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Review of selected pre-enactment living wage studies : prepared for Hillsborough County Department of Health and Social Services by Center for Economic Development Research, College of Business Administration, University of South Florida

University of South Florida. Center for Economic Development Research

Hillsborough County. Department of Health and Social Services

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# **Review of Selected Pre-Enactment Living Wage Studies**

Prepared for  
Hillsborough County Department of Health and Social Services

by  
CENTER FOR ECONOMIC DEVELOPMENT RESEARCH  
College of Business Administration



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## *Preface*

In order to study the impacts of a proposed “living wage” ordinance, the Hillsborough County Department of Health and Social Services initially commissioned the Center for Economic Development Research (CEDR) to perform four tasks. After completion of the first task, a fourth task was added. The four tasks are: (1) quantitatively summarize findings from available post-enactment studies of living wage ordinances and policies, (2) review available pre-enactment studies of living wage ordinances and policies for methodologies that might usefully supplement REMI Policy Insight® economic modeling software, (3) estimate, by industry code, the number of Hillsborough County’s contracted workers that would be affected by a proposed living wage ordinance, and (4) use the REMI Policy Insight® economic model to estimate the economic impacts of the proposed living wage ordinance in terms of jobs, wage and salary disbursements, and output (sales) on the Hillsborough County economy.

The first task was completed on December 12, 2003 when CEDR delivered its report to the Hillsborough County Department of Health and Social Services. The report, “Summary of Selected Post-Enactment Living Wage Studies,” December 2003 is available for download from CEDR’s Internet site at <http://cedr.coba.usf.edu> .

This report is in fulfillment of the second task.

The Center for Economic Development Research initiates and conducts innovative research on economic development. The Center’s education programs are designed to cultivate excellence in regional development. Our information system serves to enhance development efforts at the University of South Florida, its College of Business, and throughout the Tampa Bay region.

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## Executive Summary

We reviewed six pre-enactment studies of living wage (or minimum wage) ordinances and policies for methodologies that might usefully supplement or complement the Regional Economic Models, Inc. (REMI) Policy Insight® economic model. In a forthcoming analysis, we will use the REMI model to estimate the impacts of a proposed living wage ordinance in terms of jobs, wage and salary disbursements, and output on the Hillsborough County economy.

We believe the studies are representative of pre-enactment methodologies for economic analysis of “living wage” ordinances. We point out that the studies selected for review are not the result of an exhaustive search of the economic literature on “living wage” ordinances.

In the body of this report, we present a summary of our reviews of the pre-enactment studies. For each study, we identify the question(s) addressed by the authors. Then, we list the assumption(s) and data source(s) employed by the authors to answer the question(s). Finally, we briefly describe the methodology used in answering the question(s).

Potentially, a “living wage” ordinance may be applied to employees of Hillsborough County’s contractors. Because only a portion of a contractor’s total output may be attributed to the County contract, we envision that the ordinance may only apply to the workers who actually perform work in support of the contractor’s County business. Thus, we need a methodology to estimate the number of affected workers and the average wage increase these workers would enjoy under a “living wage” proposal. The estimate of affected employees is a necessary input to the REMI model and, therefore the methodology complements the model.

Among the studies we reviewed are the Schutz study and the Nissen study. To generate the estimates of contract workers affected by a proposed “living wage” ordinance, CEDR plans to use a modified Schutz-Nissen approach. We describe our modified Schutz-Nissen approach in depth within the body of this report.

## Introduction

We reviewed six pre-enactment studies of “living wage” (or minimum wage) ordinances and policies for methodologies that might usefully supplement or complement the Regional Economic Models, Inc. (REMI) Policy Insight® economic model. In a forthcoming analysis, we will use the REMI model to estimate the impacts of a proposed living wage ordinance in terms of jobs, wage and salary disbursements, and output on the Hillsborough County economy.

The studies we reviewed are:

1. “A Living Wage in Orange County: Arguments and Research” by Eric A. Schutz, Susan Orr and Sherry Ambrose of Orange County Living Wage Coalition,
2. “The Impact of a Living Wage Ordinance on Miami-Dade County” by Bruce Nissen of FIU Center for Labor Research and Studies,
3. “Intended vs. Unintended Consequences: Evaluating the New Orleans Living Wage Proposal” by Robert Pollin, Mark Brenner, and Stephanie Luce of Political Economic Research Institute,
4. “Living Wages and the San Francisco Economy: The Benefits and the Costs” by Michael Reich, Peter Hall, and Fiona Hsu of the Center on Pay and Inequality Institute of Industrial Relations University of California,
5. “Living Wages at the Port of Oakland” by Carol Zabin, Michael Reich, and Peter Hall of the Center for Labor Research and Education Center on Pay and Inequality Institute of Industrial Relations University of California, and
6. “The Effects of the Proposed California Minimum Wage Increase” by David Macpherson of Employment Policies Institute.

We selected the first five studies, shown above, from a list of ten studies received from the Hillsborough County Department of Health and Social Services, based on their clarity of purpose and brevity. We nominally describe these five studies as supportive of a “living wage” ordinance. CEDR reviewed one additional study (#6 – the Macpherson study) of a minimum wage proposal in order to enrich our scope of potentially useful methods.

We believe the studies are representative of pre-enactment methodologies for economic analysis of “living wage” ordinances. We point out that the studies selected for review are not the result of an exhaustive search of the economic literature on “living wage” ordinances.

We present a summary of our reviews in the next section of this report. (We also provide a more detailed review of each study in Appendix A.) Following the reviews we explain a methodology gleaned from the reviews, that we plan to use to estimate the number of Hillsborough County’s contractors’ employees who would be affected by a “living wage” ordinance. The estimate of affected employees is a necessary input to the Regional Economic Models, Inc. (REMI) Policy Insight® economic model and, thus, the methodology complements the model.

