

The Impact of the Living Wage on Disposable Income

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Executive Summary

Living wage laws are intended to provide workers with income sufficient to support their families. Starting in Baltimore in 1994, the movement has spread nationwide, with over 100 communities implementing living wage laws in the past decade. Previous studies of living wage laws have focused on its effect on employment rates, governmental costs, and poverty rates. This paper explores a new issue, which is the extent to which living wages raise income available to poor families. Higher income from a living wage is taxed by state and local governments and can also lead a family to lose eligibility for other governmental assistance programs, such as food stamps or Section 8 housing – we term these effects “leakages.” This leakage issue is crucial, as it determines how much of the living wage increase is actually kept by the family and, thus, the efficiency of the living wage to increase living standards of the working poor.

This study uses detailed survey data of families in Oregon to examine the magnitude of leakages that would occur if working poor families received a living wage similar to those considered by Eugene, OR, in 2002. Our analysis finds these leakages to be quite substantial. For example, our estimates suggest that both single-parent families and married-couple families would keep less than half of the living wage increase due to higher taxes and lost governmental assistance. The end of our study discusses an alternative policy – the Earned Income Tax Credit – which would not involve such leakages.

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I. INTRODUCTION

Society is continuously faced with the dilemma of how to provide assistance to the low-income families within its communities. Which ways will be the most efficient in keeping costs minimal while maximizing benefits? What are the possible consequences of this assistance?

The living wage is a policy through which wages are increased for certain workers in a city or county in hopes of alleviating workers out of poverty. The number of cities and counties that have implemented living wage laws has increased since the first one began in Baltimore in 1994. Today there are 123 cities or counties that have living wage laws, with more than one hundred cities, counties, colleges, universities, and states considering such policies, including Eugene and Medford, Oregon.

In 2002, the City of Eugene considered a living wage ordinance. At the time, the minimum wage in Eugene was \$6.50 per hour, and under the proposal some firms that have contracts with the city of Eugene would be required to pay their workers a minimum of \$14.28 per hour, or \$11.42 per hour if also providing their workers with benefits. This proposal was not acted upon by the City Council, but there has been recent renewed interest in Eugene for a living wage proposal.

An implementation of a living wage law has many potential consequences. On the positive side, it is thought that such laws will help reduce poverty rates for those that receive the living wage. It also could provide more workers with healthcare and provide low-income workers with necessary wages that allow them to sustain a comfortable standard of living (EPI, 2002). Pay differentials above the norm may also boost employee morale and raise worker productivity and decrease absenteeism and worker turnover (Reynolds and Vortkamp, 2000). On the negative side, one well-known criticism is the loss of jobs because firms may not be willing to hire workers at

the higher wage. Another possible effect is that the higher wage levels shift the distribution of employment in these jobs towards workers with higher skills (Macpherson, 1998, p.4). Therefore, low wage earners may be crowded out of the labor market or forced to work in lower skilled jobs outside of the living wage coverage area. Furthermore, Macpherson (1998) reports that costs of living wage increases may be born onto consumers through price hikes. Consumer groups include local governments which may end up paying more for contract work and crowd out funds for other public services.

The goal of this paper is to analyze another issue that has received relatively little attention - the crowding out effect of the living wage on families' welfare assistance and higher taxes. If a living wage is put into effect, the wages and yearly disposable incomes of affected workers will undoubtedly increase. However, this may then cause the family to lose eligibility for assistance programs, such as food stamps and section 8 housing, as well as be subject to higher federal and state taxes. We call these effects "leakages", and we can imagine them as water from a leaking bucket. If the bucket represents the gross income increase from receiving a living wage, the leakages are the loss of income from additional taxes and lost government assistance. The water remaining after the leakages is the family's net (or disposable) income from the living wage increase.

Our analysis estimates the *magnitude* of this leakage effect for Oregon families. The percent of income leaked relative to the initial gross income gain is what we will term the marginal tax rate of a living wage increase. For example, if a family gains \$5000 of gross income from a living wage law, but only keeps \$3000 after taxes and lost assistance. The marginal tax rate is 40%. We simulate the living wage effects on the economic well being of Oregon families using 2003 data from the Current Population Survey (CPS), a monthly survey of households

conducted by the Bureau of the Census for the Bureau of Labor Statistics. This survey indicates variables such as household size, participation in federal and state aid programs, and annual incomes. We determine whether the living wage raises affected Oregon families' standard of living by calculating the marginal tax rates of welfare programs that demonstrate by how much families' disposable incomes have increased after the living wage implementation. We consider the following welfare benefits to Oregon low-income families: Women, Infant, and Children (WIC); food stamps; Section 8 housing; Oregon Health Plan; Low Income Energy Assistance Program (LIEAP), and Earned Income Tax Credit (both federal and state ones).

We find that leakages from living wage laws would be substantial for Oregon families. This would be particularly true of living-wage families who typically are participating in assistance programs than for single poor workers. Our estimates suggest that both single-parent families and married-couple families would keep less than half of the living wage increase due to higher taxes and lost governmental assistance. In other words, half of the living wage increases borne by local firms (and/or their customers in the form of higher prices) would essentially be given to the Federal and State governments in terms of increased taxes and lost welfare assistance for these families.

The rest of our study proceeds as follows. The next section provides an overview of previous literature on the issue of living wages and their effects. Section III-V is the bulk of analysis in our paper, describing our methodology and using the CPS survey data to estimate marginal tax rates of the living wage increases considered in the 2002 Eugene proposal. Section VI discusses an alternative policy – the Earned Income Tax Credit – which would not involve such leakages. Section VII concludes.

II. LITERATURE REVIEW

Economic theory teaches us that an implementation of a living wage significantly higher than the state or federal minimal wage can lead to a series of consequences. The results of the living wage are ambiguous since there is still no common opinion among economists on whether the living wage improves the economic situation in the affected region or increases the well being of affected families. There has been a plethora of studies on the topic.

