Act 21 Research and Analysis In Support of the Livable Income Study Committee

Prepared for the
Vermont State Legislature
Livable Income Study Committee

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This report was prepared for the State of Vermont Legislative Livable Income Study Committee, Rep. Barbara Postman, Chair

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Act 21 Research and Analysis for the Legislative Livable Income Study Committee

Part I: Executive Summary, November 2, 1999

Introduction

Act 21 specifies a wide range of research and analysis associated with the issue of a "livable wage" in Vermont and related State public policy options. These analytic and research goals are detailed in Act 21, Section 2, and have been amplified and expanded in Draft 2.0 of the "Livable Wage Committee Discussion Document" and verbal Committee instruction since July 16, 1999. This research and analysis has been conducted under the direction of the Legislative Livable Income Study Committee, Chaired by Representative Barbara Postman.

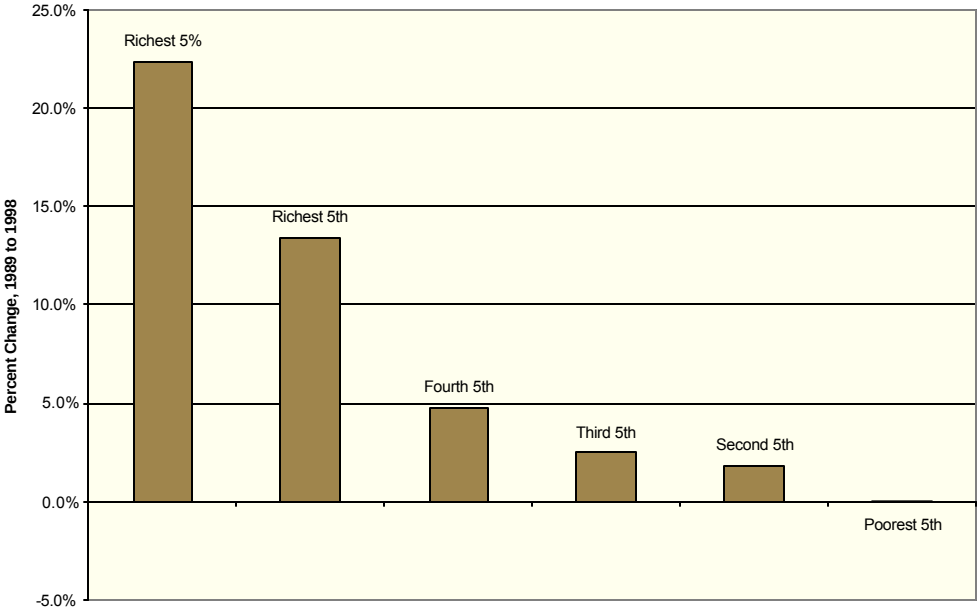
This report is organized into three sections: Part I) An executive summary containing primary findings and recommendations; Part II) A more detailed discussion of the 20 issues and related questions outlined in the research Scope of Work; and Part III) Appendices containing more technical material associated with source data, methodological and analytic output.

Background

The decade of the 1990s has witnessed unprecedented growth in aggregate U.S. income, wealth and prosperity. The economic expansion we are currently enjoying will soon be the longest in recorded U.S. economic history. These stellar aggregate measures of economic progress, however, mask a dramatic shift in the distribution of income and wealth over the past 20 years that has effectively excluded tens of millions of Americans from these gains.

Since about 1980 the distribution of income and wealth has become increasingly unequal and is now more so than at any time since World War II. The average income of the richest 5% of the population in 1981 was 14.7 times higher than that of the lowest 20% of the population. It is now 24.1 times higher. The U.S. Census Bureau recently reported that not until 1998 did real U.S. median household income exceed 1989 levels. Unfortunately, for the poorest 20% of the population, real average income as of 1998 was still below 1989 levels.

Growth in Real Household Income Since 1989



Source: U.S. Census Bureau

This stark divergence in income growth (*which excludes capital gains income)* is even more pronounced with respect to wealth. As of 1995, booming stock market values had pushed the share of total U.S. net worth owned by the wealthiest 1% of the population above 35% for the first time since the Federal Reserve Board began collecting comparable statistics in 1963. Statistics for 1998, which will be released soon, are likely to show an even greater concentration of wealth.

There are many possible causes of this polarization of economic fortunes, including economic globalization, public policy changes and technological change, none of which point toward a reversal of this trend anytime soon. This reality may pose important economic, social and political challenges to lawmakers in the years to come.

With wages and earnings of low income workers lagging well behind the economy as a whole, one pressing issue that has arisen is that low income workers are finding it increasingly difficult to earn a decent living, despite full time work. This issue is the focus of the Livable Income Study Committee and this analysis.

A Livable Income in Vermont

The Committee began its work with a definition of exactly what a "livable income" is in Vermont. A livable income is defined as an annual family income that is required to meet essential human needs, consistent with a decent standard of living.

Livable income levels differ for families, based on where they live, whether and how many children they have, whether they receive employer-assisted health care, and the number adults working in the family. With direction from the Livable Income Study Committee, "basic needs budgets" were constructed for 6 family configurations (which encompass more than 90% of all low income families in the state) for both rural and urban locations, with and without employer assisted health care.

These basic needs budgets are based on minimal costs for essential items such as food, housing, medical insurance, transportation, child care, clothing, telephone and a small provision for savings and personal expenditures. As detailed in Part II, Tables 1B-G, these budgets include no frills. For example, the USDA "moderate" food plan used in the budgets assumes a food allowance for a female, age 20 to 50, of $38.10 *per week* - about the same as the $37 *per day* maximum food allowance for Vermont legislators.

Unlike aggregate U.S. cost of living measures, such as the Consumer Price Index or various GDP deflators, the basic needs budgets used herein are specific to Vermont and based only on the costs of essential needs. They represent a standard of decency below which no working Vermont family should fall.

We estimate that about 60,000 Vermonters currently live in a family where at least one adult works full time and does not earn a livable income. This represents about 10% of all families in Vermont.

The Minimum Wage and a Livable Wage

A corollary to a livable income is an hourly wage rate that would generate a livable income, assuming full-time, year-round employment, without public assistance. This wage rate is referred to as a "livable wage."

From an historical perspective, the first U.S. minimum wage, enacted in 1938, was originally envisioned as a livable wage. As Franklin Roosevelt stated, in urging passage of this legislation:

"No business which depends for its existence on paying less than living wages to its workers has any right to continue in this country. By living wages, I mean more than a bare subsistence level – I mean the wages of a decent living."

There is no single livable wage for all Vermonters. Characteristics such as family size, geographic location, the presence of employer health benefits, etc., all affect how much a family must earn to provide basic needs. Livable wage rates currently run from a low of $8.10/hour for two working adults with no children located in an urban area, with employer assisted health care, to a high of $23.68/hour for a single working parent with two children in an urban area, with no employer assisted health care. A weighted "average" livable wage for Vermonters would probably be about $12.00/hour.

A portion of this research and analysis examined the possibility of raising the Vermont minimum wage towards a level consistent with a minimum livable wage. Accordingly, we estimated a range of economic and fiscal impacts associated with hourly minimum wage increases to $6.50, $7.50 and $8.50.

We find that a minimum wage increase to $6.50 or $7.00/hour, would probably have negligible, if any, negative aggregate economic consequences and could be an important component in advancing some of the lowest income workers towards a livable income. We also find, however, that Vermont's use of the minimum wage to achieve anything close to an "average" livable wage has serious drawbacks that limit its efficacy in achieving the overall objective of a livable income for all working Vermonters.

These drawbacks are associated with three important findings:

1) Earned income growth among the lowest income workers can result in precipitous state and federal public benefit reductions, substantially offsetting and in some cases completely negating gains in net family income. This may leave some low income families with little or no economic gain and can also result in economic costs to the state from the loss of inflexible federal transfer payments.

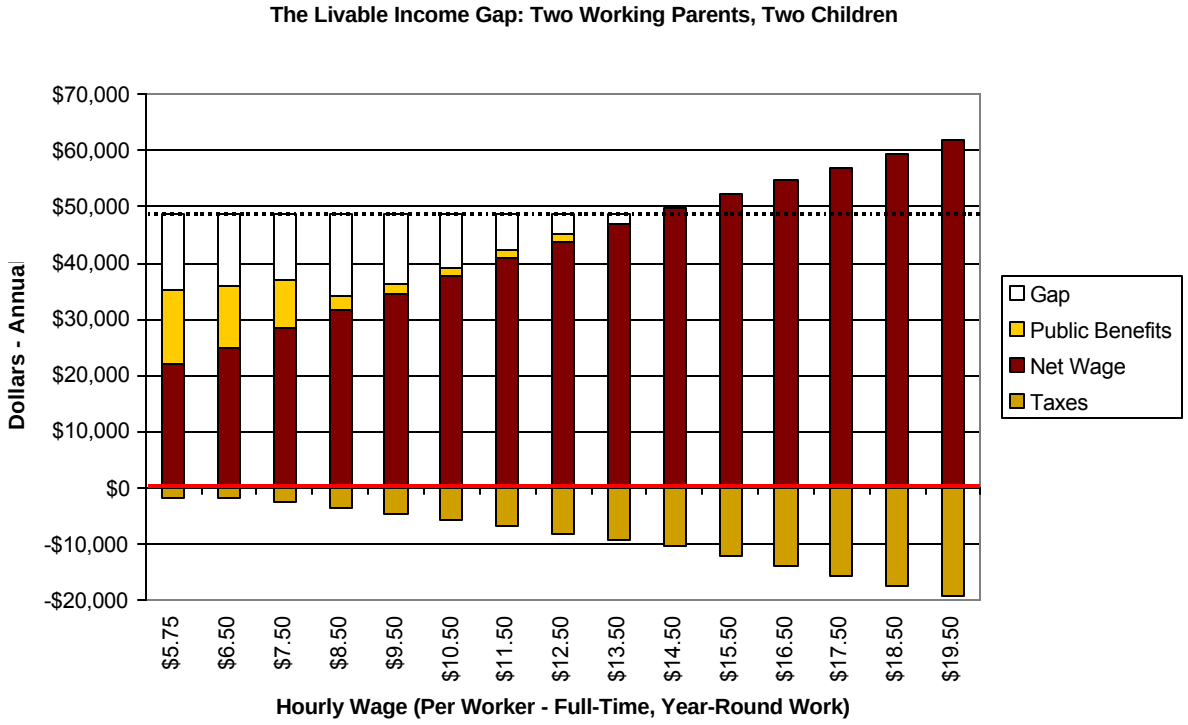
2) Federal (especially) and State income taxes consume a significant proportion of marginal income well below livable income levels. These high marginal tax rates in tandem with public benefit reductions sap work incentive and delay achievement of a livable income.

3) Minimum wage increases that even approach an average livable wage would result in significantly fewer jobs for low wage workers. A substantial increase in the relative cost of labor will result in a reduction in the amount of labor used. This occurs both from incremental reductions in hours and jobs within firms continuing or beginning operation in the State, and the elimination or relocation out-of-State of other firms. A state can mandate the minimum wage an employer must pay, but it cannot mandate the minimum number of workers an employer hires or the minimum number of hours they work. A small state such as Vermont cannot expect to sustain a pronounced variation with the U.S. minimum wage without counterproductive economic consequences.

These findings suggest the need for a range of coordinated policy actions associated with taxes, public benefits, Federal initiatives, economic development, health care, education and job training, and minimum employer standards to address the gap between existing income levels and livable incomes.

The Livable Income Gap

Some of the interactions associated with achieving a livable income are illustrated in the below chart. It is an example, based on a Vermont family consisting of two working adults and two children, of how some of the major components affecting net income, taxes, and public benefits interact at various wage levels and how they relate to a livable income.



The dotted black line marks the livable income level for this family configuration. The white gap at the top of the bars represents the gap between a livable income and actual income based on full time work for both parents at various wage levels. The lightly shaded (orange) section below the gap represents the cash value of all state and federal public benefits available at various wage levels. The dark (red) section represents earned income after taxes. The combination of after tax income and public benefits constitutes net income. The section shaded with diagonal lines represents income-based taxes (including social security and Medicare payments, expressed as a negative number). These do not include

excise taxes such as sales, gasoline or beverage taxes. Detailed charts similar to the above are contained in Part II of this report for various family configurations and public benefits components.

State governments can take action to close the livable income gap in three general ways:

1) Increase earned income through minimum wage legislation, high quality education, job training and focused economic development policies;

2) Decrease livable income thresholds by lowering or eliminating taxes until a livable income is achieved, and encouraging private benefits such as health care, child care and transportation assistance; and

3) Increase and simplify public benefits to Vermont workers in ways that preserve incentives to work, insure that benefits reach those in need, and relate to a livable income.

Other Findings and Recommendations

Other primary findings and recommendations for Committee discussion and review are summarized below. More complete analyses and discussion of these recommendations and the findings which led to them are contained in Part II of this report.

- Establish formal Vermont basic needs budgets and regularly update and expand these to include all family configurations. These budgets should be used to establish Vermont livable income levels and should inform tax, welfare and other policy considerations.

- Consider raising minimum State taxable income levels, consistent with livable income levels. State (and federal) income and other taxes should not act as a disincentive to work and should not take away earned income until a livable income has been achieved. Consider State excise tax credits for working families who do not earn a livable income. These tax levels should be adjusted each year in accordance with Vermont-specific basic needs budgets.

- Coordinate all public benefits programs, including ANFC, Medicaid, VHAP, Food Stamps, Dr. Dynasaur, Section 8 and other housing assistance, Child Care, Renter Rebates, Telephone Lifeline, EITC's, etc., so as to remove identified benefits "cliffs" and insure that work incentives are preserved as wages rise.

- Coordinate minimum wage increases with State policies to insure that a maximum amount of state and federal tax savings from higher taxes and lower transfer payments be returned to low wage workers and/or retained in the state. These

policies should address both potential reductions in Federal transfer payments and increased Federal income tax payments. They may include:

- o Policy coordination with the Agency of Human Services and careful public benefits program modifications to insure that federal transfer payments are maximized;
- o Possible State coordination and/or employer assistance in maximizing the use of tax-free employer benefits such as health care, child care, and transportation assistance in lieu of taxable income; and,
- o Possible expansion of the State EITC as a mechanism for maintaining incentives to work.

- Establish a formal dialog with all Vermont Federal Congressional members and their staffs to convey the findings of this study and explore possible Federal pilot programs and Federal legislation to be coordinated with State policy changes. A great deal of the work disincentives and loss of net income from wage increases stem from existing Federal tax and welfare policies. State policies must be designed and coordinated in the context of these Federal policies. As a small state, Vermont citizens have exceptional access to their Congressional representatives and may be better positioned to experiment with Federal pilot programs since Federal impacts would be relatively small.

- Develop and maintain essential statistical and analytic information necessary to regularly evaluate State minimum wage changes and related policy options. Regularly review and analyze income and wage distribution data within the State. This includes development and maintenance of an IRS-based Analytic Income Tax Database housed in the State Tax Department, additional DET survey data, and critical follow-up studies to measure various impacts of minimum wage increases and related policy actions in Vermont.

- The real (inflation-adjusted) effective minimum wage for Vermonters has declined over the last 30 years from a high of about $7.85 (in today's dollars) in 1968 to a low of about $4.75 in 1994, to it's current level of $5.75. While we do not unanimously recommend automatic minimum wage indexation, it is essential that minimum wage changes and exclusions be reviewed annually, in light of growth in basic needs budgets, local information on changing wage distributions, Federal changes in the minimum wage, other state minimum wage changes (especially in surrounding states), and analysis of relevant economic conditions.

- Special attention should be given to policy issues affecting families with children. There are many human issues associated with this analysis that do not lend themselves to easy quantification and may take many years to be fully recognized. Many of these relate to the needs of workers with children. Such workers are often required to perform two jobs: one that earns sufficient income to survive and one of being a responsible parent. There are tremendous social and public costs to requiring parents to sacrifice the latter for the former. Public policy should pay particular attention to the time requirements associated with parenting and not ignore the real costs of parental neglect. Child care benefits should be adjusted to avoid rapid loss of benefits with income gains, and consideration should be given to more expansive tax credits for working families with children.

- Consider creation of a tiered minimum wage that allows application of some or all of the cash value of employer benefits against a stated minimum wage.

- Evaluate the relative effectiveness of various economic development and workforce training programs and coordinate these with wage and tax policies.

- The use of temporary, part-time and contract workers has significantly increased over the past 20 years. Most employment and labor laws, however, focus primarily on the interests of regular full-time workers. We recommend a thorough assessment of these laws to insure they adequately protect the large and growing number of nonstandard work arrangements, with specific attention to the extension of pro-rated benefits for part-time and temporary workers.

Act 21 Research and Analysis In Support of the Livable Income Study Committee

Part II

Act 21 Research Goals and Committee Work Scope Interrogatory

Issue # 1

"Determine the amount of a minimum livable wage rate with recommendations for achieving it in a reasonable time, a system for maintaining a livable minimum wage in light of inflation and any other economic factors that may affect buying power." [Act 21, §2(b)(1)]

Related questions: "What is a minimum livable wage rate in Vermont? How is it defined? How sensitive is it to various assumptions of 'basic needs'? How can it be adjusted over time to account for inflation and related factors? Can it be achieved in a reasonable period of time? If not, why? If so, will there be any negative economic impacts?" [Scope of Work]

How is a minimum livable wage rate defined?

A minimum livable wage rate is an hourly wage that, with full-time employment, produces income necessary to cover basic needs plus federal and state taxes.

What are basic needs?

The standard for earned income must be higher than poverty, which is defined as material deprivation. We assume that compensation from full-time work should be adequate to ensure economic self-sufficiency and a decent standard of living.

What is self-sufficiency?

According to the U.S. General Accounting Office, self-sufficiency "requires independence from publicly provided income and housing assistance, and adequate income to provide for basic needs."[1]

What is a decent standard of living?

Something more than subsistence including food, clothing, shelter, health insurance, transportation, telephone and various personal and household expenditures. For many families, childcare has become a necessity. Some also consider life insurance and savings for supplemental retirement, children's education and emergencies as elements of a "decent" standard of living and a prudent expenditure for families.

How much is enough?

Certain subjective judgments must be made about the quality and quantity of goods and services that comprise a decent standard of living. Ultimately, this is a political decision.

[1] *Self-sufficiency: Opportunities and Disincentives on the Road to Economic Independence*, US GAO, GAO/HRD-93-23, August, 1993.

What are the methodological choices for defining a livable wage and how sensitive are they to various assumptions of "basic needs?"

There are at least four options:

1. Multipliers: This method is the basis for the federal poverty level established in 1955. Using national survey data on family consumption patterns, this approach takes the cost of a basic commodity as a percentage of an average family budget and uses that percentage to derive a multiplier. In the case of the poverty measure, the federal government used food as the basic commodity. Experts at USDA developed an "economy food plan"[2] that met minimum nutritional requirements and the component food items were priced around the country and averaged. Based on the Consumer Expenditure Survey, food costs were estimated to be one third of a total family budget. Therefore, the multiplier was three. Thus, if the annual cost of the "economy food plan" were $1,000, the poverty level would be $3,000.

   The advantage of this approach is simplicity but it ignores changes in consumption patterns that can affect the multiplier. For example, at the time of the adoption of the poverty measure, it was assumed there was a parent at home to care for children so childcare was not considered part of the family budget. With changes in labor force participation, however, childcare has become a necessity for many families. If childcare was included in the family budget, food would represent a smaller percentage of total expenditures and the multiplier would be higher. Furthermore, unless adjustments are made over time (which has not been done with the poverty measure), this approach will not reflect changes in the relative cost of one or more elements of a family budget. For example, the rate of increase in the costs of housing and health care has been much greater than the rate of increase for food. As a result, the cost of food has declined as a percentage of total expenditures and the multiplier is no longer accurate. It is for these reasons (and others) that many prominent economists and statisticians have called for changes in the federal poverty measure.[3]

2. Categorical: This approach requires the creation of a basic needs budget and was used by the Bureau of Labor Statistics (BLS) for the Family Budget Program until it was discontinued in the 1980's. This method was refined by Renwick & Bergmann in 1993[4] and was used in the Vermont Job Gap Study. The elements of such a budget are subject to debate but most people are likely to agree on the basic categories for a working family – food, housing, transportation, health care, childcare (where necessary), clothing and household expenses, and personal expenses. The development of such a budget requires some normative choices regarding the adequacy of all the elements (quality and quantity) but in some cases there are "official" or "expert" standards available.[5] In the absence of such standards, there is useful data available from the Consumer Expenditure Survey on family consumption

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2 Now referred to as the "Thrifty Food Plan."

3 Citro, Constance F. and Michael, Robert T., editors, Measuring Poverty: A New Approach, National Academy Press, Washington, D.C., 1995

4 Renwick, Trudi J. and Bergman, Barbara R., "A Budget Based Definition of Poverty," *Journal of Human Resources*, V. 28, #1, Winter, 1993.

5 For example, USDA food plans, survey data from HUD, DOT, and HCFA (health care).

patterns for various income groups. This information can be used to set allowances for certain expenditures such as clothing and household expenses.

The advantages of the budget-based approach are that it can be updated regularly to reflect changes in consumption patterns (such as childcare) and it does not require the use of a multiplier. On the other hand, there will always be some assumptions embedded in the budget that might be subject to dispute such as the number of children expected to share bedrooms or the appropriateness of the methodology used for HUD's Fair Market Rents or USDA's Food Plans.

3. Relative thresholds: This approach simply compares "the income or consumption of a family with that of other typical families. [It] designates a point in the distribution of income or expenditures to serve as the [benchmark] for a reference family."[6] As the name implies, this method is based on the assumption that the benchmark (in this case, a livable wage) must not be fixed but should change over time to reflect the social nature of economic conditions. That is, as the median family income fluctuates, so too will public perceptions of a "decent" standard of living. When used in establishing poverty thresholds, the benchmark has often been one half the median income. A livable wage threshold would likely be somewhat higher.

   The advantages of this approach are that it is easy to understand, easy to calculate, and is self-updating. On the other hand, relative thresholds are totally arbitrary since they're not based on a budget. Moreover, updating the threshold can be problematic due to changes in household or family composition. That is, if the original reference family were four persons but the average family size declined (as it has), median family income would no longer represent the same per capita expenditures so the standard of living may no longer be equivalent. For example, if the median income for a family of four were $20,000, per capita expenditures would be $5,000. But if the family only had three members, the per capita expenditure would be $6,667. Finally, this approach cannot account for different circumstances among families that require non-discretionary expenditures such as childcare. As a result, the threshold amount would permit more discretionary spending for some families than it would for others.

4. Subjective thresholds: This approach relies on public opinion data. Sample households are surveyed and asked to estimate the amount of income necessary to make ends meet. Although this method avoids reliance on "experts," it has many disadvantages. Responses to such surveys are known to vary significantly based on the questions asked and other differences in methodology. In addition, responses often show wide variation around the mean (i.e., large standard errors).[7] Finally, individual responses may reflect differences in expectations rather than objective perceptions of need.

Recommendation

There is no truly objective way to establish a livable wage since all the available options entail judgment. However, we find the Relative and Subjective approaches

[6] Op cit., Measuring Poverty, p. 124.
[7] Op cit., Measuring Poverty, p. 135.

especially inappropriate because they are totally arbitrary. The Multiplier approach is appealing because of its relative simplicity but it is not sufficiently sensitive to changes in circumstances or prices to be useful over time. Although not without shortcomings, the Categorical (or budget-based) approach has the most advantages and the fewest disadvantages.

The Categorical approach requires consensus on the elements of the budget and about the appropriate levels of adequacy for each item. Fortunately, there are generally accepted standards and reliable data for two key items (i.e., food and housing). For items without such standards, there is enough data available for policy makers to make their own judgments. In addition, the budget-based approach can be updated regularly without difficulty and can be easily adapted for different family sizes. Finally, for those budget items not based on local or regional data, it is possible to adjust average national expenditures for regional variations using the Consumer Expenditure Survey. Listed below are the proposed budget categories and data sources used in the livable wage estimates included in this report. For detailed information about sources and methodology, see Appendix 1.

Table 1A

Basic Needs Budget Categories & Data Sources		
Budget Categories	Data Source(s)	Date & Frequency
Food	U.S. Dept. of Agriculture (USDA), Center for Nutrition Policy & Promotion, "Low Cost Food Plan"	USDA – 6/99 monthly
Housing	U.S. Dept. of Housing & Urban Development (HUD), "Fair Market Rents"	HUD – 1998 annually
Transportation	U.S. Dept. of Transportation (DOT), National Personal Transportation Survey, Demographic Special Reports and Internal Revenue Service (IRS) cost per mile for business travel	DOT – 1990 occasionally[8] IRS – 1999 annually
Health care	Kaiser Permanente, CHP Plan 910 (for single, two-persons, and families)	CHP – 12/98 annually[9]
Dental care	Northeast Delta Dental, Preventer 1 (small bus.) (for single, two-persons, and families)	NDD – 7/99 annually
Childcare	Vermont Department of Social & Rehabilitation Services (SRS), Office of Childcare Services (rural) and Child Care Resource (CCR - urban)	SRS – 1998 annually CCR – annually
Clothing & HH expenses	U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey (CES)	CES – 1997 annually
Personal expenses	Derived from Consumer Expenditure Survey	CES – annually
Telephone	Bell Atlantic, Standard Use Measured Service	Bell – 1999
Renter's insurance	Smith, Bell & Thompson (SBT)	SBT – 1999
Savings	Fixed percentage of before-tax income	NA
Life insurance	National Life of Vermont	Nat. Life – 1999

[8] DOT has completed the 1995 National Personal Transportation Survey but has not yet published a Demographic Special Report with the detailed information about miles traveled by gender, work status and location.

[9] Although CHP is leaving VT, the figures can be updated easily with policy quotes from another provider.

Savings / supplemental retirement: Most would agree that it's prudent for families to save for their children's education, supplemental retirement, and emergencies. Reasonable people may disagree about an appropriate amount of monthly savings but not its importance to a family's security and independence.

Life insurance: Again, it's prudent for wage earners with children to be insured. Although many Vermonters receive life insurance as a fringe benefit of employment, at least as many do not (see Appendix 1 for details).

Debt service: Although debt is a reality for most families, a livable wage (combined with fiscal discipline) should allow families to avoid consumer debt. Therefore, we have not included it in our draft budget. If policy makers choose to include debt service in the basic needs budget, data for average consumer debt by income class is available from the Federal Reserve Board.

How can the livable wage rate be adjusted over time to account for inflation and related factors?

One of the advantages of using a basic needs budget is that the costs for most budget items are based on reliable sources that are updated frequently so there is no need to use the CPI. For example, the following sources are updated regularly: USDA Food Plans -- monthly, and HUD FMR's, IRS mileage expense, and SRS and CCR childcare costs – annually. Most of the other categories are based on current consumer prices that can be updated at will (e.g., telephone, health, dental, life, and renter's insurance).

