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**Comments on Aaron Yelowitz,  
"Santa Fe's Living Wage Ordinance  
and the Labor Market"**

**Robert Pollin  
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October 2005

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**Comments on**  
**Aaron Yelowitz, “Santa Fe’s Living Wage Ordinance and the Labor Market”**  
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**Abstract**

In a new study by Yelowitz “Santa Fe’s Wage Ordinance and the Labor Market,” dated September 23, 2005 (published by the Employment Policies Institute) Yelowitz claims to have demonstrated that the Santa Fe living wage ordinance is responsible for significant, negative consequences for Santa Fe’s least educated residents, including a 9.0 percentage point increase in the city’s unemployment rate among such workers. However, he derives these findings through a presentation of evidence that is misleading and incomplete, misusing the available data.

We replicate and extend Yelowitz’s model to look at job growth specifically, and, using the same data as Yelowitz, we find that the Santa Fe ordinance did not produce any decline at all in the availability of jobs. Moreover, our estimates suggest that the living wage ordinance did increase earned income for the average worker affected by the ordinance, even if we accept Yelowitz’s estimates on reduced hours of work. In short, even while relying on Yelowitz’s own model and estimates, we find that, to date, the Santa Fe ordinance has succeeded in achieving its main aims: to improve the quality of jobs for low-wage workers in Santa Fe without reducing their employment opportunities.

**Comments on  
Aaron Yelowitz, “Santa Fe’s Living Wage Ordinance and the Labor Market”**

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Dr. Aaron Yelowitz first became involved in the debate over the Santa Fe living wage ordinance through his participation in the April 2004 trial which challenged the validity of the law. Specifically, Yelowitz was hired by the plaintiffs in the trial to rebut the report by one of us (Pollin), who was serving as the City’s expert witness in the trial. Yelowitz provided both a written rebuttal and was questioned verbally at length during the trial.

Yelowitz’s rebuttal of Pollin’s study had serious errors and misrepresentations, including even in the manner that he reported citations of the professional literature and the handling of basic data. As such, Yelowitz’s testimony in the trial was dismissed by Judge Sanchez. The judge wrote that Yelowitz “fails to undermine the credibility of Dr. Pollin,” while commending Pollin’s own work for the “reliability of his methodology” and “the dependability of [his] data sources.”

In a new study by Yelowitz “Santa Fe’s Wage Ordinance and the Labor Market,” dated September 23, 2005 (published by the Employment Policies Institute) Yelowitz claims to have demonstrated that the Santa Fe living wage ordinance is responsible for significant, negative consequences for Santa Fe’s least educated residents, including a 9.0 percentage point increase in the city’s unemployment rate among such workers. However, he derives these findings through a presentation of evidence that is misleading and incomplete, misusing the available data.

**Basic Evidence on Santa Fe Employment Growth**

The single most useful starting point for assessing the impact of Santa Fe’s \$8.50 per hour living wage law on employment is the basic data on employment growth in Santa Fe since the living wage law was implemented in June 2004. We present the evidence on this in Table 1 (at end of document). As we see, overall employment in Santa Fe between July 2004 – July 2005 was 2.0 percent and employment in the leisure and hospitality industry was 3.2 percent. The 3.2 percent employment growth figure in leisure/hospitality is especially significant, given that the highest concentration of workers who would have received wage increases due to the living wage laws are in this industry, which includes Santa Fe’s hotels and restaurants as the main components of this industrial category. Given the disproportionately large impact of the living wage measure in this industry, one would expect that employment growth would, if anything, have been slowed in this industry if the measure did indeed lead to reduced employment growth. However, instead we see that employment growth in leisure and hospitality to be exceeding overall employment growth in Santa Fe by a substantial amount (for Santa Fe

as a whole, the difference between job growth at 3.2 percent versus the actual 2.0 percent between July 2004 – July 2005 is 738 jobs).

Santa Fe's employment growth statistics, especially again in the leisure/hospitality industry, are also impressive relative to employment trends in the state overall and in other regions of the state. Santa Fe was the only city in the state that operated with a living wage mandate in this period. The rest of New Mexico operated under the federal minimum wage standard of \$5.15 per hour. As we see in Table 1, employment in New Mexico overall grew at 2.0 percent, exactly equal to the employment growth rate in Santa Fe. And while employment growth in leisure/hospitality throughout the state, at 2.3 percent, was faster than overall state employment, this 2.3 percent figure is still well below the 3.2 percent figure for Santa Fe. Here again, there appears to be no evidence that employment growth in Santa Fe has suffered through implementing \$8.50 living wage mandate in June 2004.

