

**RAISING LOW PAY IN A HIGH INCOME
ECONOMY:
*THE ECONOMICS OF A SAN FRANCISCO
MINIMUM WAGE***

Michael Reich*
Amy Laitinen**

Institute for Labor and Employment
University of California
Berkeley, CA 94720-5555

May 2003

*Professor of Economics, UC Berkeley and
Research Chair, Institute for Labor and Employment

**Masters Candidate in Public Policy, UC Berkeley

Purpose

This report was commissioned by the San Francisco Board of Supervisors to determine how a local minimum wage would affect workers, businesses, and the San Francisco economy.

Acknowledgments

We are grateful for support from the San Francisco Board of Supervisors and the Institute of Labor and Employment at the University of California. We also thank Kitt Carpenter, who provided the initial research assistance on the survey instrument; Peter Hall for assistance with the census data; and Nathan Steinwald for general research assistance.

TABLE OF CONTENTS

SUMMARY	5
LOW PAID WORKERS IN A HIGH INCOME ECONOMY.....	8
<i>The problem: growing low-wage employment in a high-income city</i>	<i>8</i>
Economic growth and income inequality in San Francisco	8
The growth of low-wage employment in San Francisco	11
RECENT POLICY INITIATIVES TO RAISE LOW PAY	13
<i>State minimum wage laws and their effects.....</i>	<i>13</i>
<i>San Francisco's Living Wage laws and their effects</i>	<i>15</i>
<i>A proposed solution: A local minimum wage.....</i>	<i>17</i>
Making the minimum wage a livable wage.....	17
METHODS AND DATA SETS	21
THE STRUCTURE OF THE SAN FRANCISCO PRIVATE ECONOMY.....	23
<i>Distribution of establishments and workers by establishment size</i>	<i>23</i>
<i>Distribution of workers and establishments by industry.....</i>	<i>24</i>
<i>How many low-wage workers are there in San Francisco?</i>	<i>25</i>
<i>Who are the low-wage workers in San Francisco?.....</i>	<i>26</i>
HOW A SAN FRANCISCO MINIMUM WAGE WOULD AFFECT WORKERS AND BUSINESSES	29
<i>Effects on workers</i>	<i>29</i>
How to determine the impact of a minimum wage on workers	29
Results: How a minimum wage would affect workers.....	30
<i>Effects on businesses.....</i>	<i>33</i>
How to determine the impact of a minimum wage on businesses	33
Results: How a minimum wage would affect businesses	33
HOW SAN FRANCISCO EMPLOYERS MIGHT ADJUST TO A MINIMUM WAGE. 36	
<i>The variety of adjustment mechanisms</i>	<i>36</i>
<i>How San Francisco establishments say they would adjust to increased operating costs</i>	<i>39</i>
EFFECTS ON SAN FRANCISCO'S ECONOMY.....	42
<i>Increased local spending</i>	<i>42</i>
<i>Timing issues: the current state of the San Francisco and national economies</i>	<i>42</i>
CONCLUSIONS.....	46
APPENDIX: SAMPLE DESIGN AND SURVEY ADMINISTRATION	47
REFERENCES	49

LIST OF TABLES

Table 1:	Household income distributions for San Francisco, California, and the U.S., 1999.....	9
Table 2:	Household income distributions for San Francisco and California, 1989	10
Table 3:	Eating and Drinking Establishments and Employment.....	12
Table 4:	SFO wage distribution before and after Living Wage ordinances.....	16
Table 5:	Change in wages and turnover rates at San Francisco Airport	16
Table 6a:	ACCRA cost of living indices for metropolitan areas, 2002	18
Table 6b:	California “Living” Wage levels.....	19
Table 7:	Minimum wage levels used for the study.....	19
Table 8:	Percent of establishments, workers and low-wage workers, by size.....	23
Table 9:	Percentage distribution of private-sector employees, by wage.....	26
Table 10a:	Percent of private-sector full-time low-wage San Francisco workers who are.....	27
Table 10b:	Percent of private-sector part-time low-wage San Francisco workers who are.....	27
Table 11:	Simulated percentage of workers receiving wage increases.....	31
Table 12:	Percent increase in worker wages	32
Table 13:	Average increase in wage bill	34
Table 14:	Effect of minimum wage on operating costs.....	34
Table 15:	Percent of establishments with a greater than five percent increase in operating costs, by minimum wage, and by firm size.....	35
Table 16:	Percent of establishments with more than a five percent increase in operating costs, by industry.....	35
Table 17:	Percentage distribution of most likely response to a five percent increase in operating costs, by industry	41
Table 18:	Unemployment rates, San Francisco, 2000 to 2003.....	44

LIST OF FIGURES

Figure 1:	Percent of workers and businesses in consumer, personal service, and tourism industries.....	24
Figure 2:	Percent of workers and businesses in goods-producing and business services.....	25
Figure 3:	Most likely response to a hypothetical five percent increase in operating costs.....	40
Figure 4:	Unemployment trends in San Francisco, California, and the U.S.....	44

SUMMARY

BACKGROUND

This report was commissioned by the San Francisco Board of Supervisors to determine how a local minimum wage would affect workers and businesses in San Francisco.

What is the problem?

Even taking into account the recent economic downturn, San Francisco has experienced tremendous economic growth over the past decade. Economic growth, however, has generated more, not less, inequality among San Francisco residents and workers. With increased overall affluence has come an increased demand for traditionally low-paying service and restaurant jobs. Given the especially high costs of living in San Francisco, it is increasingly difficult for low-wage workers to meet their basic needs at statewide minimum wage levels.

How many low-wage workers are there?

According to our employer-based survey, 5.4 percent of those who work in the private sector in San Francisco are paid less than \$9 per hour. This percentage, when translated into absolute numbers, amounts to nearly 27,000 low-paid workers. Among part-time workers only, 15.2 percent are paid less than \$9. While these percentages are lower than in household surveys, the differences are explained by the proportion of workers who commute into San Francisco and who are not counted in those surveys.

Who are the low-wage workers?

According to household surveys, minority workers are disproportionately represented among San Francisco's low-wage workers. Among full-time workers, Hispanics and African-Americans are twice as numerous among workers earning less than \$9 per hour than they are in the workforce, while Asian-Americans are over-represented by one-fifth. Among part-time workers, while Asian-American workers account for 36 percent of the workforce in San Francisco, they make up nearly half of the low-paid part-timers.

State and local policies have been enacted to raise low pay

Although the national minimum wage was originally intended to provide a livable wage floor, it no longer does so. During the 1980s the real value of the minimum wage declined by 30 percent. To buffer these declines, California and other states have enacted higher state minimum wages. Yet these floors have also declined in value. For example, if California had indexed the 1968 minimum wage to inflation, its level today would be \$8.92 instead of \$6.75.

Many localities, including San Francisco, have also enacted "living wage" legislation to redress inadequacies in state and federal labor market policies. These policies have higher wage and benefit floors, but they do not cover most of the low-wage workers.

Although it was once believed that minimum wages translated into job losses, recent research has challenged that assumption. Employers can adjust to minimum wage increases by improving efficiency, by raising prices and by changing their nonlabor costs, and not just by reducing their workforces. Recent living wage and minimum wage policies in San Francisco and California have not led to employment losses.

Wage Levels Used

The report presents simulations for three different wage levels— \$8.50, \$9.00 and \$10.00—to provide voters, businesses, and city officials a better understanding of the implications of choices they might make. These wage levels fall in the range of a) percentage increases of the minimum wages that have been recently absorbed in California; b) the inflation-adjusted 1968 minimum wage level (\$8.92); and c) the current floor of \$10 plus benefits for the city’s service contractors.

The cost of living in San Francisco is 84 percent above the average for metropolitan areas in the U.S. An adjustment to the national minimum wage to reflect local living costs would imply a municipal minimum wage of \$9.48.

HOW A SAN FRANCISCO MINIMUM MUNICIPAL WAGE WOULD AFFECT WORKERS AND BUSINESSES

Methods

The primary data used for this study came from a survey of San Francisco business establishments designed by the author and conducted by the Survey Research Center at the University of California, Berkeley. Employers were asked questions about organizational characteristics, employee headcounts, wage rates and benefits, operating costs, and likely behavioral responses to increases in operating costs.

Effects of an SF minimum wage on workers

- Depending upon the wage level adopted, between 54,000 and 124,000 workers, corresponding to 10.6 percent and 24.3 percent of the workforce, would receive direct and indirect pay increases. The pay raises range from 2 to 48 percent, again depending on the level of the wage floor.
- San Francisco’s minority workers would benefit disproportionately, in the amounts previously mentioned for each group.

Effects of an SF minimum wage on businesses

- Most businesses (from 77 to 82 percent, depending on the wage floor) would experience less than a 1 percent increase in operating costs.
- At \$8.50 per hour, only 4.8 percent of establishments would experience an increase in operating costs of more than 5 percent. The corresponding figures are 9.1 percent at \$9, and 17.5 percent at \$10.

- At both \$8.50 and \$9, percentage cost increases are similar among all business size categories. At \$10, cost increases are somewhat higher among very small establishments and much higher among the largest ones.
- The eating and drinking industry faces the largest increase in operating costs. Nearly three quarters of eating and drinking establishments said they would increase efficiency or prices in response to increased operating costs. Price increases in restaurants are likely to be less than 1 percent.
- In all industries, businesses said they are more likely to increase efficiency, raise prices, or find an alternate method of adjusting to cost increases than they are to lay off workers, reduce worker hours, relocate outside the city or shut down.

The effect on the San Francisco economy

Low-paid workers who receive pay raises are likely to spend most of their increased earnings locally. Some small increase in payroll tax receipts that accrue to the city are also likely to occur. On the whole, however, the number of private sector jobs in the city will be affected much more-- several orders of magnitude more-- by changes in the national and global economy, than by local minimum wage policies.

CONCLUSION

San Francisco's capacity to absorb an increase in a city-wide minimum wage appears comparable to recent experiences with California minimum wage increases as well as local living wage initiatives.

LOW PAID WORKERS IN A HIGH INCOME ECONOMY

THE PROBLEM: GROWING LOW-WAGE EMPLOYMENT IN A HIGH-INCOME CITY

Relative to most other areas in California or the U.S., San Francisco's residents enjoy, on average, a high level of income. The sources of San Francisco's recent prosperity are well-known: the city is a leading center for both high technology and finance. Both of these industries employ large numbers of highly-educated and well-paid professionals and managers. San Francisco has also continued to be a magnet for visitors. By maintaining and improving its infrastructure, San Francisco has made good use of its advantages as a center for tourism and convention business.

San Francisco's affluence is particularly remarkable since the city's labor force and population have grown little over the last several decades. In the post-World War II era, San Francisco's economy was more concentrated in mature industrial sectors, such as manufacturing and shipping. Like many older central cities, it experienced decline relative to its surrounding suburbs. Even as late as 1989, average income levels in San Francisco were below those of the state as a whole. The city's recent prosperity was driven by its transformation from a largely industrial economy to a largely service economy. The city then participated vigorously in the high-tech and financial booms of the 1990s. By 2000, income and employment in the city reached new levels.

This rosy history and outlook also has a dark side: many of San Francisco's workers did not share in the economic boom of the past two decades. Despite its reputation as a city with progressive politics and policies, economic growth has generated more, not less, inequality among its citizens and workers. Moreover, in 2000 the boom peaked and the ongoing current national recession began, putting many San Franciscans out of work. The subsequent bursting of the technology bubble and the post 9/11 declines in tourism affected San Francisco more than most other cities.

After three years of recession, the business cost structures in the city, especially the elements involving commercial rents and transportation, have adjusted downwards from their peaks. The city's economy should therefore be well positioned when the national and international economies eventually revive and bring back renewed prosperity. The question we address here is whether that prosperity can be shared more widely than in the past.

Economic growth and income inequality in San Francisco

Data on economic growth and income inequality, which we present below, indicate that the recent boom has made many San Franciscans better off but left many others behind. Some of those left behind work in the traditional low-wage manufacturing industries—such as apparel-- and feel the insecurity that comes with declining employment and stagnant pay. Others are low-wage workers in sectors that have rapidly expanded— such as services for both visiting tourists and more affluent San Franciscans. While employment in these industries has grown, pay rates in these occupations have not grown as quickly as pay for professionals and managers.

The relatively high median and mean incomes of San Francisco households are documented in Table 1. In 1999, the mean earnings of San Francisco households stood at about \$81,000, or 20 percent higher than in California as a whole, and 30 percent higher than the national average.¹ Median income figures for San Francisco, which reflect the conditions of average households more closely than do means, were also considerably higher than in California (San Francisco was 16.2 percent higher) or the U.S. (San Francisco was 31.5 percent higher).