## The Reviews

We summarily present the results of our reviews of the pre-enactment studies included in the following manner. For each study, we identify the question(s), which the authors address. A question that is enclosed by quotation marks is posed as stated by the study’s author, otherwise CEDR implied the question based on the context of the study. Then, we list the assumption(s) and data source(s) employed by the authors to answer the question(s). Finally, we briefly describe the methodology used in answering the question(s). A number precedes each question and one or more numbers, which correspond to the method used, precedes each methodology. Matching a question number with a methodology number indicates, at a glance, which method addresses a particular question.

1. *A Living Wage in Orange County: Arguments and Research* by Eric A. Schutz, Susan Orr and Sherry Ambrose of the Orange County Living Wage Coalition, undated.

Questions:     1. “Why does Orange County need a Living Wage Ordinance?”  
                  2. “Is a Poverty Level Income Sufficient?”  
                  3. “Who would be covered by our proposed Ordinance?”  
                  4. “What are the Benefits of a Living Wage Ordinance?”  
                  5. What are the costs of a living wage ordinance?

Assumptions: - Benefits to workers: wage increase, health care, spending power, access to loans and credit, and dignity/self worth.  
                  - Benefits to employers: higher labor productivity, reduced labor turnover.  
                  - Benefits to citizens and taxpayers: reductions in government income supplements and other subsidies.  
                  - Cost to employers: raising wage, raising health care insurance, payroll taxes.  
                  - Ripple effect.

Data Sources: - Orange County’s Personnel Office.  
                  - County Procurement Office.  
                  - Dun & Bradstreet.  
                  - U.S. Census Bureau.  
                  - The Economic Policy Institute.

Method:

1 and 2. Used U.S. government's estimation for "official poverty threshold" for a family of four.

3 and 5. To estimate the cost of County contractors' paying their employees a Living Wage who work on County contracts, County Procurement Office data was used which was then sent to Dun & Bradstreet, Inc. Dun & Bradstreet, Inc. gave information on each contractors' total employment and sales value including its SIC code.

3 and 4. To determine the number of workers working for the wages less than the Living Wage estimation was done using U.S. Census data.

5. To determine the additional costs, payroll tax, workers compensation insurance and social security contributions were added.

4 and 5. Using the Pollin and Luce assumptions and estimations from their book "The Living Wage", ripple effect range level is assumed.

4 and 5. The dollar value per hour for providing the health care insurance was calculated based on Orange County Personnel Office information.

2. *The Impact of a Living Wage Ordinance on Miami-Dade County* by Bruce Nissen of FIU Center for Labor Research and Studies, October 1998.

- Questions:
1. What is the living wage?
  2. Which of the county contracts would be covered by the proposed ordinance?
  3. How many employees would benefit by the ordinance?
  4. What would be increased labor costs?
  5. What would be the cost for the city?
  6. What would be the cost to the County?
  7. What would be benefits of a living wage ordinance?

- Assumptions:
- Costs to employers: direct wage increase, payroll taxes, compliance costs, health care costs.
  - Costs to the County: increased direct labor costs, increased payroll taxes for full time and part time employees.
  - Ripple effects (but not estimated).
  - Cost to the city: monitoring costs.
  - Benefits to the affected workers.
  - Benefits for firms contracting with the County.
  - Benefits to the citizens and taxpayers.

- Data Sources:
- County Contract List.
  - Dun & Bradstreet's "Disclosure" database.
  - U.S. Census Bureau.
  - Current Population Survey.
  - National Association of Temporary and Staffing Services.

- Method:
1. Used 1997 U.S. government estimation for poverty level for a family of four.
  2. Used copy of all county contracts to estimate the number of contracts covered by the ordinance.
  2. To get the final estimates for the number of contracts covered and to make corrections Dun & Bradstreet data was used.
  - 3 and 4. Federal Census data was used to approximate employment numbers for each contract covered by the ordinance
  4. Payroll taxes set at an average of 11.75%
  4. Estimation for compliance costs was done by assuming that it would require two full work days per year for a employee with an annual salary

of \$40,000 and 15% added in labor costs overhead, times the number of firms covered by the ordinance.

4. Current Population Survey data was used to estimate the health care coverage.

4. Cost to contractor equals the sum of wage increase, payroll tax increase, compliance cost, health insurance costs.

5. Estimates developed by assuming that the city will require 5 analysts at \$40,000/year plus 15% in overhead costs.

6. Assumption necessary to provide increased costs for paying living wages and giving health insurance to part time employees were that employee works 20 hours per week, 80% of employees were not given the health insurance, and employee works 52 weeks in a year. County cost of part time workers = sum of increased direct labor costs, increased payroll taxes, health insurance costs.

7. Benefits to the workers and the workers' families were estimated by adding the wage lift and the loss of subsidies.

7. Savings to taxpayers equals the sum of higher income taxes, lower EITC payments, lower food stamp payments, lower health care costs.

7. Estimates developed by assuming that the productivity will increase when wages increase and health insurance costs increase.

3. *Intended vs. Unintended Consequences: Evaluating the New Orleans Living Wage Proposal* by Robert Pollin, Mark Brenner, and Stephanie Luce of Political Economic Research Institute, January 2001.

- Questions:
1. Why is living wage ordinance needed?
  2. Who are covered workers and firms?
  3. What are the costs of the ordinance?
  4. What are the benefits of the ordinance?

- Assumptions:
- Increased labor costs.
  - Increased wages and payroll taxes.
  - Ripple effects.
  - Multiplier effects.
  - Increased productivity to the firms.
  - Decrease in government subsidies.

- Data Sources:
- Yellow Pages USA Deluxe edition.
  - Telephone screening.
  - New Orleans Chamber of Commerce business directory.
  - PERI survey.
  - Bureau of Labor Statistic's Current Population Survey Outgoing - Rotation Group files (CPS-ORG).
  - U.S. Census Bureau.
  - Public Use Microdata Series.

- Method:
1. Using federal government poverty guideline to estimate the poverty level, at the minimum wage rate of \$5.15/hour, workers earn less than national poverty threshold for a family of two ("living wage" would be \$6.15/hour).