Some economists argue that the living wage will create a number of benefits to society and businesses. Kraut, Klingler, and Collins (2000) find that a higher base pay and benefits boost employee morale, in effect, causing them to need less supervision, and it attracts a higher qualified applicant pool. Reich, Hall and Hsu (1999) suggest that other workers will receive a benefit through pay equity. As the wages of covered workers increase to the levels of higher skilled workers, the latter may require an increased wage to maintain their pay differential that reflects their specialized skills, positions, and job classifications.

Adams and Neumark (2004) ask the central question of living wage laws: Do living wages help low-wage workers and low-income families? The paper conducts a cost benefit analysis that examines what types of effects living wages would have on employment and on lifting families above the poverty threshold. Although it appears that raising the wages of workers seems like a natural method to raise families above the poverty level, the researchers claim that these methods may not be successful for two reasons. First, economic theory predicts job losses, and secondly, the proposed wage floors ineffectively target low-income families. When the price of labor increases, some entity must bear the increased cost. The first assumes that the employer bears the costs of increased wages. Therefore a living wage may result in job layoffs in order for firms to work within their budget constraints. The second reason takes into account that all low-income

workers are not all in poverty or the primary earners within their household. Some of these workers are young part-time or temporary workers gaining skills.

In a previous paper, Adams and Neumark (2000) model examine the poverty-reducing effects of living wage laws using data from the Current Population Survey from 1996 through 2002 and controlling for factors such as education, marital status, age, race and sex. Their research resulted in findings that an “increase in the living wage reduces employment by 5.3%” meaning that an increased wage results in disemployment. On the other hand, it was also concluded from their research that increases in the living wages push some families past the poverty threshold, but it does not make this claim for families that begin well below the poverty line. Families that lie close to, or on the poverty line threshold, and receive a living wage income will be pushed above that line and will not be categorized as an impoverished household.

In further analysis, they also make the conclusion that living wages reduce the probability that families would be in poverty, reduce worker turnover, and increase performance. The results of Neumark’s and Adams’ (2000) research seem inconclusive in determining whether the living wage assists low-income workers and low-income families. On one hand, a living wage will create unemployment, but on the other hand, it allows families on the margin to be pushed up past the poverty line. Low-income workers’ net benefits are ambiguous because other factors must be taken into account that the researches mentioned but did not fully analyze. Among these factors are the leakages due to the crowding out of welfare benefits and higher taxes. Families might be pushed above the poverty level, but be worse off due to the leakages.

Toikka, Yelowitz, and Neveu (2005) examine the issue of marginal taxes of welfare programs and their study is most closely related to this study. Their paper examines the effects that high marginal tax rates have on the ability of living wage laws to increase the disposable

income of poor families. Results found in their study indicate that marginal tax rates for low-income families with high participation in public welfare assistance were quite high, and thus would diminish the effectiveness of the living wage laws. The researchers conclude that the living wage laws inefficiently target low-income families. Of all the families within their project's sample, 72% of the people that benefited from the living wage were not initially poor, and evidently only one third of the 28% that were initially poor were able to leave poverty. Only 9% of the third were affected. This could be due to the fact that these low-income families also faced higher marginal tax rates as their income increased.

Toikka, Yelowitz, and Neveu (2005) document that for low-income people with financial assistance, marginal tax rates are extremely high and in some cases exceeded 100% depending on the income range. These high marginal tax rates depend on the participation rate of low-income households in the welfare programs. Households with zero or low participation in these programs have the most to gain due to small losses from being disqualified from assistance and higher gains from wages. At the same time these households may face a higher tax bracket. Conversely, households with high participation in federal assistance programs have the most to lose. As their wages increase, they may suffer larger losses from being disqualified from federal assistance and still face a higher tax bracket.

From an economic standpoint, it can be concluded that the living wage law contains some inefficiencies. Low-income families may be poorly targeted through the living wage due to the fact that the majority of people affected are non-primary earners within their families, and that evidence suggests that nearly three quarters of the families affected are not low-income families to begin with. The living wages also may create a number of costs to society such as increased wages of not only minimum wage workers, but also those of higher skilled workers that will

deserve pay equity. In contrast, it is shown through Adams and Neumark's (2000) research that the living wages do have a positive effect in reducing poverty, but, as the paper by Toikka, Yelowitz, and Neveu (2005) shows, the magnitude of the reduced poverty is very minimal. The living wage appears to only help out families that were close to the poverty line.

The most relevant local study of living wage law effects is Chouinard's (2002) study, which provides an interesting background on Eugene's living wage proposal and potential consequences of the living wage. The report provides information on the living wages' history, the typical components that it would be comprised of, and, much like the other papers, developed conclusions and proposed various consequences that could occur if the proposal were to be set into effect¹.

Among the problems identified by Chouinard is the idea that the living wage would be poorly targeted and would not meet the low-income families that it was intended to. This was referred to as a leakage in the process of wealth distribution. The idea is supported by Cash, Gakuru, Parker and Trask (2001), a study completed for the City of Salem, which states that 80% of the part time recreation employees were college or high school students living with their parents. This hinders the case for implementing a living wage. These workers, if they receive a living wage, are not the primary earners in their families and hence the living wage is targeting low-income families inefficiently. Furthermore, the paper concludes that other costs would arise due to holding businesses in compliance with the living wage law and allow pay equity. Finally, it calls into question what other alternatives are available to better target low-income families, such as the EITC (earned income tax credit).

From the described literature we can see that the efficiency of the living wage has not been sufficiently studied. Our paper will implement the methodology of Toikka, Yelowitz, and Neveu

¹ Appendix includes more information on the proposal.