Table 1: Household income distributions for San Francisco, California, and the U.S., 1999

Household income in 1999	San Francisco	California	U.S.
Mean earnings	\$81,002	\$64,725	\$56,604
Median income	\$55,221	\$47,493	\$41,994
Inequality measure: ratio of mean to median	1.47	1.35	1.35
Percent of households with income...			
Less than \$10,000	9.8	8.4	9.5
\$10,000 to \$14,999	5.0	5.6	6.3
\$15,000 to \$24,999	8.5	11.5	12.8
\$25,000 to \$34,999	9.0	11.4	12.8
\$35,000 to \$49,999	13.3	15.2	16.5
\$50,000 to \$74,999	17.7	19.1	19.5
\$75,000 to \$99,999	12.1	11.5	10.2
\$100,000 to \$149,999	13.2	10.4	7.7
\$150,000 to \$199,999	5.3	3.3	2.2
\$200,000 or more	6.1	3.6	2.4

Source: 2000 census. www.factfinder.census.gov

Note: Mean earnings are shown because mean income is not available; the ratio of mean earnings to mean income is likely to be lower in San Francisco and California than in the U.S. because of the greater concentration of realized capital gains in SF and California. Hence the table understates relative inequality.

These patterns are relatively recent. In 1989, mean and median income figures for San Francisco were a bit lower than for California as a whole, as is shown in Table 2. In the 1990s, although both the state and the city enjoyed real income growth, San Francisco's incomes grew more rapidly.

¹ We present 1999 data from the 2000 census because it provides the most reliable income data that are currently available. We also use some summary statistics below from the 2001 census supplementary census survey for San Francisco. The 1999 data do not reflect the peaks reached in 2000 and 2001 and consequently are likely to be more representative of longer-term conditions.

Table 2: Household income distributions for San Francisco and California, 1989

Household income in 1989	San Francisco	California
Mean earnings	\$45,700	\$46,323
Median income	\$33,414	\$35,798
Inequality measure: ratio of mean to median	1.37	1.29
Percent of households with income...		
Less than \$5,000	5.1	3.9
\$5,000 to \$9,999	9.3	7.6
\$10,000 to \$14,999	7.4	7.4
\$15,000 to \$24,999	15.1	15.2
\$25,000 to \$34,999	15.0	14.7
\$35,000 to \$49,999	17.2	18.2
\$50,000 to \$74,999	16.5	18.4
\$75,000 to \$99,999	6.9	7.6
\$100,000 to or more	7.4	7.1

Source: 1990 Census. www.factfinder.census.gov.

Note: Figures are in current dollars.

While San Francisco ranks relatively high on mean and median income measures, it also has a relatively high level of income inequality. At the upper end, in 1999, nearly a quarter of San Francisco households had incomes exceeding \$100,000, compared with 17 percent of California's households and 12 percent of all U.S. households. At the same time, the percentage of San Francisco households with incomes under \$10,000 was slightly above that of California and the U.S. (refer to Table 2). At the bottom end, despite San Francisco's relatively high median household income, 9 percent of San Franciscans lived in federally-defined poverty in 2001, a rate that is higher than for the Bay Area as a whole.²

Summary measures of the extent of inequality reveal a similar pattern. One simple summary of the extent of inequality can be constructed by comparing the ratio of mean to median incomes. The mean income level is more affected by the concentration of incomes at the top end, while medians reflect income level at the fiftieth percentile. In general, the higher the ratio of mean to median, the higher is the concentration of income at the top. As the first row of Table 1 shows, the ratio of mean to median incomes is higher for San Francisco than for California or the U.S.

The faster growth of inequality in San Francisco during the 1990s is also visible in a comparison of the concentration of households in the upper and lower brackets. In 1989, California had slightly more households than San Francisco concentrated in the upper two income brackets (14.7 percent for California versus 14.3 percent for San Francisco). By 1999, San Francisco had

² U.S. Census Bureau, 2001 Supplementary Survey.

11.4 percent of its households in the upper two brackets, compared with 6.9 percent for California.

Interestingly, the 1999 mean-to-median measure of inequality turns out to be much higher than the same measure for 1989. (See Table 2). A comparison of these two tables shows that economic growth in the 1990s produced more inequality, for both the state and city. The tables also show that San Francisco, with its higher rate of income growth, also experienced a more rapid increase in inequality than did the state as a whole.

The growth of low-wage employment in San Francisco

How can we understand the co-existence in San Francisco of high average incomes with low incomes for others? One explanation suggests that the growth of a relatively educated and affluent population translates into increased disposable income, which in turn increases the demand for services that are often provided by low-wage workers. Although some service industries, such as business services, employ mainly high-wage workers, others, such as personal services, retail trade, and eating and drinking establishments, are more likely to employ low-wage workers.

A related argument suggests that middle-wage jobs, which have been declining in numbers throughout the Bay Area and the U.S., are in particularly short supply in San Francisco. A recent Workforce Investment Board report put it this way: “San Francisco’s occupational structure reflects in industrial distribution, with many high-wage professional and low-wage service jobs, but relatively fewer moderately-paid blue collar jobs than the rest of the Bay Area.” (WISF 2003)

San Francisco’s demand for services has indeed increased steadily in recent years. In 1988, services employed 34 percent of San Francisco workers; in 2001 they employed 41.3 percent. Retail industry’s share of workers has increased 13 percent over the same time period. Within the retail industry, eating and drinking places have experienced significant growth—the number of workers in this sector increased 24 percent from 1988 to 2000.

Eating and drinking establishments are of particular importance in understanding low-wage employment trends, since these establishments tend to have a high percentage of workers (e.g., dishwashers, food preparers, bussers, servers) earning at or near the minimum wage. To see how businesses and employment in this sector have changed in the past fifteen years, consider Table 3.

The number of eating and drinking establishments and jobs in San Francisco shows a strong cyclical pattern that is correlated with state and national levels of economic activity. Employment, for example, rose during the expansion years of the late 1980s, fell during the recession years of the early 1990s, rose again during the late 1990s boom, probably fell again in 2002 during the current recession, and is projected to grow again in the near future.

Table 3: Eating and Drinking Establishments and Employment

Year	Number of establishments	Employment
1987	2,559	34,881
1988	2,509	34,185
1989	2,638	36,562
1990	2,594	35,838
1991	2,633	34,041
1992	2,452	31,303
1993	2,533	33,038
1994	2,558	33,119
1995	2,596	34,867
1996	2,751	36,266
1997	2,851	38,295
1998	2,938	40,075
1999	2,895	40,409
2000	2,912	42,282
2001	2,796	42,374
2002	n.a.	n.a.
2003	n.a.	42,429
2006	n.a.	43,500

Table 3 also contains two other patterns of importance. First, there is an upward trend in the number of employees over the entire period, consistent with our observation that demand in this industry has continued to grow. Second, employment in eating and drinking establishments increased in years that the minimum wage increased. The number of establishments and employment in San Francisco increased during the 1988-89 period, when the minimum wage increased from \$3.35 to \$4.25. Both indices rose again in the 1996-98 period, when the minimum increased from \$4.25 to \$5.75, and employment rose slightly in 2001, when the minimum wage rose to \$6.25.

Source: 1988-2000, U.S. Bureau of the Census, *County Business Patterns*, California volumes, various years. 2001, 2003, 2006, EDD, LMID web site.

Note: Data are for San Francisco Count. 2002 data do not appear on LMID web site; 2003 figure represents EDD estimate as of February 2003; 2006 is projected.

This growth of employment in the face of rising minimum wages since 1988 suggests that the low-wage character of this industry's employment is not a necessary result of having an expanding service sector. It is possible that both employment and pay could increase in these industries, depending in part upon the pub policy context. In the next section of this report we discuss how public policy has influenced low-wage labor markets.

RECENT POLICY INITIATIVES TO RAISE LOW PAY

What can be done to improve the living standards of the large number of San Franciscans who are working for very low pay in a high cost-of-living city? We begin our discussion of potential solutions by reviewing two recent sets of initiatives that are directed at the working poor. One of these consists of the series of increases in the California minimum wage over the past fifteen years; the other consists of the Living Wage policies recently instituted in San Francisco.

STATE MINIMUM WAGE LAWS AND THEIR EFFECTS

Since their inception in the 1930s, minimum wages were intended to provide a national, livable wage floor. But since the national minimum wage rate is not indexed to inflation, it tends to lose real value over time, thereby undermining the intent of the legislation. Over a nine-year period during the 1980s, for example, the nominal value of the federal minimum wage was not adjusted, leading to a 30 percent decline in its real value. Even with increases in the 1990s, the real value of the federal minimum wage remained 21 percent lower in 1999 than 1979.

Many states, including California, have attempted to buffer such declines by enacting higher state minimum wages; these currently range from \$5.75-\$7.15 per hour. California's current minimum was raised from \$4.25 in 1996 to \$6.75 in 2002 – a 59 percent increase over six years. Despite these recent increases, the real value of California's minimum wage still remains 24.3 percent lower than the 1968 value of \$8.92 (expressed in 2002 dollars).

In recent years, as the most prominent survey article of the field (Brown 1999) emphasizes, economists have shifted their views on the impacts of minimum wage laws. Some of the earlier studies, examining the wage in the period prior to the 1980s, found small negative employment effects. More recent work, using improved methods and datasets, find employment effects that range from very, very small to not detectable to slightly positive.

In their landmark 1995 book *Myth and Measurement: the New Economics of the Minimum Wage*, David Card and Alan Krueger found a positive, rather than negative, connection between employment and minimum wages. For example, in one of several studies in this volume, Card and Krueger compared changes in fast-food restaurant employment in two states—New Jersey, which increased its minimum wage by nearly 19 percent, and Pennsylvania, which faced no increase in the minimum wage. Card and Krueger did not find disemployment effects as a result of the minimum wage; rather, they found that employment in New Jersey actually increased more than in Pennsylvania.

From 1996 to 1997, the federal minimum wage increased 21 percent, from \$4.25 to \$5.15, raising the wages of more than 10 million U.S. workers. A 1998 study by Bernstein and Schmitt, *Making Work Pay, the Impact of the 1996-1997 Minimum Wage Increase*, used four models to test for employment effects. These models had been developed and used by researchers who were generally more hostile to minimum wages as well as by those who were friendlier. Bernstein and Schmitt found no

statistically significant effects of the minimum wage on employment. The researchers concluded that any employment effects are “almost as likely to be positive as negative.”

California’s record of absorbing state minimum wage increases has received much attention. Card and Krueger’s analysis of the 1988-89 increase in the California minimum wage, presented in their 1995 volume, found no measurable adverse employment impacts and some, although short-lived, real wage gains for low-wage workers. Using a similar methodology as Card and Krueger, Reich and Hall (2001) examined the impacts of the 1996-98 California minimum wage increases—from \$4.25 to \$5.75. They also could not detect any negative employment effects. Like Card and Krueger, Reich and Hall found that the indirect, or ripple effects, added about 15 to 20 percent to the pay increases that were directly covered by the new floor. More recently, the California Budget Project examined the impacts of the 2001-02 California increases—from \$5.75 to \$6.75—and found that employment in California grew faster than in the rest of the United States.³

Despite this body of work, some economists, such as MacPherson (1998), have suggested that the recent California increases have resulted in job losses in the state. However, MacPherson does not actually *test* for such effects. Rather, he simply adopts as accurate an estimate of the employment effect of a minimum wage that was obtained by Neumark and Wascher (2000), using more limited methodology and data. This estimate was effectively challenged by Card and Krueger (2000) and cannot be taken as definitive. Using more recent data, Neumark himself reports that he does not find any adverse employment effects of minimum wages in metropolitan areas.⁴

Woods (2002) examined the employment effects of the 2001 state minimum wage increases using Current Population Survey data for California, with separate estimates by industry, occupation, age of worker and so forth. Most of his published estimates, including one for Los Angeles County alone and another for teenage workers alone, showed no significant effects. The few that are significant were of very small magnitude. In general, Woods’ reported results appear to be consistent with the hypothesis that the recent minimum wage increase affect employment adversely only in rural areas, as Neumark has suggested.⁵

In summary, recent experience suggests that California, and especially urban California, has absorbed minimum wage increases with relatively little or no negative employment effects. Indeed, from 1996 to 2002, California’s minimum wage increased nearly 60 percent, while at the same time California’s employment growth rate was higher than that of the rest of the nation--18.3 percent versus 12.6 percent-- amounting to 2.3 million new jobs.

