0.095 (0.178) <i>0.007</i>
Santa Fe indicator	-0.214 (0.093) <i>-0.017</i>	-0.215 (0.091) <i>-0.017</i>	-0.420 (0.153) <i>-0.044</i>	-0.427 (0.142) <i>-0.044</i>	-0.050 (0.118) <i>-0.003</i>	-0.055 (0.109) <i>-0.003</i>
Las Cruces indicator	0.017 (0.054) <i>0.002</i>	0.017 (0.052) <i>0.002</i>	0.087 (0.068) <i>0.012</i>	0.091 (0.066) <i>0.013</i>	-0.106 (0.074) <i>-0.006</i>	-0.109 (0.075) <i>-0.006</i>
Rest of state indicator	0.087 (0.036) <i>0.008</i>	0.087 (0.033) <i>0.008</i>	0.101 (0.051) <i>0.014</i>	0.104 (0.045) <i>0.014</i>	0.070 (0.054) <i>0.005</i>	0.063 (0.046) <i>0.004</i>
Married	-0.291 (0.031) <i>-0.028</i>	-0.292 (0.031) <i>-0.028</i>	-0.288 (0.044) <i>-0.039</i>	-0.289 (0.043) <i>-0.039</i>	-0.300 (0.054) <i>-0.021</i>	-0.296 (0.054) <i>-0.020</i>
Head of household	-0.013 (0.032) <i>-0.001</i>	0.002 (0.033) <i>0.000</i>	-0.008 (0.040) <i>-0.001</i>	-0.005 (0.041) <i>-0.001</i>	-0.005 (0.048) <i>0.000</i>	0.036 (0.052) <i>0.002</i>
Male	-0.004 (0.027) <i>0.000</i>	-0.004 (0.027) <i>0.000</i>	0.024 (0.035) <i>0.003</i>	0.025 (0.035) <i>0.003</i>	-0.058 (0.043) <i>-0.004</i>	-0.059 (0.042) <i>-0.004</i>
High school dropout	0.530 (0.055) <i>0.068</i>	0.529 (0.055) <i>0.068</i>	0.213 (0.045) <i>0.031</i>	0.213 (0.045) <i>0.030</i>		
High school graduate	0.302 (0.053) <i>0.032</i>	0.302 (0.053) <i>0.032</i>				
Some college	0.196 (0.050) <i>0.020</i>	0.193 (0.050) <i>0.019</i>			0.234 (0.052) <i>0.015</i>	0.233 (0.052) <i>0.015</i>
White	-0.310 (0.036) <i>-0.035</i>	-0.313 (0.036) <i>-0.035</i>	-0.410 (0.044) <i>-0.068</i>	-0.410 (0.043) <i>-0.067</i>	-0.229 (0.054) <i>-0.018</i>	-0.233 (0.054) <i>-0.018</i>
Hispanic	0.148 (0.029) <i>0.014</i>	0.147 (0.029) <i>0.014</i>	0.251 (0.043) <i>0.034</i>	0.248 (0.043) <i>0.033</i>	0.021 (0.045) <i>0.001</i>	0.026 (0.045) <i>0.002</i>
Veteran	-0.050 (0.063) <i>-0.005</i>	-0.050 (0.063) <i>-0.005</i>	-0.023 (0.098) <i>-0.003</i>	-0.021 (0.099) <i>-0.003</i>	-0.042 (0.083) <i>-0.003</i>	-0.043 (0.083) <i>-0.003</i>
Household size	-0.015 (0.010) <i>-0.001</i>	-0.014 (0.010) <i>-0.001</i>	-0.017 (0.012) <i>-0.002</i>	-0.018 (0.012) <i>-0.002</i>	-0.019 (0.019) <i>-0.001</i>	-0.016 (0.019) <i>-0.001</i>
Time trend included?	Yes	No	Yes	No	Yes	No
Month and Year dummies	No	Yes	No	Yes	No	Yes
CPS Sample size	21,776	21,776	9,404	9,404	12,372	12,372

Standard errors are in parentheses, and are corrected for clustering at the MSA/month/year level of aggregation. Probability derivatives in italics. Sample is drawn from the monthly Current Population Survey ("CPS") between January 2003 and June 2005. To be included in the sample, the individual must (a) live in New Mexico, (b) be aged 16 to 64, and (c) be in the labor force. Source of data is the Bureau of Labor Statistics web site (<ftp://www.bls.census.gov/pub/cps/basic/>). In addition to the variables shown, all models include a constant term and dummy variables for ages 16 to 64. Columns (1), (3), and (5) include a time trend (starting with the value of 1 in January 2003), and columns (2), (4), and (6) include dummy variables for month and year.