(2005) to study the efficiency and possible effects of the Eugene living wage proposal. We focus on the living wage consequences for low-income people through analyzing changes in their disposable incomes vs. changes in their gross earnings due to the living wage (in other words, by calculating the marginal tax rates of welfare programs.) We want to know what portion of the increased earnings these low-income people will be able to retain in their pocket. The central questions ask are 1) how do marginal tax rates affect the efficiency of living wages in reducing poverty?, and 2) is there a more reliable method to efficiently raise low income households above the poverty line?

III. OBJECTIVES AND APPROACH

In the next few sections of the paper we use data to investigate the effectiveness of the 2002 Eugene living wage proposal for reducing poverty of working-poor families in the area. Before undertaking the analysis, this section describes our general approach and introduces some concepts that will be important to our analysis.

Our focus is how much an increase in earnings from a living wage ends up in the family's "pocket" as income for them to spend. Many poor families benefit from the state and federal welfare programs that provide them with goods and services, for which, otherwise, these families would have to pay for. Such benefits raise the families' real income beyond their own gross earnings. We define the family's gross earnings plus the value of the public assistance they receive less the taxes they pay as their comprehensive disposable income (CDI). This is clearly a better measure of a family's actual income and well being than their gross earnings.

Now consider an increase in wages, such as would occur from a living wage ordinance. This will increase a family's gross earnings, but their CDI will not go up as much as gross earnings if it means they no longer qualify for various welfare programs. Thus, higher earnings

face an implicit tax caused by the family no longer receiving as much (or any) public assistance. For example, suppose a family was receiving \$3000 in public assistance before a living wage. Now, the family gains an additional \$10,000 in gross earnings from a living wage, but loses their public assistance, so that their CDI only goes up \$7000. The implicit tax is 30% (or 0.30 in decimal form), or \$3000 lost from the \$10,000 gain in earnings. In addition, to the implicit tax from lost public assistance, the family would also presumably face higher explicit income taxes from the state and federal government which would further lower the family's CDI.

From the difference between how much a family's gross earnings go up from a living wage versus how much their CDI goes up (after factoring in lost assistance and higher income taxes) we can calculate what we will term the *marginal tax rate (or MTR) of the living wage*. Specifically, the marginal tax rate measures the fraction of the living-wage-induced change in earnings that the family loses due to higher taxes and lost public-assistance benefits. Mathematically we can express the MTR as the following,

$$\text{MTR} = 1 - \frac{\text{Change in comprehensive disposable income}}{\text{Change in gross earnings}},$$

where the changes are measured between the household's observed baseline gross earnings (GE) and comprehensive disposable income (CDI), and the GE and CDI associated with the living wage intervention.

If the MTR of the living wage is positive and bigger than one it means that a family is worse off with the living wage than without. In this case the lost public assistance and higher taxes outweighs the gain in gross earnings. If the MTR of living wage is equal to one it means that a family ends up with the same CDI with and without the living wage increase in earnings. If the MTR of the living wage is less than one it means that a family is better off with the living

wage increase in earnings than without. Finally, the MTR could be as low as zero if the CDI goes up by as much as the increase in gross earnings from a living wage.

The MTR of the living wage will be our main analysis tool following the work by Toikka, Yelowitz and Neveu (2005) who demonstrate that a substantial amount of the additional earnings from living wages disappear through benefit reduction in these assistance programs and increased taxation using a national sample. We conduct a similar analysis specifically for Oregon. This allows us to examine the impact of Oregon specific programs, such as the Oregon Health Plan. Also, unlike Toikka, Yelowitz and Neveu (2005), we examine how MTRs vary across different types of working poor and their family types. Specifically, throughout our analysis we examine three very different family situations: 1) a family of four with a single earner, 2) a single person of 20 years old and 3) a single mother with her child. We expect strong crowding out effects in the 1st and 3rd cases due to availability of programs that target poor families with kids. A single mother and a family of four with one earner can hope for a wide range of assistance like WIC, OHP, Section 8 Housing, a large EITC, Food Stamps, energy assistance on their gross earnings. On the other hand, a single person has a much shorter list of possibilities. Therefore, we expect a relatively small crowding out effect for the 2nd case.

The next section begins our analysis by examining the MTR of living wage increases for our three hypothetical families assuming that they take advantage of all welfare programs available to them. In computing the MTRs for these hypothetical scenarios, we consider the following transfer, tax and tax subsidy programs: federal and state income taxes, FICA taxes, tax credit programs (federal and state earned income tax credits, and the federal child tax credit), Food Stamps, Section 8 Housing Assistance, WIC (Women, Infants, and Children), and LIEAP (Low-Income Energy Assistance).

The numbers from these hypothetical scenarios give us an upper-bound estimate of the MTRs of the living wage increase since they assume full participation in all available welfare programs. In reality, many families do not take advantage of eligible public assistance programs. Thus, in the following section, we turn to actual data on Oregon families that we draw from the 2003 using the Current Population Survey (CPS), the most recent year for which data are currently available. From the CPS sample, we identify a number of families who might be affected by the proposed living wage ordinance (for Eugene) mandating a wage rate of \$14.28 and fit one of our three family types. Then we assign each family in our sample to particular schedules associating the change in their comprehensive disposable income with the change in gross earnings, with and without the living wage intervention and compute an average marginal tax rate for each of the three family types.

IV. ANALYSIS OF THE LIVING WAGE USING REPRESENTATIVE EXAMPLES

Before implementing our methodology with the real data we use the following hypothesized examples to demonstrate the crowding out effects of the living wage. We consider three representative families and examine the significance of marginal tax rates for the impacts the living wage law has on the economic well being of these families. We consider the following families: 1) a family of four with a single earner, 2) a single person, and 3) a single parent with one child. For our calculations we use the 2004 data, the most recent data available for our variables.