While encouraging, this experience does not give us a definitive guide to the employment effects that might result if a minimum wage were to be implemented at a much higher level, and in a local rather than statewide environment. For such evidence, we turn to San Francisco’s recent experience with Living Wage policies.

³ CBP 2002. Their analysis is only suggestive, as their methods were not as elaborate as the previously cited studies.

⁴ Personal communication, April 15, 2003.

⁵ Unfortunately, Woods does not report any tests for differences between rural and urban areas.

SAN FRANCISCO'S LIVING WAGE LAWS AND THEIR EFFECTS

By February, 2003, over 100 cities and counties in the U.S. had passed some form of "living wage" legislation. As the name implies, living wages increase the earned income of the working poor by setting living wage floors that are considerably higher than even the highest state minimum wages. Living wage ordinances in San Francisco, for example, specify a wage floor of about \$10 if employers offer health insurance benefits and \$11.25 without benefits.

Although existing living wage ordinances have raised pay for many covered workers, their scope has often been limited. Most living wage ordinances cover only firms that have financial relationships with municipal governments, so the effects on the low-wage labor market as a whole are extremely small. The Los Angeles ordinances, for example, are estimated to cover less than three percent of the low-wage workers in the city.

In 1999 San Francisco passed a series of policies that are often referred to collectively as its living wage laws. The main elements include the Minimum Compensation Ordinance (MCO) and the Quality Standards Program (QSP). The MCO applies to for-profit and non-profit businesses providing services under contract with the city. It also covers home care workers employed through the IHSS and to businesses with leases at San Francisco Airport. The QSP covers employers whose work involves access to secure areas at the airport.

A recent study by Reich, Hall and Jacobs (2003) examines the effects of the living wage laws on workers and employers at the San Francisco Airport (SFO).⁶ This case is pertinent, as well as unusual, in that virtually all the low-wage workers in a geographical area were covered by the ordinance. The data for this study were collected soon after the ordinances went into effect and just prior to 9/11. Consequently, they reflect the impact of the ordinances and are not affected by the more recent troubles of the airline industry.

As a result of the living wage policies, over 9,700 SFO workers received wage increases, around two-thirds as a direct result of becoming covered under the policies, and around one-third through ripple, or indirect effects. The ripple effects were greater than in state minimum wage studies because they were concentrated in a geographic area, so that the whole labor market was affected. Workers who had previously earned below the new minimums saw their earnings increase an average of 33 percent. Table 4 below summarizes the impacts of these policies on reducing wage inequality.

⁶ A companion study by Howes (2003) examines the impacts of the wage increases upon the IHSS workers. Most of these increases are paid out of state and federal funds. The MCO was gradually phased in among the city's service contractors as their contracts were up for renewal. Consequently, we do not yet have data on its impacts.

Table 4: SFO wage distribution before and after Living Wage ordinances

Percent receiving an average hourly wage of...	Before	After
Less than \$8 per hour	23.1	0.2
Less than \$10 per hour	55.0	4.9
Less than \$12 per hour	82.0	66.3
Less than \$14 per hour	98.0	96.7
Total (all ground-based nonmanagerial employees)	100.0	100.0

Source: Reich, Hall, and Jacobs 2003.

There was no evidence of disemployment as a result of the policy; in fact, employment *increased* after the policy was implemented. The researchers found that “firms responded to the QSP by training and upgrading their existing workers rather than by replacing them.” The costs to the airlines of the living wage policies were approximately \$1.42 per passenger.

The study also found reduced turnover costs for employers (see table 5). Turnover fell an average of 34 percent for all surveyed firms and 60 percent for firms that increased wages by 10 percent or more. Each turnover costs employers approximately \$4,275.

Table 5: Change in wages and turnover rates at San Francisco Airport

	Percent increase		Percent decrease
	Entry wage	Average wage	Turnover
Customer Service	26	17	-5
Baggage/Ramp	27	18	-25
Cabin Cleaner	32	15	-44
Screener	69	55	-80

Source: Reich, Hall, and Jacobs 2003.

Firms and workers also reported increased overall work performance, customer service, and worker morale and decreased disciplinary issues and employee grievances. Notably, 25 percent of firms reported increasing training for their workers, which should lead to productivity increases.

The living wage experience at SFO thus represents a positive experience that may well have broader implications at other locations. However, it is important to note that the policies were implemented in a context in which business location is relatively fixed and in which cost increases could easily be passed on to consumers in the form of higher prices, with little impact on consumer demand. Nonetheless, these findings suggest that higher wage floors, ones that are much higher than existing minimum wages, might lead to fewer adverse impacts on businesses and workers than is often believed.

A PROPOSED SOLUTION: A LOCAL MINIMUM WAGE

Most existing living wage ordinances do not apply to the majority of workers in any given geographical area. The ordinances in effect at San Francisco Airport provide an important precedent for how a geographically-based ordinance might work. Moreover, the prior existence of a minimum compensation ordinance that covers some of the workers in San Francisco also provides a basis upon which coverage could be expanded.⁷

Members of the Board of Supervisors in San Francisco have expressed interest in a minimum municipal wage ordinance that would a) apply to all workers in the city, and b) restore some of the decline in the state and national minimum wage levels. The decision to set a higher local wage level requires consideration of the following issues:

- 1) How high should a minimum wage be set to correct for national and local inflation?
- 2) What will be the impacts on the local economy? Recent experience suggests that a higher local wage need not have adverse economic impacts; the level of impact, however, is likely to vary according to the level of the wage floor.
- 3) What is the current state of the economy? The timing of minimum wage laws are typically sensitive to the state of the economy, as policy makers recognize that the policies can be more easily absorbed during economic upswings.

In the remainder of this section, we discuss the first of these issues—options for setting the level of the minimum wage. In the next section, which constitutes the main body of our study, we discuss our findings on how such a minimum might be absorbed. In the final section, we present a few remarks concerning the state of the local economy that are pertinent to the timing of any increase in the minimum wage.

Making the minimum wage a livable wage

As previously noted, if we adjusted California's minimum wage for national inflation since 1968, we would have a minimum wage today of \$8.92 (in 2002 dollars). Since average worker productivity has grown by more than fifty percent in the intervening years, and since low-paid workers today are more educated than in the 1960s, an even higher minimum wage would appear to be feasible.

Such calculations, however, do not account for regional variations in cost-of-living trends. The relatively high income of many San Franciscans has put upward pressure on the prices of many local

⁷ Recent initiatives in Santa Fe and New Orleans also are of interest here. In late February 2003, the Santa Fe City Council voted to enact a citywide minimum wage of \$8.50 per hour for businesses with more than 25 employees. This ordinance will cover about 60 percent of all Santa Fe workers. The wage will be gradually increased to \$10.50 per hour in 2008 and will then be indexed to inflation. New Orleans has been considering even broader legislation—a minimum wage that would apply to *all* workers in the city. In February of 2002, New Orleans voters overwhelmingly approved a measure that would set the city hourly wage to \$6.15, one dollar above the federal minimum of \$5.15. The measure was challenged in court and in September, 2002 the Louisiana Supreme Court affirmed its state legislature's right to ban minimum wages that exceeded those of the state. A statewide initiative drive, currently underway, is seeking to restore the city's right to implement the ordinance.

goods, especially housing. The cost of living in San Francisco stands at 184 percent above the national average, with housing costs more than 300 percent of the national average.⁸ Housing costs are relatively more burdensome for low-income renter and homeowner households who tend to spend a higher percentage of their incomes on housing than more affluent households. This point is particularly apt for San Francisco, which as Table 6a shows, has living costs that far exceed those of the rest of California’s urban areas.⁹ Indeed, San Francisco had the highest cost of living index in 2002 of any of the metropolitan areas in the United States.

Although apartment rents have eased somewhat from their 2000 peaks, home prices continue to increase. The median home price in California increased from \$175,000 in 1996 to \$324,000 in 2002; in the San Francisco Bay Area the costs are higher still—the median home price was \$540,000, and still rising, in 2002.¹⁰ With such a high cost of living, meeting their own basic needs is increasingly difficult for low-wage workers who provide the services for wealthier San Franciscans.

Despite enormous variation in regional costs of living, federal anti-poverty policies do not take these differences into account when determining eligibility for various poverty programs. Given the relatively high living costs, it is not unimaginable to consider many San Francisco households who fall outside of the federal definition of poverty as “poor” and yet not served by current anti-poverty programs.

Table 6a: ACCRA cost of living indices for metropolitan areas, 2002

Metropolitan Area	Indexed to 100.0	Indexed to \$5.15
San Francisco	184.1	\$9.48
Oakland	139.5	7.18
San Diego	137.8	7.10
Los Angeles-Long Beach	135.2	6.96
Orange County	134.6	6.93
Average, 324 urban areas	100.0	5.15

Source: www.accra.org.

Note: San Francisco PMSA consists of San Francisco, San Mateo and Marin Counties.

Using average expenditures on a minimal package of goods and services, the California Budget Project (CBP) has calculated basic, also known as “self-sufficiency,” budgets for a variety of household sizes and configurations. From these, CBP has also estimated the hourly wage needed to live in California. Depending on the number of earners and household size, CBP finds that workers in California need between \$9.86 and \$20.89 per hour to make ends meet (see Table 6b).

⁸ Association of Community and Economic Development Research Professionals 2003.

⁹ The federal poverty level in 2003 for a family of four in the Bay Area is set at about \$18,000.

¹⁰ California Legislative Analyst Office. www.lao.ca.gov/2002/cal_facts.

Table 6b: California “Living” Wage levels

	Basic family hourly wage
Single adult	\$ 9.86
Single-parent family	20.89
Two-parent family (one working)	17.43
Two working parent family	12.51

Source: California Budget Project 2002.

Choosing Wage Levels

In the main body of this report, we present simulations for three different wage levels in order to provide information on a range of options for San Francisco voters, businesses, and city officials. We consider three possible wage floors-- \$8.50, \$9.00 and \$10.00—as a means of giving policy-makers a better understanding of the implications of different choices they might make. These wage levels fall in the range of a) percentage increases of the minimum wages that have been recently absorbed in California; b) the inflation-adjusted 1968 minimum wage level (\$8.92); and c) the current floor for the city’s service contractors. All of these wage levels are below the self-sufficiency wages calculated by the California Budget Project.

Table 7: Minimum wage levels used for the study

	\$8.50	\$9.00	\$10.00
Absolute increase in minimum wage	\$1.75	\$2.25	\$3.25
Percentage increase in minimum wage	25.9	33.3	48.1

In percentage terms, these hypothetical wage levels represent increases that fall within the general range of minimum wage increases absorbed by the California economy in recent years. In 1996-98, the California minimum wage increased from \$4.25 to \$5.75, a 35 per cent increase. In 2001-2002, California’s minimum wage increased from \$5.75 to \$6.75, nearly 17 percent. Together, they represent an increase of nearly 59 percent in California’s minimum wage. The wage levels we have chosen for the study represent, respectively: a 26 percent increase (to \$8.50 from the current \$6.75 minimum), a 33 percent increase (at \$9.00), and a 48 percent increase (at \$10).

Still another way to think about an appropriate minimum wage level involves controlling for differences in costs of living indices. As is evident in Table 6.a above, most of the urban areas in California have costs of living indices that are about 35 percent higher than the average for metropolitan areas in the U.S. as a whole. If we apply this 35 percent California average as an adjustment to the national minimum wage of \$5.15, we obtain \$6.95, which is a bit higher but not too far from the current statewide minimum of \$6.75. Applying the same logic to San Francisco, and using the 84 percent correction for the San Francisco relative cost of living, we obtain a figure of

\$9.48 as a minimum wage that would account for the high cost of living in the city, relative to other urban areas.

METHODS AND DATA SETS

Data: The UCB 2002 San Francisco Establishment Survey

We developed and conducted a survey of San Francisco business establishments to determine how a minimum municipal wage would affect San Francisco workers and businesses. We also draw upon data from the U.S. Census Bureau and the California Employment Development Department, which each regularly provide survey findings at the county level. Our survey of establishments, however, provides three types of essential information not contained in these other data sources.