1. PERI survey and CPS ORG data were used once again to estimate the costs of the wage increase, average hourly wage in each wage category, and average hours worked per week for affected wage categories.

2. Estimation done using Yellow Pages USA and business directory provided by New Orleans Chamber of Commerce, phone survey, CPS-ORG, and mailing questionnaire.

2. Weighted in order to adjust the results for probability of selection and response rate. The formula for weight is  $(1/PS * PN)*RR$ , where PS is probability of being selected into the first sample, PN is probability of being named a good number out of the pre-screening and phone calling, and RR is number of firms for which surveys were completed.

2. To estimate the number of workers affected, PERI survey and CPS-ORG data was used for southern cities.

3. Estimations for cost were based on the PERI survey and CPS-ORG.

3 and 4. Ripple effects were estimated by dividing the affected workers into the wage categories using the CPS-ORG file under the assumption that workers in successive wage categories receive a declining percentage raise.

4. Estimation for multiplier effects was done using Census Summary Tape File 3A, Public Use Microdata Series data.

4. *Living Wages and the San Francisco Economy: The Benefits and the Costs* by Michael Reich, Peter Hall, and Fiona Hsu of Center on Pay and Inequality Institute of Industrial Relations University of California, June 1999.

- Questions:
1. "How high is the living wage and what does the ordinance cover?"
  2. "Does San Francisco need a Living Wage Ordinance?"
  3. "How many contractors and workers are covered by the ordinance?"
  4. "How many workers would benefit and in what amount?"
  5. "What is the demographic composition of the benefiting workers?"
  6. "Would there be indirect pay increases because of "wage push"?"
  7. "How much will employers' costs increase?"
  8. "How much of the cost increase would be passed through to the city's budget?"
  9. "Would the city economy benefit?"
  10. What is cost to the County?

- Assumptions:
- Raising benefits for service contract workers.
  - Raising costs to contractors.
  - Health care increases.
  - Public expenditures decrease.
  - Productivity gains.
  - Ripple effects (imperfect).
  - Multiplier effect.

- Data Sources:
- List of Vendors (Controller's Office of San Francisco).
  - American Business Directory.
  - Independent Health and Social Services (IHSS).
  - Mayor's Blue Ribbon Commission on Universal Health Care Report.
  - Current Population Survey.
  - Bureau of Economic Analysis.
  - Bureau of Labor Statistics.
  - ABD database from Hass Business School.
  - Data from Service Employees International Union.

Method: 2, 3, 4, 6 and 7. Estimated number of workers covered by the ordinance by taking the number of hours per average worker and the sector's ratio of labor costs to total revenue.

3 and 4. Used wage distribution in each sector to estimate the number of workers and the pay level of those who earn less than the "living wage."

5. Used Current Population Survey data to estimate the percent of workers earning less than the "living wage," and residing in households with less than \$25,000 in annual earnings, examining also for race and gender effects.

6 and 7. Used Card and Krueger (1995) findings to estimate that an increase of up to \$2/hour might occur for workers currently paid \$11/hour. Assumed that workers earning \$9 to \$11 per hour would receive \$11.50 per hour after the living wage is implemented.

7. To estimate the additional labor costs to firms in each sector, Bureau of Labor Statistics and census data were used. Estimated labor cost as the sum of current contract value, percent of revenue accounted by labor costs and percent increase in labor costs required to achieve compliance.

9. Estimation for multiplier effect done using San Francisco Controller's Office Vendor List, IHSS data, CPS March Supplement data, and Bureau of Economic Analysis data.

10. To estimate County's increase in cost for home health care workers two assumptions were made. First, the State's 33% marching share per hour worked applies only to the minimum wage, but secondly, the minimum wage limit would be relaxed considerably if a bill (AB 16) before the State legislature is enacted and funded.

5. *Living Wages at the Port of Oakland* by Carol Zabin, Michael Reich, and Peter Hall of Center for Labor Research and Education Center on Pay and Inequality Institute of Industrial Relations University of California, December 1999.

- Questions:
1. “What kinds of jobs does the Port create and who holds them?”
  2. “What would be the benefits of a living wage policy at the Port?”
  3. “What would be the costs of a living wage policy at the Port?”
  4. “What are other benefits of the ordinance?”
  5. “Who would bear the costs and would business growth in Oakland be hurt?”

- Assumptions:
- Benefits to the workers: increase in average pay and health benefits.
  - Benefits to employers: reduced turnover costs, increased productivity.
  - Increase in “wage push”.
  - Increase costs to leaseholders.
  - Increase in benefits to governmental entities (higher income tax, smaller earned income tax credit, etc.).

- Data Sources:
- In-person survey.
  - Telephone survey.
  - Governmental Affairs Division of the Port of Oakland data.
  - American Business Directory.
  - Occupational Employment Series for the Oakland primary MSA average wage data.
  - Current Population Survey.
  - National Restaurant Association Survey.
  - Alameda County Health Department data.
  - Medically Indigent Care Reporting System data.
  - Pacific Maritime Association data.

- Method:
1. Estimation for the number of low-wage workers affected by the living wage ordinance done using University of California Employer Survey.
  1. Estimations for demographic composition of workers were produced using Employer Survey.
  2. To estimate turnover savings for employers, Employer Survey was used. The overall turnover costs consist of the replacement cost per replaced worker multiplied by the number of replaced workers. Productivity increases were not quantified.
  - 2 and 3. In order to estimate the effects of the wage push Card and Krueger research was used in conjunction with Employer Survey data.
  - 2 and 3. Estimation for benefits to governmental entities calculated using data provided by the Alameda County Health Department and Medically Indigent Care reporting system.

3. Estimated the value of tips for certain categories of workers by conducting interviews with workers.
  
5. To estimate cost by revenue division, labor shares of business revenue derived from the American Restaurant Association Survey and US Census data was used.

6. *The Effects of the Proposed California Minimum Wage Increase* by David Macpherson of the Employment Policies Institute, June 2002.