For each of these cases we start with the head of the family earning \$8 per hour (\$16000 per year), which is just above the minimal wage in Oregon². Next we calculate the taxes this family would pay and the benefits it would receive from the following transfer and welfare

² \$8 per hour is a reasonable amount in the context of a living wage. Proposed affected workers rarely earn less.

programs: EITC, Food Stamps, LIEAP, Section 8 Housing, WIC, and Oregon Health Plan. We proceed by calculating their comprehensive disposable income by taking all the benefits and taxes into consideration. Then, we hypothesize an increase in their gross earnings due to the living wage ordinance of \$14.28 per hour without medical benefits, and \$11.42 per hour with the benefits. Their annual gross earnings become \$22840 and \$28560, assuming they worked 40 hours per week and 50 weeks in a year. Next, we follow the same steps as for the before-living-wage earnings to calculate the comprehensive disposable income for these situations. Then, we calculate the MTRs of welfare programs for each of the families and see how much of the living wage increase in earnings these families can keep. In other words, whether the families are better off or worse off with the living wage increase in earnings³.

A Family of Four with a Single Earner

Imagine such a family: a mom, a dad and 2 children of ages 2 and 10. The dad is the only breadwinner in this family, and they are below 100% of the poverty line for a family of this size. He only earns \$16,000 per year, but their family actively participates in the available welfare programs. The second column of table A-I illustrates the assistance they get from the welfare benefits, the taxes they pay (or EITC they receive), and computes their disposable income in this situation. Their CDI equals \$27,927.20. This number is significantly larger than their gross earnings of \$16,000. Now consider that the City of Eugene implements the living wage law mandating an hourly pay of \$11.42 with health benefits and \$14.28 without health benefits. Is our imaginary family better off or worse off?⁴

³ Federal and state income taxes are calculated assuming the families claim standard deductions. To estimate the welfare benefits we use their income eligibility guidelines and an average amount per person or household of a particular size or income (depending on the program).

⁴ We assume that the value of welfare benefits is fully recovered by each family and is valued as cash

The third and the fourth columns of table A-I illustrate whether the family qualifies for the same welfare programs, how much assistance it gets in this new situation, and how much taxes the family pays or EITC it receives. As we expect, the family's welfare benefits decrease due to the higher family income and their taxes go up as well as the EITC goes down. If we assume the dad earns \$11.42 per hour with health benefits, then the family's CDI becomes \$28,543.20, which is bigger than the original amount by exactly \$616. In the case of \$14.28 per hour without health benefits the family's CDI becomes \$29,083.20, which is higher than the original amount by only \$1156.

Now we can calculate the marginal tax rates of welfare programs for this family using the formula mentioned earlier in the paper. Table A-II illustrates the results we get. So when the family's gross earnings change from \$16,000 per year to \$22,840 (an increase to \$11.42/hr with benefits) the MTR equals 0.91. This number means that out of a \$6840 increase in gross earnings the family loses 91% of it due to not being able to take advantage of the welfare programs. Now they have to pay for those things from their own pocket, so they only retain 9 % of the increase in gross earnings, \$616⁵.

In the second case, the family's annual gross earnings change from \$16,000 to \$28,560 (an increase to \$14.28/hr without benefits) the MTR equals again 0.91. However, now the family retains in its pocket only \$1156 per year out of a \$12560 increase in gross earnings.

We can see that for a family of four below the poverty line the living wage law will not increase their standard of living by a significant amount, only by 9 %, due to high marginal tax rates of welfare programs.

⁵ Here and in the following sections the MTRs are rounded to the closest decimal.

A Single Individual

Now let's imagine the same situation as above, but for a single person without kids. We expect the MTRs for this situation to be relatively smaller due to a much shorter list of welfare programs available for this individual.

Tables B-I and B-II demonstrate the same type of calculations outlined in the previous section. From Table B-I we can see that when the person's gross earnings go up to \$22,840 from \$16,000 (with health benefits) his disposable income increases from \$15,119 to \$19,476. In the second case, when the person's gross earnings increase from \$16,000 to \$28,560 his income goes up by a significant amount from \$15,119 to \$23,589.

From Table B-II we can see the MTRs for this single person. When his gross earnings increase to \$22,840 the MTR is 0.36, which means that he retains 64 % of the living wage increase or \$4377.6 out of a \$6840 increase in gross earnings. In the second case, when this person's earnings increase to \$28,560 his MTR is 0.33, which means that the person retains 67% of the living wage increase of \$12560 - \$8415,2.

We can definitely say that this person is better off with the living wage law, because his / her CDI increases by a large amount due to relatively small MTRs.

A Single Mother with a Child

A single mom with a child who is near the poverty line is eligible for many programs that try to simplify her life. In this situation we expect relatively large MTRs due to a relatively large assistance from the EITC, WIC, OHP and other programs.

Tables C-I and C-II again illustrate the same type of calculation of the CDI and MTRs for this family of two. Table C-I demonstrates that when her gross earnings increase from \$16,000 to \$22,840 (with health benefits) her CDI actually *decreases* from \$24,536.20 to \$24,281.20. So her

family is worse off after the implementation of the living wage. When we consider the second case, an increase in gross earnings from \$16,000 to \$28,560 (without health benefits), we can see that this family's CDI goes up from \$24,536.20 to \$26,393.

From the Table C-II we can see the MTRs for this family. As we expected they are relatively large: in the first case - 1.04 and in the second - 0.85. The first number means that when the mom's gross earnings increase by \$6840 their family actually loses 4% of her previous CDI, \$255. The second number, .85, means that she retains 15% of the living wage increase of \$12,560 in her gross earnings, \$1884.

So for a single mom with one child the benefit from the living wage increase in her gross earnings is not such a sure thing as for a single person due to high MTRs of welfare programs.