- First, an employer-based survey allows us to obtain an up-to-date picture of the wage distribution and the importance of labor costs in different types of businesses. It also permits us to obtain these pictures with sufficient sample size that can illuminate differences by size of business and by detailed industry. The other datasets are not available at the microdata level, so sufficient disaggregation is not possible.
- Second, the standard statistical sources, such as those conducted by the U.S. Bureau of the Census, are based on household surveys that include residents only. San Francisco is highly unusual among U.S. cities in that large proportions of non-San Francisco residents (about 45 percent) make up its workforce. Moreover, about 20 percent of employed San Francisco residents work outside the city, mostly also in surrounding counties. Consequently, household-based surveys provide a very incomplete picture of the city's workforce.
- Third, an employer-based survey permits us to ask behavioral questions about how employers are likely to respond to cost increases. Such questions are not asked in standard household surveys conducted by government agencies.

The sample for the San Francisco Establishment Survey consisted of a stratified random sample, drawn from Dun and Bradstreet's database of establishments for San Francisco. The sample includes businesses and non-profit establishments with at least three employees. Government agencies and public schools or universities were excluded from the sampling frame. The instrument contained 18 questions to obtain information regarding organizational characteristics, employee composition, costs, and likely behavioral responses to an increase in operating costs.

The survey was fielded by the Survey Research Center at the University of California, Berkeley. The results include 450 completed cases and a response rate of 42.3 percent, quite similar to those obtained for similar surveys in other cities.¹¹ We obtained similar but not identical response rates among all establishment size classes. The results that we report are weighted to reflect differences in these response rates.

¹¹ For example, McConville and Ong (2000); Pollin, Luce and Brenner (1999). See the appendix for more details on the survey.

As noted above, our survey is limited to establishments with at least three employees. As in the rest of the U.S., a large proportion of San Francisco establishments have no employees at all and many have negligible revenue. In 1997, for example, 58 percent of retail firms and 81 percent of professional, scientific, and technical service firms in San Francisco had no employees.¹² Among establishments with only one or two employees, a large percentage of the employees are family members and/or are independent and relatively well-compensated professionals.

We excluded these establishments from our survey for four main reasons: 1) they account for a very small percentage of the workforce; 2) including them would have required major reductions in the sampling numbers among the remaining size categories; and 3) among very small firms, distinctions among labor, and managerial and owner income streams are extremely difficult, given the large proportion of employees that are family members, making interpretation of the effects of a higher minimum wage on a business more ambiguous; and 4) results for these establishments in any case tend to mirror those for the smallest size establishment categories that we do include.

Organizational characteristics included whether a firm was for-profit or non-profit and whether it was a single or multi-establishment organization. Employee information included total, full-time, and part time employee counts, as well as wage, health insurance, tenure, and training data. Additional cost questions asked for overall payroll and operating costs. Behavioral adjustment questions referred to a hypothetical five percent operating cost increase affecting the entire industry.

¹² US Census Bureau 1997. Economic Census. *Nonemployer Statistics, San Francisco PMSA*.

THE STRUCTURE OF THE SAN FRANCISCO PRIVATE ECONOMY

The UCB 2002 San Francisco Establishment survey looked at establishments, as opposed to employers or businesses. An establishment is generally a single physical location at which employees work and business is conducted. According to our survey, 86.6 percent of establishments are for-profit organizations, while 13.4 percent are non-profits. Just over 71 percent are single-location businesses; 20 percent are branch locations of a multi-establishment firm; and 8.8 percent are the headquarter offices of a multi-establishment firm.

We present here a description of the structure of San Francisco’s business establishments and workers, looking first at the size of establishments and second at their sectoral composition.

DISTRIBUTION OF ESTABLISHMENTS AND WORKERS BY ESTABLISHMENT SIZE

According to our survey results, as shown in Table 8, establishments with 25 or fewer employees account for more than three-quarters of San Francisco establishments and employ about a quarter of the workforce. Large and very large establishments, those with over 100 workers, on the other hand, represent 5.4 percent of all establishments, but employ 45 percent of the workers.

Low-wage workers—those earning \$7.50 or less—are much more concentrated among medium and large size establishments than among small or very large establishments. Very small firms account for the largest portion of the establishments, yet account for the smallest percentage of low-wage workers. Many high-wage workers are employees of dentists, consultants, architects and other professionals and work in very small, independent establishments.

Table 8: Percent of establishments, workers and low-wage workers, by size

Size, measured by # of employees	Percent of all establishments	Percent of all workers	Percent of low wage workers*
Very small: <10	49.4	11.3	0.7
Small: 10- 24	26.8	13.9	1.7
Medium: 25 - 100	18.5	30.8	30.4
Large: 101 - 250	4.3	22.3	56.7
Very large: 251+	1.1	21.7	10.5
Total	<i>100</i>	<i>100</i>	<i>100</i>

Source: UCB 2002 San Francisco Establishment Survey, conducted by the authors.

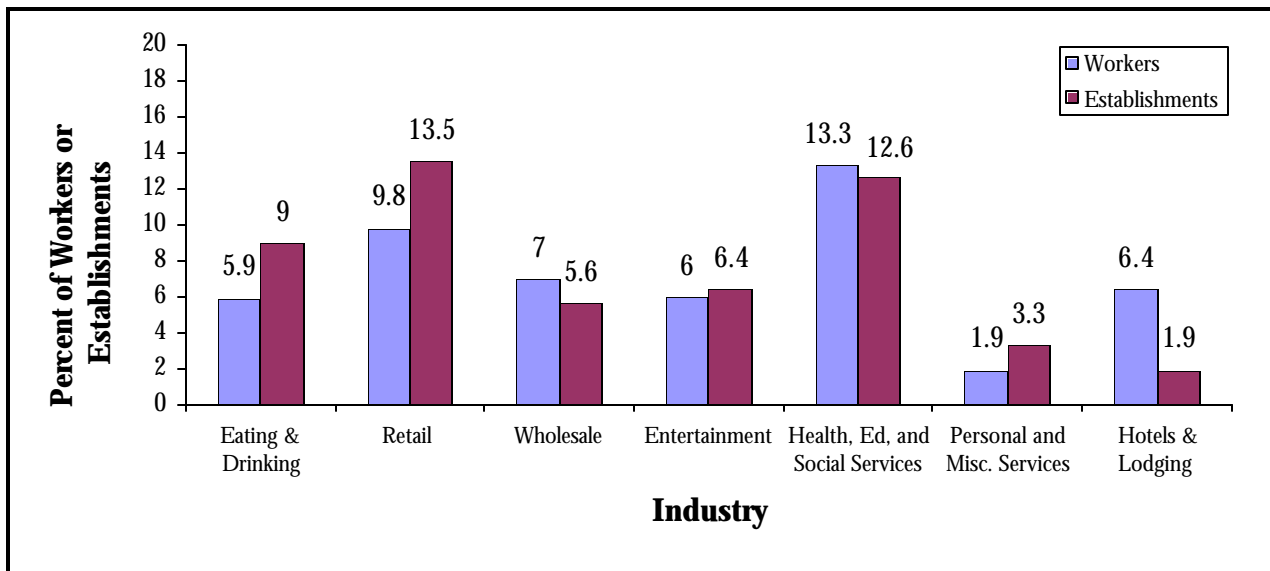
*Low wage workers are those earning \$7.50 per hour or less.

DISTRIBUTION OF WORKERS AND ESTABLISHMENTS BY INDUSTRY

Although San Francisco workers and businesses are located in a large number of industries, most of them can be situated within two broad clusters: 1) Consumer goods, personal services, and tourism; and 2) Goods-producing industries and business services.¹³ The distribution of workers and businesses within each of these clusters are summarized in Figures 1 and 2.

Workers are unevenly distributed among the industries that comprise each cluster. For example, while Hotels and lodging account for 1.9 percent of establishments, they employ about 6.4 percent of San Francisco workers. Retail, on the other hand, accounts for 13.5 percent of establishments, yet employs only 9.8 percent of workers.

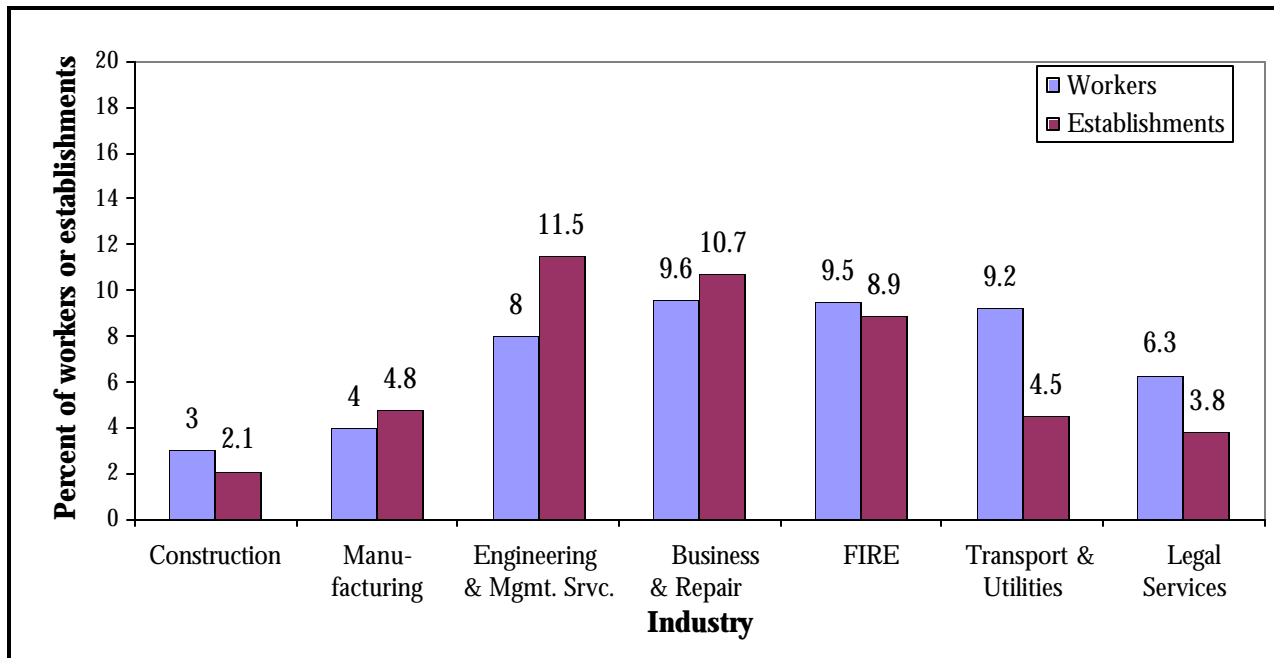
Figure 1: Percent of workers and businesses in consumer, personal service, and tourism industries



Source: UCB 2002 San Francisco Establishment Survey, conducted by the authors.

¹³ The distribution of firms by industry found in the survey is consistent with data collected by California's Employment Development Department.

Figure 2: Percent of workers and businesses in goods-producing and business services



Source: UCB 2002 San Francisco Establishment Survey, conducted by the authors

HOW MANY LOW-WAGE WORKERS ARE THERE IN SAN FRANCISCO?

We begin with an examination of what San Francisco workers currently earn. As Table 9 reports, few San Francisco workers—less than three percent of the total—are paid less than \$7.50 per hour. Another 2.8 percent earn between \$7.50 and \$9 per hour, and 8.3 percent are paid between \$9 and \$11 per hour. An overwhelming proportion—around 86 percent-- earn above \$11 per hour.

Part-time workers are more likely to be near the minimum wage and less likely to earn above \$11 per hour than are full-time workers. About 8 percent of part-time workers earn under \$7.50 per hour, compared with about 2 percent of full-time workers. At the same time, about 57 percent of part-time workers earn more than \$11 per hour, compared with nearly 91 percent of full-time workers.

Table 9: Percentage distribution of private-sector employees, by wage

Employees earning, per hour	Full and part time % and (#)	Full time only %	Part time only %
< \$7.50	2.6 (13,336)	1.8	8.1
\$7.50- \$9.00	2.8 (14,362)	2.2	7.1
\$9.00-\$11.00	8.3 (42,573)	5.4	28.0
\$11.00 and higher	86.3 (442,658)	90.6	56.9
Total	100.0 (512,929)	100.0	100.0

Source: UCB 2002 San Francisco Establishment Survey, conducted by the authors.

These findings indicate that the proportion of San Francisco workers who can be considered low-paid is lower than in many other cities. Nonetheless, these workers constitute a considerable number, expressed in absolute numbers. Approximately 13,300 workers earn less than \$7.50 per hour, and around 27,700 earn less than \$9.00 per hour.¹⁴

The results above can be compared with those from other sources. As we previously discussed, an establishment survey is likely to obtain different results from a household-based dataset. For example, the 5.4 percent of workers found to earn below \$9 per hour in this study is lower than the proportion in the 2001 CHIS sample: 9.9 percent. (CHIS stands for California Health Interview Study. CHIS 2001 provides data on approximately 900 employed private-sector workers who live in San Francisco.) The two estimates are not inconsistent with each other. The denominator in our study includes a large proportion of in-commuters who are generally better-paid.