- Questions:
1. "Who will be Affected by the Minimum Wage Increase?"
  2. "What will be the Impact on the Distribution of Family Income?"
  3. "How Many Workers will be Laid Off?"
  4. "What will be the Cost to Employers and the Income Loss to Laid Off Workers?"

Assumptions: - Labor costs increase.  
- Labor force demand decreases.

Data Source: - Current Population Survey Outgoing Rotation Group files (CPS-ORG).

Method: 1 and 3. Estimation done using computed minimum wage increase for each affected worker averaged across the sample. To calculate the employment loss the following formula was used:  $\text{employment loss} = \text{fractional wage gain} * \text{affected worker employment} * \text{labor demand elasticity}$ .

1 and 3. Neumark and Wascher (2000) estimates were used in determining labor demand elasticity.

2. Family income as a categorical variable is reported in the CPS-ORG. In order to assign a dollar value to each category, mean values of family income for persons in each income range were calculated from a sample of California residents.

3 and 4. Estimation for top-coded workers was done by assuming that the upper tail of weekly earnings distribution follows a Pareto distribution.

3 and 4. Estimation for weekly hour for workers is done using regression.

4. Estimated by multiplying the annual increase in wages due to the minimum wage increase times the number of affected workers and multiplying it by the number of workers who are projected to lose their jobs times their average wage before the increase.

## Estimating Affected Contractors' Employees

Potentially, a “living wage” ordinance may be applied to employees of Hillsborough County’s contractors. Because only a portion of a contractor’s total output may be attributed to the County contract, we envision that the ordinance may only apply to the workers who actually perform work in support of the contractor’s County business. Thus, we need a methodology to estimate the number of affected workers and the average wage increase these workers would enjoy under a “living wage” proposal. The estimate of affected employees is a necessary input to the Regional Economic Models, Inc. (REMI) Policy Insight® economic model and, thus, the methodology complements the model.

We plan to use a modified Schutz – Nissen approach to make our estimate. Bruce Nissen (#2 on our list of studies reviewed) obtains county contracts and uses contract titles as a guide to the type of contract, because he only includes service contracts. He assigned each service contract an industry code (SIC) and yearly cost. He uses Dun & Bradstreet’s “Disclosure” data files to verify a contracting firm’s SIC. He converts yearly costs into employment estimates based on federal census data on the number of employees in Miami-Dade County per \$100,000 of sales, i.e. the county’s contract cost equals the firm’s sales for a particular contract. Then, he again uses federal census data to estimate the percentage of workers who are paid less than a specified “living wage” level.

Professor Eric Schutz (#1 on our list of studies reviewed) uses a procedure very similar to the Nissen methodology. He obtains county contracting data from Orange County and sends the data to Dun & Bradstreet. Dun & Bradstreet return to Professor Schutz information about each contractor’s total employment, sales and industry (SIC) code. He then estimates the number of contractors’ employees currently working at less than a specified “living wage” using federal census data.

To generate the estimates of workers affected by a proposed “living wage” ordinance, CEDR’s modified Schutz-Nissen approach is as follows. Using contract data provided by Hillsborough County and the most recently available version of the Florida Agency for Workforce Innovation’s Enhanced Quarterly Unemployment Insurance (EQUI) database, we determine industry (NAICS) codes for each contractor. We then bridge the industry (NAICS) codes to the older industry (SIC) codes to accommodate the REMI model. Next, we compare REMI tables of industry annual output per job to the dollar value of the contracts. By dividing the annualized value of a firm’s Hillsborough County contracts (the contracts’ “output”) by the industry’s output per job, we estimate the number of employees who work on county contracts during a year.

Having estimated the total number of workers working on County contracts, we then seek to estimate the number of these employees who earn less than a proposed “living wage,” and the average wage of these workers. To do so, we will use the Census Bureau’s 5-Percent Public Use Microdata Sample (PUMS) database. PUMS data files contain records for a sample of households with information on the characteristics of

each unit and each person in it, including wage and salary income, weeks and hours per week worked, and industry of employment for year 1999. The Hillsborough County PUMS data contains information on 9,612 individuals, who resided in a sampled household.

We will adjust the wages and salaries earned in 1999 to 2003 dollars to account for inflation using the consumer price index for the Tampa-St. Petersburg-Clearwater, FL MSA. After this adjustment, we query the PUMS database to determine the percentage of workers, by industry, who earn less than the proposed “living wage.” This percentage is applied to the number of workers in each applicable industry working on County contracts to estimate the number of employees affected by a proposed “living wage” ordinance. We will query the PUMS database a second time to determine the average pre-enactment wages of the affected workers. Multiplying the average hourly wages of the affected workers by the number of affected workers yields the pre-enactment wage bill. We then multiply the number of affected workers by the proposed “living wage” to estimate the post-enactment wage bill. These two wage bills and the number of affected workers by industry group form the inputs for the REMI model to determine the total economic impact.

## Appendix A

This appendix contains an outline, in narrative form, of the questions, assumptions, and methodologies for each of the studies that we reviewed.

1. *A Living Wage in Orange County: Arguments and Research* by Eric A. Schutz, Susan Orr and Sherry Ambrose of the Orange County Living Wage Coalition, undated.

The proposed “living wage” in Orange County would be at 120% of the official poverty level for a family of four with two children, or \$10.07/hour. Ordinance would cover County employees and County contractors’ employees, as well as both permanent, full-time employees and temporary or part-time employees. Ordinance would benefit low-wage workers, employers, citizens and taxpayers.

-Define what is the government’s official poverty threshold for a family of four including two children. Assumption is that a full-time employee is paid 2080-hours per year, that is 40 hours per week where employee gets paid vacation.resulting in a “living wage” of \$8.4/hour.

-Reasonable “living wage” would be 20% above the poverty level (\$10.07/hour).

-The data required for estimating the County’s own employees (full time and part time) was obtained directly from the County’s Personnel Office.

-The data required to estimate the County’s contractors’ employees who work on County contracts was not available and required a “roundabout” approach.

-The roundabout approach included obtaining a list from County Procurement Office of all the County’s contractors. Author determined what it was provided by the contract to the County and how much the County paid for it.