After analyzing the impacts of the living wage on economic well being of these three typical families we can conclude the following: 1) if a particular family takes advantage of welfare programs then this family will not benefit much from the living wage law implementation like in our examples of a family of four and a single parent, 2) if a family does not use welfare assistance then it might benefit substantially, similar to our example with a single person. High marginal tax rates of welfare programs cause most of the living wage increase to disappear, because now the families have to pay for the goods and services they used to receive for free. In this case, the living wage is not well targeted for reducing poverty due to large leakages from the family's "pocket".

V. ANALYSIS OF THE LIVING WAGE USING THE CPS DATA

In the previous section we have demonstrated that ordinary Oregon families with an exception of single individuals would not benefit much (or even lose) with an implementation of the living wage law. However, one of the assumptions for the hypothesized examples is full

welfare participation. We know that in real life full welfare benefit participation is unlikely due to costs of finding out and applying for such benefits.

Characteristics of Families with Low Wages from the CPS

To assess the importance of high marginal tax rates of welfare programs resulting from multiple program participation, we examine the data from the 2003 Current Population Survey for Oregon (CPS). We construct an original sample of 3346 observations or 1381 families, of whom 48% are married with children, 38% are childless, and 14% are single parents⁶.

Since we are interested in the living wage impacts on the economic well being of Oregon families we create a subsample of families that have at least one earner who would qualify for a wage of \$11.42 per hour or \$14.28 per hour. This sample includes 1135 individual observations or 485 families: 137 families of single people, 152 families of single parents, and 196 families of married couples with or without children.

First, we examine the overall participation in welfare programs (Table D column one) for all Oregon families using our original data set (column two). We define welfare participation on an annual basis and find that across the entire sample 89.42% do not participate in OHP, Section 8, Food Stamps, WIC or LIEAP. The entire sample does not condition on low income or low wages, so participation is fairly low. The rows four to fifteen of Table D break out the participation in different kinds of welfare programs across all the families, and across the families below 100% and 200% of the FPL. The three largest categories of welfare participation are OHP, Food Stamps and OHP in combination with LIEAP. Overall, 13.86% of Oregon families participated in Oregon Health Plan (OHP), 13.86% in OHP and LIEAP and 11.8% in Food Stamps. The remaining rows and columns show that multiple program participation is quite common.

⁶ The 2003 CPS Survey collects information about people's situation in 2002. Hence, we use the 2002 data on the variables of interest.

In the third and fourth columns of Table D, we break out welfare participation by family income, showing participation rates for the families below 100% and 200% of the FPL. Our findings for welfare participation are consistent with the general trend, but much more dramatic this time. The OHP participation is almost 50% in case of families at or below the federal poverty line and 32.55% for families below 200% of the FPL. Participation in multiple programs is very high, up to 48.48% in OHP and LIEAP and 36.63% in Food Stamps and OHP (in the poverty case).

Rows seventeen and eighteen break down participation in the workforce across the entire sample and below the poverty line, and show how many families are actually within 100% or 200% of the poverty line. In our sample, approximately 10.85% lived in poverty in 2002, and 30.84% of families lived in near poverty, below 200% of the FPL. Participation in the work force of people across the entire sample is 62.19%. For people in poverty this number is almost twice as low, 33.95%, and it increases to 42.31 % for the people within 200% of the FPL.

When we do the same type of analysis only for the families that have at least one worker earning less than a living wage of either \$11.42 per hour or \$14.28 per hour, we can see that the results are similar to the findings for the Oregon families as a whole. Table E displays these results. We should notice that the work force participation rates are significantly higher for the people near the FPL (61.11% and 53.4%) than the ones found in our original data.

Table E illustrates welfare participation among the families that have at least one worker who qualifies for the living wage. We can conclude that the multiple welfare program participation rates are pretty high in Oregon overall, especially among the families that are below 200% of the FPL or in poverty. We observe even higher multiple program welfare participation and a higher rate of work force participation than in table D. We need to remember that welfare

assistance is based on the family earnings; thus, high welfare participation rates mean strong crowding out effect of these benefits when the living wage increases the gross earnings of the families.

Simulating the Effects of the Living Wage: Preliminaries

In this section we analyze what happens to the families' comprehensive disposable incomes as their hourly wage increases to \$11.42 per hour with benefits or \$14.28 without benefits.

We work with the 2002 Current Population Survey and identify a sample of families where at least one worker would qualify for a living wage of either \$11.42 per hour or \$14.28 per hour. Then, we subdivide this sample into the following three categories: 1) single person families (137 families), 2) single parent families (152 families), and 3) married couples with or without kids (196 families)⁷.

For each of the three subsamples the analysis is focused on the change in the family's comprehensive disposable income (CDI) compared to the increase in their gross earnings due to the living wage. We define the CDI as a family's income after all the taxes and monetary benefits of welfare assistance are taken into consideration. In calculation of the families' new CDIs, after the living wage increase, we focus on the families' new family income and the families' tax status (head of household, single or married). Monetary benefits for Food Stamps, LIEAP, OHP, Section 8 and WIC were calculated according to their income eligibilities for 2002, as well as EITC and federal, state and employment taxes (such as Social Security or Medical care). We assume that all families file a tax return and claim a standard deduction. All families' earnings, income, and marginal tax rates were modeled on their reported program participation and

⁷ We define a worker that qualifies for the living wage of either \$11.42 with benefits or \$14.28 per hour without benefits as a worker who works at least 30 hours a week and earns below the appropriate living wage. We are less concerned with the place of work of an individual since we analyze the crowding out of welfare benefits that it not tied to a particular job.

estimated welfare benefits⁴.