Table 1 also provides employment growth data for the three other metropolitan statistical areas (MSAs) in New Mexico. Again, Santa Fe's performance looks quite healthy, both in overall employment and in the leisure/hospitality industries. Employment growth is clearly stronger than Albuquerque. It is slower overall than in Las Cruces, but well above Las Cruces's 1.6 percent employment growth figure for leisure/hospitality. Employment did grow more quickly in Farmington both in total and in the leisure/hospitality industry. But the figures for Santa Fe are still roughly comparable to Farmington, which, in any case, has the smallest base of employment in the state. The overall point that again emerges from these comparisons is that there is no evidence suggesting that Santa Fe has suffered in terms of employment growth since it implemented its \$8.50 living wage mandate relative to the other New Mexico MSA's, which continue to operate at a \$5.15 minimum wage.

Such figures provide an important basic reference for analyzing the impact on employment over the first year of Santa Fe's living wage law. However, these figures do not themselves provide a complete picture. This is because they do not control for factors other than the living wage law that could also be affecting employment growth. For example, it is possible that, even given Santa Fe's healthy employment growth over this period, businesses in the city may have hired even more people if they weren't forced to operate under the \$8.50 minimum wage. This is the basis for the claim of Aaron Yelowitz that the Santa Fe measure has increased unemployment in Santa Fe. We therefore now turn to evaluating Yelowitz's specific claims.

### **Distortions in Citations of Professional Literature**

1. On the first page of the main text of his study, Yelowitz asserts that "virtually no serious economist would argue that a 65 percent increase in the wage floor would lead to employment growth," (p. 3). This is an inaccurate and highly misleading assertion. We cite only the main distortions.

A) The professional debate is not over whether an increase in the minimum wage itself *increases* employment growth. The only real issue under debate is whether increases in the minimum wage within the ranges discussed by policy makers (including those in Santa Fe) will produce only a weak negative effect on employment (i.e. causing little or no employment losses) or whether they will cause large employment losses. After many years of research and debate, the professional consensus view is that increases in the minimum wage in the ranges being discussed by policy makers does not produce significant employment losses.

Thus, Professor Richard Freeman, the senior labor economist at Harvard University and the National Bureau of Economic Research, summarized the well-known debate on this issue by Professors David Card and Alan Krueger on the one side, and Drs. David Neumark and William Wascher on the other side, as follows:

The debate is over whether modest minimum wage increases have “no” employment effect, modest positive effects, or small negative effects. It is *not* about whether or not there are large negative effects (in “What Will a 10%...50%...100% Increase in the Minimum Wage Do?” Industrial and Labor Relations Review, 1995, 48(4): 830-834).

B) Yelowitz reports correctly that the wage floor in Santa Fe rose by 65 percent due to the living wage ordinance—i.e. from \$5.15 to \$8.50 per hour. But he failed to note that, even with this increase in the wage floor, the average increase in costs to businesses relative to their sales due to the living wage ordinance was about 1 percent, and that even for the hotel and restaurant industry, the cost increase-to-sales ratio was about 3 percent. Robert Pollin estimated these ratios based on publicly available data. But his estimates were confirmed virtually to the decimal point by the payroll data provided for the trial by the plaintiffs at the trial.

Thus, it may seem difficult to accept that there could be no employment losses through a 65 percent increase in the wage floor in Santa Fe. But it is far more understandable that businesses are capable of absorbing their cost increases due to the living wage mandate when it is understood that, on average, these cost increases will amount to no more than 1 percent of their total sales; and no more than about 3 percent even for restaurants such as the plaintiffs in the Santa Fe trial. The main means through which businesses can absorb cost increases of this modest magnitude is to raise prices by similar magnitudes (assuming no decline in customer demand). For example, a meal at one of the plaintiff's restaurants will need to rise from, say, \$20 to \$20.60 to fully absorb the cost impact of the Santa Fe ordinance, assuming business demand does not decline through this price increase.