Can a livable wage be achieved in a reasonable period of time? If not, why? If so, will there be any negative economic impacts?

These subjects are addressed in Issues 3, 5 and 9.

What is a minimum livable wage rate in Vermont?

Estimated livable wage rates for 1998 are summarized below in Chart 1A and are shown in detail on the following pages. Tables 1B through 1G include estimates for six (6) different family units in both rural and urban settings, with three different sets of assumptions.

It's important to note that the total cost of meeting basic needs is found in Column A, for which we assumed that each worker paid the full cost of health insurance. This is the cost of meeting all the family's basic needs without any assistance from the employer or the state. In Column B, we assumed that each worker received health insurance benefits from the employer, and that Dr. Dynasaur covered any children. Therefore, the difference in the "equivalent hourly wage" between columns A and B represents the value of the employer's contribution to health insurance and Dr. Dynasaur. The combined value of these two benefits ranged between $1 per hour and $4 per hour.

Livable wage estimates

Wage estimates are an average of the urban and rural estimates from Column B of Tables 1B through 1G on the following pages.

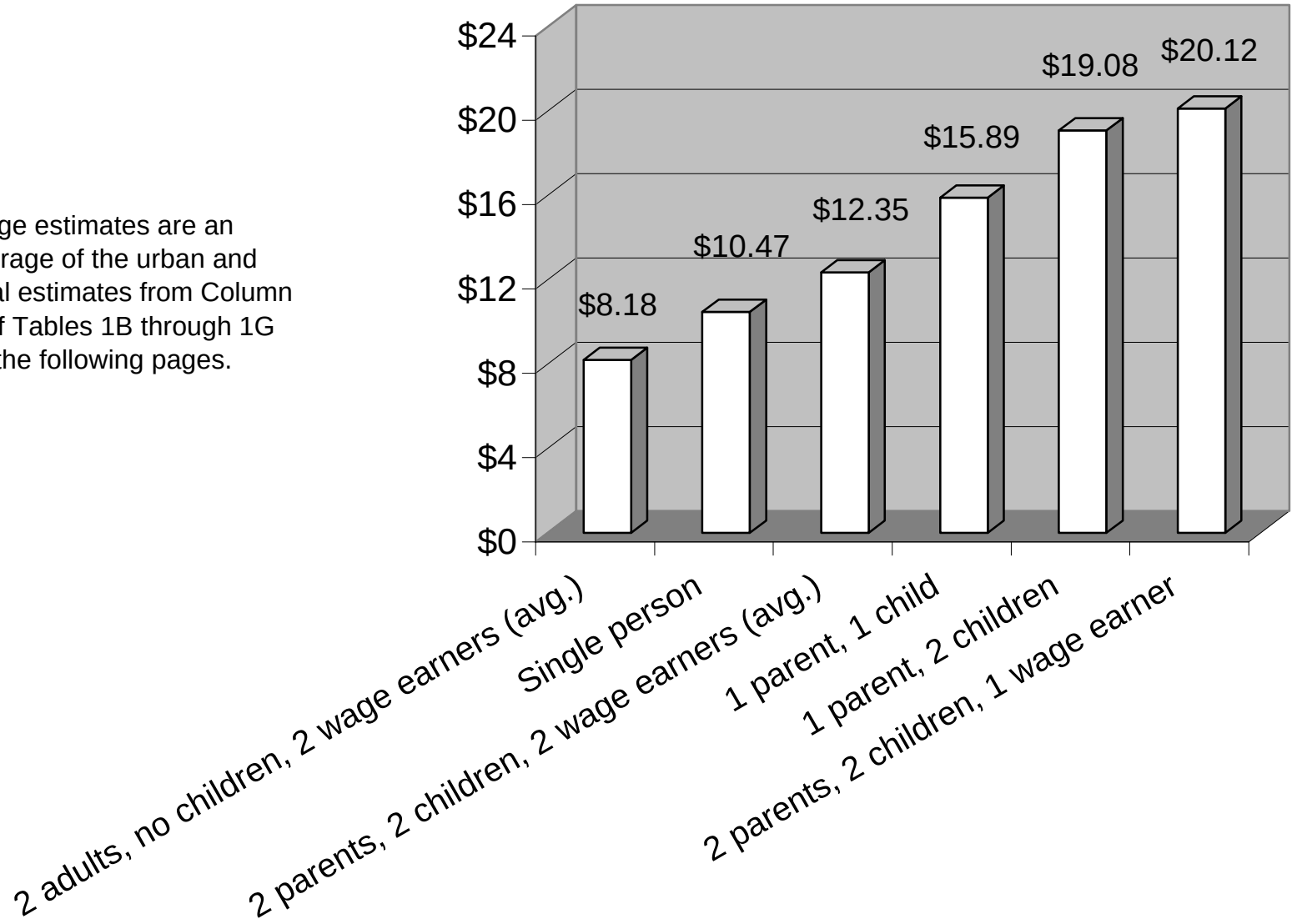


Table 1B

Estimated Cost of Basic Needs and Livable Wage

Single Person

(Full-time work with and without employer-assisted health care)

	Urban			Rural		
	A	B	C	A	B	C
	No employer assisted health care	With employer assisted health care	With employer assisted health care	No employer assisted health care	With employer assisted health care	With employer assisted health care
Category	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**
	Moderate Cost Food Plan		Low Cost Plan	Moderate Cost Food Plan		Low Cost Plan
Food	$206	$206	$169	$206	$206	$169
Rent & Utilities	519	519	519	455	455	455
Health Care[1]	233	109	109	233	109	109
Transportation	223	223	223	255	255	255
Child Care	0	0	0	0	0	0
Clothing / Household	196	196	196	196	196	196
Telephone	36	36	36	36	36	36
Personal Exp.	60	60	30	60	60	30
Renter's Insurance	10	10	10	10	10	10
Dental insurance	36	36	36	36	36	36
Term Life Insurance	0	0	0	0	0	0
Savings (5%)	76	70	0	74	68	0
Total Monthly Expenses	$1,595	$1,465	$1,328	$1,561	$1,431	$1,296
Annual Expenses	$19,139	$17,577	$15,936	$18,736	$17,174	$15,552
Federal & State Taxes[2]	$5,094	$4,410	$3,688	$4,950	$4,390	$3,677
Annual Income	**$24,233**	**$21,987**	**$19,624**	**$23,686**	**$21,564**	**$19,229**
Equivalent Hourly Wage	**$11.65**	**$10.57**	**$9.43**	**$11.39**	**$10.37**	**$9.24**

1. Employer contribution = 66% of the monthly premium cost for a single person.
2. Includes federal & state income taxes, FICA and Medicare.

See Appendix 1 for complete description of methodology.

Table 1C

Estimated Cost of Basic Needs and Livable Wage

Two Adults with No Children

(Full-time work with and without employer-assisted health care)

	Urban			Rural		
	A	B	C	A	B	C
	No employer assisted health care	With employer assisted health care	With employer assisted health care	No employer assisted health care	With employer assisted health care	With employer assisted health care
Category	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**
	Moderate Cost Food Plan		Low Cost Plan	Moderate Cost Food Plan		Low Cost Plan
Food	$410	$410	$322	$410	$410	$322
Rent & Utilities	519	519	519	455	455	455
Health Care[1]	465	169	169	465	169	169
Transportation	591	591	591	693	693	693
Child Care	0	0	0	0	0	0
Clothing / Household	219	219	219	219	219	219
Telephone	36	36	36	36	36	36
Personal Exp.	120	120	60	120	120	60
Renter's Insurance	10	10	10	10	10	10
Dental insurance	62	62	62	62	62	62
Term Life Insurance	19	19	0	19	19	0
Savings (5%)	123	108	0	124	110	0
Total Monthly Expenses	$2,574	$2,263	$1,988	$2,613	$2,303	$2,026
Annual Expenses	$30,883	$27,153	$23,856	$31,361	$27,632	$24,312
Federal & State Taxes[2]	$7,893	$6,555	$5,373	$8,095	$6,727	$5,536
Annual Income	**$38,776**	**$33,708**	**$29,229**	**$39,456**	**$34,359**	**$29,848**
Equivalent Hourly Wage	**$18.64**	**$16.21**	**$14.05**	**$18.97**	**$16.52**	**$14.35**
Avg. per wage earner	**$9.32**	**$8.10**	**$7.03**	**$9.48**	**$8.26**	**$7.18**

1. Employer contribution = 79% of the monthly premium cost for a two-person family.
2. Includes federal & state income taxes, FICA and Medicare.

See Appendix X for complete description of methodology.

Table 1D

Estimated Cost of Basic Needs and Livable Wage

Single Parent with One Child

(Full-time work with and without employer-assisted health care + Dr. Dynasaur)

	Urban			Rural		
	A	B	C	A	B	C
	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur
Category	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**
	Moderate Cost Food Plan		Low Cost Plan	Moderate Cost Food Plan		Low Cost Plan
Food	$315	$315	$256	$315	$315	$256
Rent & Utilities	$692	$692	$692	$570	$570	$570
Health Care[1]	465	164	164	465	164	164
Transportation	224	224	224	255	255	255
Child Care	414	414	414	387	387	387
Clothing / Household	219	219	219	219	219	219
Telephone	36	36	36	36	36	36
Personal Exp.	120	120	60	120	120	60
Dental insurance[2]	62	36	36	62	36	36
Renters Insurance	10	10	10	10	10	10
Term Life Insurance	12	12	12	12	12	12
Savings (5%)	128	112	0	123	106	0
Total Monthly Expenses	$2,697	$2,354	$2,123	$2,574	$2,230	$2,005
Annual Expenses	$32,369	$28,249	$25,476	$30,883	$26,762	$24,060
Federal & State Taxes[3]	$7,284	$5,806	$4,812	$6,751	$5,273	$4,304
Annual Income	**$39,653**	**$34,055**	**$30,288**	**$37,634**	**$32,035**	**$28,364**
Equivalent Hourly Wage	**$19.06**	**$16.37**	**$14.56**	**$18.09**	**$15.40**	**$13.64**

1. For columns B and C, we assumed the child is covered by Dr. Dynasaur so the employer only contributes to a single person policy. Employer contribution = 66% of the premium.
2. Except for column A, the child's dental care is covered by Dr. Dynasaur so the cost is for a single person only.
3. Includes federal and state income taxes, FICA and Medicare.

See Appendix 1 for complete description of methodology.

Table 1E

Estimated Cost of Basic Needs and Livable Wage

Single Parent with Two Children

(Full-time work with and without employer-assisted health care)

	Urban			Rural		
	A	B	C	A	B	C
	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur
Category	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**
	Moderate Cost Food Plan		Low Cost Plan	Moderate Cost Food Plan		Low Cost Plan
Food	$462	$462	$373	$462	$462	$373
Rent & Utilities	$692	$692	$692	$570	$570	$570
Health Care[1]	634	209	209	634	209	209
Transportation	224	224	224	255	255	255
Child Care	607	607	607	568	568	568
Clothing / Household	285	285	285	285	285	285
Telephone	36	36	36	36	36	36
Personal Exp.	180	180	90	180	180	90
Dental insurance[2]	105	36	36	105	36	36
Renters Insurance	10	10	10	10	10	10
Term Life Insurance	14	14	14	14	14	14
Savings (5%)	162	138	0	156	131	0
Total Monthly Expenses	$3,411	$2,893	$2,576	$3,275	$2,756	$2,446
Annual Expenses	$40,937	$34,713	$30,912	$39,299	$33,075	$29,352
Federal & State Taxes[3]	$8,311	$6,078	$4,715	$7,723	$5,491	$4,155
Annual Income	**$49,248**	**$40,791**	**$35,627**	**$47,022**	**$38,566**	**$33,507**
Equivalent Hourly Wage	**$23.68**	**$19.61**	**$17.13**	**$22.61**	**$18.54**	**$16.11**

1. For columns B and C, we assumed all children are covered by Dr. Dynasaur so the employer only contributes to a single person policy. Employer contribution = 66% of the premium.
2. Except for column A, children's dental care is covered by Dr. Dynasaur so the cost is for a single person only.
3. Includes federal and state income taxes, FICA and Medicare.

See Appendix 1 for complete description of methodology.

Estimated Cost of Basic Needs and Livable Wage

Two Parents & Two Children (one wage earner)

(Full-time work with and without employer-assisted health care)

	Urban			Rural		
	A	B	C	A	B	C
	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur
Category	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**
	Moderate Cost Food Plan		Low Cost Plan	Moderate Cost Food Plan		Low Cost Plan
Food	$641	$641	$516	$641	$641	$516
Rent & Utilities	$692	$692	$692	$570	$570	$570
Health Care[1]	679	269	269	679	269	269
Transportation	520	520	520	614	614	614
Child Care	0	0	0	0	0	0
Clothing / Household	285	285	285	285	285	285
Telephone	36	36	36	36	36	36
Personal Exp.	240	240	120	240	240	120
Dental insurance[2]	105	62	62	105	62	62
Renters Insurance	10	10	10	10	10	10
Term Life Insurance	15	15	15	15	15	15
Savings (5%)	161	139	0	160	137	0
Total Monthly Expenses	$3,384	$2,909	$2,525	$3,355	$2,879	$2,497
Annual Expenses	$40,610	$34,902	$30,300	$40,257	$34,549	$29,964
Federal & State Taxes[3]	$8,920	$6,872	$5,221	$8,793	$7,376	$5,101
Annual Income	**$49,530**	**$41,774**	**$35,521**	**$49,050**	**$41,925**	**$35,065**
Equivalent Hourly Wage	**$23.81**	**$20.08**	**$17.08**	**$23.58**	**$20.16**	**$16.86**

1. For columns B and C, we assumed all children are covered by Dr. Dynasaur so the employer only contributes to a two person policy. Employer contribution = 79% of the premium.
2. Except for column A, children's dental care is covered by Dr. Dynasaur so the cost is for a two persons only.
3. Includes federal and state income taxes, FICA and Medicare.

See Appendix 1 for complete description of methodology.

Table 1G

Estimated Cost of Basic Needs and Livable Wage

Two Parents & Two Children (two wage earners)

(Full-time work with and without employer-assisted health care)

	Urban			Rural		
	A	B	C	A	B	C
	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	No employer assisted health care or Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur	With employer assisted health care + Dr. Dynasaur
Category	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**	**cost / mo.**
	Moderate Cost Food Plan		Low Cost Plan	Moderate Cost Food Plan		Low Cost Plan
Food	$641	$641	$516	$641	$641	$516
Rent & Utilities	$692	$692	$692	$570	$570	$570
Health Care[1]	679	269	269	679	269	269
Transportation	591	591	591	693	693	693
Child Care	607	607	607	568	568	568
Clothing / Household	285	285	285	285	285	285
Telephone	36	36	36	36	36	36
Personal Exp.	240	240	120	240	240	120
Dental insurance[2]	105	62	62	105	62	62
Renters Insurance	10	10	10	10	10	10
Term Life Insurance	23	23	23	23	23	23
Savings (5%)	195	173	0	193	170	0
Total Monthly Expenses	$4,104	$3,629	$3,211	$4,043	$3,567	$3,152
Annual Expenses	$49,253	$43,546	$38,532	$48,510	$42,802	$37,824
Federal & State Taxes[3]	$10,389	$8,342	$6,544	$10,123	$8,075	$6,310
Annual Income	**$59,642**	**$51,888**	**$45,076**	**$58,633**	**$50,877**	**$44,134**
Equivalent Hourly Wage	**$28.67**	**$24.95**	**$21.67**	**$28.19**	**$24.46**	**$21.22**
Avg. per wage earner	**$14.34**	**$12.47**	**$10.84**	**$14.09**	**$12.23**	**$10.61**

1. For columns B and C, we assumed all children are covered by Dr. Dynasaur so the employer only contributes to a two person policy. Employer contribution = 79% of the premium.
2. Except for column A, children's dental care is covered by Dr. Dynasaur so the cost is for a two persons only.
3. Includes federal and state income taxes, FICA and Medicare.

See Appendix 1 for complete description of methodology.

Issue # 2

"Consider the impact of a livable wage on public assistance payments and other employee benefits, including the cost to the state and employers of providing those benefits." [Act 21, Section 2(b)(2)].

Related questions: "If the minimum wage were raised to the level of a livable wage, what impact would this have on public assistance payments and tax revenues? How much might the State and private employers save as a result? How might this affect a low-income worker in terms of total income including the cash value of public benefits? Might some workers end up being worse off with a livable income due to decreased eligibility for public assistance payments? Are there benefit 'cliffs' that can be identified and ways to adjust benefit programs to avoid these?" [Scope of Work].

What is the relationship between the minimum wage and public assistance payments?

We identified the livable income for different household types in Issue #1. In all cases, the livable wage is considerably higher than the current minimum wage of $5.75 per hour. This means that households dependent on minimum-wage workers cannot provide their basic needs without assistance.

The six graphs that follow (2A – 2F) show the public assistance available to six households dependent on minimum-wage jobs. The graphs are based on the six household types specified by the Committee. The livable income for each is a weighted urban / rural average, assuming there are no employer benefits.

Public assistance helps to partially fill the gap between wages and a livable income. As would be expected, however, as the minimum wage increases from $5.75 to a livable wage, various components of public assistance decrease.

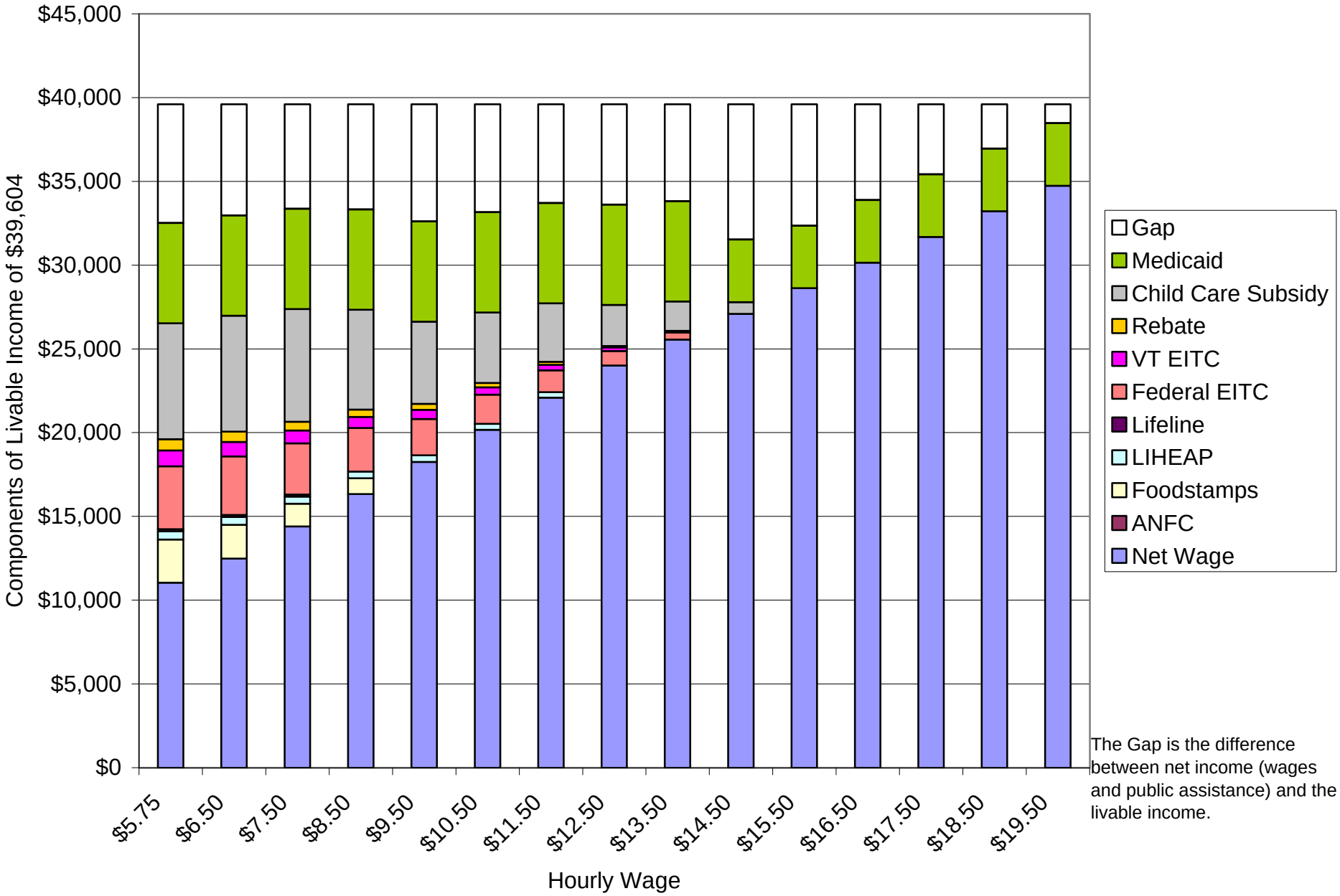
There are two trends worth noting:

- At $5.75 per hour, none of the households are able to meet their basic needs. Even with public assistance, there is a gap between the household's actual income and the livable income.
- Increases in the minimum wage would not change the ability of some households to meet their basic needs until the wage is significantly higher than it is now. These are the households most dependent on public assistance. In many cases, they would lose one dollar (or more) of public assistance for each dollar they gained in wages.

Might some workers end up being worse off with a livable wage because of lost public assistance benefits?

As is indicated in the six graphs on the following pages (2A – 2F), modest increases in the minimum wage are not likely to help those households most dependent on public assistance to meet their basic needs. In some cases, they would actually have less net

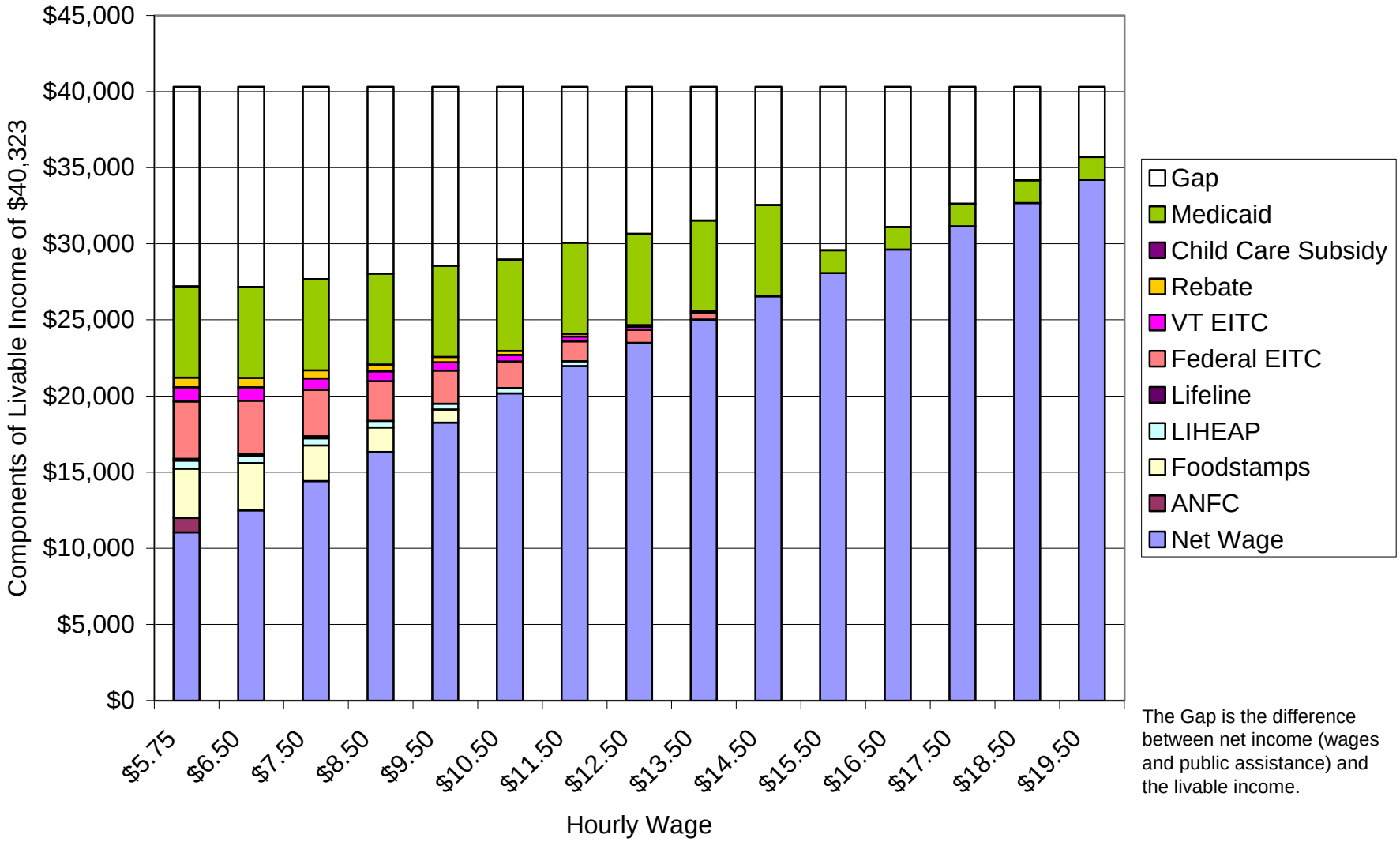
Chart 2A
Meeting Basic Needs: Single Parent,Two Children



The Gap is the difference between net income (wages and public assistance) and the livable income.