-The gathered data was then sent to Dun & Bradstreet for information on each contractor’s total employment and sales and its Standard Industrial Classification code.

-Calculated how many employees each contractor employed per \$1000 of its sales.

-To complete the list of the firms for which Dun & Bradstreet did not have data available the author used SIC codes with information published by the U.S. Census Bureau on the employment and sales of industries in Florida.

-When the number of employees working on Orange County contracts in County contracted private firms is known, U.S. Census data on wages in various industries in Florida was used to determine how many of them worked at wages less than the living wage. 5% sample consisting of 300,000 respondents is used. Census industries were translated to correspond to SIC codes and amount of inflation in each industry’s wage was adjusted from 1990 to 2000.

-Included in the cost estimates was also payroll tax and workers compensation insurance cost. Assumed that social security contributions by employers are 7.65% (for OASDI & Medicare) paid on each employee’s wage up to maximum \$76,200/year. Second, unemployment compensation contributions by affected employers remain constant. Third, based on labor cost data from the U.S. Bureau of Labor Statistics on the South Census region as a whole workers’ compensation insurance costs are 2.3% of private sector employers’ total direct payroll, and 3.2% of local government total direct payroll.

- Assumed that given a “living wage” ordinance, employers would raise the wages of employees who were already at or above the “living wage” up to a level 20% over the “living” wage. Assumed that they would do so in a linearly graduated fashion that preserves the ranking of employees’ pay levels in place before the ordinance.
- Based on information by the Orange County Personnel Office, the author expects that an hourly pay increase of \$1.89 may be necessary to pay for the provision of health-care insurance of typical coverage for a full-time employee at group rates.

*2. The Impact of a Living Wage Ordinance on Miami-Dade County* by Bruce Nissen of FIU Center for Labor Research and Studies, October 1998.

Ordinance calls for all service contractors with the county who hire within Miami-Dade or immediately adjacent counties to pay all of their workers a “living wage” and health care insurance, at the rate of \$1.25 per hour. “Living wage” is defined as 10% above the 1997 federal poverty level wages needed to sustain a family of four. (\$8.56 per hour) Following the first year, wages would be indexed to the inflation rate, ensuring that they would remain above the poverty level.

- Author obtained a copy of all county contracts that were in effect during the calendar year 1997.
- Contract titles are used as a guide to the type of contract, e.g. service.
- From all the contracts that county had 266 amount of contracts were determined to be services performed by employers in Miami-Dade County or one of the immediately adjoining counties.
- 266 contracts were assigned SIC numbers to indicate their industry. SIC numbers were double-checked by comparing SIC number assigned to the SIC of the contracting company in Dun and Bradstreet’s “Disclosure” data files.
- Each contract was given a “yearly” cost. E.g. contract worth \$300,000 for 3 years was given yearly cost of \$100,000.
- Yearly cost figures were converted into approximate employment on each contract by consulting federal census data on number of employees in Miami-Dade County per \$100,000 of sales. (assumption: county contractors were no different than other similarly sized businesses in their industry concerning employment).
- When a number of workers was calculated, 1990 Census data for Dade County (giving 1989 wage rates) was used to calculate what percentage of the workers was paid less than specified “living wage” levels.
- The 1989 hourly wage levels were updated to 1997 levels by changing each worker’s wage according to the increase in county wages between 1989 and 1997-creating “wage levels” database.
- Determined how much more, on average, each worker would have to be paid to be brought up to the designated “living wage” level.
- Payroll taxes set at an average of 11.75% (FICA of 7.65%, unemployment compensation at 1.8%, and workers compensation at 2.3%).
- In regard to compliance costs, assumed that preparing data requires the equivalent of one full day of an office worker’s time each time, or two full days per year. \$20 per hour rate was used (equivalent of an average annual salary of \$40,000 per year. 15% of total labor

costs added for overhead. Therefore,  $8 \times 2$  (number of hours worked in two days)  $\times$  \$20 (average pay rate per hour on \$40,000 per year)  $\times$  1.15 (overhead)  $\times$  number of firms equals the total compliance cost.

-To calculate health care costs, data from the Current Population Survey was used. Only aggregate figures for the whole Florida were used because in many industries the sample was extremely small.

-The percentages of workers in each industry below the specified wage levels without health insurance were calculated. The percentages were then multiplied by the number of county contract workers in those industries, arriving at the number without coverage. The number of workers was then multiplied times \$1.25 per hour worked (or whatever their workweek was according to Census figures). \$1.25 is what the ordinance required. The resulting figure was then multiplied times the number of weeks worked in a year (provided by the government statistics).

-Total increased costs to contractors from passage of the “living wage” ordinance are:  
Total Costs = Wage Increase + Payroll Tax Increase + Compliance Cost + Health Insurance Cost.

-Indirect costs, known as ripple effect, were not included. This is because of the subjective nature of making a judgment on the size of any ripple effect.

-The additional costs calculated above would not begin immediately at the commencement of the ordinance. Most contracts being multi-year the increased costs would phase in over the years as new contracts are let out. On average, contracts are three years in duration so one can roughly calculate that the additional costs would kick in over a three-year period. Annual cost increase beyond the previous year’s costs should be cut to one third of those presented in the TC formula phased in over a three-year period.

-Regarding the city’s monitoring costs, assumed that city will hire five management analysts at the rate of \$40,000/year plus 15% overhead.

-A list of all county employees making less than \$12.00 per hour is obtained from the administrative services division of the County employee relations department. Author used the list to find the number of employees earning wages below and between the various levels, which could be designated a “living wage”.

-In order to calculate health insurance coverage author used the estimates from the county’s employee relations department.

-Total labor costs to county if all full time employees were paid a “living wage” are:  
Total Costs = Increased direct labor costs + Increased payroll taxes.