2. Also on the first page of his September 2005 report, Yelowitz cites an “employment elasticity” estimate of Neumark and Wascher of -0.22 due to increases in the minimum wage (Neumark and Wascher, “Minimum Wages and Employment: A Case

Study of the Fast-Food Industry in New Jersey and Pennsylvania: Comment (in Shorter Papers)," *American Economic Review*, 2000, 90(5): 1362-1396). This employment elasticity figure means that if the minimum wage were to rise by 10 percent, then employment would fall by slightly more than two percent. Yelowitz cited this same -0.22 percent elasticity estimate in his 2004 rebuttal to Pollin's study. However, just as with his 2004 paper, Yelowitz again fails in his current study to point out a fundamental fact about this Neumark and Wascher estimate: that it applies to the *fast-food industry only*. Neumark and Wascher never state that the estimate applies to all workers in all industries, but Yelowitz misleadingly cites the figure as if it were meant to apply generally. Under cross-examination at the April 2004 trial, Yelowitz was forced to concede this major misrepresentation. Yet he continues to recycle this misrepresentation in his current report.

### **No Decline in Employment based on Data and Model Used by Yelowitz**

Yelowitz's conclusions are based on an incomplete analysis. Yelowitz's main findings are based on his examination of the unemployment rate only. However, the unemployment rate is only one aspect of the employment situation of a given labor market. Indeed, the unemployment rate can sometimes provide a misleading picture of what is happening to job growth because the unemployment rate may increase at the same time that the number of jobs is constant or increasing.

Because of this, economists often look at other features of a labor market to get a more complete picture of what is happening to jobs or job growth. Two other such features are the employment to population ratio—the number of employed individuals relative to the population, and the labor force participation ratio—the number of individuals who are interested in having a job relative to the population. By simply extending Yelowitz's analysis to encompass these other important characteristics of Santa Fe's labor market, we find that Yelowitz's result of an increase in unemployment among those with high school degrees or less *is due entirely* to a large increase in the percentage of such people entering the labor force in the post-living wage period—i.e. to an increase in the labor force participation rate. It is not due *at all* to a given number of people finding greater difficulties finding jobs.

To illustrate this point, let us consider some simple descriptive statistics based on the CPS data presented in the first two columns of Table 2 (at the end of this document). Again focusing as Yelowitz does on those with high school degrees or less, we see that the percentage of such adults who are employed (i.e., the employment-to-population rate) *increased* from 66.7 percent to 70.0 percent. In other words, the chances of an adult with a high school degree or less getting (or holding onto) a job did not decrease after the enactment of Santa Fe's living wage ordinance. The only way for the unemployment rate to increase, given that employment opportunities did not fall, is for the percentage of adults looking for jobs to rise *not* for the percentage of adults who have jobs to fall. This trend shows up in the sizable increase in the labor force participation rate from 70.3 percent to 76.6 percent.

The following hypothetical exercise drives home this point. Let us assume that the percentage of people participating in the labor force remained constant at 70.3 percent between the pre-living wage and post-living wage periods, rather than rising from 70.3 to 76.6 percent. Let us then also assume that the same number of people with high school degrees or less were holding jobs in the post-living wage period. If both of these assumptions were true, then, as we see in the last column of Table 2, there would be 23,559 people in the labor force and 23,472 employed. That is, the number employed would be just 87 people shy of the total labor force. This is a rough estimate, of course, but the basic point is clear: there would be effectively *full employment* among those with high school degrees or less in the Santa Fe MSA if the labor force participation rate did not increase from the pre- to the post-living wage period, given the employment level in the post-living wage period.

The result from this simple exercise is purely illustrative. Among other things, it does not take into account all of the other factors that could be influencing employment in Santa Fe. However, we reach basically the same conclusion when we conduct a formal replication of Yelowitz's own model that includes controls for other factors potentially influencing employment in the Santa Fe MSA. In that formal replication of Yelowitz's model, which we present in Table 3, we find the following main results:

1. As with Yelowitz, we find that the “probability of *unemployment*” within the Santa Fe MSA for labor force participants with high school degrees or less rose by 9 percent from June 2004 – June 2005 relative to a pre-living wage base period of January 2003 – May 2004 (column 1).

2. However, for all adults with high school degrees or less, using Yelowitz's own model, we also found that the “probability of *employment*” did not change at all—i.e. that the living wage ordinance is not associated with *any decline at all* in the availability of jobs among those with high school degrees or less (column 2).

3. Still using Yelowitz's own model, we finally find that the probability of being in the labor force—i.e., employed or looking for a job, rose by 5.1 percent in the post-living wage period (column 3).