Chart 2B

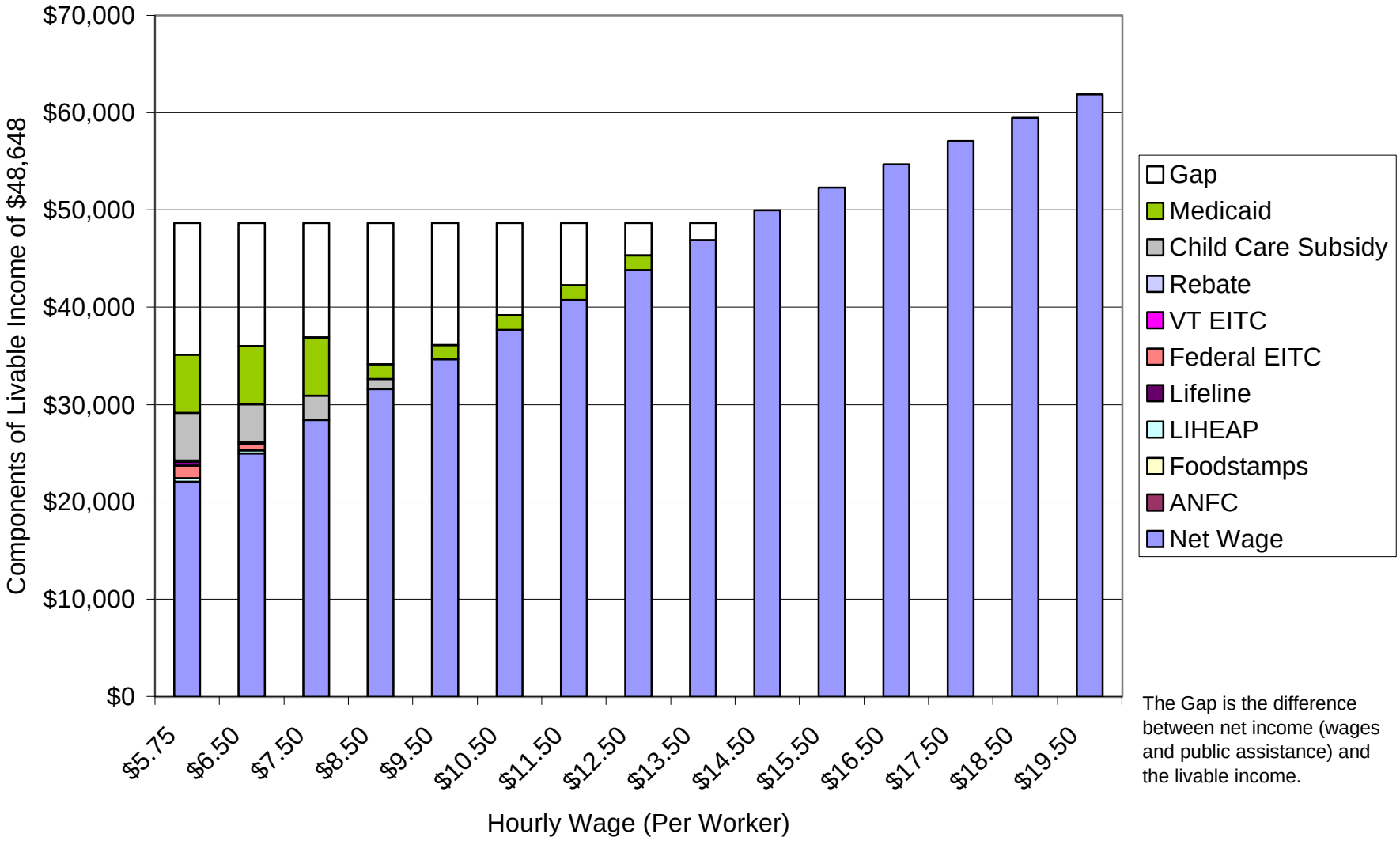
Meeting Basic Needs: Two Parents (One Working) and Two Children



The Gap is the difference between net income (wages and public assistance) and the livable income.

Chart 2C

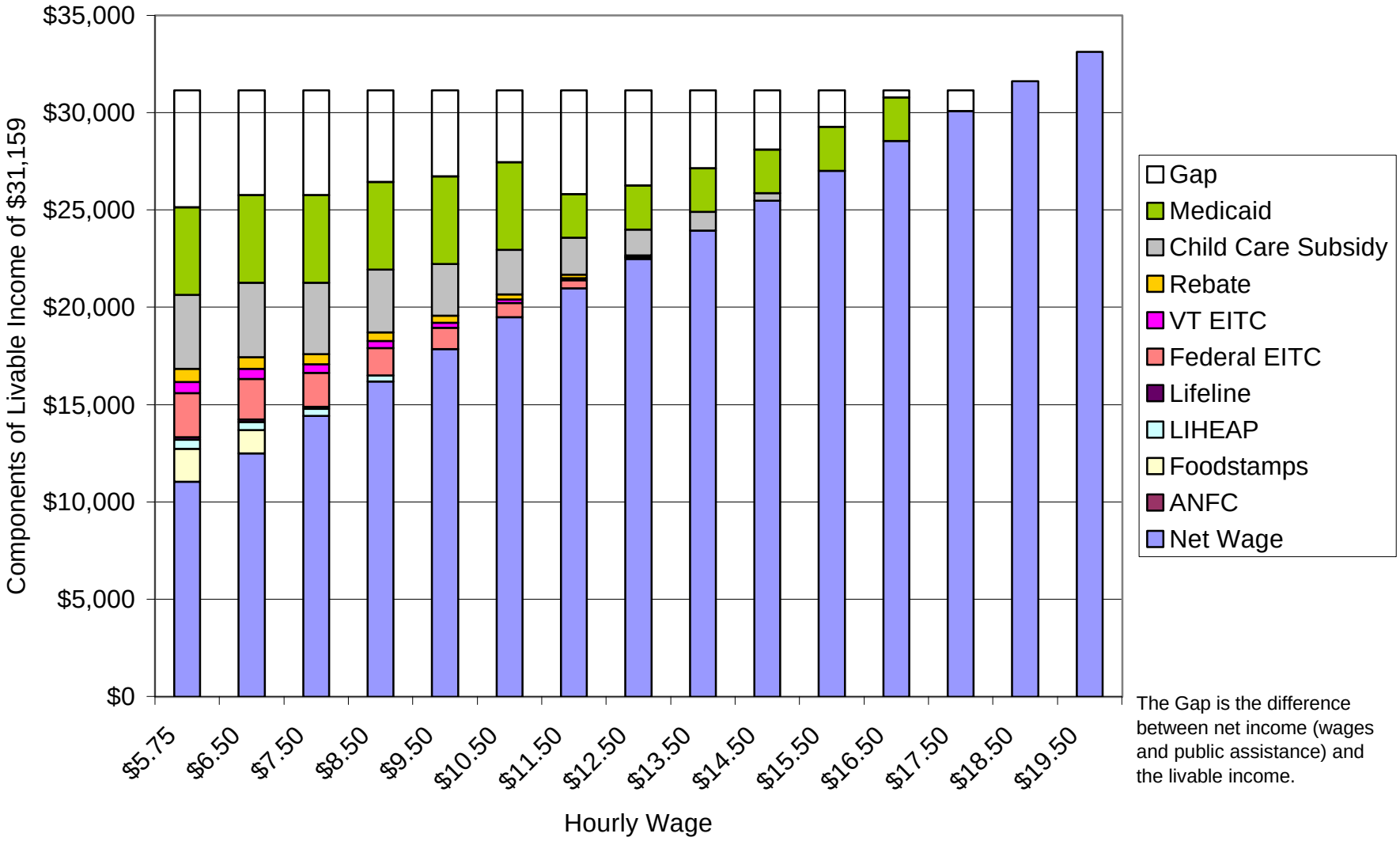
Meeting Basic Needs: Two Working Parents, Two Children



The Gap is the difference between net income (wages and public assistance) and the livable income.

Chart 2D

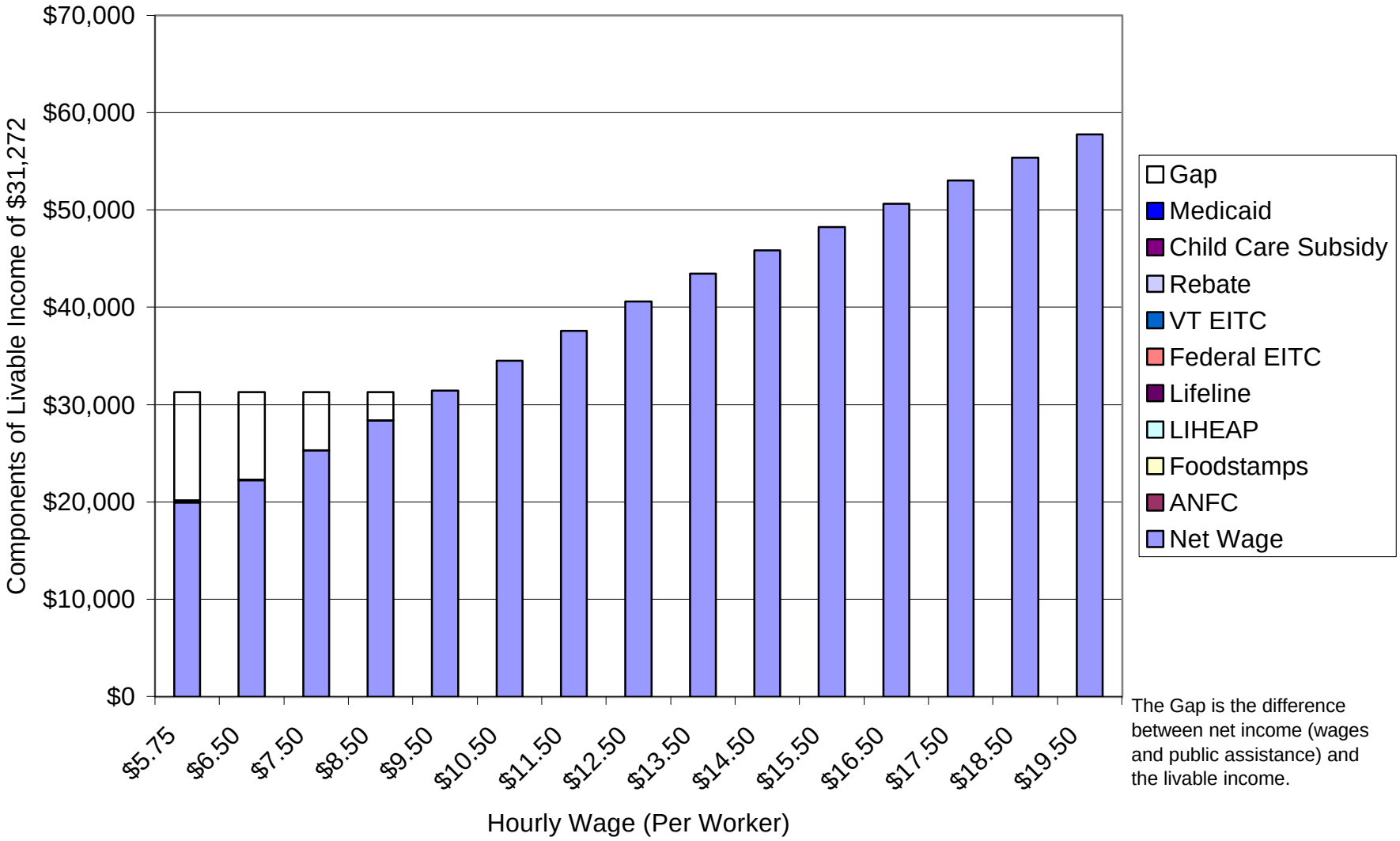
Meeting Basic Needs: Single Parent, One Child



The Gap is the difference between net income (wages and public assistance) and the livable income.

Chart 2E

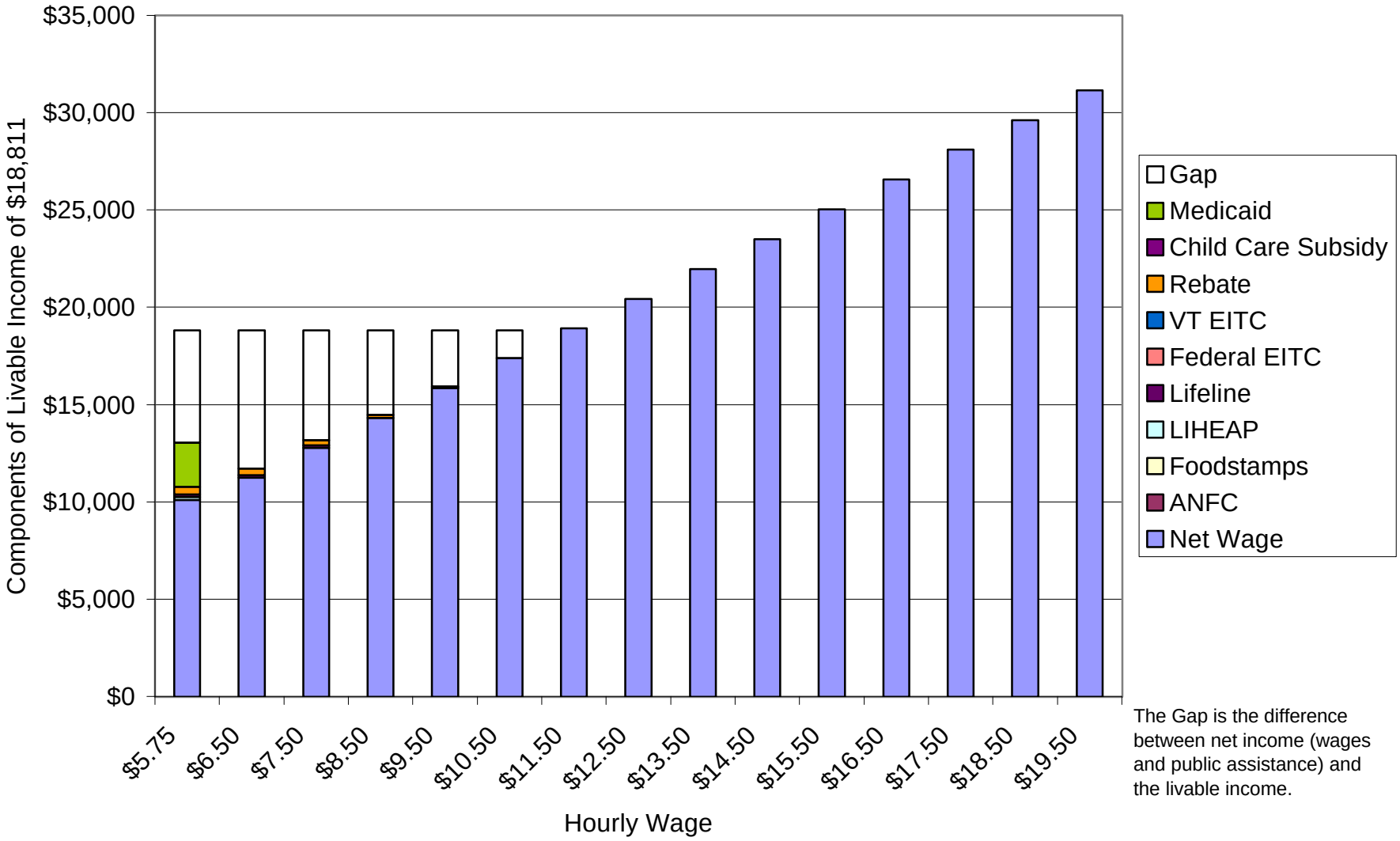
Meeting Basic Needs: Two Adults, No Children



The Gap is the difference between net income (wages and public assistance) and the livable income.

Chart 2F

Meeting Basic Needs: Single Person



The Gap is the difference between net income (wages and public assistance) and the livable income.

income than they do currently. This is because the reduction in public assistance can exceed the gain in wages.

The public assistance package shown in the graphs includes Aid to Needy Families with Children (ANFC), Food Stamps, Low-Income Home Energy Assistance Program (LIHEAP), Child Care Subsidy, Telephone Lifeline, Medicaid (including the Vermont Health Access Plan – VHAP, and Dr. Dynasaur), Renter's Rebate, Federal Earned Income Tax Credit (EITC), and the Vermont Earned Income Tax Credit.

All of these programs are "income-sensitive" and the benefits decrease as household income rises. Although the benefits function as a package to help households fill the gap, there is no coordination of the sliding scales that are used to determine the benefit amounts. While each benefit is cut slightly as wages increase, in combination the benefit loss may equal or exceed the wage increase. This is the equivalent of a 100% (or more) tax rate, and certainly provides little incentive to earn higher wages.

Although not shown in the graphs, it is important to recognize that there are about 8,000 families whose rent is being partially paid with federal Section 8 subsidies. There are different categories of subsidies with different rules, but, in general, the subsidy would be reduced by at least $0.30 for a $1 increase in wages. When Section 8 subsidies are combined with the other benefits shown in the graphs, these families may see a decrease in income of over $1.30 for every $1 gained in wages.

There are two reasons why this happens:

Most programs calculate benefits based on household income. In general, this calculation of income includes earned income, ANFC, and child care subsidy, but it does not include a value for other types of public benefits such as fuel assistance, food stamps, earned income tax credit, etc. As earned income replaces these benefits, even though there may be no net increase in the ability of the household to meet its needs, the benefit programs calculate that the household is richer. Because many of the programs are federal and have specific targets, the elements of the benefit package are not coordinated to calculate sliding scales so that the package as a whole does not leave gaps or create disincentives.

Are there potential benefit cliffs?

Most of the benefit programs have slopes of gradually decreasing benefit levels rather than cliffs. Exceptions include the renter rebate program, telephone lifeline, and Medicaid.

The Renter Rebate Program has more of a terraced slope than a cliff because program eligibility and benefits are sensitive to income. However, the change from one bracket to the next can be illogical. For example, a household with a monthly rent of $500 would receive a rebate of $135 if its income were $24,999. If the household income increased by $1, the rebate would decrease by $125. This is because the bracket changes at $25,000. The edge of the final terrace or cliff would be reached at a wage level of approximately $24.50 per hour and is not of concern in this study. (32 V.S.A. Section 6066).

The Telephone Lifeline Program reduces basic telephone rates to income-qualified households. The federal funding formula provides a credit of $7 per month per household, provided the state matches this amount with at least $3.50. Until this year, eligibility for people younger than 65 was tied to participation in public assistance programs. In 1999, the cutoff point for eligibility is 150% of poverty level. For a family of two, the threshold for Lifeline eligibility is $16,275. (30 V.S.A. Section 7513).

Medicaid cliffs are far more significant that those of the Rebate or Lifeline programs. Eligibility for the VHAP program stops as incomes exceed 150% (for adults without children) or 185% (for adults with children) of the federal poverty level. Eligibility for Dr. Dynasaur for children stops as household incomes exceed 300% of the federal poverty level. Because health insurance is such a significant proportion of the basic needs budget, increasing wages to the point of ineligibility can mean that a $1 increase in wages can result in a $2,255 gap per person if the household now must pay for health insurance. An alternative may be to look at some sort of spend down or cost-sharing program so that the household shares in the cost of health insurance as earned income increases, rather than having health insurance be an "all or nothing" benefit.

What is the relationship between minimum wage and taxes?

The federal and state income taxes paid by the same six hypothetical households at different wage levels are shown in the next set of six graphs (2G – 2L).

All six households reliant on minimum-wage jobs pay FICA and Medicare taxes. At the current minimum wage of $5.75, households with children do not pay either federal or state income taxes, while households without children are subject to taxes. It should be noted that all households pay other state excise taxes, such as the sales and use tax, gasoline tax, motor vehicle purchase and use tax, etc., as well as various state fees. The charts presented in this section do not include these other taxes or fees.

All six households are subject to both state and federal income taxes at wages lower than a livable wage. A household with two adults and two children with only one working adult does not pay income taxes until the hourly wage is over $11. The livable wage for that household is more than $23 / hr.

What is the relationship between minimum wage and employer benefits?

Depending on the wage level, one dollar of employer benefits can be worth more than one dollar of wages to the employee. This is because some employer benefits, most commonly health insurance and group term life insurance, are not counted as income for either tax purposes or for the calculation of public assistance.

For example, to a household in the 15% income tax bracket, an additional dollar of wages would be worth less than 74 cents after federal and state taxes. An additional $1 of health care insurance would be worth the full $1 in closing the gap between the

Chart 2G

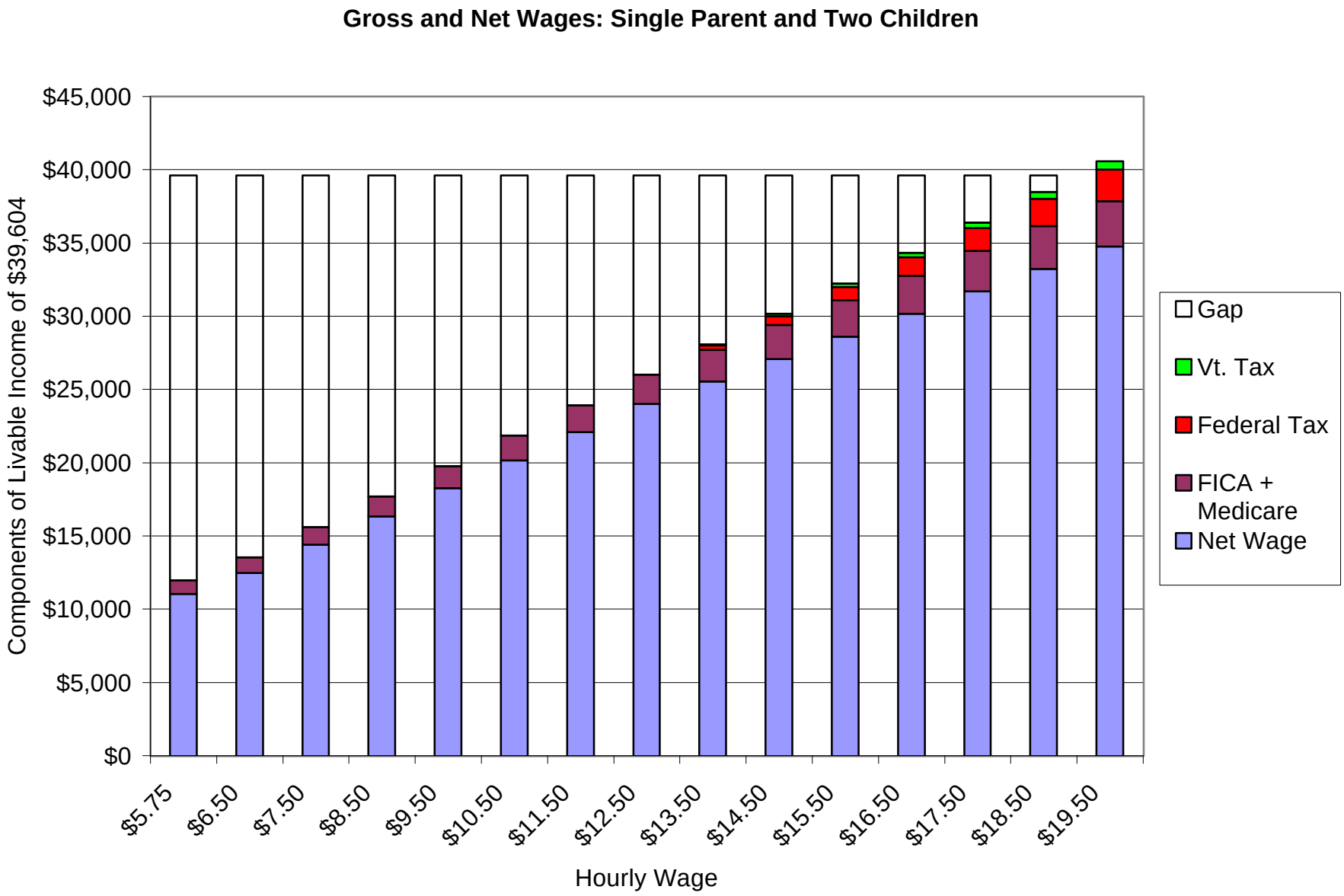

Gross and Net Wages: Single Parent and Two Children
Components of Livable Income of $39,604
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage
Gap
Vt. Tax
Federal Tax
FICA + Medicare
Net Wage

Chart 2H

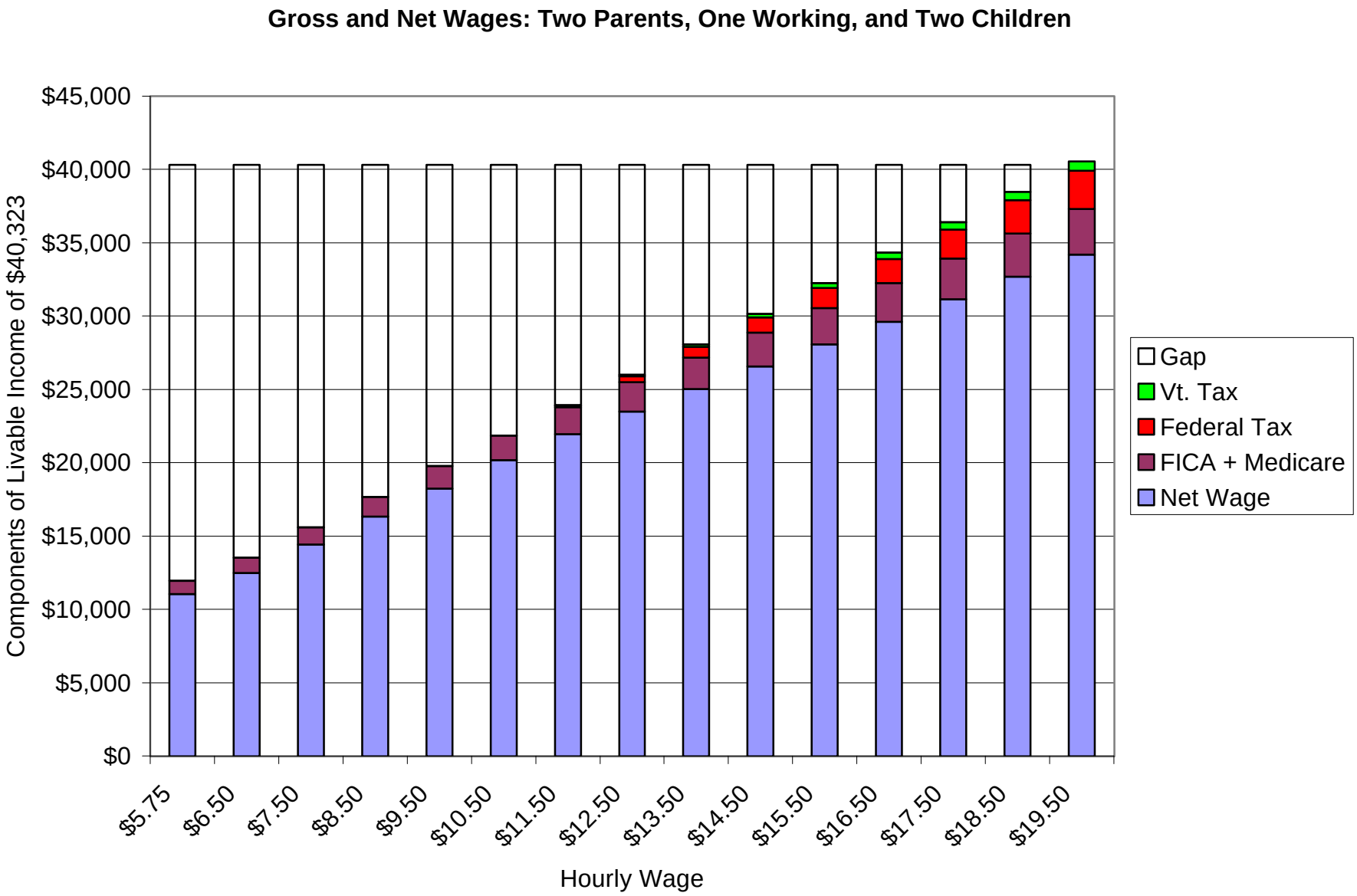

Gross and Net Wages: Two Parents, One Working, and Two Children
Components of Livable Income of $40,323
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage
Gap
Vt. Tax
Federal Tax
FICA + Medicare
Net Wage