-Added to this is the increased costs for part time employees (use county payroll files) The county was unable to provide the number of hours worked by part time employees. Assumption is that part time employees work on average 20 hours a week. Individuals in the county employee relations department stated that approx. 80% of part time workers are not given health insurance (if they work 30 or more hours a week, they are entitled to health insurance). Assuming that 80% of part time county workers are not given health insurance, a second reasonable assumption is that the percentages are the same as those discovered for county contractors. It is also assumed that part time workers work a full 52 weeks a year, although this assumption undoubtedly raises the cost beyond what actual costs would be.

-Total county costs for part time workers at mandated “living wage” levels are:

Total Costs = Increased direct labor costs + Increased payroll taxes + Health insurance costs.

-Benefit to affected workers and their families calculated by picking a typical, or average, employee working for a county contractor earning below the poverty level wage.

Assume a family of four with one adult working. Take the same worker and the same family, and calculate their condition if they earned at the designated “living wage” levels.

-Variables included are: Yearly gross wage, Federal income tax, FICA, after-tax earned income, private health care coverage, after-tax earned income health coverage. Included also are government subsidies such as earned income tax credit, food stamps, county public health trust health care, disposable income and health care.

-The study also calculated conditions in two and three family households.

Impacts on families with more than one wage earner were not calculated.

-High impact contractors: employers that will see cost increases totaling 10% or more of their contract income. Those percentages in the 1-10% range are labeled “medium impact” and less than 1% are labeled “low impact.” The result is based on calculation of increases in costs relative to contract size.

-Base is a family of four, but calculations also made for families of three and two.

-Upper end total estimated savings to taxpayers from a “living wage” ordinance are: Total Savings = higher income taxes (saving per family at living wage) + lower EITC payments (saving per family at living wage) + lower food stamp payments + lower healthcare costs, including Medicaid, public health trust, etc.

-“Living wage” ordinance added labor costs, taxpayer saving and the difference for county workers and county service contract workers.

-Assumed that is that high impact firms will pass on all of their labor cost increases, medium impact firms will pass on half, and low impact firms will not pass on any of their less than 1% cost increases.

-No analysis conducted regarding the impact of the ordinance on an “airport licensee or similarly situated individual or entity”. Number of employees on county contracts in the landscaping and lawn care industry and temporary help industry did not come from Census data but from the National Association of Temporary and Staffing Services.

*3. Intended vs. Unintended Consequences: Evaluating the New Orleans Living Wage Proposal* by Robert Pollin, Mark Brenner, and Stephanie Luce of Political Economic Research Institute, January 2001.

Ordinance is to establish a citywide minimum wage one dollar above the federal minimum. Paper evaluated five means through which firms might adjust to cost increases: raising prices, improving productivity, redistribution of firms’ income, layoffs/labor displacements, and relocations. The paper also considered the likely benefits of the measure to some New Orleans businesses through an expenditure multiplier.

-Yellow Pages USA, Deluxe Edition, a directory of businesses available on CD-ROM, was used to construct a sampling frame. This list was checked against a business directory from the New Orleans Chamber of Commerce.

- Firms were stratified by size according to 5 employment categories available on the CD-ROM.
- A sample was drawn from a phone survey of 1800 firms.
- Once the firms were found using the CD-ROM they were placed in corresponding categories using SIC classification system.
- After telephone pre-screening calls in Dec. 1998 and Jan. 1999, 679 firms were eliminated for different reasons, such as the firm could not be reached after five attempts.
- Once the telephone pre-screening was done the mail survey was sent to the remaining companies in question. After the completion of mailing the questionnaire an addition 46 firms were discarded.
- At the end, 451 firms completed survey or a 40.1% response.
- A formula was constructed in order to adjust the results for probability of selection and response rate.  $Weight = (1 / (PS * PN)) * RR$ , where
  - PS = probability of being selected into the first sample (n=1800)
  - PN = probability of being named a “good number” out of the prescreening and phone calling (n=1077)
  - RR = number of firms for which surveys were completed.
- Cost calculations were based on the 1999 PERI survey and the Current Population Survey Outgoing Rotation Group files. Author used aggregate CPS-ORG data for all southern metropolitan statistical areas that had average hourly wages within one dollar above or below the average hourly wage in New Orleans.
- The number of full-time and part-time workers receiving between \$5.15 and \$6.14 per hour was taken from PERI.
- The number of tipped workers covered by the ordinance was calculated using CPS-ORG data.
- The cost of the wage increase was calculated using the PERI survey and CPS ORG data. CPS ORG data was used to calculate the average hourly wage in each wage category, which was used to determine the average hourly raise each worker would receive. CPS-ORG data was also used to calculate the average hours worked per week for affected wage categories.
- Ripple effects were calculated in the same way as above and using the same assumptions. Only tipped workers were used to calculate the ripple effect
- In order to re-estimate the overall cost effects of the “living wage” ordinance, the author used the Bureau of Labor Statistic’s Current Population Survey in addition to the author’s original survey to assess changes in New Orleans labor market over the past 3 years.
- Assumed that the indirect ripple effect wage effects will change in a proportionate way relative to the direct wage increases. Based on author’s business survey, the dollar value of aggregate operating cost for all the firms covered by the ordinance was estimated.
- Assumed that this aggregate operating figure remains constant.
- Analysis based on detailed census tract info: STF3A of the Census Bureau (information on population and work force) and the 5% sample of the Public Use Microdata Series
- Determined the effect of a wage increase on low and moderate income neighborhoods by identifying the number of workers who would be covered by the mandated wage increase residing in those neighborhoods, as well as those who would likely receive raises due to ripple effects.