Thus, again, according to the CPS dataset used by Yelowitz, and using his own model, we find that it is the rise in the *number of people looking for jobs*—not the decline in *employment opportunities*—that has caused the rise in the unemployment rate.

This result is very straightforward to interpret in terms of mainstream economic theory. It is that the rise in wages associated with the living wage ordinance attracted more people into the labor market seeking better-paying jobs. There has been no decline in *the number of jobs available* in the post-living wage period in the Santa Fe MSA, even relative to the population level in the post-living wage period. But there has been an increase in the number of people *seeking jobs* in the MSA. This is how it is possible for

there to be an increase both in the *growth of employment* (total number of jobs) and in the *unemployment rate* (total number of people not getting jobs/total number of people seeking jobs).

### **Decreased Hours and Increased Earned Income**

Yelowitz also presents evidence that for those workers who have jobs after the ordinance is passed their weekly hours decreased. Specifically, he finds that workers with a high school diploma or less worked 3.5 fewer hours per week after the living wage ordinance was enacted. Let us assume for now that this figure is accurate. Yelowitz presents this result as an unambiguous hardship for workers. In fact, assuming the figure is accurate, what would have most likely happened for most workers is that they are earning significantly more money even while working somewhat fewer hours.

Based on findings presented in Pollin's 2004 expert testimony, we provide a rough estimate of the likely impact on workers' earnings in Table 4. In his expert testimony, Pollin estimated that among workers earning less than \$8.50 in Santa Fe prior to passage of the living wage ordinance, their average hourly wage was \$6.91. This means that establishing the \$8.50 minimum wage in Santa Fe would bring an average wage increase to these workers of \$1.59—from \$6.91 to \$8.50.

These workers, on average, also worked 33 hours per week and 50 weeks per year in Pollin's initial estimate. Assuming that their hours did not change after the living wage law was implemented, they would have earned an additional \$2,647 per year due to the \$8.50 living wage minimum, from \$11,505 to \$14,152 over the year. But assuming that their hours did change by the 3.5 hours that Yelowitz estimates, that still means that their annual earnings will have risen by \$1,160 due to the \$8.50 living wage, to \$12,665. This is even while the average low-wage employee worked 3.5 fewer hours per week. That is, their wage earnings over the year will have risen by 10 percent due to the living wage ordinance even while working fewer hours.

Living wage ordinances are not designed to accelerate the growth in the number of jobs. Rather, they are designed to improve the quality of jobs by raising wages, while, at the same time, avoiding losses in the availability of jobs. As we have seen, using the same data and model as Yelowitz himself, we show that the Santa Fe ordinance did not produce any decline at all in the availability of jobs. Moreover, our estimates suggest that the living wage ordinance did increase earned income for the average worker affected by the ordinance, even if we accept Yelowitz's estimates on reduced hours of work. In short, even while relying on Yelowitz's own model and estimates, we find that, to date, the Santa Fe ordinance has succeeded in achieving its main aims: to improve the quality of jobs for low-wage workers in Santa Fe without reducing their employment opportunities.



**Table 1. Employment Growth in New Mexico,  
July 2004 – July 2005**

	<b>Total Nonfarm Employment</b>	<b>Leisure and Hospitality Industry</b>
<b>Santa Fe MSA</b>	<b>2.0%</b>	<b>3.2%</b>
Statewide	2.0%	2.3%
Albuquerque MSA	1.7%	0.8%
Las Cruces MSA	3.0%	1.6%
Farmington MSA	2.6%	3.9%

Source: New Mexico Department of Labor, Labor Market Report (August 31, 2005)

**Table 2. Employment Data on Santa Fe MSA,  
 Pre- and Post Living Wage Ordinance**

Figures are for those with High School Degree or Less

	<b>Pre-Living Wage Period, January 2003 – May 2004</b> <i>actual data in CPS</i>	<b>Post Living Wage Period, June 2004 – June 2005</b> <i>actual data in CPS</i>	<b>Post Living Wage Period, <i>assuming constant labor force participation rate</i></b>
Adult Population	32,199	33,512	33,512
Employed	21,476	23,472	23,472
Employment to Population Rate (number of adults employed/adult population)	66.7%	70.0%	70.0%
Labor Force Participation Rate (number of adults in the labor force/adult population)	70.3%	76.6%	70.3%
Number of people in labor force (= adult population x labor force participation rate)	22,631	25,674	23,559
Unemployed	1,155	2,202	87
Unemployment Rate (= unemployed/ number of people in labor force)	5.1%	8.6%	0.4%

Source: U.S. Department of Labor, Current Population Survey, Santa Fe MSA  
 Note: These estimates incorporate the sampling weight provided by the CPS.