Chart 2I

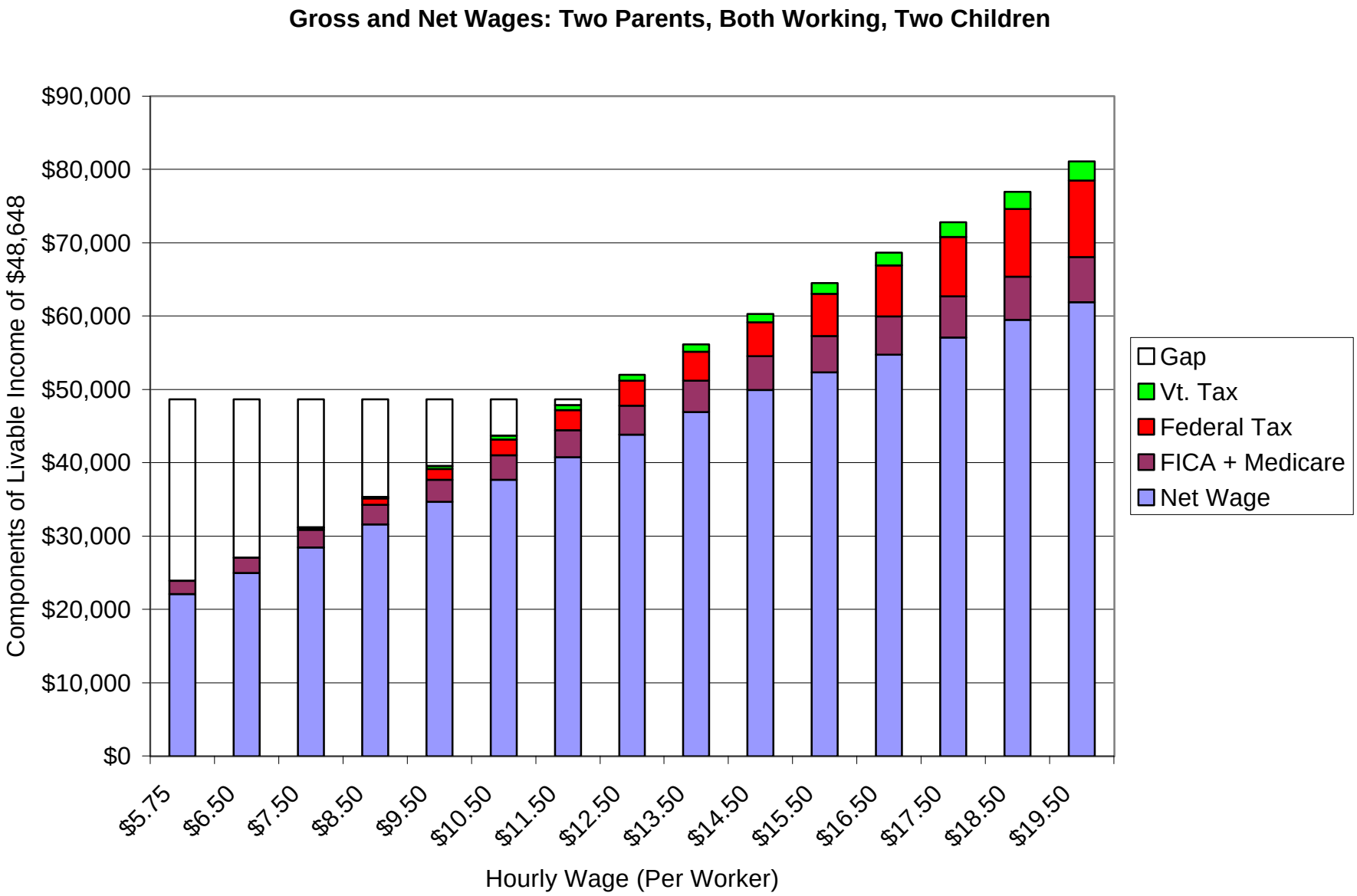

Gross and Net Wages: Two Parents, Both Working, Two Children
Components of Livable Income of $48,648
$90,000
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage (Per Worker)
Gap
Vt. Tax
Federal Tax
FICA + Medicare
Net Wage

Chart 2J

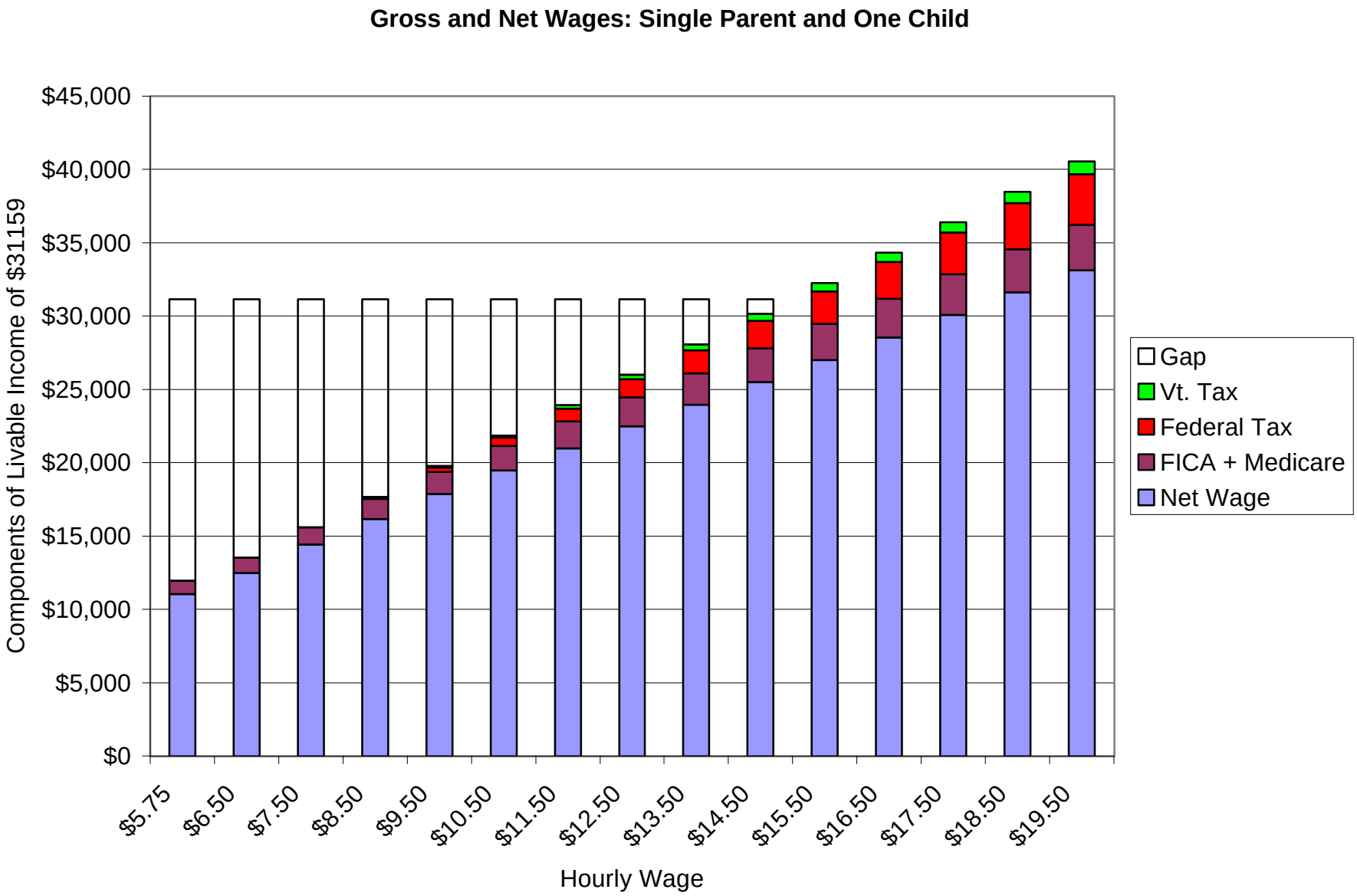

Gross and Net Wages: Single Parent and One Child
Components of Livable Income of $31159
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage
Gap
Vt. Tax
Federal Tax
FICA + Medicare
Net Wage

Chart 2K

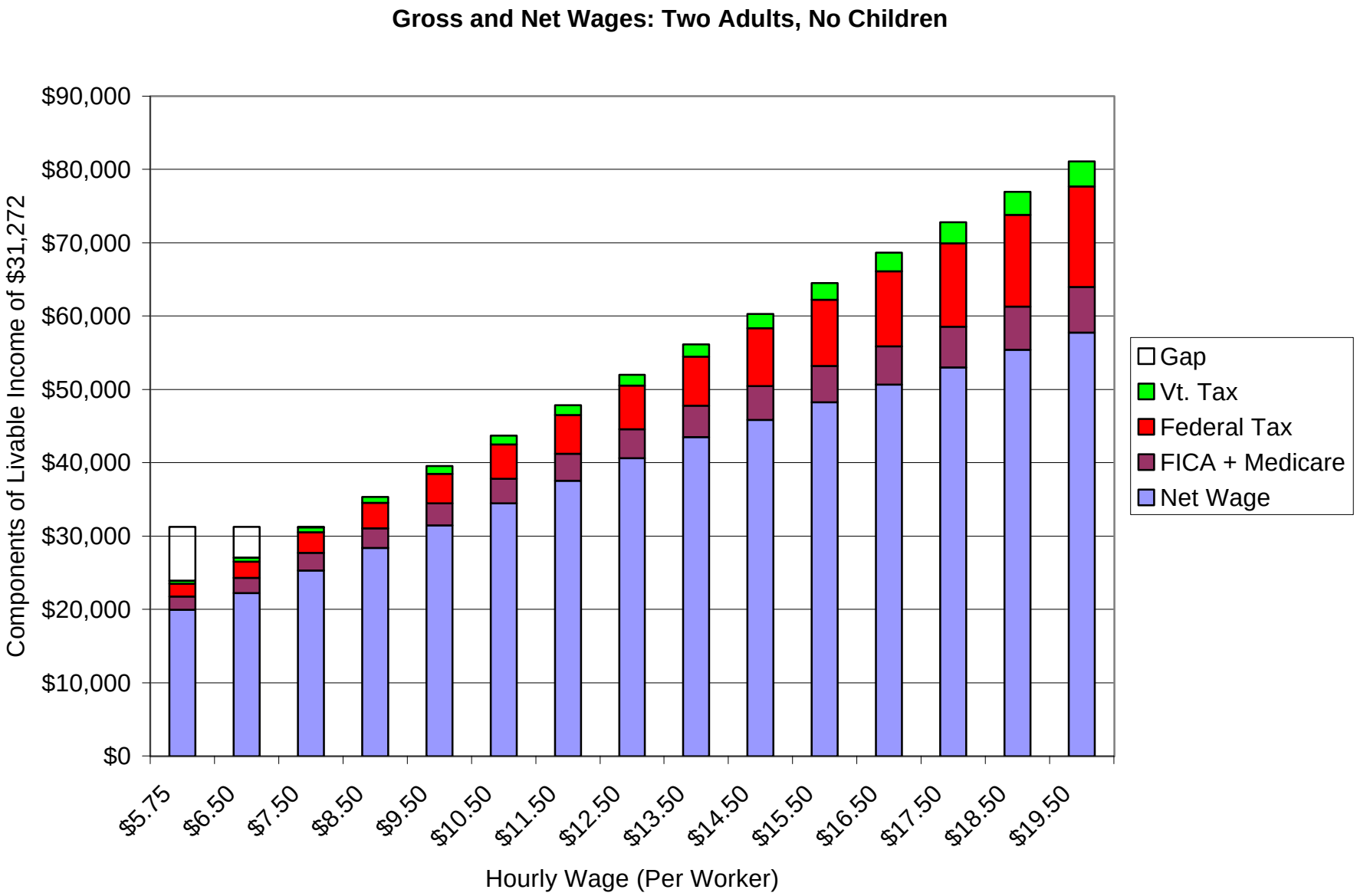
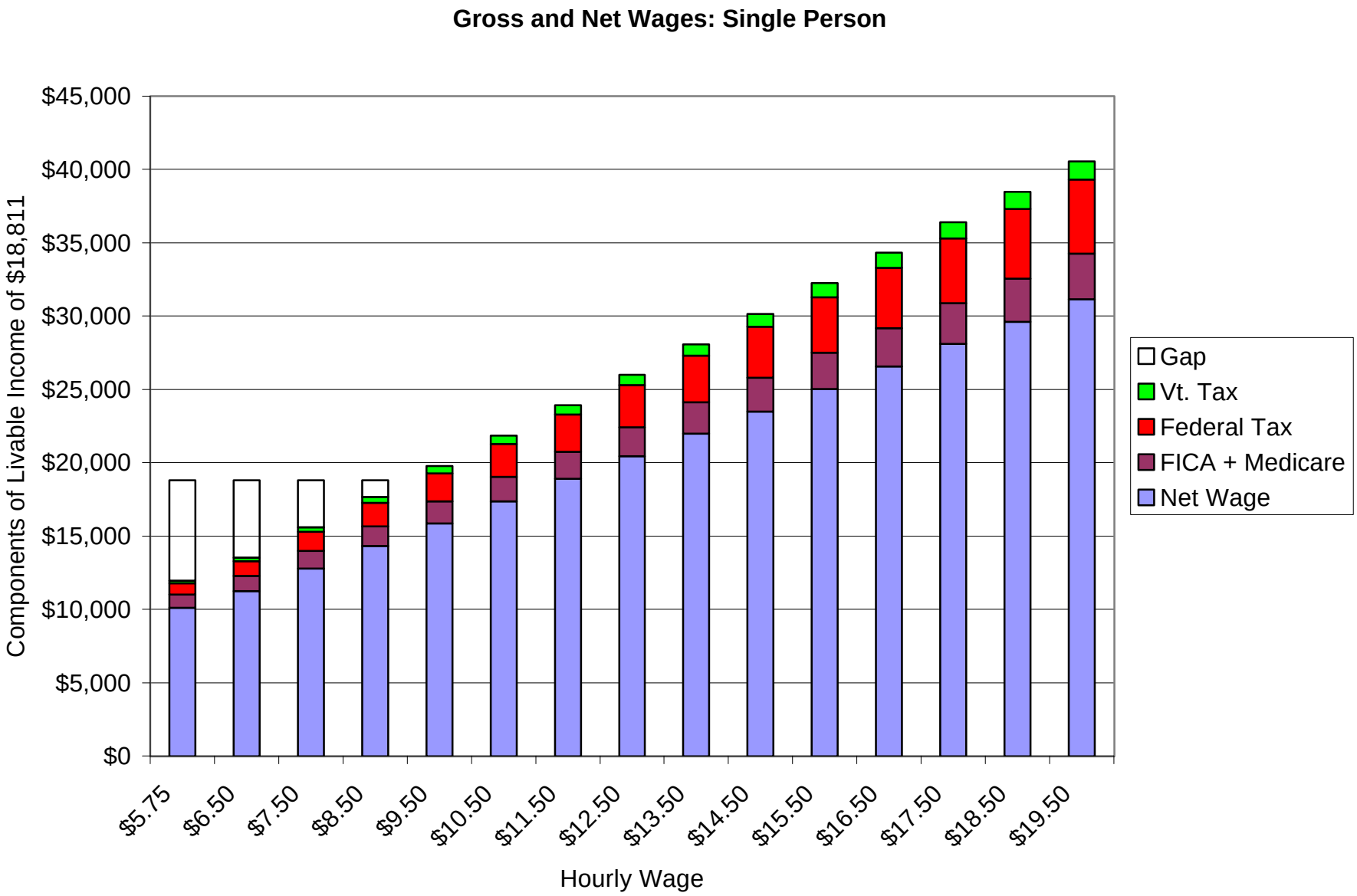

Gross and Net Wages: Two Adults, No Children
Components of Livable Income of $31,272
$90,000
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage (Per Worker)
Gap
Vt. Tax
Federal Tax
FICA + Medicare
Net Wage

Chart 2L


Gross and Net Wages: Single Person
Components of Livable Income of $18,811
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage
Gap
Vt. Tax
Federal Tax
FICA + Medicare
Net Wage

household's wages and its livable income, assuming the household is not eligible for Medicaid and does not have sufficient expenses to justify itemizing expenses.[1]

Other non-taxable employer benefits include: accident or health insurance; contributions to provide coverage for long-term care services (except as part of a "cafeteria" type plan[2]); contributions to medical savings accounts; group term life insurance coverage (up to $50,000), transportation benefits such as a transit pass or access to a commuter van between work and home; and educational assistance (up to $5,250).[3] In addition, the value of employer-provided dependent care (either a day-care facility provided by the employer or payments made to a care provider) may be excluded from income depending on the plan.[4]

The interaction between wages, public benefits and taxes, assuming employer assisted health care, is illustrated in Charts 2M-R. The dramatic differential between growth in earnings and growth in net income (assuming employer assisted health care) at various wage levels is depicted in Chart 2S.

To a household receiving public assistance, an additional dollar of wages would be offset by a loss in public assistance, often equal to the additional wages. The same household could receive a dollar in employer benefits without a decrease in public assistance benefits.

[1] Without home mortgage deductions, most low-income households do not itemize deductions unless they have extraordinary medical expenses.

[2] Employer-provided benefits that offer employees a choice of one of several types of benefits such as health, life, and / or dental insurance, retirement options, etc.

[3] These are 1998 amounts. See I.R.S. Publication 525. Taxable and Nontaxable Income.

[4] See I.R.S. Publication 503. Child and Dependent Care Expenses.

Chart 2M

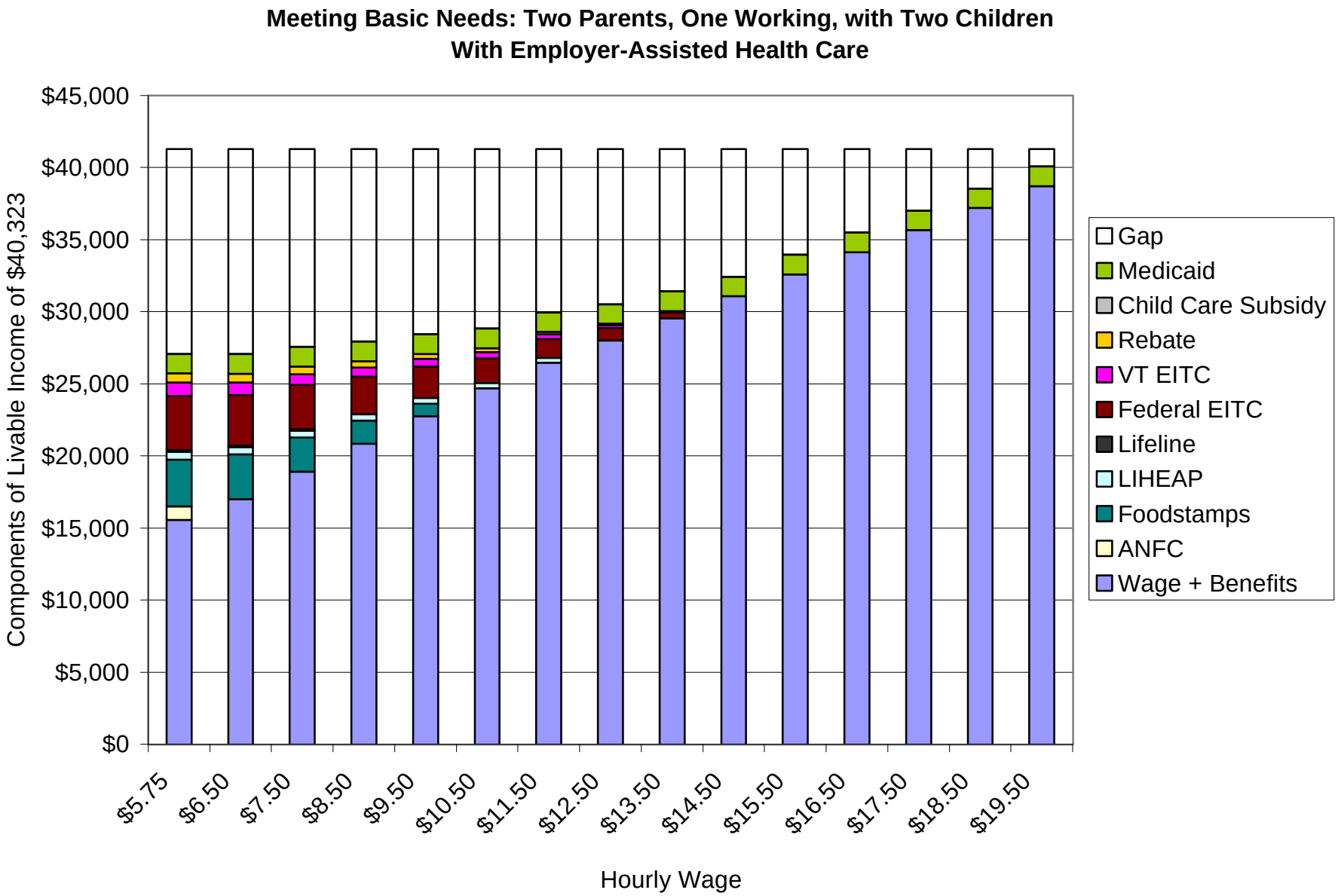

Meeting Basic Needs: Two Parents, One Working, with Two Children
With Employer-Assisted Health Care
Components of Livable Income of $40,323
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$5.75
$6.50
$7.50
$8.50
$9.50
$10.50
$11.50
$12.50
$13.50
$14.50
$15.50
$16.50
$17.50
$18.50
$19.50
Hourly Wage
Gap
Medicaid
Child Care Subsidy
Rebate
VT EITC
Federal EITC
Lifeline
LIHEAP
Foodstamps
ANFC
Wage + Benefits

Chart 2N

Meeting Basic Needs: Single Parent with Two Children
With Employer-Assisted Health Care

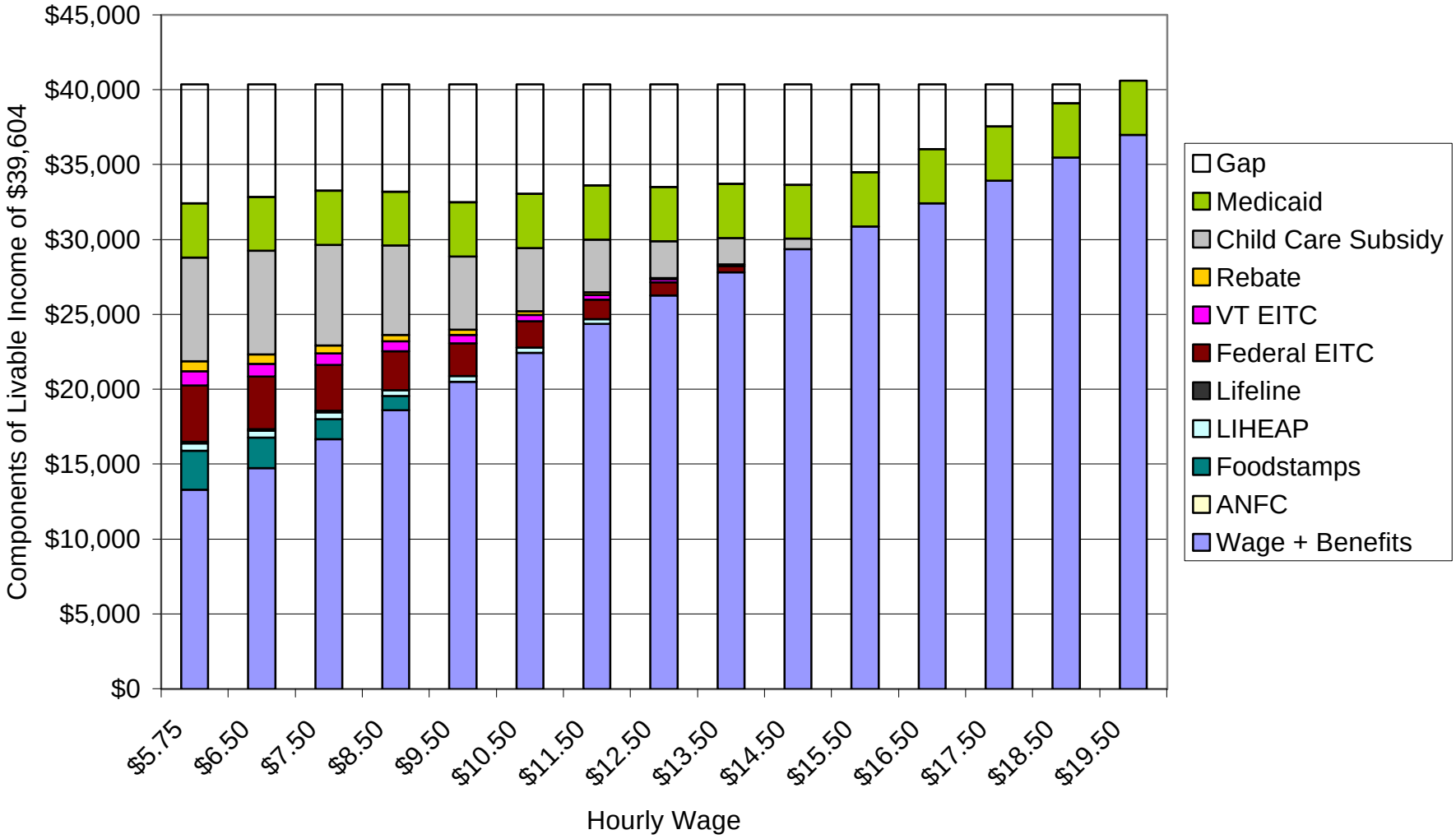


Chart 2O

Meeting Basic Needs: Two Parents, Both Working, Two Children With Employer-Assisted Health Care