We use the MTR formula discussed in the “Objectives and Approach” section to calculate the MTRs for every family in each subsample. Then, we average all the MTRs across the given subsample to display a trend for a particular type of household. Table F demonstrates our findings. We differentiate the MTRs for each sub sample by families’ original income: 1) for the entire sub sample (income does not matter), 2) for families that originally were in poverty (their income is less than 100% of FPL), and 3) for families that originally were in near poverty, so their income is between 100% and 200% of FPL. The third and fourth columns of table F present the MTRs for the families below \$11.42 per hour with benefits and \$14.28 per hour without benefits for each sub sample and income distribution.

We observe that the MTRs are consistent with the discussion on the hypothesized examples. However, we get more moderate results with real data than with our hypothesized examples, because previously we assumed 100% welfare participation, and in real life this rarely happens. For single person families in the entire subsample the MTR is 0.36 for a living wage of \$11.42 per hour and 0.16 - for \$14.28 per hour. This means that an average single person in Oregon would keep 64% of the living wage increase in the first case and 84% in the second case. For single people in poverty or near poverty the results are similar for a living wage of \$11.42 per hour (0.32 and 0.34 respectively), but the crowding out effect of a living wage of \$14.28 per hour is larger (MTRs are 0.29 and 0.32 respectively). An average single person in poverty earning \$14.28/hr would only keep 68% of the increase in earnings.

The picture looks similar for married couples and single parents. For the entire subsample of single parents the MTR is 0.45 with a living wage of \$11.42 per hour and 0.54 - with a living wage of \$14.28 per hour. This means that an average single parent family keeps only 55% if their

increase in earnings in the first case, and 46% - in the second case. They keep even less if their family is in poverty, as low as 16% of an increase in earnings from a living wage of \$14.28/hr. For married couples with or without children the results are more drastic. An average family keeps only 27% of an increase in earnings from a living wage of \$11.42/hr, and 43% - from a living wage of \$14.28/hr. For people in poverty these numbers become - 48% and 25%, and for families near poverty - 39% and 56%. These figures are consistent with our earlier expectations of substantial crowding out effect of a living wage on welfare benefits.

We can see that our data findings are consistent with our earlier discussion of the hypothesized examples of three typical Oregon families. As in the examples, single person families gain the most from a living wage increase due to unavailability of most of welfare programs for their families. The crowding out effect in this case happens mostly due to higher federal and state income taxes. Single parent families keep relatively less of a living wage increase than single people (as low as only 16%) due to a higher crowding out effect of welfare benefits and higher taxes. Married couples keep even less of a living wage increase than single parents due to even higher crowding out effect of welfare benefits and taxes.

Data Conclusion

Using the 2003 Oregon CPS, we demonstrated relatively high marginal tax rates for samples of married couples with and without kids. The marginal tax rates become relatively high for single parents and married couples, up to 0.75 and 0.84 in some cases. This happens due to crowding out of welfare assistance and shifts to higher federal and state tax brackets. In many cases, families keep as little as 16% or 25% of a living wage increase, and their disposable income as a measure of their well being does not increase by much. We can conclude that the proposed living wage ordinance will not be a very effective method of raising well being of affected

families due to such high leakages.

In the event of a living wage, affected families will have to pay higher taxes and acquire goods and services they used to receive for free through welfare programs, and their CDI will not increase by the full amount of a gross living wage increase. The next section discusses an alternative method that would raise the standard of living of affected families but would not cause the crowding out of welfare benefits or higher taxes - the state EITC.

VI. AN ALTERNATIVE TO THE LIVING WAGE

Given the analysis above and the evidence of substantial leakage of living wage increases, an obvious question is whether there are any alternatives that would reduce such leakage, or whether such leakages are simple necessary costs to redistribute income to working poor families. In fact, the Earned Income Tax Credit (EITC) is an alternative that does not lead to such leakages and high MTRs.

The EITC is a refundable income tax credit for low-income working families, particularly those with children. The EITC is available to people that have a social security number, have a source of earned income, and fall within the income eligibility limits. Hotz and Scholz (2001) provides background information, as well as insight to the benefits of the EITC and why it is a better means to fight poverty than programs such as the living wage. If a family's tax credit is larger than its tax liability, then that family receives a refund check. That is, the credit directly lowers the taxes a family pays without affecting families' gross income. Therefore, families are still able to participate in government assistance programs because they remain under income eligibility limits. In other words, the increase income through an EITC does not lead to increased taxes for the family, nor does it reduce their eligibility for public assistance programs, the two main leakages for a living wage proposal that cause high MTRs.

Another important difference between the EITC and a living wage, is that all working-poor families are eligible, not just those that happen to fall under the living wage ordinance. Living wage ordinances typically only apply to city workers, workers of city contractors, and/or workers of firms receiving city assistance. In this way, the EITC is non-discriminatory in its eligibility requirements.

The effectiveness of the EITC depends on its participation rate, and there are numerous barriers that prevent people from claiming or filing for the credit. Among these barriers is the idea of opportunity cost. Opportunity cost can be thought of as the cost of an opportunity forgone. Therefore, the cost of filing for the earned income tax credit may be time that could be spent taking care of kids, working, or sleeping. Other barriers that prevent families from filing a claim are language barriers, or comprehension of the tax forms, which can be very intimidating. In contrast to the EITC, the living wage automatically goes to workers in their paychecks. However, both the living wage and the EITC are only effective if the household has a source of earned income.

The EITC is available on the federal, but a number of states and cities (such as New York City) also offer EITCs. Oregon is one of the states with its own EITC. Currently, it allows claimants to receive up to 5% of their federal credit, meaning that if a claimant's federal credit is \$1,000.00, then their maximum state credit would be \$50.00. However, the credit is non-refundable, that is the Oregon tax credit only covers an individual's state tax liabilities. If the same claimant has a state tax liability of \$20.00, that claimant would not be able to keep the difference of \$30.00.