- Author labeled any neighborhood with an average household income less than \$20,000 in 1990 to be low to moderate income.
- Information above used in combination with calculation of the percentage of directly and indirectly affected workers who live and work in the city and come from households with less than \$20,000 in total income, therefore effectively determining the total number of affected workers who reside in low or moderate income neighborhoods.
- Divided all workers into one of eight wage categories, and apportioned the total number of workers in each category to each of the x census tracts.
- Looked at the number of workers who work in New Orleans from the low and moderate income census tracts as a proportion of the total number of workers working in New Orleans from all census tracts.
- Author determined the number of affected workers in each wage category as a proportion of all affected workers.
- Applied proportions to the total number of affected workers, to estimate the number of affected workers in each wage category by census tract.
- Compared the total amount of the wage increase with the level of economic activity observed by local businesses.
- Impact estimated by comparing the total wage increase to the total household income in the low and moderate income communities.
- Assumed that the bulk of sales in neighborhood businesses come from local residents and the spatial expenditure patterns of households will be roughly the same for new income as it is for existing income.
- Important to compare the net wage increase to the amount of money households had available for retail expenditure prior to the wage increase.
- Household expenditures not considered in these calculations as they are expected to change little given the magnitude of the total wage increase.

*Living Wages and the San Francisco Economy: The Benefits and the Costs* by Michael Reich, Peter Hall, Fiona Hsu of Center on Pay and Inequality Institute of Industrial Relations University of California, June 1999.

The proposed “living wage” ordinance is to establish a wage of \$11 per hour, indexed to future inflation, and requires health benefits or additional pay of \$1.50 per hour for health care expenses. The ordinance covers employees of organizations who work on service contracts with the City of San Francisco. It covers home health care workers employed through the IHSS (Independent Health and Social Services) program and employees of companies that lease property from the City. Report attempts to determine the impact of the San Francisco Living Wage Ordinance on a sector-by-sector basis.

- The base data for the benefit and cost analysis of the service contracts was a list of 1997/8 Vendors supplied by the Controller’s Office of the City of San Francisco.
- American Business Directory and other business data sources were used to determine the industry sector and the size of most of the contractors.
- Contractors exempted from the ordinance are firms with five employees or fewer, contracts under \$25,000, contracts covered by prevailing wage laws, contracts with

wholesale and retail goods providers, vending contracts identified as interdepartmental and intergovernmental transfers.

-Did not exclude any service contracts where there was a possibility of overestimating the value of contracts and thus the overall costs of the ordinance.

-Author analyzed the size distribution of the affected contracts.

-To estimate the number of workers in each sector who are covered by the ordinance, the author used the number of hours per average worker, average wage in each industry sector and the sector's ratio of labor costs to total revenue.

-Wage distribution used for each sector to estimate the number of workers and their pay levels. Assumed that the average for all affected workers is 1800 hours of work per year.

-Using IHSS data, the author derived a formula to calculate the value of the health coverage.

-Author used Mayor's Blue Ribbon Commission on Universal Health care report to calculate the number of uninsured patients.

-Adding together the workers on service contracts and the home health care workers, the author calculated the number of low-wage earners working in San Francisco that would receive pay gains.

-Author used Current Population Survey data to find demographic composition of affected workers.

-The report admits that the ripple effects in the current state of knowledge are imperfect.

-Author uses Card and Krueger's result to calculate the ripple effect (impact of minimum wage increases upon the pay of above-minimum workers) where they say that percentage pay increase for those just above the new minimum averaged less than half of what the workers at the old minimum received. Assumed that each worker currently earning \$9.00 to \$11.00 would actually receive \$11.50 per hour after the "living wage" is implemented.

-In order to calculate the multiplier benefits to the city economy, the report assumed that 70% of the additional income earned as a result of the "living wage" ordinance is available for re-spending locally, yielding a multiplier is 1.7.

-The report argues that three important multiplier-related effects will result from the proposed "living wage" ordinance. First, an injection of external income because portions of the increased wages of home health care workers will be paid from federal and state sources. Second, a greater portion of the increased wages paid to employees by service contractors and to home health care workers by the county will be spent in the local economy than the average consumer would spend. Third, the sum of the outside injection and additional income will be subject to local multiplier effect.

-Bureau of Economic Analysis recommendation was used regarding the multiplier effect for the State of California. California's multiplier effect was then applied to a smaller area that decreased the size of the multiplier.

-Bureau of Labor Statistics and Census data sources were used to estimate the additional labor costs of the "living wage" ordinance to firms in each sector.

-The costs were attributed to every worker in the database who earned less than the "living wage" ordinance would require and to all workers who reported that their employer did not provide them any paid health insurance. For each sector, estimates were found by using Current Population Survey data.

-Formula used to calculate increased labor cost of the "living wage" ordinance for service contractors is: estimated labor cost increase =  $A * B * C$ , where

A = current contract value

B = percent of revenue accounted by labor costs (collected from Bureau of Economic Analysis, Department of Commerce, Gross Product by Industry)

C = percent increase in labor costs required to achieve compliance.

- Assumed that for-profit contractor could pass through to government one-third of added costs, but a nonprofit contractor would pass through all added costs to government.
- A dollar value was not placed on employers facing higher costs to become more productive searching for innovations.
- The formula used to calculate the County's increased costs for home health care workers, which costs are shared by the Federal Government, the State of California and San Francisco County, was not included in this report.
- Estimates of increased costs of the County of the IHSS program was based on two assumptions. First, that AB16 (the bill that was at the time before the state legislature) is funded fully covering the State's share. Second, no pay increase is negotiated before the implementation of the ordinance, which exerts an upward bias on the estimate of the probable cost of the ordinance.
- Predicted savings from reduced absenteeism, better quality care and other improvements in the delivery of home health care services are not quantified.
- For all wage related estimates, report does not have contractor-level wage rates or employment levels and relied instead on wage and employment data at the detailed industry level, gleaned from government surveys.
- The limitations of the Current Population Survey sample size frequently required author to use earnings estimates for the entire Bay Area, rather than for San Francisco County. CPS is a monthly survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics. It provides information on the labor force characteristics of the U.S. population, as well as earnings, hours of work and other employment indicators and demographic and occupational characteristics.
- The report did not attempt to estimate any wage effects on workers in the same for-profit or nonprofit organization who are doing similar work but not for a government contract.
- Study did not include the employees on lease contracts (San Francisco International Airport or at the Port of San Francisco).
- The listing of vendors, provided by the City Controllers office, covers firms that are contracting services with the city. The listing includes vendor's name, and address, contract amount, department origin, and employment status.
- The ABD is a CD-ROM database available at the Hass Business School. The ABD contains information on U.S. companies and business organizations based on various governmental business and chamber of commerce directories, etc. The ABD provided the Standard Industrial Classification codes.
- For wage estimates, author adjusted for inflation using the Bureau of Labor Statistics wage earner CPI deflator. Author also estimated hourly pay as either the reported hourly wage for workers paid by the hour, or for salaried workers, as the annual wage and salary divided by the total hours worked.
- All earners with wage less than \$1 or who worked less than 10 weeks during the year or worked less than 10 hour per week were excluded in order to reduce measurement error in computing hourly pay.