WHO ARE THE LOW-WAGE WORKERS IN SAN FRANCISCO?

Due to small sample size constraints, it is difficult to identify the characteristics of San Francisco's low-wage workforce using the Current Population Survey (CPS). However, the CPS can tell us the characteristics of California's low-wage workers in California as a whole. Together with CPS demographic data on the racial/ethnic characteristics of San Francisco residents, we can obtain a likely picture of San Francisco's low-wage workers.

¹⁴ Our discussion of the industries with the highest concentrations of low-wage workers is integrated in a later section of this report.

Minority workers

Using Current Population Survey data for 2001, the California Budget Project (CBP 2002) analyzed the composition of California's low-wage workforce. Defining low wages as less than \$7.25 per hour, CBP finds 10.6 percent of the state's workers are low-paid. They also find that low-wage work is disproportionately distributed among minority workers. For example, while Latinos comprise about 30 percent of the state's workforce, they account for nearly 53 percent of all low-wage workers. Whites, on the other hand, account for about 51 percent of the state's workforce yet account for about 34 percent of all low-wage workers.

San Francisco has a relatively high percentage of minority residents: 33 percent are Asian American, 14 percent are Hispanic, 7 percent are African-American, and 43 percent are non-Hispanic white. Given San Francisco's relatively high percentage of minority residents and the fact that minority workers tend to be lower paid, it is likely that a San Francisco minimum wage would disproportionately benefit minority workers.

This expectation is borne out by a special tabulation of the 2001 California Health Interview Study. The CHIS design over-samples among a number of detailed immigrant groups and therefore provides more information on minority workers than does the CPS. The results from the CHIS dataset are shown below in Tables 10a and 10b.

Table 10a: Percent of private-sector full-time low-wage San Francisco workers who are...

Full-time workers (at least 35 hours in previous week)

	female	Hispanic	African-American	Asian-American	other races	non-Hispanic white
Of all wage earners	42.6	13.4	5.6	25.6	2.8	52.6
Of those earning under \$11/hr	31.6	28.3	13.8	26.4	1.4	30.1
Of those earning under \$9/hr	35.7	24.7	11.4	30.6	1.3	32.0

Table 10b: Percent of private-sector part-time low-wage San Francisco workers who are...

Part-time workers (less than 35 hours in previous week)

	female	Hispanic	African-American	Asian-American	other races	non-Hispanic white
Of all wage earners	64.0	11.7	2.7	36.0	3.6	46.0
Of those earning under \$11/hr	44.0	7.3	2.4	41.5	12.2	36.6
Of those earning under \$9/hr	39.4	9.1	3.0	48.5	27.3	12.1

Source: CHIS 2001, special tabulation.

Among full-time workers, Hispanics and African-Americans are twice as numerous among workers earning less than \$9 per hour than they are in the workforce. Full-time Asian-American workers are over-represented by one-fifth among low-wage workers. Among part-time workers—defined as those working less than 35 hours per week, but consisting mainly of workers working 20 hours or less, Hispanic and African-American workers are represented more proportionately to their numbers. However, nearly half of all part-time workers in San Francisco earning less than \$9 per hour are Asian-Americans, much greater than their share of part-time workers and nearly twice their share of the full-time workforce.

Female workers

A large body of research has found that women continue to be paid lower wages than men, although the gap has been shrinking. CBP (2002) also found that female workers were more likely to be low-paid. Women made up 46 percent of the state's workforce in 2001, public and private, yet comprised 55 percent of low-wage workers.

Our results from the CHIS data for San Francisco, which are for private sector workers only, do not find this pattern. Women made up 42.6 percent of the full-time workforce and only 35.7 percent of the workers paid under \$9. Women accounted for 64.0 percent of all the part-time workers, but only 39.4 percent of those paid under \$9.

This indication that fewer women than men receive low pay could reflect higher schooling levels, declines in gender discrimination, or other factors. Economists have found that in recent decades the earnings of college-educated women have been increasing much faster than for college-educated men (Blau and Kahn 2000). The high level of schooling could therefore be an important factor. Pursuing such an analysis is, however, beyond the scope of this study.

HOW A SAN FRANCISCO MINIMUM WAGE WOULD AFFECT WORKERS AND BUSINESSES

EFFECTS ON WORKERS

There are about 596,000 employees who work in San Francisco. Approximately 14 percent of these workers are employed in the public sector.¹⁵

How to determine the impact of a minimum wage on workers

To estimate the effects of a minimum wage on private sector workers, we divide the total effect into a direct effect and an indirect effect.

Direct wage effect

The direct wage effect consists simply of the wage increases to employees who previously earned below the new minimum wage. Under a new minimum wage of \$8.50, for example, a worker previously earning \$6.75 would receive a direct increase of \$1.75 to the new wage of \$8.50. To calculate the direct wage effects we simply increased all workers below the new minimum to the new minimum of \$8.50, \$9.00, or \$10.00.

Indirect effects

Direct wage effects, however, account for only part of the total wage increase to workers. The relative pay employees receive is highly correlated with their job title, tenure, experience, and skill, rated relative to other workers. Consider, for example, a supervisor earning \$8.50 an hour prior to a minimum wage increase. If a minimum wage increase brought her supervisees up to \$8.50 per hour, it is likely that this supervisor would receive a pay increase to more than this amount. The pay increase received by this supervisor represents the indirect effect of a minimum wage increase. The phenomenon of workers who had previously been paid near the new minimum receiving such unmandated increases in pay is also often referred to as the “ripple effect” of a minimum wage increase.

The size of ripple effects

The metaphor of a ripple suggests that those workers originally closest to the point of impact (the new minimum) receive the largest, most concentrated, effects, while those further out on the ends receive more moderate increases. Card and Krueger (1995) examined the strength and duration of the “ripple” and found that those workers closest to the new minimum indeed received the greatest indirect increases; these increases averaged less than half of the direct increase received by workers previously at the old minimum wage.

¹⁵ Non-farm workers, from Worforce Investment San Francisco.

The ripple does not extend infinitely. A number of studies (reviewed in Reich and Hall 2001) suggest that any measurable ripple effect ends for workers who originally were paid a wage that is another 100 percent over the increase. In other words, if the minimum wage were to increase by \$1.75, from \$6.75 to \$8.50, then workers who earn more than \$1.75 over \$8.50—that is, more than \$10.25 per hour-- would not receive indirect wage increases. Those who were paid from \$8.50 and up would get indirect increases, with the amount approaching zero as the wage approaches \$10.25.

The magnitude of the indirect effect, or ripple, falls in a smooth and gradual manner, starting at 100 percent of the mandated wage increase, and falling down to zero. This implies that the *average* ripple effect for those getting unmandated increases will be half of the maximum. For the purposes of this study, we do not need to calculate the ripple effect for every worker at every wage level, since we know the average effect. The indirect wage effects for each of our wage intervals are then easily simulated: we add half of the difference between the previous average wage and the wage level that would amount to another 100 percent increase over the minimum wage. The example in the box illustrates this calculation more clearly.

Calculating Indirect Effects

If the minimum wage were increased to \$10 per hour then a worker currently earning \$10 per hour should receive no mandated, or *direct*, increase. This worker would, however, receive an indirect increase in wages of half the difference between 100 percent over the increase of the previous wage and the previous wage

$\$10 - 6.75 = \3.25	absolute increase in minimum wage
$\$10 + \$3.25 = \$13.25$	100 percent over the increase
$.5 * (13.25 - 10) = \$1.63$	indirect increase
$\$10 + \$1.63 = \underline{\underline{\$11.63}}$	new wage for workers previously at \$10 per hour

This simulation is somewhat more expansive than Card and Krueger's. Consequently, it likely results in an *over*-estimate of the indirect effects upon workers and employers.

Results: How a minimum wage would affect workers

Using the average wages calculated as above for workers in each wage category, we estimated the number and percentage of workers who would receive direct and indirect increases. The results are presented in Table 11.

Based on these calculations, we find that 4.4 percent of workers in San Francisco businesses would receive direct wage increases at a minimum wage of \$8.50, 5.4 percent at a minimum of \$9.00, and 9.6 percent at a minimum of \$10.00. Adding the indirect effects gives large proportions: 10.6 percent of workers in San Francisco businesses would receive some sort of wage increase with a minimum wage level of \$8.50, 14.6 percent would receive such increases at a minimum of \$9.00, and 24.3 percent would receive increases at a minimum of \$10.00.

Table 11: Simulated percentage of workers receiving wage increases

	Percent of private sector workers receiving increases at different minimum wage levels		
	\$8.50	\$9.00	\$10.00
Direct wage effects	4.4 (22,569)	5.4 (27,698)	9.6 (49,241)
Direct and indirect wage effects	10.6 (54,370)	14.6 (74,888)	24.3 (124,642)

Source: Computed from UCB 2002 San Francisco Establishment Survey, conducted by the authors.

The table above illustrates the direct effects as well as the range of ripple effects. About three times the number of workers receives some degree of wage increase above those who are mandated to receive increases. The amount of increase, however, varies greatly depending on how close the workers are to the new minimum. The impact on payrolls depends also on how many workers are paid at these higher levels.

Recall that with our conservative assumptions, we may be overstating the ripple effect. Other studies, notably Card and Krueger (1995), as well as Reich and Hall (2001) obtained ripple effects that contributed an additional 15 to 20 percent to the direct payroll effects of an increased statewide minimum wage. Reich and Hall (1999) obtained similar results in estimating the prospective impacts of a \$10 or \$11 living wage for San Francisco service contractors. Reich, Hall and Jacobs (2003) find ripple effects of around 30 percent for living wage effects at SFO. The results in Table 11 above, which suggest a much higher ripple effect, therefore may well be overstated by fifty percent or more. With the limited data available to us, we can do little more than to note this bias here, and to repeat it in the next section as a reason that we may be overstating the impacts on business costs as well.

Table 12 provides more detail on these simulated pay increases. Workers currently earning under \$11 per hour would receive wage increases from 2 percent to 48 percent, depending on their current earnings and the new minimum wage that would be in effect. Those workers now at or near the current minimum wage will see the largest increases—ranging from a 26 percent increase at a minimum wage of \$8.50 to a 48 percent increase at a minimum wage of \$10. Some workers earning above \$11 per hour will see wage increases, of about 2 percent, but only if the new minimum wage were \$10.

Table 12: Percent increase in worker wages

Current wage level	Percent of work force	Average percentage wage increases, direct and indirect		
		8.50	9.00	10.00
At minimum wage of \$6.75	0.27	26.0	33.0	48.0
\$6.75-7.50	2.31	22.0	29.0	43.0
\$7.50-8.99	2.81	12.0	18.0	30.0
\$9.00-11.00	8.28	2.1	6.4	16.5
\$11.00+ (<i>part time</i>)	7.19	0.0	0.0	2.3
\$11.00+ (<i>full time</i>)	79.15	0.0	0.0	0.0

Source: Computed from UCB 2002 San Francisco Establishment Survey, conducted by the authors.

EFFECTS ON BUSINESSES

How to determine the impact of a minimum wage on businesses

We express the impact of a minimum wage on San Francisco establishments in proportion to changes in their operating costs. Operating costs, as defined in the survey, include: labor, rent, maintenance, supplies, taxes, utilities, and energy costs. To determine the impact for each establishment we used the survey data to compute for each establishment their existing overall payroll, their payroll cost increases, and their operating costs. We then took payroll as a percent of operating costs and the calculated percent increase in payroll, and multiplied these numbers together to determine the overall impact on operating costs.

Our method may be *overstating* the impacts on businesses, for three reasons. First, as we indicated in the previous section, we have likely overstated the indirect, or ripple, effects that generate a substantial component of the overall payroll increases.

Second, our focus on operating costs, which has also been used in other studies (Pollin, Luce and Brenner 1999), has an upward bias because it ignores capital expenditures for depreciation or new investment, as well as profits. However, data on investments and profits are much more difficult to obtain.