Table 3 Ordinary least squares model of usual hours of work per week for workers

	Full Sample		12 or fewer years of education		13 or more years of education	
Indicator for living wage ordinance	-1.662 (0.654)	-1.777 (0.655)	-3.541 (1.038)	-3.603 (1.022)	-0.470 (0.761)	-0.611 (0.733)
Santa Fe indicator	1.725 (0.343)	1.736 (0.319)	1.869 (0.566)	1.899 (0.568)	1.468 (0.527)	1.451 (0.471)
Las Cruces indicator	-0.713 (0.253)	-0.728 (0.229)	-0.484 (0.461)	-0.507 (0.428)	-0.560 (0.391)	-0.550 (0.361)
Rest of state indicator	1.194 (0.199)	1.163 (0.174)	1.102 (0.292)	1.103 (0.269)	1.221 (0.286)	1.182 (0.260)
Married	0.128 (0.199)	0.153 (0.198)	0.839 (0.283)	0.852 (0.289)	-0.543 (0.281)	-0.503 (0.279)
Head of household	0.046 (0.208)	0.004 (0.217)	0.776 (0.285)	0.722 (0.292)	-0.658 (0.229)	-0.736 (0.236)
Male	5.017 (0.174)	5.013 (0.175)	4.601 (0.287)	4.591 (0.286)	5.306 (0.206)	5.312 (0.205)
High school dropout	-2.024 (0.357)	-2.028 (0.354)	-0.854 (0.354)	-0.845 (0.354)		
High school graduate	-1.317 (0.299)	-1.307 (0.300)				
Some college	-1.012 (0.250)	-0.996 (0.251)			-0.457 (0.240)	-0.431 (0.240)
White	0.738 (0.274)	0.724 (0.274)	-0.043 (0.359)	-0.018 (0.355)	1.222 (0.388)	1.185 (0.386)
Hispanic	-0.414 (0.216)	-0.405 (0.215)	0.328 (0.311)	0.292 (0.313)	-0.707 (0.267)	-0.711 (0.266)
Veteran	-3.466 (0.408)	-3.459 (0.409)	-2.204 (0.696)	-2.215 (0.699)	-4.191 (0.405)	-4.182 (0.406)
Household size	0.001 (0.070)	0.002 (0.069)	0.021 (0.079)	0.023 (0.080)	-0.039 (0.101)	-0.037 (0.101)
Constant term	18.031 (1.261)	17.933 (1.324)	16.595 (1.240)	16.899 (1.293)	23.502 (2.788)	23.090 (2.769)
Time trend included?	Yes	No	Yes	No	Yes	No
Month and Year dummies included	No	Yes	No	Yes	No	Yes
CPS Sample size	19,268	19,268	8,056	8,056	11,212	11,212

Standard errors are in parentheses, and are corrected for clustering at the MSA/month/year level of aggregation. Sample is drawn from the monthly Current Population Survey ("CPS") between January 2003 and June 2005. To be included in the sample, the individual must (a) live in New Mexico, (b) be aged 16 to 64, (c) be employed, and (d) not have variable hours of work. Source of data is the Bureau of Labor Statistics web site (<ftp://www.bls.census.gov/pub/cps/basic/>). In addition to the variables shown, all models include dummy variables for ages 16 to 64. Columns (1), (3), and (5) include a time trend (starting with the value of 1 in January 2003), and columns (2), (4), and (6) include dummy variables for month and year.

Table 4 | **The Santa Fe living wage ordinance significantly raised the unemployment rate in aggregate MSA data**

	Unemployment rate	
Living wage ordinance dummy	0.62 (0.22) {2.79}	0.69 (0.18) {3.81}
MSA -level dummy variables	Yes	Yes
Time trend	Yes	No
Month/Year dummies	No	Yes
Number of observations	172	172

Metropolitan areas include Santa Fe, Albuquerque, Las Cruces, and Farmington, from January 2002 to July 2005. Standard error in parenthesis, t-statistic in brackets. Data source are BLS series LAUMT35107403, LAUMT35221403, LAUMT35297403 and LAUMT35421403.

Table 5 | **The Santa Fe living wage ordinance significantly raised the unemployment rate in aggregate city data**

	Unemployment rate	
Living wage ordinance dummy	0.37 (0.19) {1.91}	0.39 (0.14) {2.74}
City-level dummy variables	Yes	Yes
Time trend	Yes	No
Month/Year dummies	No	Yes
Number of observations	430	430

City areas include Santa Fe, Albuquerque, Alamogordo, Carlsbad, Clovis, Farmington, Hobbs, Las Cruces, Rio Rancho, and Roswell, from January 2002 to July 2005. Standard error in parenthesis, t-statistic in brackets. Data source are BLS series LAUCT35005003, LAUCT35007003, LAUCT35010003, LAUCT35015003, LAUCT35020003, LAUCT35025003, LAUCT35030003, LAUCT35035003, LAUCT35036003, and LAUPA35005003..

**Employment
Policies**

I N S T I T U T E