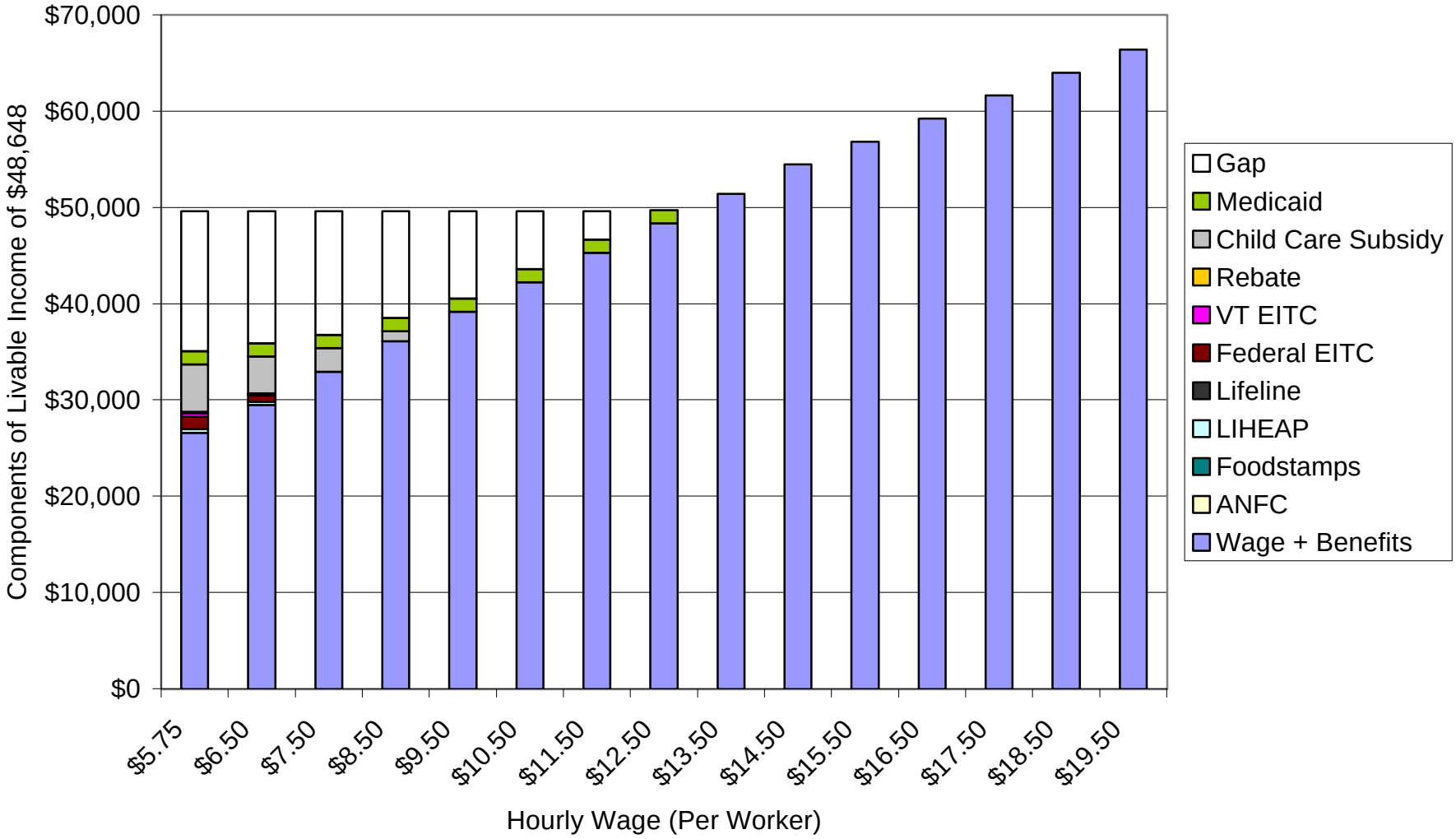


Chart 2P

Meeting Basic Needs: Single Parent and One Child
With Employer-Assisted Health Care

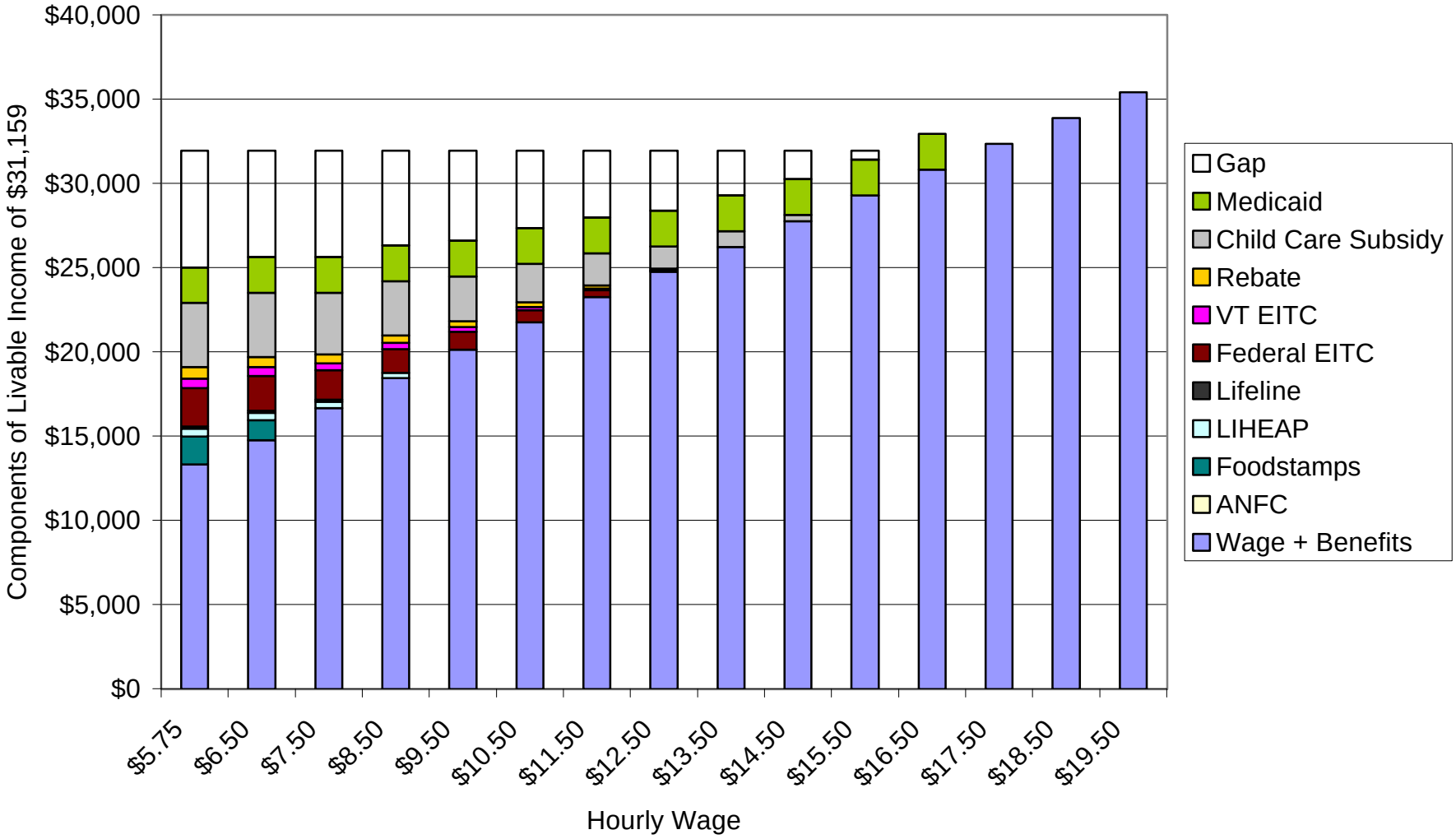


Chart 2Q

Meeting Basic Needs: Two Adults
With Employer-Assisted Health Care

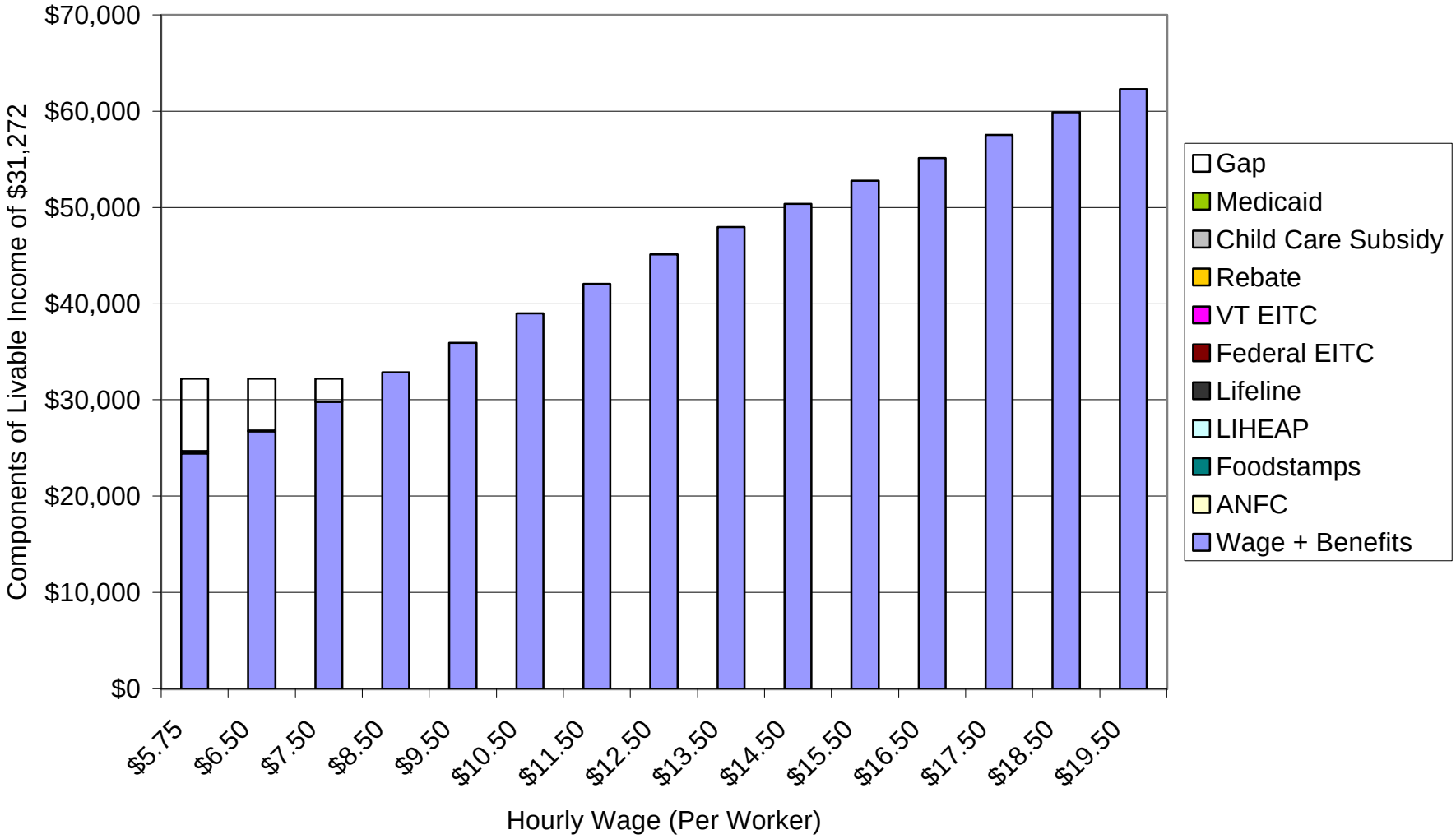


Chart 2R

Meeting Basic Needs: Single Person
With Employer-Assisted Health Care

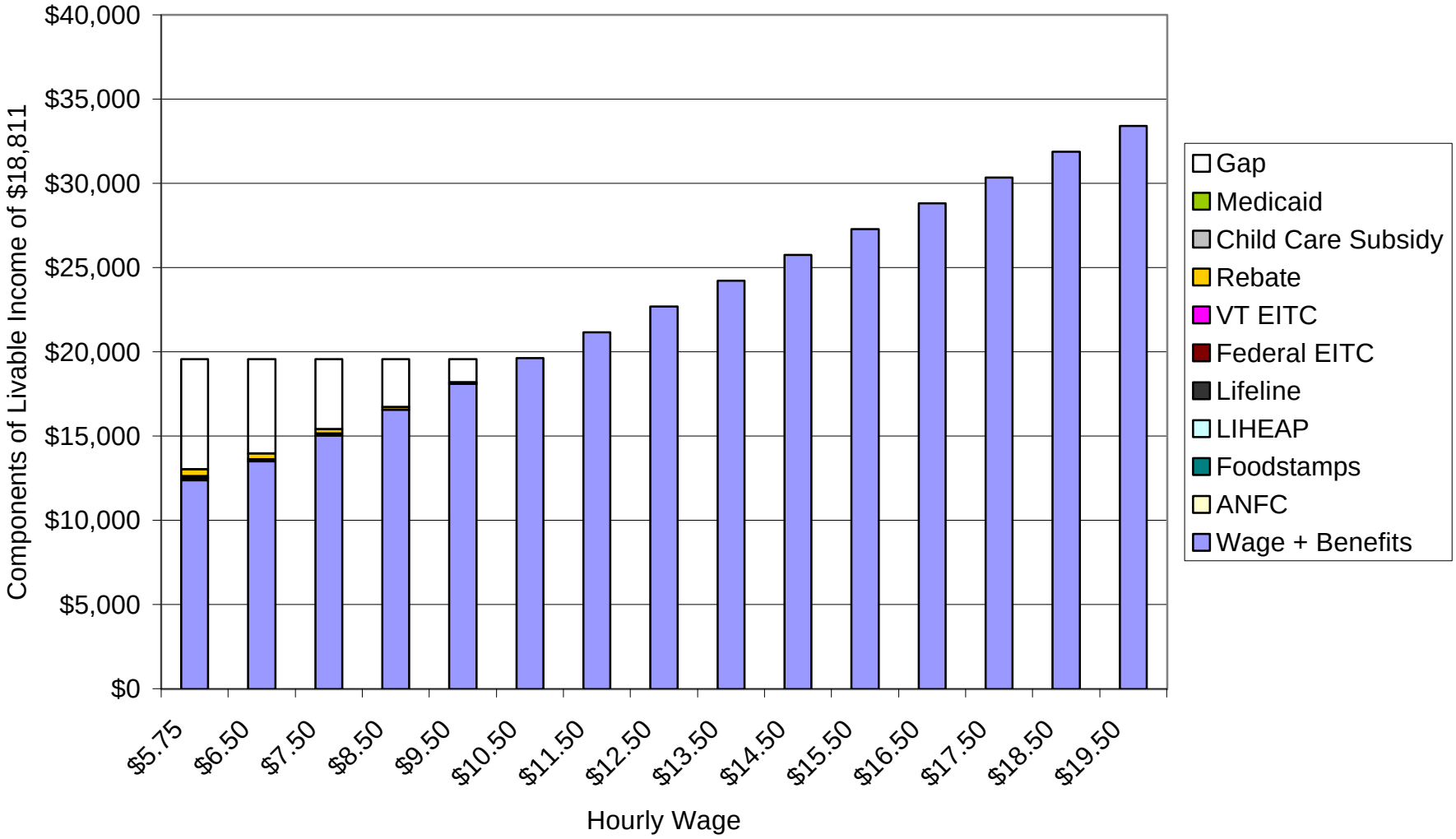
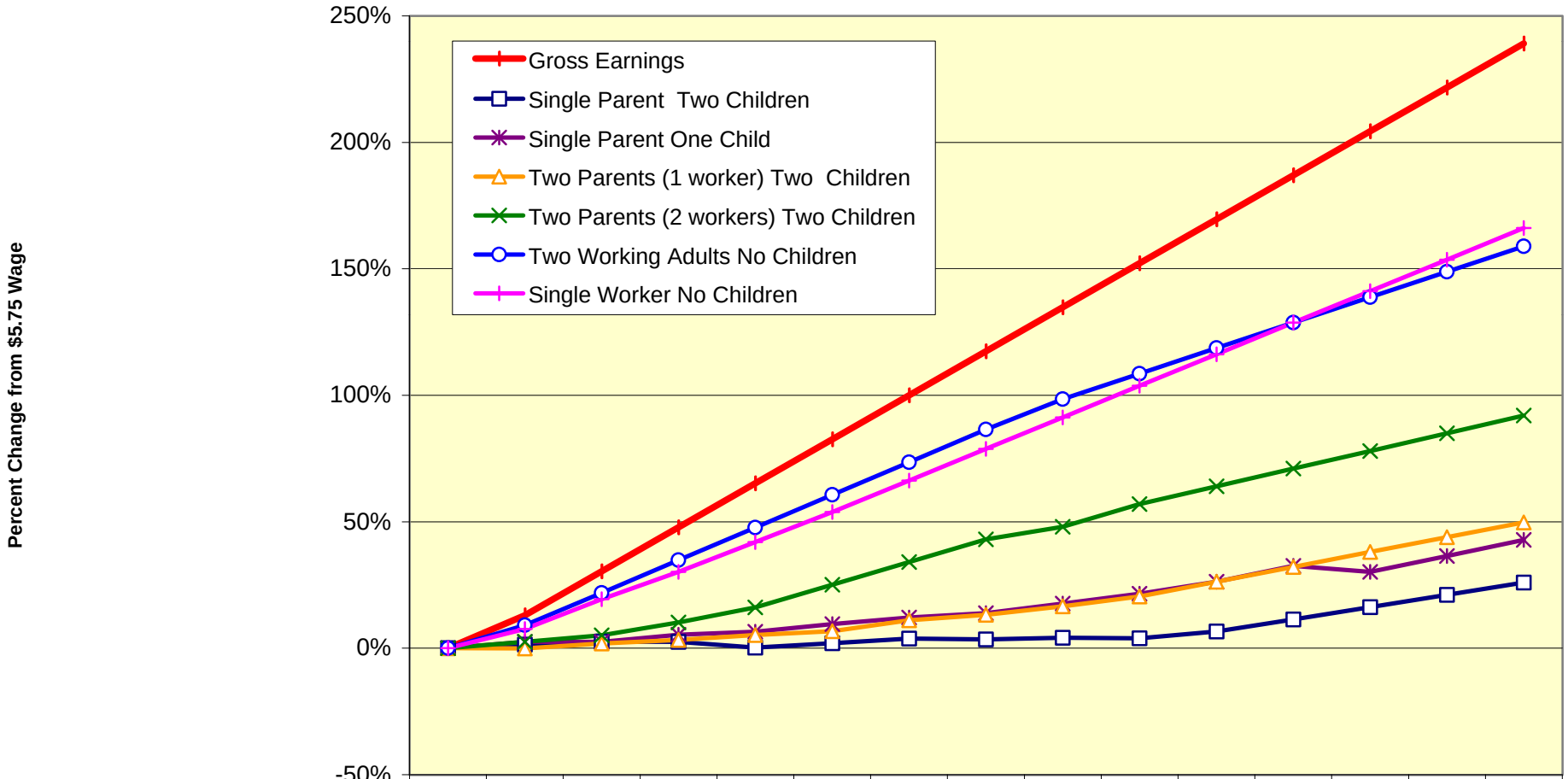


Chart 2S

Growth in Gross Earnings vs. Net Income by Wage Level for Selected Family Configurations (Percent Change from $5.75 Wage Level, With Employer Assisted Health Care)



	$5.75	$6.50	$7.50	$8.50	$9.50	$10.50	$11.50	$12.50	$13.50	$14.50	$15.50	$16.50	$17.50	$18.50	$19.50
Gross Earnings	0%	13%	30%	48%	65%	83%	100%	117%	135%	152%	170%	187%	204%	222%	239%
Single Parent Two Children	0%	1%	3%	3%	0%	2%	4%	3%	4%	4%	7%	11%	16%	21%	26%
Single Parent One Child	0%	3%	3%	5%	7%	10%	12%	14%	18%	22%	26%	33%	30%	36%	43%
Two Parents (1 worker) Two Children	0%	0%	2%	3%	5%	7%	11%	13%	17%	20%	26%	32%	38%	44%	50%
Two Parents (2 workers) Two Children	0%	2%	5%	10%	16%	25%	34%	43%	48%	57%	64%	71%	78%	85%	92%
Two Working Adults No Children	0%	9%	22%	35%	48%	61%	74%	86%	99%	109%	119%	129%	139%	149%	159%
Single Worker No Children	0%	8%	19%	30%	42%	54%	66%	79%	91%	104%	116%	129%	141%	154%	166%

Hourly Wage

Issue # 3

"Consider how wage increases may affect the economy and propose innovative methods to assure the economic viability of businesses if the minimum wage is increased." [Act 21, §2(b)(3]

Related Questions: **"**How might various minimum wage increases, from minor increases to a livable wage level, impact the Vermont economy? What might be the impact on total employment in the State? On low wage jobs? How might these changes affect small and other businesses in Vermont? If some business sector is negatively impacted, what might be done to minimize or eliminate this impact?" (Scope of Work)

How might various minimum wage increases, from minor increases to a livable wage level, impact the Vermont economy? What might be the impact on total employment in the State? On low wage jobs?

Per the Committee's instructions, minimum wage increases were analyzed at three initial levels, $6.50, $7.50 and $8.50. The $8.50 minimum wage increase qualifies as a livable income wage equivalent only for families consisting of two working adults and no children, with employer assisted health care (see Tables 1B – G). All 22 other livable income wage equivalents for various family configurations, geographic locations and health benefit options exceed $9.25/hr. For example, the average statewide livable wage equivalent for a single adult worker without employer assisted health care is about $11.50/hr. With employer assisted health care, it's about $9.30/hr.

Traditional economic theory suggests that when the relative price of an economic input is increased, less of it will be used. With respect to a minimum wage increase, this implies that as the price of labor goes up, less of it will be demanded, resulting in net job losses. This effect is referred to as "disemployment." Because these job losses are likely to be concentrated among very low wage workers the minimum wage increase is intended to help, many economists disfavor minimum wage increases as the most efficient way to assist low wage workers.

However, as is often the case when applying simplistic economic theory to more complex economic reality, recent empirical data on actual minimum wage increases necessitates a more complex theoretical model to explain actual market behavior. As detailed in our analysis of Issue 9, this empirical data shows that recent minimum wage increases in a number of states have resulted in no significant disemployment and may even be associated with positive net employment impacts under some circumstances. There are many possible cultural, sociological and other economic factors that may explain these effects, however, it is by no means certain that a modest minimum wage increase in Vermont would result in any net disemployment.

One of the conditions that is associated with minimal or zero net disemployment effects is a high job vacancy rate in low wage positions. Because raising the minimum wage under such circumstances attracts additional entrants to the labor force, any

disemployment effects from relative wage increases are outweighed by lower vacancy rates and, therefore, total employment may increase. Although there are no credible statistics on job vacancy rates in Vermont by wage level, anecdotal information from many businesses suggests that just such circumstances may presently exist.

Although one could credibly argue that there may be no or only minimal disemployment effects at a $6.50/hour or even a $7.50/hr minimum wage in Vermont, it is likely that any increase that might approach an average livable income wage equivalent would be accompanied by more substantial disemployment. We have attempted to quantify maximum potential disemployment effects and other economic impacts at various minimum wage levels using the REMI state economic model for Vermont.

The REMI economic model and our model specifications are described in detail in Appendix 3A-C. We regard REMI as the best available dynamic model with which to quantify and estimate the multitude of interactions that occur within the state economy. Its theoretical construct is in accord with traditional economic theory, however, and thus probably overstates negative economic impacts, especially at the lower minimum wage levels analyzed.

The REMI model estimates that total net maximum annual disemployment associated with a minimum wage increase to $6.50 would probably be in the range of 400-500 jobs, depending upon the use of available exclusions (see Appendix 3D). This amounts to about one-tenth of one percent of total employment. At $7.50, maximum annual disemployment could exceed 1,500 jobs, and at $8.50, disemployment could total close to 3,000 jobs. Most of these maximum negative impacts occur within two years of a minimum wage change. Without indexation of the minimum wage, these negative impacts steadily recede over the ten year forecast horizon.

The REMI model estimates aggregate personal income and wage and salary disbursements to be higher for the first year or two after a minimum wage change, but are below levels that would otherwise be expected after about three years. Thus, although tax revenues may initially increase, if disemployment occurs, they will quickly evaporate along with increased transfer payments to unemployed individuals.

The lower minimum wage changes analyzed would have a relatively small impact on consumer inflation rates in the State, adding about two-tenths (0.2) of a percentage point to growth in the Personal Consumption Expenditure Index at a $6.50 minimum wage, and about one half of one percentage point (0.5) at $7.50. At $8.50, the maximum annual impact on consumer prices would be no more than about 1.3 percentage points. Annual economic impacts for about 30 selected economic variables are presented in Appendices 3D-3G.

The REMI model cannot disaggregate overall economic impacts with those only affecting low-wage workers. Presumably, most of the wage gains and job losses the model predicts would occur among low-income workers. Thus, this model would suggest that any initial gains low-income workers might make in aggregate income, would soon disappear as lower employment reduces total income.

It is our best judgment that a Vermont minimum wage increase in the range of $6.50 to $7.00/hr would be unlikely to result in significant, if any, aggregate disemployment. It could add more than $40 million in income to low wage workers, increase state tax revenues through higher income taxes and lower public benefits, and help close the gap between current incomes and livable incomes for many Vermonters.

Although we did not run minimum wage increases at levels consistent with most livable income wage equivalents, it is likely that at minimum wage levels of $9.50, $10.50, $11.50 or above, very significant disemployment could result, with widespread negative economic consequences.

How might these changes affect small and other businesses in Vermont? If some business sector is negatively impacted, what might be done to minimize or eliminate this impact?

We do not currently have either DET wage data by firm size or REMI economic output by firm size. It is thus impossible to accurately quantify possible minimum wage impacts by firm size. This would require additional source data development, such as survey work recommended in Issue #10.

Economic impacts by sector are detailed in Appendices 3A-C and Issue #5, which looks at sensitivity to external wage competition and reliance on substandard wages by sector. As shown in Chart 3A (next page) and Appendices 3A-C, the sector with the greatest potential negative impacts, especially at relatively high minimum wage rates, is the hotel and lodging industry. Eating and drinking establishments, other retail businesses and apparel manufacturing are also more vulnerable to economic loss from minimum wage increases than most other sectors. Besides these four industry groups, virtually no other sector of the economy suffers a loss of output greater than about one half of one percent (0.5%) relative to the REMI Regional Control Forecast, even at an $8.50 minimum wage.