Third, our approach also presumes that establishment respondents could provide reasonably valid estimates of their operating costs. In our survey, the computed median reported ratio of payroll as a percentage of operating costs was 52.8 percent; it was also relatively uniform among the different establishment size categories. Our examination of the individual responses to this question indicated that their responses generally were economically meaningful, in the sense that they were somewhat more than their payroll costs alone, yet still in the same order of magnitude. However, these payroll to operating cost ratios were still generally higher than are found in most other surveys. Among eating and drinking places, for example, payroll costs reported in economic censuses usually are in the range of 30 to 40 percent of revenues. Such a discrepancy may indicate that our reported operating costs are biased downwards. If the operating cost figures that we use are too low, then we have a third reason that we may be overstating the impact of a minimum wage on businesses.¹⁶

Results: How a minimum wage would affect businesses

San Francisco businesses on the whole will face some increases in the overall amount they pay to workers. As shown in Table 13, the average increase in the wage bill ranges from 1.1 percent at \$8.50 per hour to 3.5 percent at \$10.00 per hour. These low figures reflect the small proportion of establishments with workforces consisting solely or largely of low-wage workers.¹⁷

¹⁶ Insofar as profits and depreciation must also be covered by revenues, however, our respondents' reports may not be inconsistent with census data.

¹⁷ These figures omit other elements of compensation, such as health insurance and pensions. It is beyond our scope to examine whether wage increases would be traded off against reduced benefits. We have not included payroll taxes in these calculations for similar reasons. The relative magnitudes involved are sufficiently small to suggest that none of the findings in this report would be significantly affected.

Table 13: Average increase in wage bill

	\$8.50	\$9.00	\$10.00
Percent increase in wage bill	1.1	1.8	3.5

Source: Computed from UCB 2002 San Francisco Establishment Survey, conducted by the authors.

Table 14 summarizes the impacts on operating costs. Depending on the minimum wage level, between 76.9 percent and 82 percent of San Francisco establishments would either see no increase in operating costs or increases of less than 1 percent. Again depending on the minimum wage level, 82.5 to 95.2 percent would see increased operating costs of between 1 and 5 percent. Small increases in operating costs are a normal part of the business environment, as inflation constantly increases the costs of doing business. These costs are easily absorbed by employers and are typically offset by increases in worker productivity.

Table 14: Effect of minimum wage on operating costs

At a minimum wage of...	Percent of establishments that would experience increases in operating costs of no more than...		
	1 percent	3 percent	5 percent
\$8.50	82.0	90.6	95.2
9.00	75.2	84.9	90.9
10.00	66.9	77.8	82.5

Source: Computed from UCB 2002 San Francisco Establishment Survey, conducted by the authors.

Although a large majority of firms face nominal increases of less than 1 percent in operating costs, a small fraction of San Francisco establishments would face more moderate to large increases in operating costs. We have chosen a five percent increase threshold to examine the point at which employers would begin considering cost offsetting adjustments. At \$8.50 per hour only 4.8 percent of establishments would see increases in operating costs above five percent. At \$10 per hour this number increases to 17.5 percent.

A widely-held view suggests that minimum wage increases especially affect small businesses. Our findings, presented in Table 15, indicate this is not always the case.¹⁸ At an \$8.50 minimum wage, very small and large establishments are less affected than are the small and medium size establishments. At a \$9 minimum wage, the effects are fairly similar among all size categories. At \$10 per hour, the large firms are much more affected by a minimum wage than any other group.

¹⁸ A 1999 study of New Orleans also found that small firms would be much less affected than firms of 50 to 499 employees. See Pollin, Luce and Brenner 1999.

Table 15: Percent of establishments with a greater than five percent increase in operating costs, by minimum wage, and by firm size

Firm Size	\$8.50	\$9.00	\$10.00
Very small (<10 employees)	3.0	8.3	19.4
Small (10- 25 employees)	5.5	8.0	12.0
Medium (25-100)	5.1	6.3	17.6
Large (100+)	3.6	6.6	44.0

Source: Computed from UCB 2002 San Francisco Establishment Survey, conducted by the authors.

Minimum Wage Effects by Industry

Although a minimum municipal wage would affect a small fraction of San Francisco establishments, it would affect some industries more than others. Industries whose workforce is comprised largely of low-wage workers will face higher cost increases than those industries with a more highly paid workforce. As Table 16 shows, eating and drinking establishments are most likely to have increased operating costs of more than five percent than any industry.

Table 16: Percent of establishments with more than a five percent increase in operating costs, by industry

	\$8.50	\$9.00	\$10.00
<i>All SF establishments</i>	4.8	9.1	17.5
Eating and drinking	17.9	44.0	76.3
Retail	8.6	8.6	24.2
Manufacturing	0	14.2	33.5
Entertainment	0	6.6	22.5
Wholesale	5.6	5.6	10.6
Business and repair services	3.2	3.2	8.5
Hotels	0	6.4	6.4
Personal services	0	18.2	18.2
Health, education and social services	1.6	1.6	13.6

Source: Computed from UCB 2002 San Francisco Establishment Survey, conducted by the authors.

Nearly 18 percent of eating and drinking establishments will see an increase of five percent or more in operating costs with a minimum wage of \$8.50. At a \$10.00 minimum wage, more than three quarters of all eating and drinking businesses will see increased operating costs over five percent. This industry's experience, however, is atypical. Even moderate impacts on other industries do not appear until \$9 or \$10 per hour.

HOW SAN FRANCISCO EMPLOYERS MIGHT ADJUST TO A MINIMUM WAGE

Thus far we have simulated the effects of a minimum wage on affected workers and employers. But in order to fully understand the effects of a minimum wage on firms and workers, we must also look at *how firms will adjust* to an increase in operating costs.

THE VARIETY OF ADJUSTMENT MECHANISMS

Since minimum wage floors raise the costs to employers of hiring low-skilled workers, one of the primary questions to be addressed when considering a minimum wage is how firms will respond to increased labor costs. The responses to this question depends on a variety of factors that vary among firms and industries, including the price elasticity of consumer demand; the percentage of the workforce making below the proposed minimum; the opportunities to improve skills and training as pay increases and turnover decreases; the proportion of labor costs in overall operating costs; the ease of substituting nonlabor and labor inputs; the mobility of the firm; and competition within and outside of the area. The most commonly discussed means of adjusting to increased costs include:

- ◆ Reducing employment
- ◆ Relocating to an area where labor is less expensive
- ◆ Raising prices
- ◆ Increasing productivity
- ◆ Reducing nonlabor costs

Employment effects

Although the most widely mentioned effect of minimum wages concerns the effect on employment, our review of recent research on employment effects found little to no negative employment effects associated with minimum wages. We would expect greater effects on employment in areas that have a high portion of the workforce earning at or near the minimum wage. In New Orleans, for example, more than a quarter of the workforce earns within a dollar of the federal minimum wage of \$5.15 per hour. Yet research on a minimum wage increase for New Orleans projected little effect on employment. In San Francisco, about three percent of workers earn within a dollar of California's minimum wage of \$6.75. Consequently, we focus our discussion here on the other adjustment strategies that firms may be likely to employ.

Relocation

Another common concern of minimum wages is that they induce firms to relocate to areas with less expensive labor, resulting in a different channel that could create job losses for the local economy. While relocation is certainly an option for firms, their ability and willingness to move depends upon

a variety of factors. Two of the most prominent factors are 1) the strength of the impact of the minimum wage on a firm's operating costs; and 2) the location of the firm's customers. A small increase in operating costs is unlikely to push an employer out of the city. It is more likely that firms will adjust to cost increases by improving productivity, raising prices, or redistributing the firm's income or profit margins. This is especially true, given San Francisco's geography and the distance to neighboring counties.

Even for firms who do face more significant increases, relocation may not be an option if the customer base is in the location covered by the minimum wage. This is particularly true for service industries whose business relies on the proximity of workers and customers. These types of industries have at least two compelling reasons to find alternative means of adjusting to increased labor costs. First, although absolute operating costs might increase, the relative costs remain the same since all employers face the same increase under a minimum wage. Firms, therefore, do not suffer a competitive disadvantage from increased prices, relative to similar firms.

Secondly, customers may be unwilling to relocate with the firm. This is particularly true for service-oriented businesses in which customers pay for convenience. While customers may be willing to go out of the area for larger goods purchases, such as cars or appliances, they are unlikely to substitute dinner or dry cleaning in San Francisco for dinner or dry cleaning in San Jose.

For firms with closely linked customer and worker bases relocation is likely to be *more* costly than alternate cost-adjusting mechanisms. For industries in which the worker and customer bases are not closely tied, however, relocation is a more viable option. Manufacturing is one industry that has traditionally used relocation to adjust to significant increases in operating costs.

Raising prices

Employers may attempt to pass forward some of the increased labor costs through price increases to customers.

Much of the research on minimum wage effects on prices focuses on food prices. Eating and drinking establishments typically employ high numbers of low-wage workers and, consequently, experience higher increases in operating costs than many other industries under minimum wage increases. Studies that focus on the most affected industries (such as Chinkook, Schluter and O'Roark 2000; Aaronson, 2001) have repeatedly found very small to negligible price increases as the result of minimum wage legislation.

For example, Card and Krueger (1995) report that prices rose about 4 percent faster among fast food restaurants in New Jersey, compared to Pennsylvania, thereby covering the cost increases. A 2000 U.S. Department of Agriculture study found that even if eating and drinking establishments were to pass the entire costs of a minimum wage increase to consumers (which would be unlikely), the upper limit of a price increase would be less than 1 percent.¹⁹ In real terms, this means that 50 cents would be added onto a \$50 dinner for two—an increase unlikely to perceptibly affect customer

¹⁹ Chinkook, Schluter and O'Roark. 2000.

demand. MacDonald and Aaronson (2000) also found small increases in restaurant prices after a minimum wage increase, and found that the average amount of price pass through varied according to type of eating establishment. Fast food and limited service firms were more likely to pass on greater price increases than full service restaurants. They also found that firms do not typically raise all prices, but instead raise prices on about a quarter of their items. For a 10 percent increase in the minimum wage, MacDonald and Aaronson found a range of price increases, from .19 percent to 1.83 percent, with the smallest increases found in full service establishments and the largest increases concentrated in fast food and limited service establishments.

Reich and Hall (2001) compared price trends among eating and drinking places in California with those for food items purchased in grocery stores or supermarkets, both before and after the 1996-98 minimum wage increases in the state. They found no differences in the price trends, even though food items purchased in supermarkets were less affected by minimum wage rates.

Increasing productivity

Although much of the discussion of increased labor costs focuses on the costs to employers, it is important to examine the benefits of increased wages. Higher pay can induce increased productivity by reducing turnover costs, by improving worker morale, by reducing absenteeism, shirking and monitoring costs; as well as by increasing worker training. If worker productivity increases, the firm has more product to sell without hiring additional workers and can, therefore, increase profits, reduce prices, etc. A minimum wage increase that induces increased productivity can then partly pay for itself by offsetting the wage increase with productivity increases. An enhancement of productivity growth of only two or three percent per year, which larger retail firms in the U.S. were able to achieve in the latter half of the 1990s (see Baily et al 2002), could be very large relative to the operating cost increases presented above.

Consider first the benefits of higher wages in increased worker retention and reduced turnover. Replacing workers is a costly endeavor. Reich, Hall, and Jacobs (2003), drawing from multiple academic and industry human resource surveys, found a range of estimated turnover costs per employee from \$1,332 to \$8,000. Relying primarily on the academic literature, they calculated that turnover costs ranged from \$1,760 to \$3,880 per turnover, depending on whether training costs were also considered. Reducing turnover, therefore, can result in significant cost savings. After the San Francisco living wage was implemented in 2000, annual turnover rates for baggage screeners declined from 110 percent to 25 percent, resulting in cost savings of \$3.1 million. In addition to these large turnover savings, the study found an increase in overall job performance and improved morale, and a reduction in worker absenteeism.

By reducing turnover, higher wages can also incentivize increased worker training, which leads to further productivity increases (Acemoglu, 2001). Economists once believed that increasing minimum wages would reduce training incentives, because of the greater constraints on subminimum training wages. However, recent findings on experience with training subminimums, which have been implemented in recent national policy, as well as comparative research in other countries, has cast doubt on this theory. More recently, studies that have better measures of training, that draw upon employer as well as household surveys, and that recognize that many firms operate with some

market power in the labor market, have led to further revisions of received wisdom (for a recent survey, see Fairris and Pedace 2003).

Our survey collected data on the extent of turnover, training, and other employment practices. While we have not yet had the opportunity to study these results carefully, our preliminary analysis suggests that many businesses with low-wage workers had considerable room to adjust their behavior along the dimensions suggested here. They have, in other words, scope to adjust to minimum wage increases through these mechanisms.