**Table 3. Replication and Extension of Yelowitz Probit Models of Probability of Unemployment, Employment and Labor Force Participation**

	Probit model of probability of:		
	Unemployment during month (among labor force participants)	Employment during month (among adults)	Labor force participation during month (among adults)
Indicator for living wage ordinance	0.480 (0.205) <i>0.090</i>	-0.004 (0.098) <i>-0.002</i>	0.144 (0.088) <i>0.051</i>
Santa Fe indicator	-0.420 (0.153) <i>-0.044</i>	0.208 (0.078) <i>0.079</i>	0.119 (0.068) <i>0.043</i>
Las Cruces indicator	0.088 (0.068) <i>0.013</i>	-0.082 (0.042) <i>-0.032</i>	-0.064 (0.043) <i>-0.024</i>
Rest of state indicator	0.103 (0.051) <i>0.014</i>	-0.138 (0.028) <i>-0.053</i>	-0.127 (0.026) <i>-0.047</i>
Married	-0.288 (0.044) <i>-0.040</i>	0.077 (0.024) <i>0.030</i>	0.004 (0.023) <i>0.001</i>
Head of household	-0.018 (0.038) <i>-0.002</i>	0.089 (0.023) <i>0.034</i>	0.099 (0.022) <i>0.036</i>
Male	0.020 (0.035) <i>0.003</i>	0.392 (0.024) <i>0.151</i>	0.461 (0.024) <i>0.168</i>
High school dropout	0.214 (0.045) <i>0.031</i>	-0.386 (0.025) <i>-0.150</i>	-0.395 (0.028) <i>-0.146</i>
White	-0.406 (0.044) <i>-0.067</i>	0.234 (0.031) <i>0.092</i>	0.155 (0.034) <i>0.058</i>
Hispanic	0.252 (0.043) <i>0.034</i>	-0.116 (0.026) <i>-0.045</i>	-0.052 (0.026) <i>-0.019</i>
Veteran	0.051 (0.100) <i>0.007</i>	-0.233 (0.048) <i>-0.092</i>	-0.266 (0.046) <i>-0.101</i>
Household size	-0.017 (0.012) <i>-0.002</i>	-0.009 (0.010) <i>-0.003</i>	-0.020 (0.010) <i>-0.007</i>
Time trend included?	Yes	Yes	Yes
CPS Sample size	9,294	14,529	14,529

Source: Current Population Survey January 2003 to June 2005.

Notes: Standard errors are in parentheses, and are corrected for clustering at the MSA x Month x Year level of aggregation. Probability derivatives are in italics. To be included in the sample for column 1, the individual must a) live in New Mexico, b) be aged 16 to 64, c) have a high school degree or less, and d) be in the labor force. To be included in the samples for column 2 and 3, the individual must a) live in New Mexico, b) be aged 16 to 64, and c) have a high school degree or less. In addition to the variables shown, all models include a constant term and dummy variables for ages 16 to 64. We also produced estimates using Yelowitz's alternative model which includes dummy variables for each month and each year, the results are basically unchanged.

**Table 4. Change in annual earnings for the average affected worker,  
 assuming Yelowitz estimate of reduction in hours**

	<b>Estimates assuming no change in work hours/week</b>	<b>Estimates based on Yelowitz estimate of reduced hours/week</b>
<b>Average wage before living wage ordinance</b>	\$6.91	\$6.91
<b>Mandated Raise due to living wage ordinance</b>	\$1.59	\$1.59
<b>Average Hours/Week</b>	33.3	29.8 (with 3.5 hours reduction)
<b>Average Weeks/ Year</b>	50	50
<b>Average Yearly Earnings Prior to Living Wage ordinance</b>	\$11,505 (with 33.3 hours/week of work)	\$11,505 (with 33.3 hours/week of work)
<b>Average Yearly Earnings Increase due to living wage</b>	\$14,152 (= \$2,647 earnings increase)	\$12,665 (= \$1,160 earnings increase)
<b>Average Percentage Earnings increase due to living wage</b>	23.0%	10.0%

Source: Expert Report of Dr. Robert Pollin (2004)

Note: Revised estimate based on the expected reduction in hours estimated by Yelowitz (2005)