VII. CONCLUSION

The objective of the living wage is to provide a sufficient source of income for low-wage

earners that will reflect the cost of living in the proposed location. However, simply raising the wages of these workers is not the most efficient approach since there are numerous effects that occur. Our analysis concludes that the effect of marginal tax rates of welfare benefits and higher taxes on increased income is a very relevant and crucial factor in considering whether a living wage should be implemented in the city of Eugene.

Our findings show that low-income workers that a sizeable portion of additional earnings created by a living wage law would not end up with the working poor families it is intended to help. This is because the families would have to pay higher state and federal taxes, as well as potentially lose public assistance benefits. Single people, opposed to single mothers and families of four with one primary earner, retain more of the living wage increase in gross earnings because there are less public assistance programs for these groups.

As families face high marginal tax rates and are only able to retain a small portion of their increased gross earnings, we question whether a living wage would be worth implementing. Are the gains that workers may receive worth the costs that the living wage will present as proposed by other research papers? Our research suggests that the living wage poorly targets low-income families. The living wage is meant to provide a sufficient wage for low-income workers to support their families. However, labor force participation for low-income families that would have a worker covered by the living wage is close to only 50%. Although some low-income workers would be covered by the living wage, many other workers, not in poverty, will receive the increased wage. Furthermore, the workers that do receive the living wage are not substantially better off than they were without the living wage. The marginal tax rates associated with living wage families show that they retain only a relatively small portion of their increased income after leakages and facing higher taxes (table F).

Unlike the living wage, the EITC can be claimed directly by all low-income workers and does not increase taxes or lead to loss of public assistance programs. Therefore implementing a living wage is not the most efficient means to assist low-income families in Eugene, and hence the EITC should be considered by local policy makers as a more efficient method to raise the disposable incomes for poverty stricken families.

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APPENDIX: BACKGROUND ON THE EUGENE LIVING WAGE PROPOSAL

The Eugene Springfield Solidarity Network, a local labor coalition, proposed the living wages of \$14.28 for workers without medical benefits and \$11.42 for workers with medical benefits that are meant to reflect the cost of living in Eugene. The proposed living wage was quite high relative to the other metropolitan areas that had living wages. San Francisco has a living wage of \$8.62 without medical benefits and \$7.75 with medical benefits, New York City has a living wage of \$9.50 with medical benefits and \$11.10 without medical benefits, and Santa Monica has a living wage of \$10.25 with medical benefits and \$11.25 without medical benefits. On the other hand, smaller cities such as Lansing, Missouri (\$12.09 with and without benefits), Fairfax, California (\$13.00 with benefits and \$14.75 without benefits), and Ashland, Oregon (\$11.44 with and without benefits) have similarly high living wages, but none exceeding that proposed by Eugene.

The proposed living wage ordinance would affect all regular and temporary city employees working over 600 hours per year (over 11.5 hours per week), all contractors with city contracts totaling more than \$10,000 in 12 months, and all employees of firms receiving more than \$25,000 in city funded assistance in a 12 month period. After a proposed analysis, the living wage proposal was concluded to have an ambiguous impact on the city of Eugene that may have resulted in job losses, worker displacement, and a decrease for city contracts. In 2003, the proposal to implement the living wage over a three year phase in plan was defeated by a 4-3 vote in which many Eugene council members dismissed the proposal as bad public policy that needed to be further studied, and suggested that other methods should be used in assisting low-income families. January 3 of 2005 saw the new mayor, Kitty Piercy, sworn in, reviving the discussion of living wage ordinance for the City of Eugene.

Table A-I Calculation of CDI for a Family of Four.

<i>Benefits</i>	<i>Annual Income / Value of Benefits</i>		
	\$16,000.00	\$22,840.00	\$28,560.00
<i>Benefits and Taxes</i>			
Food Stamps	\$4,080.00	\$2,016.00	\$0.00
Oregon Health Plan	\$928.00	\$0.00	\$0.00
Other Health Care Coverage	\$0.00	\$928.00	\$0.00
Section 8 Housing	\$2,496.00	\$444.00	\$0.00
Low Income Energy Assistance (LIEAP)	\$153.00	\$153.00	\$153.00
WIC	\$445.20	\$445.20	\$445.20
Total Income After Benefits	\$24,102.20	\$26,826.20	\$29,158.20
<i>Taxes</i>			
Federal Tax Paid	\$0.00	\$0.00	\$0.00
Federal Tax Refund	\$4,093.00	\$2,660.00	\$1,450.00
State Tax Paid	\$268.00	\$943.00	\$1,525.00
State Tax Refund	\$0.00	\$0.00	\$0.00
Total Refund Received	\$3,825.00	\$1,717.00	-\$75.00
<i>Disposable Income</i>	<i>\$27,927.20</i>	<i>\$28,543.20</i>	<i>\$29,083.20</i>

Table A-II Calculation of Marginal Tax Rates of Welfare Programs for a Family of Four.

	Change in Gross Earnings / Change in Comprehensive Disposable Income	
	\$16000 - \$22840 / \$27927 - \$28543	\$16000 - \$28560 / \$27927 - \$29083.20
<i>Marginal Tax Rate</i>	0.91	0.91

Table B-I Calculation of CDI for a Single Person.