-CBP is an annual data series that contains regional and county-level economic data by industry. The author used CBP for data on employment and annual payroll by industrial sector.

-To calculate IHSS cost estimates the author used data from the Department of Health Services provided to him by Mary Ruth Gross of Local 250 of the Service Employees International Union.

4. *Living Wages at the Port of Oakland* by Carol Zabin, Michael Reich, Peter Hall of Center for Labor Research and Education Center on Pay and Inequality Institute of Industrial Relations University of California, December 1999.

2,600 low-paid workers at the Port of Oakland would benefit directly from the proposed living wage ordinance. 500 more workers would benefit indirectly because of a “wage push” (ripple) effect. The ordinance would set a wage floor of \$ 8.30 per hour if the employer also pays for health benefits, or \$9.55 without health benefits. Pay is to be indexed to inflation in future years. Ordinance would also mandate a floor of 12 days of compensated time off for illness, etc. Ordinance report covers all leaseholders at the Port of Oakland.

-The primary data source for the Port of Oakland study was a telephone and in-person survey of Port leaseholders. When necessary, author collected supplementary data from a variety of official sources.

-Author obtained a list of tenants compiled by the Government Affairs Division of the Port of Oakland.

-Real Estate and Airport Divisions provided further information.

-Field visits were conducted to complete the data.

-The American Business Directory data with survey data was used to estimate the number of employed at the Port.

-In order to fill in the gaps, the author searched for comparable job titles in comparable firms within the sample in order to create average wage data.

-In cases where the starting wage was provided but not the average, the author multiplied the starting wages by a factor generated from the available survey data.

-Occupational Employment Series for the Oakland Primary MSA average wage data was used. Author extracted micro-data from the March Supplement of the Current Population Survey for the Bay Area Statistical Area.

-Author weighted each firm in a survey using 11 industrial classes and seven port regions.

-Assumed that health benefits cost employers \$1.25 per hour worked.

-Data for potential savings concerning turnover the author obtained through its employer survey. 20% expected decline in turnover was used. Improvements in were not quantified.

-Cost to employers is equal to the direct and indirect wage and benefit increases.

Total Cost = cost of bringing wages up + cost of providing more health care coverage + costs of paying an indirect wage push + costs of paying 12 days of paid leave + additional payroll tax.

-Author used analysis of minimum wages by Card and Krueger to examine the impact of “wage” push. He translated Card and Krueger’s findings as suggesting that if the largest wage increase at the Port of Oakland were about \$4 per hour an increase of up to \$2 per hour might occur for workers currently paid \$9.55 per hour. It is also assumed that tip income would increase an individual’s earnings by 10 percent.

6. *The Effects of the Proposed California Minimum Wage Increase* by David Macpherson of the Employment Policies Institute, June 2002.

The report examines the employment and income consequences of setting a minimum wage throughout California of \$10.25 an hour, effective January 1, 2003.

-Author used January 1999 through December 2001 Current Population Survey (CPS) Outgoing Rotation Group (ORG) data to analyze the effects of the proposed California Minimum Wage Increase.

-The main sub-sample of the CPS ORG data in use includes wage and salary workers who are residents of California, 16 years of age or older and whose hourly wage is between \$6.75 and \$10.25

-The impact on the distribution of family income was calculated using CPS ORG data. All means were calculated using CPS sample weights.

-Author used the following procedure to calculate the job loss due to the increase in minimum wage: the fractional wage gain due to the minimum wage increase was computed for the each affected worker and then averaged across the sample. Estimated fractional gain was used in the formula to calculate the employment loss.

$$\text{Employment Loss} = \text{Fractional Wage Gain} * \text{Affected Worker Employees} * \text{Labor Demand Elasticity.}$$

-Labor demand elasticity is set at -0.22.

-The costs to the employers were calculated first by finding what would be the cost to the employer if no workers were laid off. This number was estimated by multiplying the annual increase in wages due to the minimum wage increase times the number of affected workers. Workers’ lost income due to layoffs is also estimated.

-The lost income to workers is calculated by multiplying the number of workers who are projected to lose their jobs times their average wage before the minimum increase. Net increase in labor cost to employers is calculated by taking the difference between the costs to employers if no layoffs occur and the reduction in costs due to employee layoffs.

-Wages were constructed to account for problems caused by workers with variable hours, tips, etc.

-For all non-hourly workers, the hourly wage is constructed by dividing usual weekly earnings by usual hours worked per week.

-Weekly earnings for workers whose earnings are top-coded or capped at a maximum value were estimated.

-In order to estimate the mean earnings of top-coded workers it was assumed that upper tail of weekly earnings distribution follows a Pareto distribution.

-Estimated usual weekly hours for workers who indicate their weekly hours are variable. This was calculated by using the results of a regression model based on a sample of workers that have non-missing data on usual hours worked. The parameters from this

regression model were then used to estimate the usual hours for those whose weekly hours are variable.

-Author assigned a wage for hourly workers who receive tips, etc. A worker's hourly wage was constructed by dividing usual weekly earnings by usual hours worked.

-Wages of workers were adjusted for inflation and changes in the minimum wage.

-Family income was reported as categorical variable in the CPS ORG and includes all sources of money income received in the prior 12 months.

-To assign a dollar value to categories, mean values of family income for persons in each income range were calculated from a sample of California residents in the March 1999, March 2000, and March 2001 CPS.