Adjustments of nonlabor costs

As noted earlier, a firm's decision on how to adjust depends on its ability to adjust costs in one area to offset increased costs in another. If firms face increased labor costs, for example, they may purchase less expensive nonlabor inputs or reduce overhead by renegotiating their lease. Rent, a large expense for many San Francisco establishments currently is trending down. Office rents are at a six-year low and many businesses are renegotiating their leases or threatening to move to another SF location.²⁰

HOW SAN FRANCISCO ESTABLISHMENTS SAY THEY WOULD ADJUST TO INCREASED OPERATING COSTS

The survey we developed for this study included a question that asked employers to predict their response to a hypothetical scenario. They were asked to assume that operating costs had increased by five percent for *all* San Francisco businesses, not just for their individual business. Although five percent is not a large percentage change, it is somewhat greater than the other cost increases that employers regularly absorb, including inflation. It is also, as we have seen above, greater than our predicted cost increase for over 82.5 percent of establishments at a \$10 minimum wage, and for 95 percent of establishments at a minimum of \$8.50.

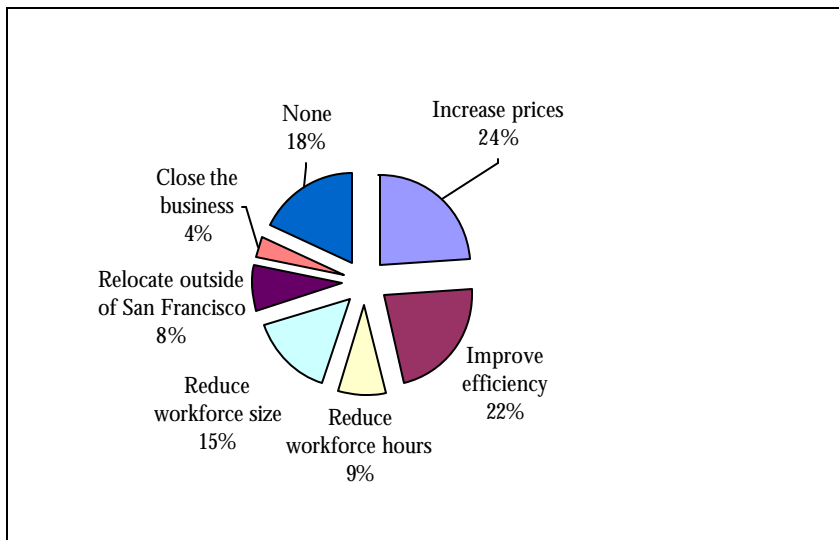
Employers were asked how likely they would be to 1) improve efficiency, 2) increase prices or charges to clients, 3) reduce the hours of the workforce, 4) reduce the size of the workforce, 5) relocate out of San Francisco, 6) close the business entirely, or 7) do none of these. The establishments could respond by predicting whether they were not at all likely, very unlikely, somewhat likely, or very likely, to adopt each of the above responses to adjust to increased operating costs.

To better understand what they would do first, employers were then also asked to choose which *single* response they were most likely to adopt in the face of a five percent cost increase. The responses to this question provide the most revealing prediction of their most likely adjustment. Their answers are presented in Figure 3.

²⁰ <http://www.grubb-ellis.com/pdf>.

The largest group of establishments—more than 40 percent—said they would most likely improve efficiency or take none of the cost-offsetting actions previously mentioned. This finding indicates many businesses possess a ready ability to adjust to cost increases. An additional 24 percent said they would increase prices or charges to clients, although the magnitude of these pass-through costs was not asked or given. Another 15 percent said they would reduce the size of their workforce, 8.6 percent would reduce the hours of their workforce, again without specifying the magnitude of the adjustment. Finally, 8 percent said they would relocate, and 4 percent would close their business.

Figure 3: Most likely response to a hypothetical five percent increase in operating costs



Source: UCB 2002 San Francisco Establishment Survey, conducted by the authors.

Note: Percentages shown refer to responses from *all* establishments, not just those that would experience five percent cost increases in the event of a minimum wage increase.

As we previously discussed, a firm’s actual decision about how to respond to cost increases will depend upon a variety of considerations, including location of customer base, the price elasticity of demand for the product, profit margin, and ability to substitute capital for labor. These considerations will vary by industry.

Table 17 reports how two industries varied in employer responses to our cost increase scenario. Service-oriented businesses are more likely to improve efficiency or increase prices than goods-producing businesses such as manufacturing. Nearly three quarters of eating and drinking establishments said they would increase efficiency or prices in response to increased operating costs of more than five percent.

As noted earlier, studies that look at the effects of increased costs on food prices predict that even if restaurants were to pass on their increased costs to consumers, this would result in a price increase of no more than one percent on average.

Table 17 also shows that service industries are less likely than overall San Francisco establishments to reduce the hours or size of their workforce. This partly reflects a lesser ability to easily substitute between labor and capital. Whereas a manufacturing company may be able to substitute capital for workers, service-oriented businesses are less able to do so. Moreover, many restaurants' customer base is largely tied to location. It is unlikely that customers would be willing to follow many restaurants out of San Francisco and into Oakland or San Jose.

Table 17: Percentage distribution of most likely response to a five percent increase in operating costs, by industry

Industry	Improve efficiency	Increase prices	Reduce hours of workforce	Reduce size of workforce	Relocate outside of San Francisco	Close the business	None	Total
<i>All Industries</i>	22.2	23.9	8.6	15.3	8.0	4.0	18.0	100.0
Eating and drinking	23.1	41.0	2.6	15.4	10.3	5.1	2.6	100.0
Manufacturing	19.0	19.0	0.0	19.0	33.0	0.0	9.5	100.0

Source: UCB 2002 San Francisco Establishment Survey, conducted by the authors.

Nonetheless, 10.3 percent of the eating and drinking establishments said they were “most likely” to relocate if faced with a five percent increase in operating costs. If 10.3 percent of the 18 percent of eating and drinking establishments who faced increases of more than five percent did relocate, this would account for only 1.8 percent of eating and drinking establishments and 0.16 percent of all San Francisco establishments (at an \$8.50 minimum).

EFFECTS ON SAN FRANCISCO'S ECONOMY

INCREASED LOCAL SPENDING

The greater the proportion of San Francisco residents working in San Francisco, the more effective a minimum wage will be in increasing earnings of low-income San Franciscans. If the majority of residents work outside of the county then the benefits will accrue disproportionately to non-residents. Residency of workers is also important in considering increased spending in the local economy as a result of increased wages. Since low-income individuals are less likely to travel outside of their area and are more likely than their wealthier counterparts to spend their increased earnings locally, the greater proportion of workers who live in San Francisco, the greater the benefits to the San Francisco economy.

According to 2000 Census data, eighty percent of employed San Francisco residents work in San Francisco. A local minimum wage would thus cover the vast majority of San Francisco's employed residents. However, of the entire workforce employed by San Francisco businesses, about 55 percent actually live in San Francisco. Increased local spending will, therefore, be shared between San Francisco and the broader Bay Area.

The rate at which new income is spent and re-circulated in a regional economy is dependent upon several factors. One factor involves the size and diversity of the local economy. A large and diverse economy provides more products and services on which consumers can spend, resulting in a larger multiplier effect than in smaller, less diverse economies (Reich and Hall, 1999). Another factor concerns the disposable income level of the recipients. Lower income individuals are more likely than higher income individuals to spend more quickly and to spend more of their income locally.

The explanation of why low-income individuals spend their new income more quickly is straightforward. Since they do not have as much disposable income to devote to savings, the purchases that low-income individuals make are more likely to be for necessities that cannot be postponed. Low-income individuals are more likely to spend locally because they are less likely than their higher income counterparts to travel outside of the area to consume.²¹

TIMING ISSUES: THE CURRENT STATE OF THE SAN FRANCISCO AND NATIONAL ECONOMIES

The results presented earlier in this report indicate that a substantial numbers of San Francisco's workers would benefit from a local minimum wage. At the same time, the impacts on businesses would be absorbable in most cases through efficiency improvements, price increases and adjustments in nonlabor costs. Very few employers would be expected to shut down their businesses

²¹ San Francisco collected \$271.47 in payroll taxes in Fiscal Year 2001-02. The current payroll tax rate is 1.5%--a minimum wage would result in an additional .01 to .04 percent of payroll tax dollars per year—adding between \$27,147 and \$108,588 to city revenues.

or lower the size of their workforce in response to such a policy. Of the alternatives considered here, a minimum wage of \$8.50 is least likely to have a substantial impact upon employment. These conclusions are reinforced by recent studies on the impacts of minimum wages and by recent state and local experience with wage policy.

Yet our survey findings derive from a single snapshot in time. Since the survey was undertaken in the second half of 2002, while San Francisco was already deep in a recession, we can expect that the respondents had already internalized the adjustments caused by the decreased level of economic activity in the city. We can also assume that they were affected by the extent of pessimistic expectations of more hard times to come. Consequently, the findings themselves may be grounds for optimism, as they appear to controvert much of that pessimism.

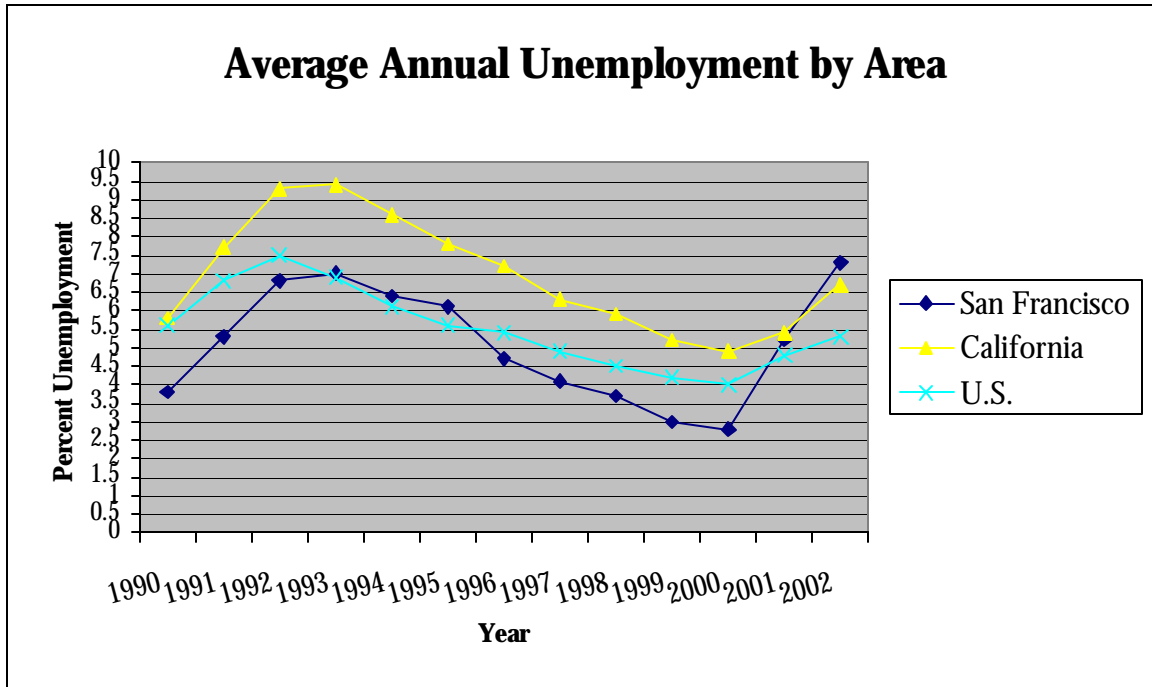
Policy-makers nonetheless may need to recognize that the ongoing recession has generated anxiety, especially because of ongoing reductions in state and local programs, the increased economic uncertainty that has arisen, related to terrorism, U.S. military policy, SARS and so forth. Some segment of public opinion worries that economic conditions might continue to deteriorate.

Although there are good reasons in our findings not to be concerned about these anxieties, such issues have exercised voters and public officials in the past. The *implementation* of national and state minimum wage increases have occurred much more often during periods of economic upturn, when optimism prevails more generally, with fewer implemented during downturns. But in the past, the *passage* of proposed increases has sometimes occurred during recessions, with the implementation delayed to occur during expansions. It is therefore pertinent to consider briefly whether the current recession will continue or not and how economic conditions relate to minimum wage policy.

Although we cannot predict the future, historical patterns are worth noting. The current national and local employment recession is already three years old, which is quite long by historical standards. Since the boom that preceded it was the longest in the nation's history, the recession could also be longer than the average, meaning it has not yet ended.