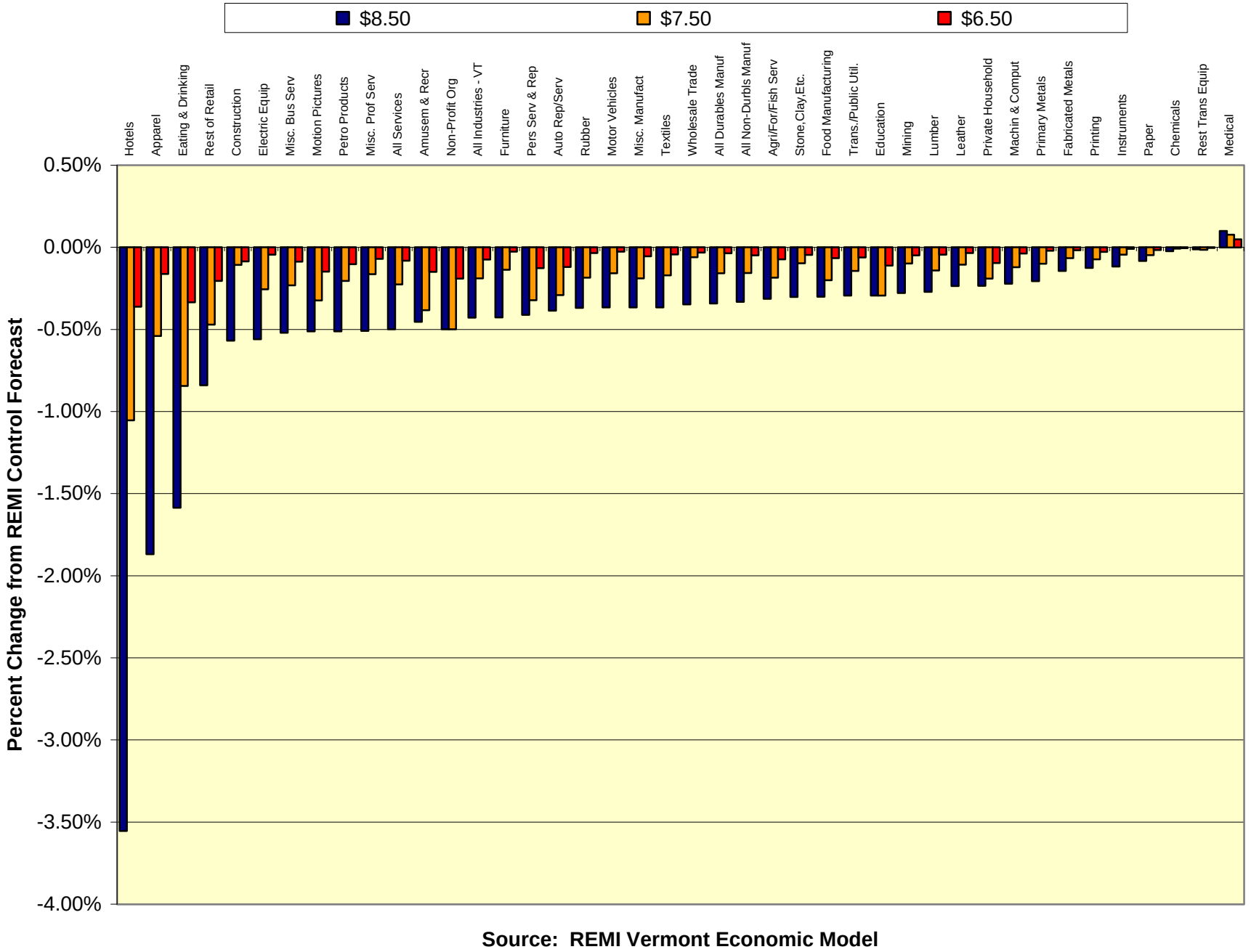
As mentioned in Issue #5, there are a range of possible options that could be utilized to minimize potential negative effects of a substantial minimum wage increase in the most affected sector, hotel and lodging. These include increased tourism advertising expenditures, offsetting reductions in meals and rooms taxes, phased out minimum wage exclusions for this industry and targeted tax credits to smaller lodging firms that may be especially vulnerable.

With respect to the sensitivity of lodging establishments in Vermont to relatively minor price increases, it should be noted that the recent 2% increase in the Meals and Rooms tax, which Administration and Legislative economists expected to result in a reduced tax yield of about 92% to 99% of the nominal static increase, had virtually no observed negative aggregate impact. Despite worse-than-average winter skiing conditions in 1998-1999 (the first full year of tax implementation), FY99 Meals and Rooms tax revenues exceeded expectations by more than 5%.

This type of local information underscores the importance of funding and conducting follow-up research to measure *actual* economic impacts of minimum wage changes on this and other sectors, as prescribed in Issue #10. This research could identify actual

CHART 3A

Maximum Potential Change in Output Following Selected Minimum Wage Changes



Source: REMI Vermont Economic Model

impacts by sector, by firm size and by region of the State, informing future policy with hard facts instead of sole reliance on theoretical model estimates and anecdotal testimony.

Issue # 4

"Consider the effects of the increasing use of temporary and part-time employees not receiving benefits." [Act 21, §2(b)(4)]

Related questions: How prevalent is the use of temporary and part-time employees and how many receive benefits. (Scope of Work)

Part-time workers are defined by the Bureau of Labor Statistics as those who work less than 35 hours per week. Temporary workers may include employees of temporary help agencies, direct-hire temporary workers (workers not hired through an intermediary such as an agency), and on-call workers (for example, substitute teachers, some nurses and construction workers). There is some data on part-time workers in Vermont, but there is no data source of sufficient size to provide reliable information on temporaries for Vermont. Therefore, all the information on temporaries in this report is based on U.S. data.

How has the use of temporary and part-time employees who do not receive benefits grown in recent years? How prevalent is the use of temporary and part-time employees?

Part-time workers in Vermont have grown only slightly in this decade, from 22.1% of total employment in 1990, to 23.6% in 1997. The percent of part-time workers who want full-time jobs but cannot get them ("involuntary" part-time for economic reasons[1]) has gone from 20.0% in 1990 to 16.2% in 1997. Changes in these numbers reflect long-term economic trends, the emergence from the recession of the early 1990s, and sampling variability (especially salient for the percent voluntary, since the numbers are quite small for Vermont in a non-census year). Most of the growth in part-time employment happened in the 1970s and 1980s. Nonetheless, there were still about 12,000 Vermonters who were involuntary part-time workers in 1997. (U.S. Bureau of Labor Statistics, 1999 and 1991)

Temporary workers have been much less closely followed. Nationally, the number of employees of "help supply services" (SIC 7363) has increased from 400,000 (0.5% of non-farm payroll employment) in 1982 to more than 2 million in 1998 (2.3% of employment). (Cohany, 1996: Houseman, 1999) This understates the total number of temporary workers, since it does not include on-call workers and direct-hire temporaries.

Nationally, 5.2% of workers were classified as temporary in 1997. These consisted of two groups: 2.6% of workers who were on-call temporaries or employees of temporary help agencies, and 2.6% who were direct-hire temporaries. (Houseman, 1999)[2]

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1 Slack work or lack of full-time opportunities rather than because of personal constraints or preferences. BLS "Revisions in the Current Population Survey Effective January 1994," p. 16.

2 Direct hire temporaries were defined in this survey as workers whose "job is temporary or they cannot stay as long as they wish for economic reasons" and they are not classified as agency temporaries, on-call or day laborers, independent contractors, or contract company workers.

Table 4A

U.S. Workers in Part-Time and Temporary Positions, 1995*			
	On-call workers	Employees of temporary help agencies	Traditional arrangements**
Full-time	44.1%	79.4%	81.7%
Part-time	55.9%	20.5%	18.3%
Total	100.0%	100.0%	100.0%

Source: Cohany, 1996.
* This table does not include direct-hire temporaries.
**This study defined traditional job arrangements as workers who are not employees of temporary help agencies, on-call workers, contract workers, or independent contractors.

It is impossible to estimate the *growth* in temporary and part-time employees *who do not receive benefits* from the existing data. However, there is national data for recent years about the percentages of these employees that have received benefits.

How many temporary and part-time employees receive benefits?

Nationally, part-time workers and temporary workers are much less likely to be eligible for employer-provided health insurance and pensions. Workers who happen to be both part-time and temporary have the lowest rates of insurance and pension coverage. (Hipple and Stewart, 1996) Even taking into account differences in age, education, industry, and so forth, part-time and temporary workers are less likely to have benefits than workers who are in full-time permanent positions. (Houseman, 1999)

Table 4B

Percentages of U.S. workers eligible for employer-provided health insurance, 1995*			
	Employees of temporary help agencies	On-call workers	All workers in traditional job arrangements
Full-time	26.0%	43.9%	82.8%
Part-time	10.2%	14.1%	32.9%
Average	22.6%	26.5%	73.5%

Source: Hipple and Stewart, 1996
* These percentages overstate the number of employees that actually use these benefits (e.g., many people are covered on their partner's health plan).

Table 4C

Percentages of U.S. workers eligible for employer-provided pension benefits, 1995*			
	Employees of temporary help agencies	On-call workers	All workers in traditional job arrangements
Full-time	7.8%	37.2%	63.8%
Part-time	3.9%	16.3%	22.1%
Average	7.0%	25.3%	56.0%

Source: Hipple and Stewart, 1996.
* Fewer employees actually use these benefits than the number eligible.

In which occupations and economic sectors are such workers most prevalent?

1. Occupations:

Occupations with the highest concentration of on-call workers are professional workers, service workers, and operators, fabricators and laborers. Employees of "temp" agencies are concentrated in administrative support occupations and operators, fabricators and laborers.

Vermont part-time workers are concentrated mostly in service occupations, and to a lesser extent, in sales and clerical work.

Table 4D

Percent distribution of temporary workers by occupation, 1995 (US)			
Occupational category	On-call workers	Temporary help agency workers	Traditional job arrangements
Executive, administrative, managerial	3.0	6.5	13.6
Professional	22.1	8.3	14.7
Technical	1.6	3.7	3.4
Sales	6.2	2.6	11.7
Administrative support including clerical	9.9	30.1	16.0
Service	20.0	9.0	13.6
Precision production, craft and repair	13.3	5.6	10.1
Operators, fabricators and laborers	20.1	33.2	14.6
Farming, forestry and fishing	3.8	1.0	2.4
Totals	100.0	100.0	100.0

Source: Cohany, 1996.

Table 4E

Percent distribution of Vermont part-time workers by occupation, 1990		
Occupation	Full-time	Part-time
Executive, administrative, managerial	14.3	5.9
Professional	15.8	15.5
Technical	4.0	3.0
Sales	10.6	13.3
Administrative support including clerical	12.6	18.6
Service	10.1	23.4
Precision production, craft and repair	14.1	6.0
Operators, fabricators and laborers	14.4	9.9
Farming, forestry and fishing	4.1	4.5
Totals	100.0	100.0

Source: 1990 Vermont census 5% sample.

2. Industries:

On-call workers are concentrated in the construction and service industries. Temporary agency workers are concentrated in manufacturing and, to a lesser extent, in services.

Part-time workers are concentrated in trade and services.

Table 4F

Percent distribution of temporary workers by industry, 1995 (US)			
Industry	On-call workers	Temporary help agency workers	Traditional job arrangements
Agriculture	3.7	0.4	2.4
Mining	0.5	0.2	0.6
Construction	13.1	2.8	4.4
Manufacturing	6.3	33.5	17.9
Transportation and utilities	9.0	7.7	7.2
Trade	14.5	8.1	21.4
Finance, insurance, real estate	1.9	7.5	6.4
Services	47.4	38.7	34.4
Public administration	3.5	1.2	5.4
Total	100.0	100.0	100.0

Source: Cohany, 1996.

Table 4G

Percent distribution of Vermont part-time workers by industry, 1990		
Industry	Full-time	Part-time
Agriculture	4.0	4.4
Mining	0.3	0.0
Construction	8.3	5.2
Manufacturing	19.0	7.0
Transportation and utilities	5.8	2.7
Trade	20.9	27.7
Finance, insurance, real estate	5.7	3.7
Services	31.4	46.0
Public administration	4.8	3.1
Total	100.0	100.0

Source: 1990 Vermont census 5% sample.

Profile temporary and part-time workers by earnings, gender, educational level and state or region.

According to an analysis of the 1990 Census (Vermont 5% sample), part-time workers in Vermont earn much less per hour than full-time workers, even when they are of identical educational levels, in the same broadly defined region (urban/rural), of the same age, and of the same family status. Male part-time workers earned 15% less than full-time male workers with the same characteristics. Women with the same characteristics that worked part-time earned 11.6% less than women that worked full-time. (Governor's Commission on Women, 1993)

Nationally, the weekly earnings of *full-time* temporary workers is much lower than that of workers in traditional arrangements. In 1995, on-call workers earned $386 per week, temporary help agency employees earned $290, and workers in traditional arrangements earned $480. (Hipple and Stewart, 1996)

Women are disproportionately represented among temporary and part-time workers. While women are 46% of the U.S. workforce, they are 51.6% of on-call workers, and 52.8% of temp agency workers. (Cohany, 1996) In Vermont, women were 71.6% of all part-time workers and 50% of all involuntary part-time workers in 1997. Women were 48.9% of all employed Vermonters. (U.S. Bureau of Labor Statistics, 1998)

Table 4H

Issue # 4 Educational Levels of U.S. Workers by Type of Employment, 1995		
Education level	On-call workers	Temporary help agency workers
Less than high school degree	11.3%	14.2%
High school graduate	67.1%	65.5%
College graduate	21.7%	20.3%
Total	100.0%	100.0%

Source: Cohany, 1996.

Table 4I

Issue # 4 Educational Levels of Vermont Workers by Full- and Part-Time Status, 1990		
Education level	Full-time	Part-time
Less than high school degree	11.5%	20.5%
High school graduate	61.1%	58.8%
College graduate	27.4%	20.7%
Total	100.0%	100.0%

Source: 1990 Vermont census 5% sample.

Table 4J

Ages of U.S. Workers by Type of Employment, 1995		
Age	On-call workers	Temporary help agency workers
16-24	19.3%	24.9%
25-64	74.0%	73.3%
65+	6.7%	1.8%
Total	100.0%	100.0%

Source: Cohany, 1996.

Table 4K

Ages of Vermont Workers by Full- and Part-Time Status, 1990		
Age	Full-Time	Part-Time
16-24	11.7%	32.6%
25-64	86.6%	59.5%
65+	1.7%	8.0%
Total	100.0%	100.0%

Source: 1990 Vermont census 5% sample.

How might the prevalence of temporary and part-time workers affect livable wage rate analyses?

1. Addressing the Problem of Involuntary Temporary and Part-time Employment:

Temporary and part-time workers earn low wages and few benefits relative to workers in fulltime, permanent positions. Moreover, many of the part-time and temporary workers would prefer to be in permanent and / or full-time jobs. Among employees of temporary help agencies, 63.3% preferred traditional jobs, and 64.7% of them said that they worked as temporaries for economic reasons.[3] Among on-call workers, 56.7% preferred traditional work arrangements, and 47.4% of them were on-call workers for economic reasons. (Cohany, 1996) One-sixth of Vermont's part-time workers (12,000 people) cannot get the full-time hours they would prefer.

There are at least three possible ways to approach the problem of low-wage and low-benefit, involuntary part-time and temporary workers. One way is for the state or federal government to provide universal health insurance that is not tied to employment status. Another way is to make more jobs full-time. A third way is to improve the quality of part-time jobs: for example, by pro-rating benefits for part-time workers.

Currently, temporary and part-time workers are much less likely to be eligible for employer-provided health insurance and pensions than full-time permanent employees. The livable wage analyses in Issue 1 showed the significant difference between wage levels required to achieve a livable wage when the employer provided no health insurance vs. when the employer covered the full-time worker (but not her / his children, who were assumed to receive Dr. Dynasaur). Issue 8 showed the savings to the state when full-time employees get higher wages (or more employer-provided health benefits). Although this report does not provide analogous data for part-time workers, similar results would be expected: pro-rated benefits would do much to close the gap between actual wages and livable wages for part-time workers while reducing the expense of health care to the state.

Livable wage analyses also need to estimate the cost to employers of providing additional health benefits for part-time and temporary workers, much like these analyses have analyzed the cost of higher wages to employers. These analyses can take into account that a significant percentage of employees who are eligible for benefits do not actually use them, for example, workers who elect to be covered on their spouse's health plan.

[3] Slack work or lack of full-time opportunities rather than because of personal constraints or preferences. BLS "Revisions in the Current Population Survey Effective January 1994," p. 16.

Table 4L

Eligibility for and use of health benefits, U.S. 1995*		
	% eligible for employer-provided health insurance	% receiving employer-provided health insurance (through current employer at main job)
Full-time workers in traditional arrangements	82.8	71.2
Part-time workers in traditional arrangements	32.9	17.4
On call temporaries	26.5	17.2
Temporary help agency workers	22.6	5.7

Source: Hipple and Stewart, 1996b.

* Workers who are eligible for pensions sometimes do not use them either, although the take-up rate is higher for pensions than health plans. (Hipple and Stewart, 1996b)

2. Part-time Workers and the Minimum Wage:

Another possible way to improve the quality of part-time jobs is to raise the minimum wage. Temporary workers and part-time workers receive lower wages, even on an *hourly* basis. Also, minimum wage earners are much more likely to work part-time. (Card and Krueger, 1995)

We might also ask, would a higher minimum wage be offset by reductions in hours, or by employers changing jobs from full-time to part-time positions? There is only very limited evidence on this question. Orazem and Mattila (1998) found that hours declined more strongly than total employment in retail trade and services after the Iowa minimum wage increased in the early 1990s. In contrast, Katz and Krueger (1992) suggested that the increase in the minimum wage in Texas caused fast food employers to substitute full-time workers for part-time workers, because the former were regarded as more productive (this may be because full-time workers are older.) Similarly, Card and Krueger (1995) found that when the minimum wage rose in New Jersey (but not Pennsylvania), the percentage of full-time employees rose in New Jersey relative to Pennsylvania.

There is the additional question of whether increases in the minimum wage would induce employers to reduce benefits. Card and Krueger found no significant evidence of this in their fast-food studies, although the benefits in fast food are only minimal (free or reduced-price meals). Since many minimum wage earners do not get benefits, the effects of minimum wages on benefits in jobs other than fast food may be minimal as well, but more research is required to determine this. From a survey of retail and non-professional service firms in Iowa, Orazem and Mattila (1995) also found that changes in benefits were small after an increase in the minimum wage. More research is needed in this area.

3. The Problem of Full-Time Work for Families with Children:

The livable wage analysis in this report has assumed at least one full-time person per household. Additional analyses were reported for two-adult households with two full-

time earners. Yet a more typical situation is one full-time and one part-time worker. One parent often works part-time to leave more time for childcare and household work. Similarly, single parents assume the great majority of responsibility for children, and may reasonably prefer part-time work to leave more time for family care. In the future, livable wage analyses should take into account the need for high quality part-time jobs for people whose family responsibilities make it difficult to work at full-time jobs. Policy questions should include the potential effects of pro-rated benefits as well as the amount of income supplements (cash or in-kind) needed to maintain a single parent's family at a livable income if that parent is employed part-time. Policy questions should also include the effect of welfare-to-work requirements that assume that single parents should be employed full-time.

Issue #5

"Consider the effect of multi-state employers on the ability of Vermont businesses to pay a living wage and be competitive." [Act 21, §2(b)(5)]

Related Questions: ***"****How might raising the minimum wage affect Vermont businesses that compete with multi-state or out of state employers that pay their workers less than Vermont's minimum wage? How many Vermont businesses may be affected by this? In what industries or regions are such companies concentrated?" (Scope of Work)*

How might raising the minimum wage affect Vermont businesses that compete with multi-state or out of state employers that pay their workers less than Vermont's minimum wage? How many Vermont businesses may be affected by this? In what industries or regions are such companies concentrated?

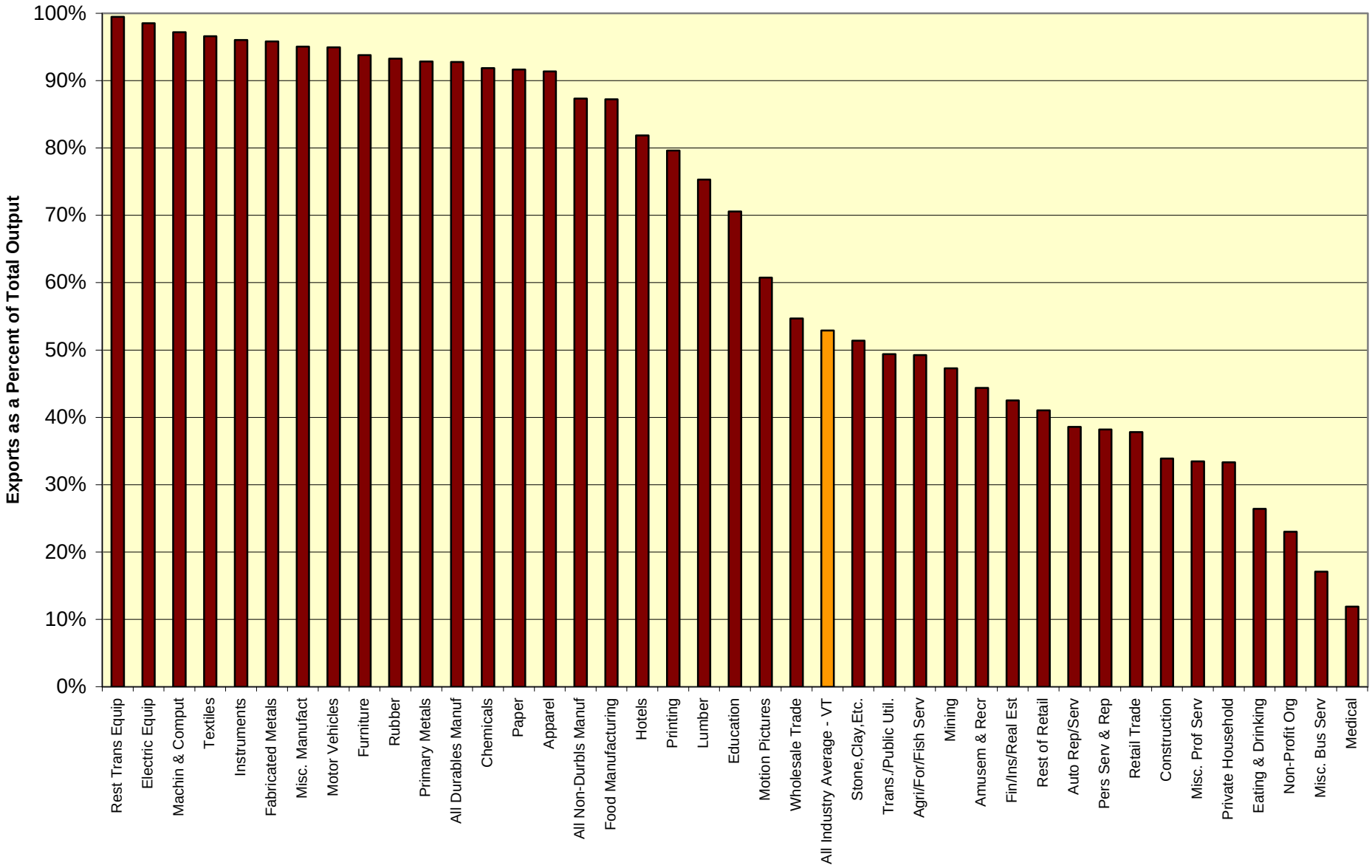
As detailed in Issues #3 and #7, the Vermont industries with the greatest incidence of low wage jobs covered by Vermont minimum wage law are retail sales businesses, eating and drinking establishments, and hotel and lodging businesses. These businesses tend to be relatively small and spread throughout the state. Retail establishments (including restaurants) tend to be distributed in rough accordance with population. Hotels and lodging establishments are located both in populated areas and rural tourist destinations. Information detailing exact establishment counts for all economic sectors by county (and zip code, if desired) and firm size class is available upon request.

Relative sensitivity to out-of-state competition can be roughly gauged by the portion of total industry output that is comprised of exports. For service industries, such as hotels, restaurants and retail establishments, exports consist of the portion of total output sold to out-of-state residents. Estimates of relative export intensity by sector is depicted in Chart 5A. As illustrated in this chart, retail and eating and drinking establishments have among the lowest export shares. The Vermont business sectors with the highest export to output ratios are generally in the manufacturing sector. One notable exception is the hotel, motel and lodging industry, which has an export share of 82%.

Vermont manufacturing firms do not tend to be among the lowest wage employers and thus are not nearly as sensitive to minimum wage increases as the retailing, restaurant and lodging businesses. As detailed in Appendices 5A-I, even a minimum wage change to $8.50/hour would have relatively minor impacts in the manufacturing sector. Only apparel manufacturing would experience a reduction in exports of more than 1%, and this is associated with a disemployment effect of only 32 full time equivalent positions (out of about 1,480 total jobs).

The industry in which there is a convergence of both export sensitivity and reliance on substandard wage jobs is the hotel, motel and lodging industry. Accordingly, it is likely to be the most sensitive to minimum wage changes. With an $8.50 minimum wage change, aggregate industry exports could be reduced by as much as 3.5%, nearly

CHART 5A
Relative External Competitive Sensitivity of Selected Vermont Economic Sectors



Sources: Bureau of Economic Analysis, Regional Economic Models, Inc.

double the relative impact on any other sector, with a maximum disemployment effect of about 500 jobs (out of about 12,600 total jobs) within about 3 years.

Despite the relatively low aggregate export reliance in the eating and drinking (26%) and other retail (38%) sectors, there will be greater sensitivity to external competition in some regions of the state than in others. Establishments located near competitive political jurisdictions that allow substandard wages will face both a loss of export-based and local business if wage increases are passed along in the form of higher prices. This may be particularly acute among retail firms located in the Connecticut River Valley, where prolonged sales tax differentials (which generally exceed any analyzed minimum wage impacts) between Vermont and New Hampshire would combine with any wage differentials to exacerbate the competitive disadvantage to Vermont firms.

As noted in Issues #3 and #9, modest minimum wage increases are expected to have very minimal, if any, aggregate negative economic consequences for any sector. Potential impacts by sector for $6.50, $7.50 and $8.50 minimum wage increases are detailed in Appendices 5A-I.

Issue # 6

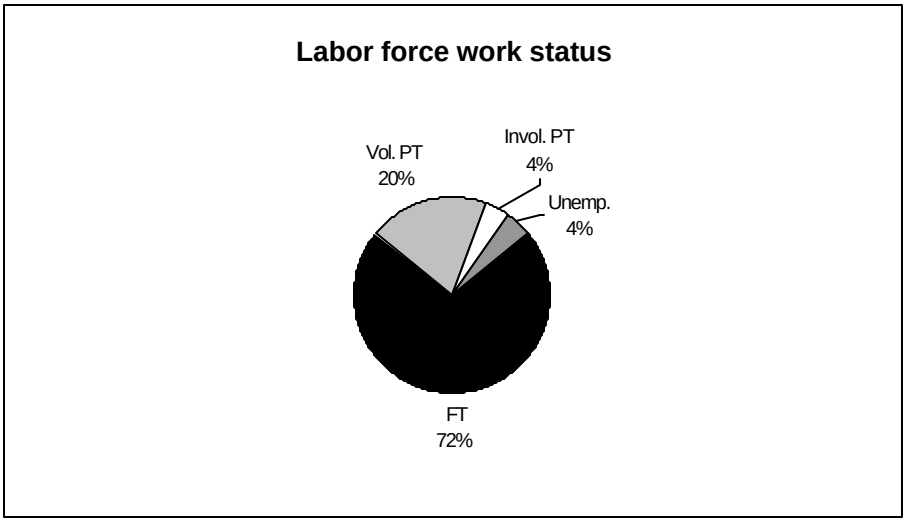
Create "a profile, including age, gender, educational and training level and location of the full- and part-time workers at various wage rate levels, beginning at minimum wage with 50-cent increments to a livable wage." [Act 21, §2(c)(2)]

Related questions: What are the relevant demographic, educational, geographic and social characteristics of Vermont's lowest income workers? Are data available that allow segmentation by 50¢ wage increments? If not, what is the most detailed breakdown possible? (Scope of Work)

How many Vermonters work full-time (FT) vs. part-time (PT)?[1]

We found that on average over the past three years seventy one percent (71%) of all employees worked FT; twenty percent (20%) worked PT voluntarily; four percent (4%) worked PT involuntarily for economic reasons;[3] and four percent (4%) were unemployed.[4]

Chart 6A[2]



What are the age characteristics of full-time and part-time workers?