<i>Benefits and Taxes</i>	<i>Annual Income / Value of Benefits</i>		
	\$16,000.00	\$22,840.00	\$28,560.00
<i>Benefits</i>			
Food Stamps	\$0.00	\$0.00	\$0.00
Oregon Health Plan	\$0.00	\$0.00	\$0.00
Other Health Care Benefits	\$0.00	\$232.00	\$0.00
Section 8 Housing	\$921.00	\$0.00	\$0.00
Low Income Energy Assistance (LIEAP)	\$153.00	\$0.00	\$0.00
WIC	\$0.00	\$0.00	\$0.00
Total Income After Benefits	\$17,074.00	\$23,072.00	\$28,560.00
<i>Taxes</i>			
Federal Tax Paid	\$854.00	\$1,874.00	\$2,736.00
Federal Tax Refund	\$0.00	\$0.00	\$0.00
State Tax Paid	\$1,101.00	\$1,722.00	\$2,235.00
State Tax Refund	\$0.00	\$0.00	\$0.00
Total Taxes Paid	\$1,955.00	\$3,596.00	\$4,971.00

Disposable Income ***\$15,119.00*** ***\$19,476.00*** ***\$23,589.00***

Table B-II Calculation of Marginal Tax Rates of Welfare Programs for a Single Person.

	Change in Gross Earnings / Change in Comprehensive Disposable Income	
	\$16000 - \$22840 / \$15199 - \$19476	\$16000 - \$28560 / \$15199 - \$23689
<i>Marginal Tax Rate</i>	0.36	0.33

Table C-I Calculation of CDI for a Family of Two: a Single Mom with one Child.

<i>Benefits and Taxes</i>	<i>Annual Income / Value of Benefits</i>		
	\$16,000.00	\$22,840.00	\$28,560.00
<i>Benefits</i>			
Food Stamps	\$1,980.00	\$0.00	\$0.00
Oregon Health Plan	\$464.00	\$0.00	\$0.00
Other Health Care Coverage	\$0.00	\$464.00	\$0.00
Section 8 Housing	\$921.00	\$0.00	\$0.00
Low Income Energy Assistance (LIEAP)	\$153.00	\$153.00	\$0.00
WIC	\$445.20	\$445.20	\$0.00
Total Income After Benefits	\$19,963.20	\$23,902.20	\$28,560.00
<i>Taxes</i>			
Federal Tax Paid	\$0.00	\$0.00	\$558.00
Federal Tax Refund	\$2,287.00	\$1,201.00	\$0.00
State Tax Paid	\$0.00	\$822.00	\$1,609.00
State Tax Refund	\$2,286.00	\$0.00	\$0.00
Total Tax Paid	-\$4,573.00	-\$379.00	\$2,167.00

Disposable Income ***\$24,536.20*** ***\$24,281.20*** ***\$26,393.00***

Table C-II Calculation of Marginal Tax Rates of Welfare Programs for a Family of Two.

	Change in Gross Earnings / Change in Comprehensive Disposable Income	
	\$16000 - \$22840 / \$24536.20 - \$23817.20	\$16000 - \$28560 / \$24536.2 - \$26393.00
<i>Marginal Tax Rate</i>	1.04	0.85

Table D Welfare Participation Characteristics of Oregon Families

Welfare program	2002 Participation in Welfare Programs		
	Over the entire sample	Family below 200% of FPL	Family below 100% of FPL
No Welfare Participation	89.42%	69.96%	57.57%
OHP Participation Only	13.86%	32.55%	48.48%
OHP and Food Samps Participation	7.26%	21.70%	36.63%
OHP and Section 8 Participation	1.55%	4.94%	9.90%
OHP and LIEAP Participation	13.86%	32.55%	48.88%
OHP, Food Stamps and Section 8 Participation	1.46%	4.65%	9.90%
OHP, Food Stamps and WIC Participation	2.50%	7.84%	14.87%
OHP, WIC and LIEAP Participation	0.06%	2.00%	2.75%
OHP, Food Stamps and LIEAP Participation	1.52%	4.94%	5.50%
Food Stamps Participation Only	11.80%	31.20%	45.18%
LIEAP Participation Only	3.82%	11.90%	11.57%
WIC Participation Only	9.30%	23.54%	30.57%
Section 8 Participation Only	2.42%	6.88%	11.30%
Work Force Participation	62.19%	42.31%	33.95%
Family Income below the Poverty		30.84%	10.85%

Table E Welfare Participation Characteristics of Families that have at least One Worker Who Qualifies for a Living Wage

Welfare program	2002 Participation in Welfare Programs		
	Over the entire sample	Family below 200% of FPL	Family below 100% of FPL
No Welfare Participation	86.67%	68.31%	53.84%
OHP Participation Only	14.72%	31.53%	47.12%
OHP and Food Samps Participation	7.86%	20.09%	34.13%
OHP and Section 8 Participation	1.45%	4.02%	9.62%
OHP and LIEAP Participation	14.72%	31.53%	47.11%
OHP, Food Stamps and Section 8 Participation	1.34%	3.71%	9.62%
OHP, Food Stamps and WIC Participation	2.56%	7.11%	14.90%
OHP, WIC and LIEAP Participation	0.72%	2.01%	3.36%
OHP, Food Stamps and LIEAP Participation	1.34%	3.71%	3.84%
Food Stamps Participation Only	13.94%	30.75%	42.30%
LIEAP Participation Only	4.18%	11.28%	12.01%
WIC Participation Only	13.05%	27.97%	38.47%
Section 8 Participation Only	2.62%	6.18%	10.09%
Work Force Participation	71.74%	61.11%	53.40%
Family Income below the Poverty		36.08%	11.60%

Table F The MTRs Across Given Sub-Samples

Subsample		Value of the Average MTR	
	Wage per hour	\$11.42 / hr with benefits	\$14.28 / hr without benefits
Single Person Families	Entire Sample	0.36	0.16
	Families originally below 100% of FPL	0.32	0.29
	Families originally between 100% and 200% of FPL	0.34	0.32
Single Parent Families	Entire Sample	0.45	0.54
	Families originally below 100% of FPL	0.64	0.84
	Families originally between 100% and 200% of FPL	0.49	0.54
Married Couples	Entire Sample	0.73	0.57
	Families originally below 100% of FPL	0.52	0.75
	Families originally between 100% and 200% of FPL	0.61	0.44