Figure 4 below presents the past dozen years of unemployment rates in San Francisco, the state of California, and the U.S. The data show that unemployment did indeed increase sharply in San Francisco in 2000-2002, and much faster than in the rest of California or the U.S.

Figure 4: Unemployment trends in San Francisco, California, and the U.S.



Source: California and San Francisco data taken from the EDD Labor Market Information Division. US data from the Bureau of Labor Statistics.
 Note: Not seasonally adjusted

However, consider Table 18, which presents a closer look at unemployment rates in San Francisco during the first three months of 2003, compared to similar periods in each of the previous two years. This table shows a different story: unemployment rates have declined slightly relative to 2002, indicating that the bottom of the employment recession may have been reached and perhaps even passed. (This decline is affected by out migration from the city, which reduces the available labor force, but not in sufficient numbers to change the basic story of the table.)

Table 18: Unemployment rates, San Francisco, 2000 to 2003

Year	January to March average
2000	2.7
2001	3.5
2002	7.4
2003	7.0

Source: California Employment Development Department
 Note: Not seasonally adjusted

The recent declines in San Francisco in housing and office rents and declines in traffic congestion provide some indicators that local business costs may be returning to more profitable levels. So do

reports that more restaurants opened last year than closed.²² Nationally, in 2002 profit margins for nonfinancial corporations returned to the levels in place in 2000.²³

Which set of data, those in Figure 4 or those in Table 18, are more indicative of the future? One view is that each scenario is equally likely at this point in time. Most of the economists who specialize in the forecasting business predict that by a year from now the U.S. and San Francisco economies could well be in a stronger state than today, perhaps even in a period of sustained recovery (ABAG regional outlook, January 31, 2003). Judgments about current economic conditions therefore might best be seen as neutral, as neither providing a pessimistic nor an optimistic economic environment.

What is clear is that whatever their direction, the effects of changes in national and international economic conditions will dominate, by several orders of magnitude, any impacts that minimum wage policies will have on employment in San Francisco. Recall also the longer-term growth of service employment, including among eating and drinking establishments, which we presented earlier in this report. Such long-term growth is likely to continue.

Business conditions in the city, in conclusion, are primarily not determined by local minimum wage policies. Decisions about such policies can be made on their own merits.

²² Ryan Tate, "S.F. adds 127 more eateries." *San Francisco Business Times*, March 21, 2003.

²³ Profits per unit of real output, as provided by the Bureau of Economic Analysis, U.S. Department of Commerce.

CONCLUSIONS

Low-wage workers and minimum wage levels

San Francisco has a significant percentage of workers who are low-paid, especially considering the high cost of living in the city relative to the state and the U.S. as a whole. State minimum wage levels have failed to bring such workers to a “living wage.” A minimum wage of \$8.50 for San Francisco would not set a living wage and it would only partly account for cost of living differences. Taking such differences more fully into account would imply a minimum wage of about \$9.50 in San Francisco.

Effects of recent minimum and living wage policies

Recent increases in the statewide minimum wage and the living wage ordinances at San Francisco Airport have benefited low-wage workers without affecting the economy or employment conditions adversely. Since the low-paid workers in San Francisco businesses constitute a smaller percentage of the workforce than they do for California as a whole, it appears that a municipal minimum wage could be absorbed in a comparable manner to the statewide experience.

Survey findings

The impact of a municipal minimum wage would likely be similar among most employer size categories. It would affect some industries more than others. Most employers in all industries report that they would be more likely to use adjustment mechanisms—including efficiency improvements, small price increases and changes in the utilization of nonlabor inputs—than to reduce workforces, relocate or shut down. San Francisco’s capacity to absorb an increase in a city-wide minimum wage thus appears comparable to recent experiences with California minimum wage increases as well as local living wage initiatives.

The state of the economy

National and international economic conditions are likely to fluctuate in coming years and to affect employment in San Francisco. Long-term data show that some industries that are sensitive to economic cycles, such as eating and drinking establishments, nonetheless have tended to grow even when minimum wages have increased because of long-term structural patterns. These cyclical and longer-term trends will far outweigh any effects of municipal minimum wage policy.

San Francisco’s capacity to absorb an increase in a city-wide minimum wage appears to be as substantial as was California’s recent experiences with increasing state-wide minimum wages. Policy decisions can be made on their own merits.

APPENDIX: SAMPLE DESIGN AND SURVEY ADMINISTRATION

Sample Design

The San Francisco Establishment Survey was drawn from a stratified random sample, based on the Dun and Bradstreet database of establishments for San Francisco. The survey included private for-profit and non-profit business establishments. To exclude business with mainly family employees, only establishments with three or more employees were included. To focus on the impact on the private sector, government agencies and public schools or universities were excluded from the sampling frame.²⁴

The study was conducted as a mail-back survey with telephone follow-up. Fieldwork was carried out during the period between July 31, 2002 and January 3, 2003. Most duplicates on the Dun and Bradstreet database were eliminated prior to sample selection by comparing telephone numbers of establishments. However, some duplicates were only recognized during fieldwork and were eliminated at that point.

Within each size category, Dun and Bradstreet drew a random sample of eligible establishments. The larger establishments were sampled at progressively higher rates. The sampling fractions ranged from 2.6 percent for the category with the smallest establishments to 84.5 percent for the category with the largest establishments. Since the establishments were sampled with different sampling fractions, weights were calculated to compensate for those differences.

Weight Calculations

We use two different weighting schemes in this study, both of which include a non-response adjustment.

1. Establishment weights

Larger establishments were sampled at a higher rate than smaller establishments. The establishment weight compensates for that over-sampling, by weighting each case inversely proportional to the relative sampling fraction. The non-response weight compensates for differential response rates within the size categories used for sampling. The establishment weight for each case is divided by the response rate for its size category and then rescaled so that the weighted number of cases equals the actual number of cases. Since the response rate was lower in the largest establishments, their weight is correspondingly greater. The establishment weights would be used to estimate the proportion of establishments with some characteristic, considering all establishments equally, regardless of size.

²⁴ Government employees accounted for 14.01 percent of San Francisco's workforce in 2001, according to the California Employment Development Department.

2. Worker weights

The worker weights are created by multiplying the establishment weight for each case by the number of employees in the establishment, and then rescaling so that the weighted number of cases is equal to the actual number. The non-response adjusted version of the worker weight was created by multiplying the number of employees by the non-response adjusted version of the establishment weight. Since the response rate was lower in the largest establishments, their weight is correspondingly greater.

Field Outcome

A total of 1,181 establishments were sampled, of which 1,065 met the eligibility criteria for the study. Interviews were completed at 450 establishments, for a response rate of 42.3 percent. About 53 percent of interviews were completed as a Self-Administered Questionnaire and 47 percent were completed via telephone.

Average hours for full-time and part-time employees

For full time employees we assumed a forty-hour work week. For part-time employees, we used the average number of hours per week provided by the employer. When average part time hours were missing, we used 20 hours per week, which was the median and mode of part time hours for the sample.

REFERENCES

- Aaronson, Daniel 2001. "Price Pass-Through and the Minimum Wage." *Review of Economics and Statistics*. 83, 1: 158-169.
- Acemoglu, Daron 2001. "Good Jobs versus Bad Jobs." *Journal of Labor Economics* 19, 1: 1-21.
- Baily, Martin et al 2002. Study of productivity growth in retail in 1990s. McKinsey Institute.
- Bernstein, Jared and John Schmitt 1998. *Making Work Pay: The Impact of the 1996-97 Minimum Wage Increase*. Economic Policy Institute. Washington, D.C.
- Bhaskar, V. and Ted To 1999. "Minimum Wages for Ronald McDonald Monopsonies: A Theory of Monopsonistic Competition." *Economic Journal* 109: 190-203.
- Blau, Francine and Lawrence Kahn 2000. "Gender Differences in Pay." *Journal of Economic Perspectives*: 75-99.
- Brown, Charles 1999. "Minimum Wages, Employment and the Distribution of Income." In Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics*, vol. 3: 2101-2163.
- CHIS 2001. *California Health Interview Survey*. Center for Health Policy, UCLA.
- California Budget Project 2001. *Making Ends Meet: How Much Does It Cost to Raise a Family in California?* Sacramento, CA.
- California Budget Project 2002. "Minimum Wage Increases Bring Real Wage Gains to California Workers." CBP Budget Brief. Sacramento: CA.
- Card, David and Alan Krueger 1995. *Myth and Measurement: The New Economics of the Minimum Wage*. Princeton: Princeton University Press.
- Card, David and Alan Krueger 2000. "Minimum Wages and Employment: a Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Reply." *American Economic Review* 90, 5: 1397-1420.
- Chinkook, Lee, Gerald Schluter, Brian O'Roark 2000. *How Much Would Increasing the Minimum Wage Affect Food Prices?* Economic Agriculture Information Bulletin No. 747-03. U. S. Department of Agriculture. Washington, D.C. www.ers.usda.gov/publications.
- Dickens, Richard, Stephen Machin and Alan Manning 1999. "The Effects of Minimum Wages on Employment: Theory and Evidence from Britain." *Journal of Labor Economics* 17, 1:1-23.
- Fairris, David and Roberto Pedace 2003. "The Impact of Minimum Wages on Job Training." Working Paper, Department of Economics, UC Riverside.

Haugen, Steven E., and Mellor, Earl F. 1990. "Estimating the Number of Minimum Wage Workers." *Monthly Labor Review* 113 (January): 70-74.

LMID 2003. "Labor Market Statistics." Labor Market Information Division, employment Development Department, State of California. Accessed via web site, www.calmis.ca.gov.

Lang, Kevin, and Shulamit Kahn 1998. "The Effect of Minimum-Wage Laws on the Distribution of Employment: Theory and Evidence." *Journal of Public Economics* 69: 67-82.

Lee, C. and B. O'Roark. 1998. *The Impact of Minimum Wage Increases on Food and Kindred Products Prices: An Analysis of Price Pass-Through*. Technical Bulletin No. 1877. United States Department of Agriculture. Washington, D.C.

MacDonald, James and Daniel Aaronson 2000. "How do Retail Prices React to Minimum Wage Increases?" Working paper. Research Department, Federal Reserve Bank of Chicago.

MacPherson, David A. 1998. *Effects of the 1998 California Minimum Wage Increase* Employment Policies Institute. Washington, D.C.

Manning, Alan 1995. "How do we Know That Real Wages are Too High?" *Quarterly Journal of Economics* November: 1111-1125.

McConville, Sharon and Paul Ong 2000. "Employer-Based Health Insurance for Entry-Level Employers in Los Angeles County." Unpublished paper. Lewis Center: UCLA.

National Economic Council 2000. *The Minimum Wage: Increasing the Reward for Work*. Washington, D.C.

Neumark, David and William Wascher 2000. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Comment." *American Economic Review* 90, 5: 1362-1396.

O'Brien-Strain, Margaret and Thomas MaCurdy 2000. *Increasing the Minimum Wage: California's Winners and Losers*. San Francisco: Public Policy Institute of California.

Pollin, Robert, Stephanie Luce and Mark Brenner 1999. *Economic Analysis of the New Orleans Minimum Wage Proposal*. PERI Research Report. Political Economy Research Institute. University of Massachusetts-Amherst.

Pollin, Robert, Mark Brenner and Stephanie Luce 2001. "Intended vs. Unintended Consequences: Evaluating the New Orleans Living Wage Proposal." Working Paper no. 9. Political Economy Research Institute. University of Massachusetts-Amherst.

Rebitzer, James B., and Lowell J. Taylor 1995. "The Consequences of Minimum Wage Laws: Some New Theoretical Ideas." *Journal of Public Economics* 56.2: 245-255.

Reich, Michael and Peter Hall 1999. *Living Wages and the San Francisco Economy: The Benefits and the Costs*. Report of the Bay Area Living Wage Research Group, Institute of Industrial Relations, UC Berkeley.

Reich, Michael and Peter Hall 2001. "A Small Raise for the Bottom." In Ong, Paul and James Lincoln, eds. *The State of California Labor*. University of California: Institute of Industrial Relations.

Reich, Michael, Peter Hall, and Ken Jacobs 2003. *Living Wages and Economic Performance: the San Francisco Airport Modd*. University of California: Institute of Industrial Relations.

Woods, Jeffrey 2002. *Minimum Wages: The Economic Impact of the 2001 California Minimum Wage Increase*. California Industrial Relations Research Report 2002-1. Division of Labor Statistics and Research.

WISF 2003. "Research Brief: Ten Things to Know About San Francisco's Economy and Employers." Workforce Investment San Francisco Board. February.