Over three-quarters of all those over 22 years old work FT. While a substantial percentage of those under 23 years old work FT (35%), they represent only 5% of the total FT workforce (see Charts 6B and 6C on next page).

When we look at just FT workers, we find that while only fifteen percent (15%) of those over 30 years old earn less than $6.50 / hr, they represent sixty six percent (66%) of all those who earn less than $6.50 / hr. Conversely, while the majority of 16-22 year olds earn less than $6.50 / hr, they account for only eighteen percent (18%) of all those who earn less than $6.50 / hr (see Charts 6D and 6E).

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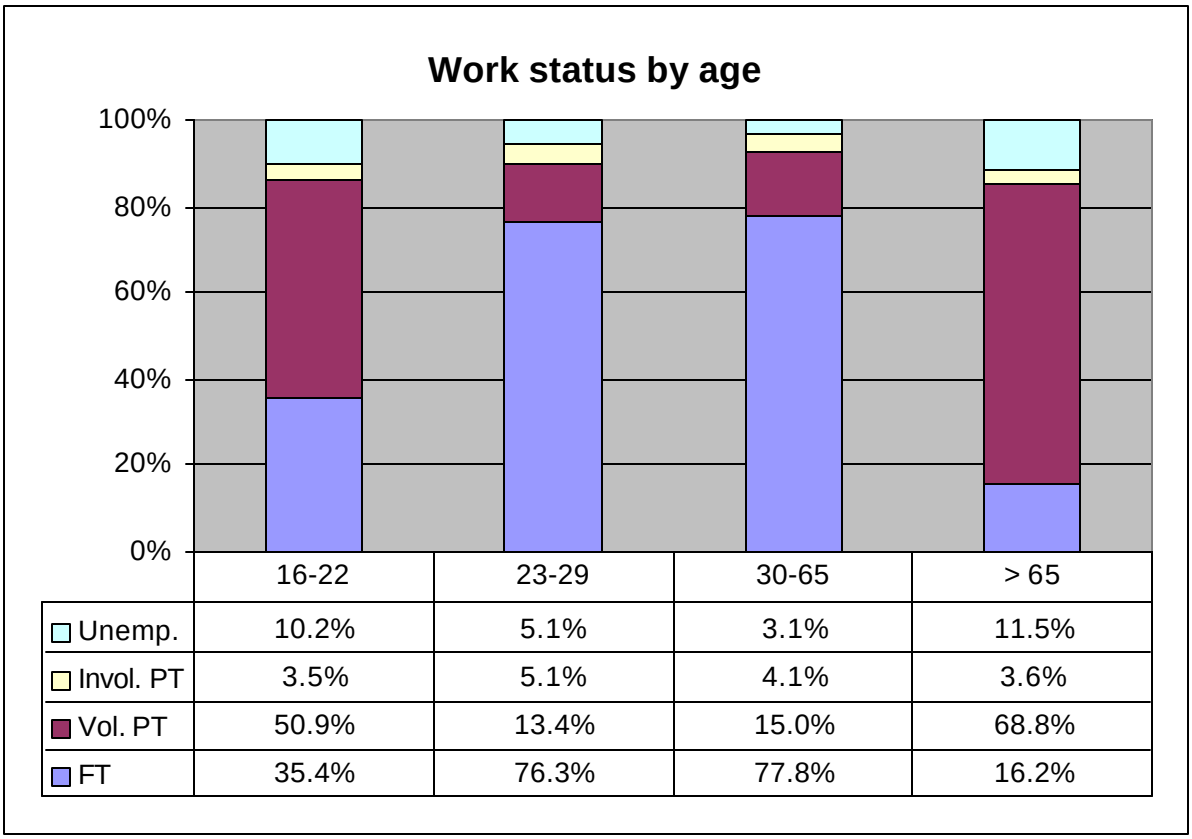
1 All data presented for Issue #6 are from the Current Population Survey (US Census Bureau). We averaged three years of data from the 1996-98 March Supplement which includes questions about the previous calendar year.

2 Chart 6A does not include "discouraged workers" or the "marginally attached" because they are not considered part of the active labor force. Discouraged workers are "persons who want a job, are available to take a job, and who had looked for work within the past year but not within the prior 4 weeks because they believed the search would be futile," BLS, Revisions to the CPS, Effective 1994, p. 16. The marginally attached are not actively seeking work because of personal / financial reasons (e.g., ill health, lack of childcare or transportation). BLS estimated there was a total of 3,756 persons in both categories in Vermont in 1997.

3 Involuntary PT is an official BLS category for those who work less than 35 hrs / week because of slack work or an inability to find FT work, rather than because of personal constraints or preferences.

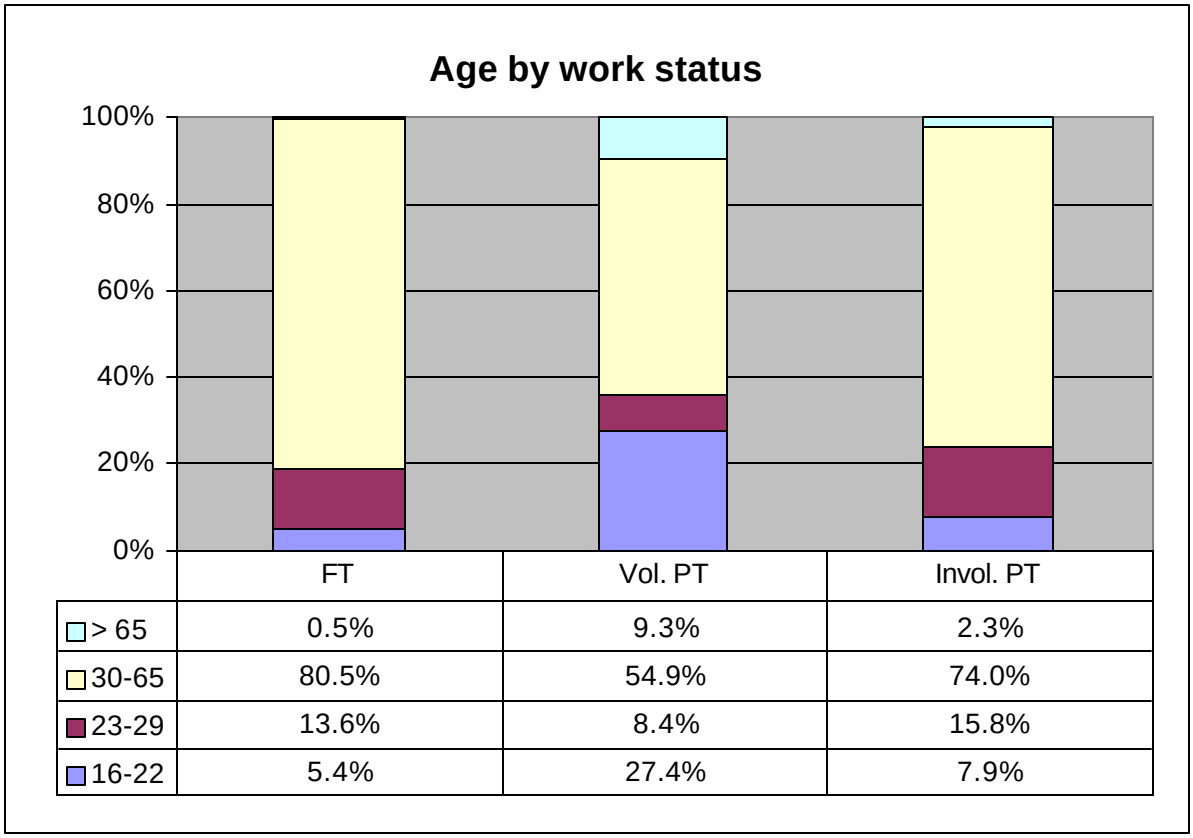
4 Figures do not total 100% due to rounding.

Chart 6B



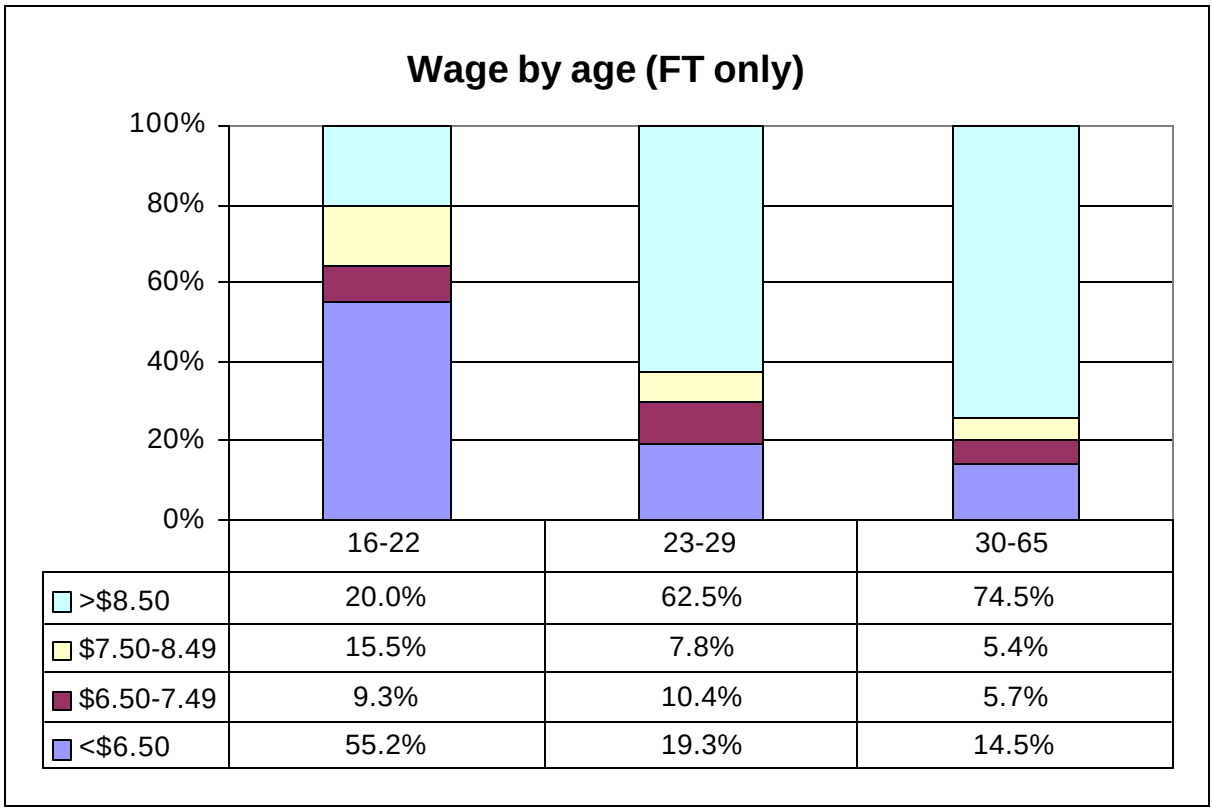
	16-22	23-29	30-65	> 65
Unemp.	10.2%	5.1%	3.1%	11.5%
Invol. PT	3.5%	5.1%	4.1%	3.6%
Vol. PT	50.9%	13.4%	15.0%	68.8%
FT	35.4%	76.3%	77.8%	16.2%

Chart 6C



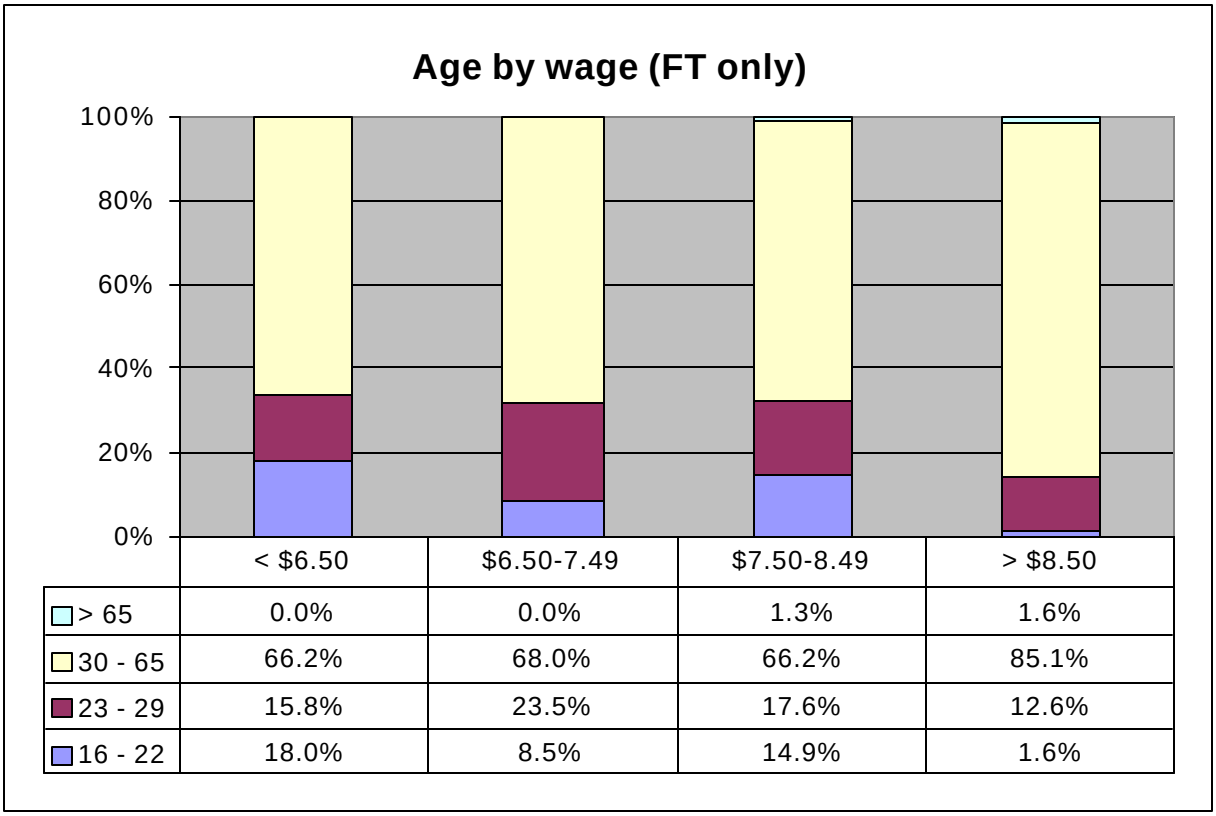
	FT	Vol. PT	Invol. PT
> 65	0.5%	9.3%	2.3%
30-65	80.5%	54.9%	74.0%
23-29	13.6%	8.4%	15.8%
16-22	5.4%	27.4%	7.9%

Chart 6D



	16-22	23-29	30-65
>$8.50	20.0%	62.5%	74.5%
$7.50-8.49	15.5%	7.8%	5.4%
$6.50-7.49	9.3%	10.4%	5.7%
<$6.50	55.2%	19.3%	14.5%

Chart 6E



	< $6.50	$6.50-7.49	$7.50-8.49	> $8.50
> 65	0.0%	0.0%	1.3%	1.6%
30 - 65	66.2%	68.0%	66.2%	85.1%
23 - 29	15.8%	23.5%	17.6%	12.6%
16 - 22	18.0%	8.5%	14.9%	1.6%

What are the gender characteristics of full-time and part-time workers?

Men hold fifty eight percent (58%) of all FT jobs which, among other factors, reflects their greater participation in the workforce (men 77%, women 67%[5]). Women are three times as likely as men to work PT voluntarily, perhaps due to their continuing role as primary caregivers for children and elders. Women are much more likely than men to hold low-paying FT jobs. There are undoubtedly numerous reasons for this disparity including limited occupational opportunities and gender-based wage disparities, among others.[6]

Chart 6F

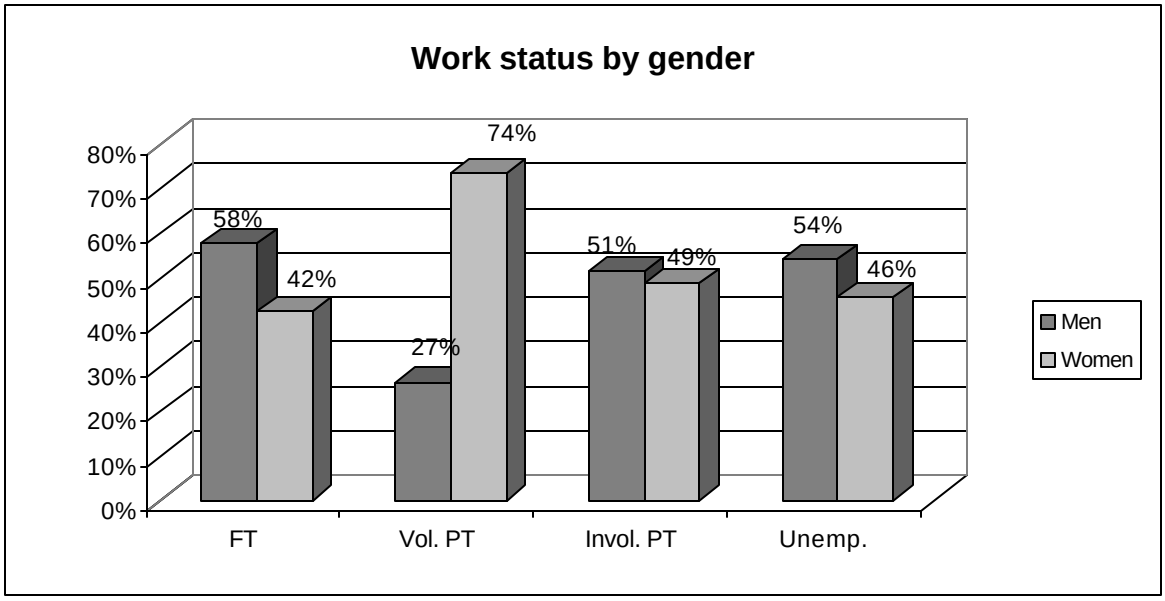
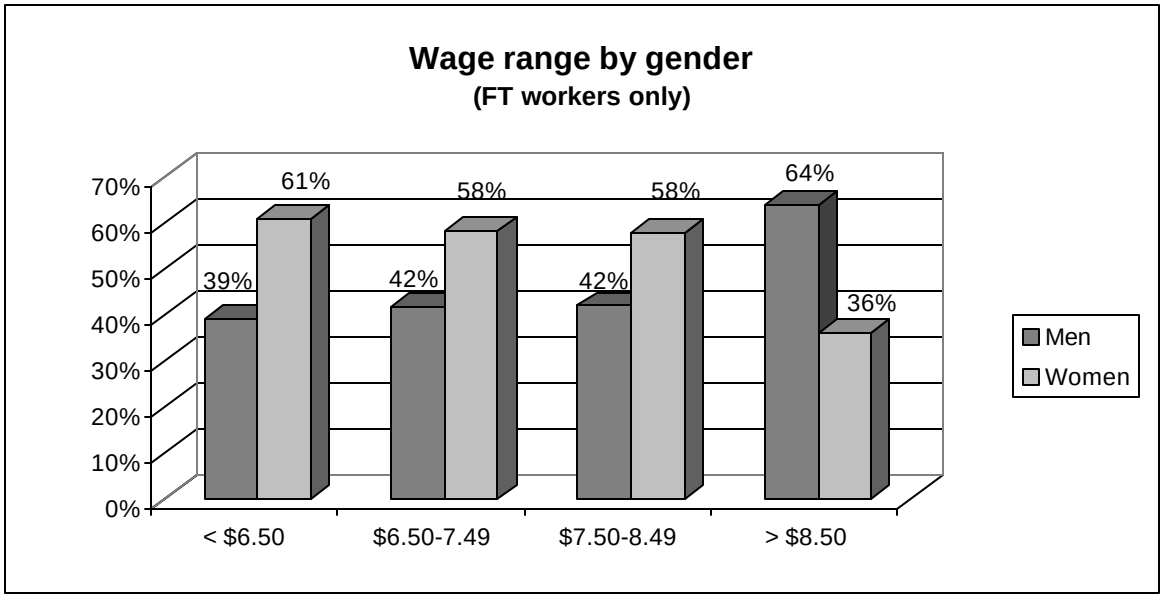


Chart 6G

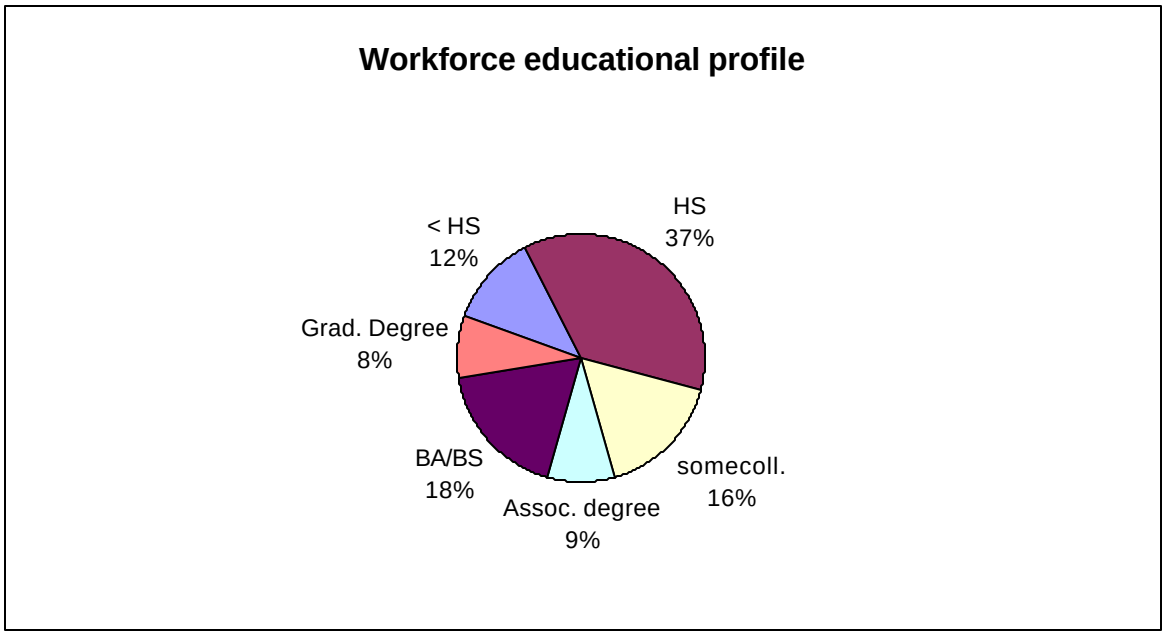


[5] Source: DET, 1997.

What are the educational characteristics of the workforce?

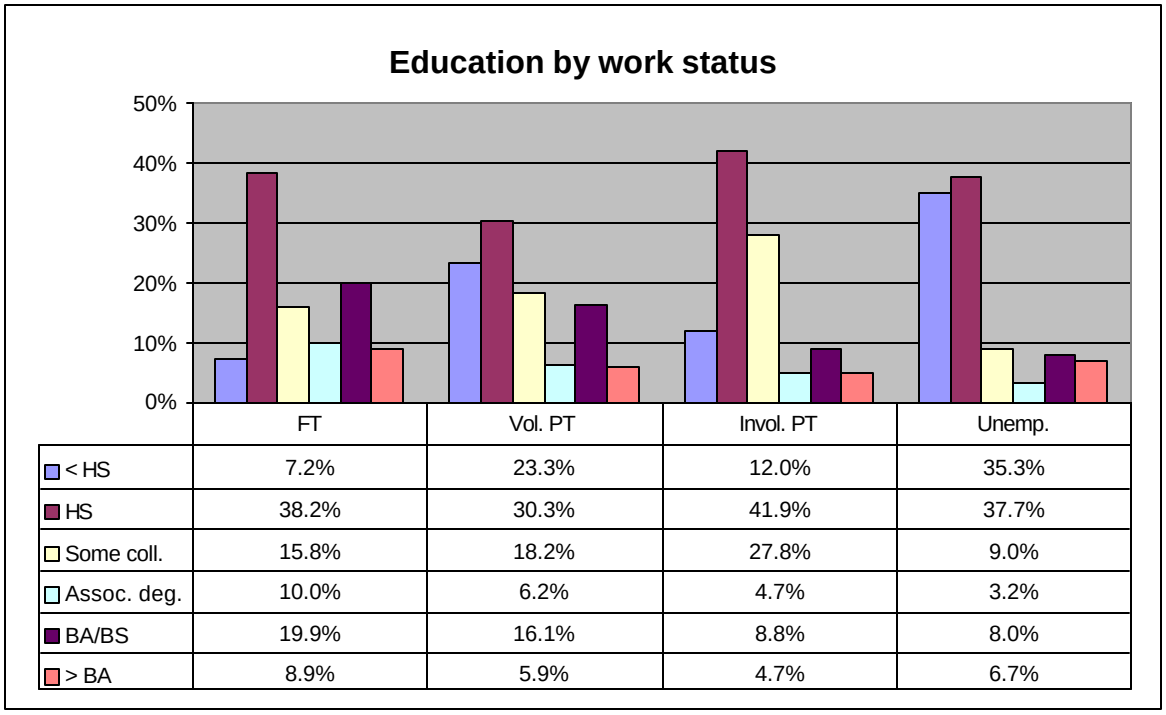
Forty nine percent (49%) of those in the workforce have no more than a high school education, while thirty five percent (35%) have at least an Associate's degree.

Chart 6H



Relatively less education appears to have little correlation with work status except that those with no more than a HS degree are much more likely to be unemployed.

Chart 6I



	FT	Vol. PT	Invol. PT	Unemp.
< HS	7.2%	23.3%	12.0%	35.3%
HS	38.2%	30.3%	41.9%	37.7%
Some coll.	15.8%	18.2%	27.8%	9.0%
Assoc. deg.	10.0%	6.2%	4.7%	3.2%
BA/BS	19.9%	16.1%	8.8%	8.0%
> BA	8.9%	5.9%	4.7%	6.7%

[6] There is no appreciable difference between the educational attainment of men and women in the workforce.

Not surprisingly, there is a strong correlation between post-secondary education and higher wages. Nevertheless, twenty three percent (23%) of all FT workers that earn less than $8.50 / hr have at least an associate's degree. Therefore, it appears that the economy is not producing enough livable wage jobs that require post-secondary education (see Issue #7 for more on this).

Chart 6J

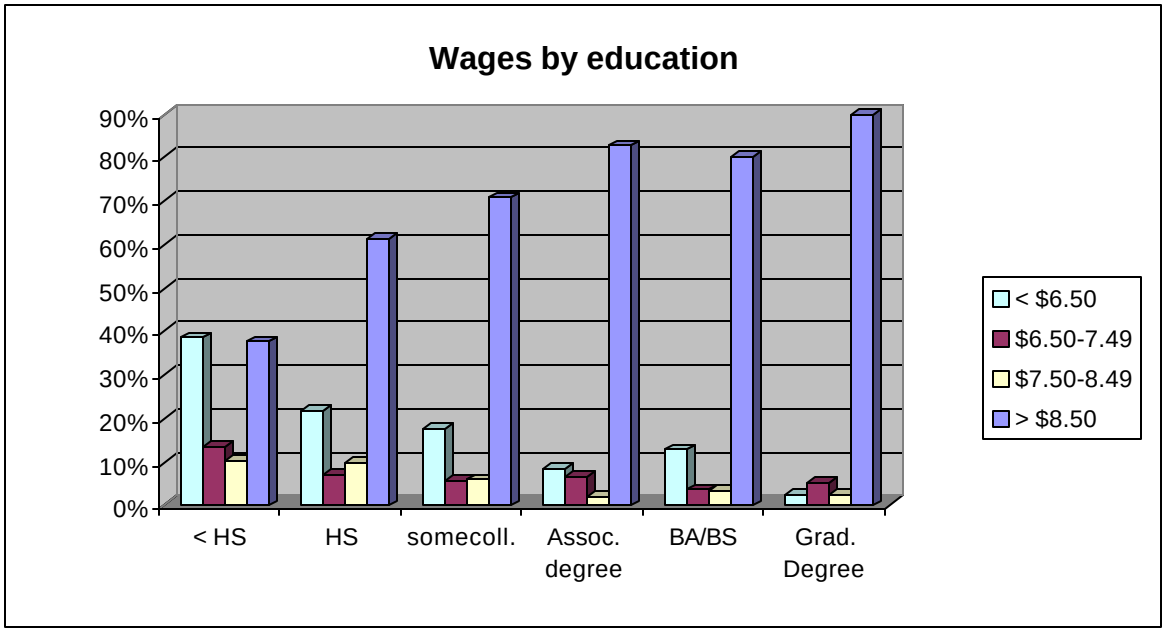
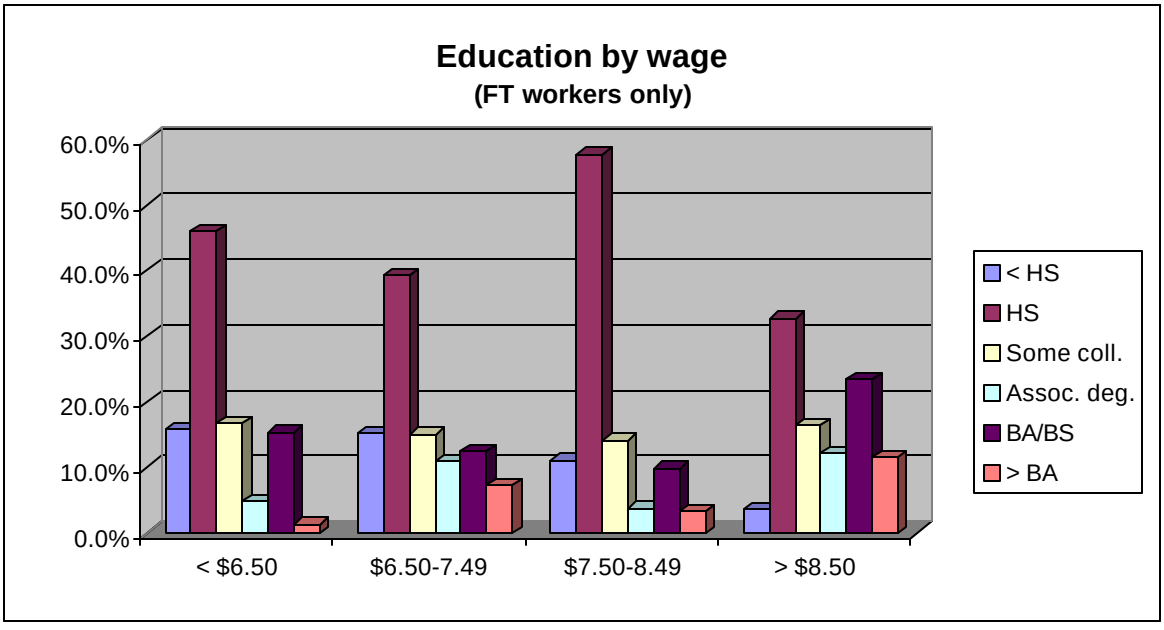


Chart 6K



Issue # 7

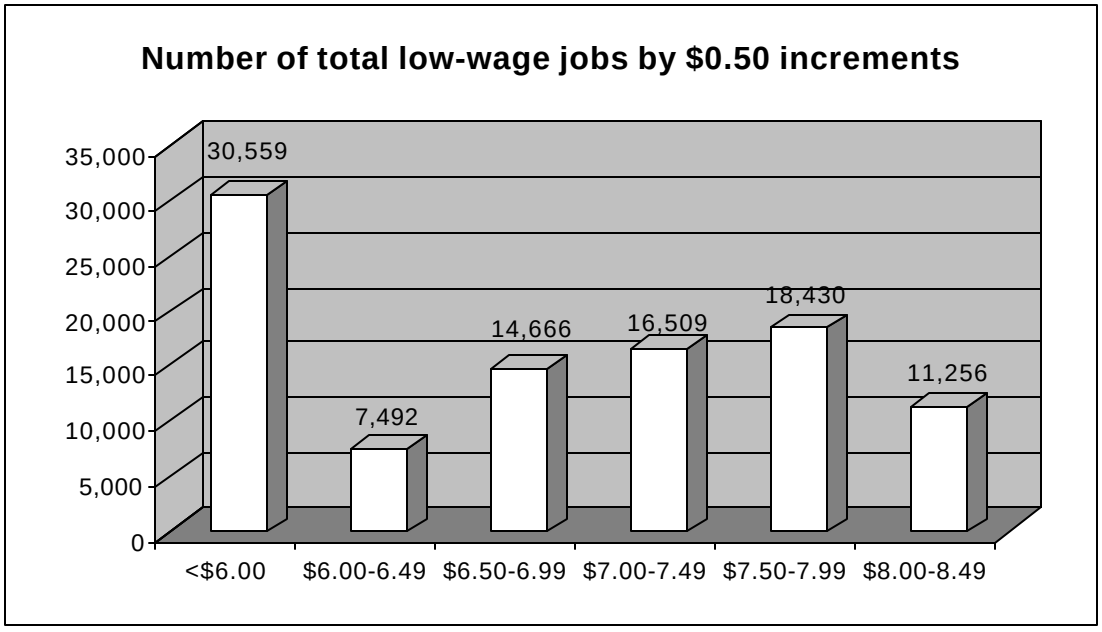
Create "a profile of the numbers, types and percentage of jobs that pay less than a livable wage. The profile shall include the types of businesses or occupations, the economic sector of these jobs, the turnover rate and the level of education and training required for each job." [Act 21, §2(c)(2)]

Related questions: "What do we know about jobs that pay less than the livable wage in Vermont? How many such jobs are there? In what industries, regions, occupations and economic sectors are such jobs concentrated? What type of educational training, if any, is required for these jobs? Is there any information available on job turnover and job vacancy rates for these jobs? If not, are there ways this could be estimated?"

How many jobs in Vermont pay less than a livable wage?

We found that on average over the past three years, and that 98,912 jobs (35%) pay less than a livable wage for an adult in a household with two wage earners and no children ($8.50 / hr).[1] See Appendix 7 for details.

Chart 7A



How are these jobs distributed throughout the state?

There is little difference in the percentage distribution of lower wage jobs between the Burlington MSA and the rest of the state. The percentage of such jobs is slightly higher in the rest of the state (37%) than in the Burlington MSA (34%). Overall, the distribution of low-wage jobs is almost exactly the same as it is for total jobs (31% Chittenden Co. vs. 69% balance of state).

[1] DET, 1997 Occupational Employment & Wage Survey. The sample includes private & public entities covered by Unemployment Insurance but does not include unincorporated firms, the self-employed, or employers with less than five (5) employees, although small business employment was included in the final estimates.

In what industries are low wage jobs most prevalent?

Ninety one percent (91%) of the jobs that pay less than $8.50 / hr are found in three industries: Trade, Services, and Manufacturing. Sixty one percent (61%) of all jobs in Trade (retail & wholesale) pay less than $8.50 / hr.

Chart 7B

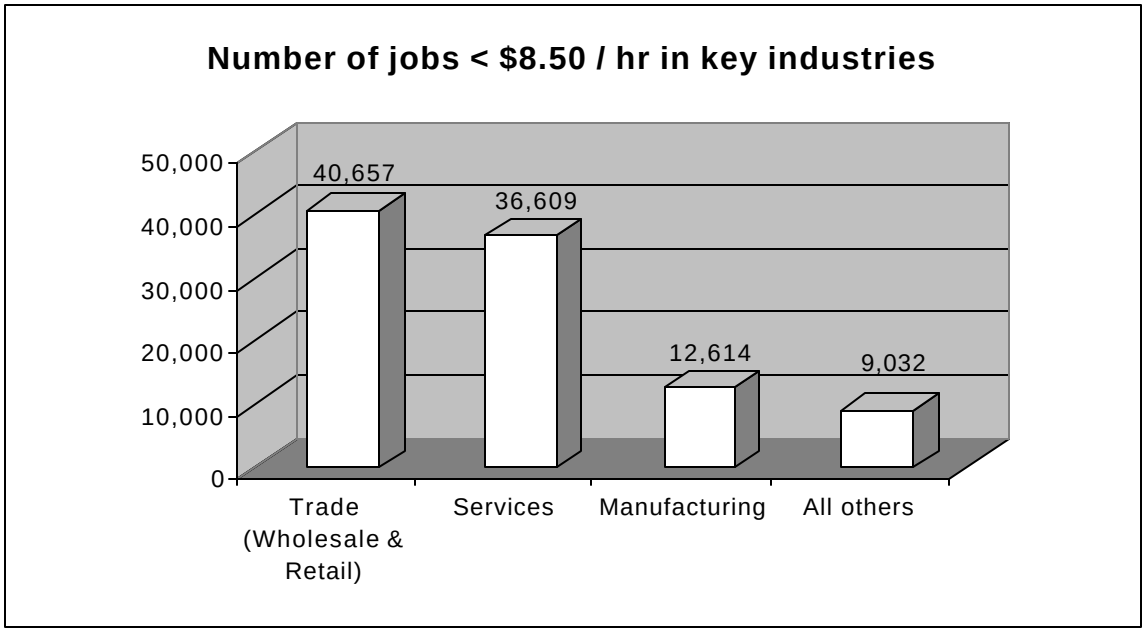
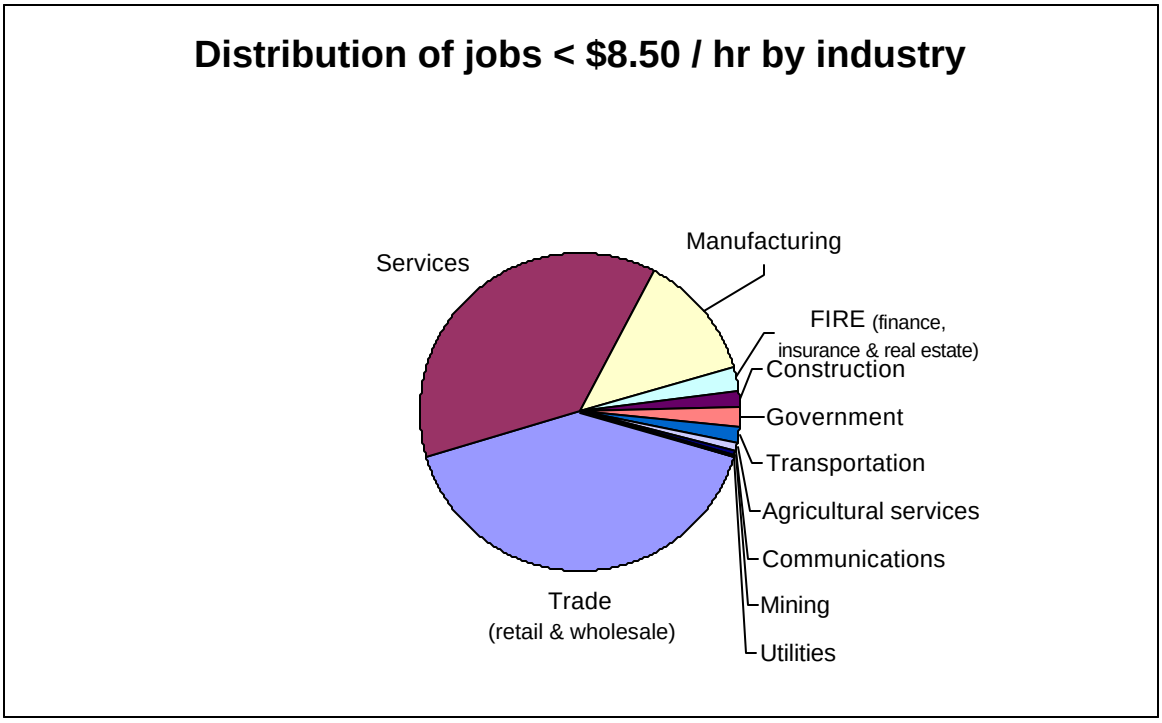


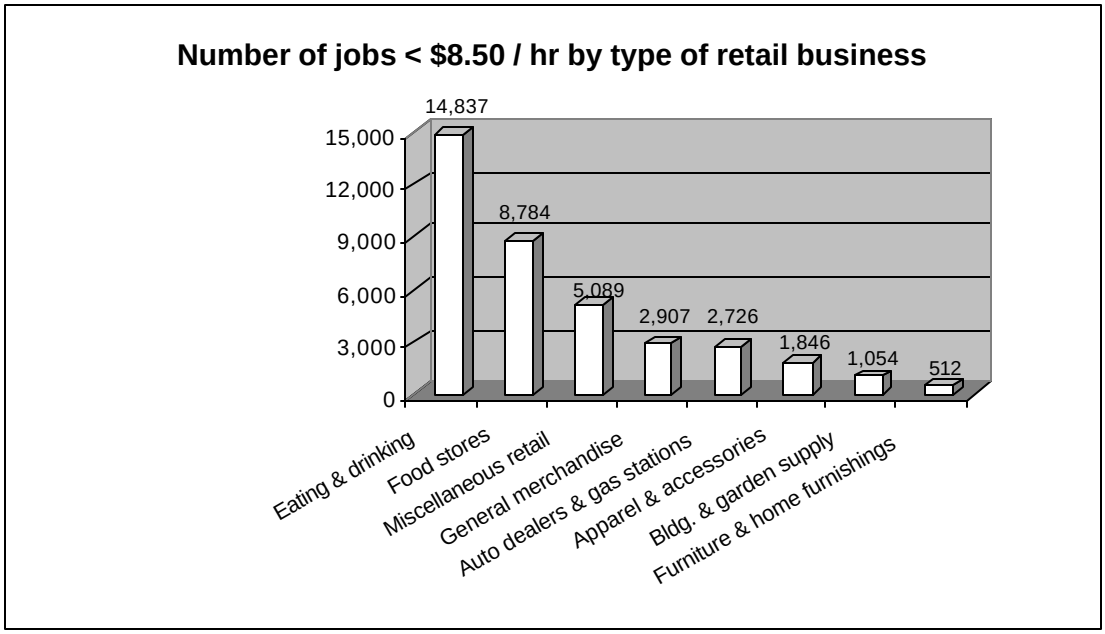
Chart 7C



What types of businesses have the largest number of jobs that pay less than a livable wage?

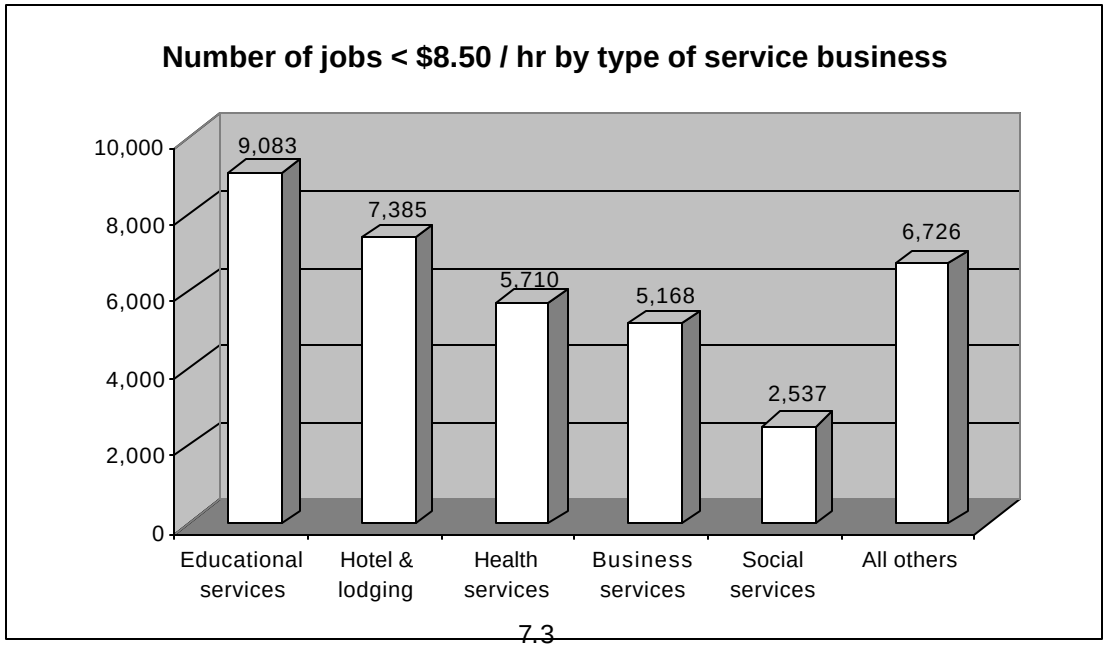
Seventy one percent (71%) of all trade jobs (retail & wholesale) that pay less than $8.50 / hr are found in three types of retail businesses (eating & drinking, food stores, and miscellaneous retail). In four types of retail businesses, the percentage of low wage jobs exceeds eighty percent (80% - general merchandise, eating & drinking, food stores, and apparel & accessories).

Chart 7D



Seventy five percent (75%) of all service jobs that pay less than $8.50 / hr are found in four types of service businesses (education, hotel & lodging, health, and business services).

Chart 7E

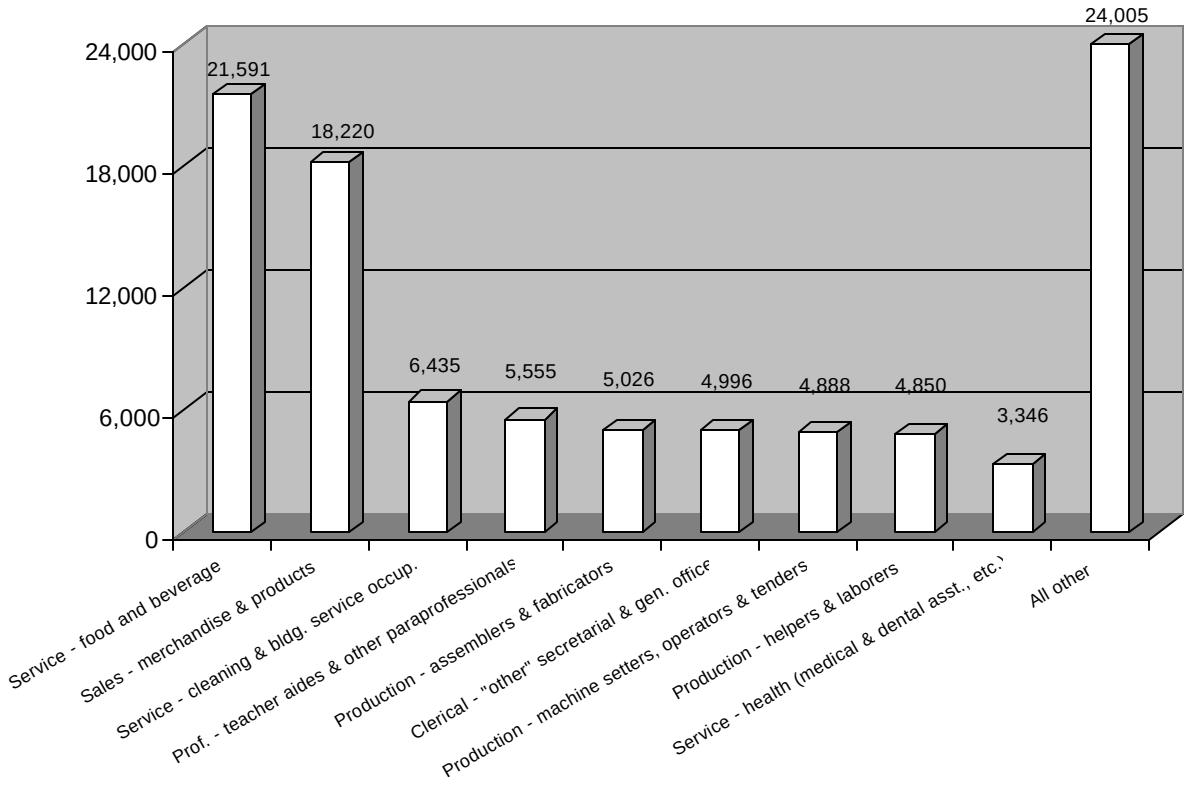


In what types of occupations are the lower wage jobs?

Three major occupational categories account for seventy six percent (76%) of all jobs that pay less than $8.50 / hr (sales; service; and production, construction, operating, maintenance, material handling).

Chart 7F

Number of jobs < $8.50 / hr by occupational title



What are the education & training requirements of jobs that pay less than $8.50 / hr?

We estimate that seventy percent (70%) of all jobs in Vermont (194,305) do not require any education beyond High School. Forty percent (40%) require only short-term on-the-job training (113,125). Twenty two percent (22%) require at least a Bachelor's degree (61,145). See Chart 7G on the next page.

Seventy eight percent (78%) of all jobs that pay less than $8.50 / hr (76,704) require no education or training.

Note: The categories in Appendix 7, Table 7G are from BLS' National industry-occupational matrix of occupations by education and training category. There is some unavoidable imprecision in these categories that is compounded by matching them to jobs in Vermont.

Issue #8

Conduct "an analysis of how increased earnings might affect taxes and public assistance, including food stamps, LIHEAP, Dr. Dynasaur, ANFC, Medicaid and any other relevant income-sensitive public assistance Benefits." [Act 21, Section 2(c)(3)]

Related questions: "How might increased earnings as a result of a minimum wage increase affect State revenues and expenses? How much of a fiscal impact might be expected in terms of increased tax revenue and decreased expenditures for income-sensitive public assistance benefits? [Scope of Work]

How might increased earnings as a result of a minimum wage increase affect State revenues and expenses?

As wages increase there is less need for public assistance to working families. Issue 2 examined the potential tradeoff between increased wages and public assistance for six hypothetical families reliant on minimum-wage jobs. Issue 8 estimates the potential savings to the state and federal governments for actual Vermont families.

It is important to note that the estimates provided here are a "snapshot" in time, assuming no disemployment or other economic feedback effects. It should also be noted that these effects can be substantial at higher minimum wage levels and change over time. These effects are detailed in Issues #3 and #9.

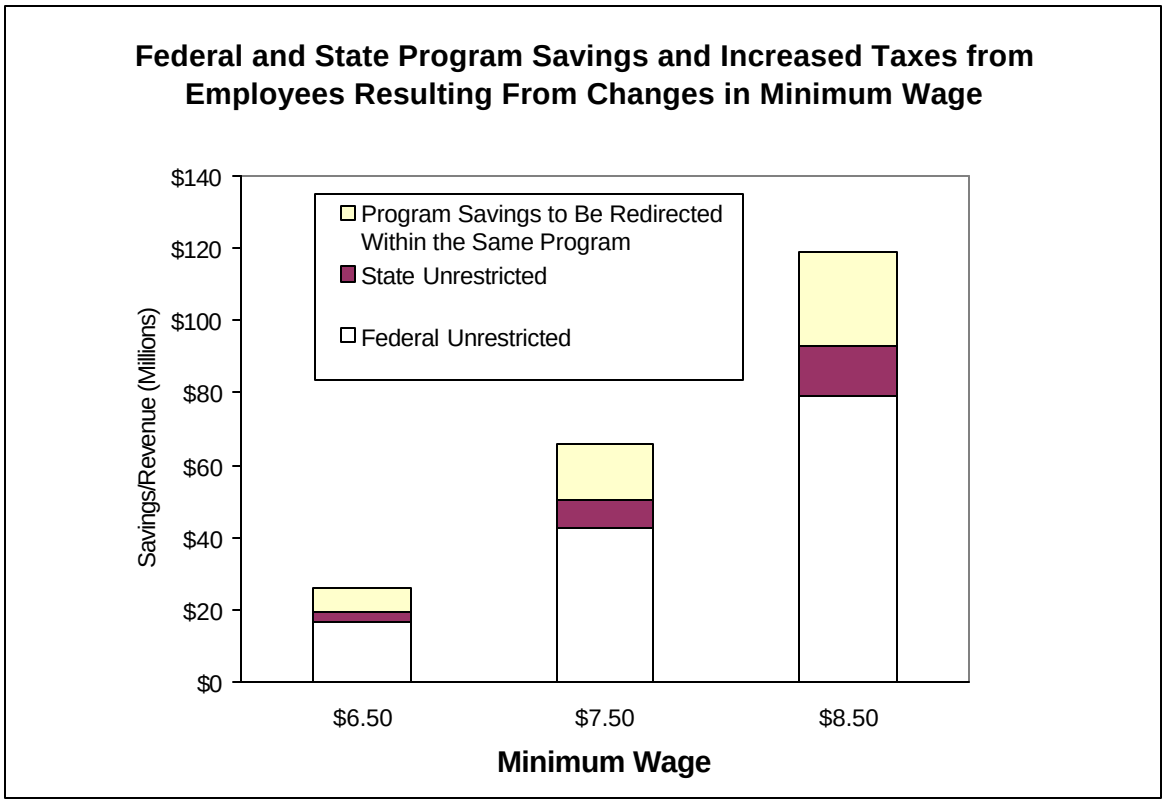
In some cases, the governmental savings and / or increased revenues are unrestricted; that is, the revenue can be used for other programs. In other cases, there are state / federal matching requirements and it is assumed that, in order to keep the federal money, the state would choose to reallocate the state share to the same program but change the guidelines to make the money go farther or deeper.

Chart 8A shows potential combined public savings and increased tax revenues that would result from employees earning additional income as the minimum wage increased. It has been compiled by taking actual Vermont households (as opposed to the hypothetical households profiled elsewhere in the report) and increasing the earnings of low-wage workers. It does not include the effects of possible disemployment or reduced taxes paid by employers. These effects are likely to be non-existent or negligible at a $6.50 / hr minimum wage level, but become increasingly significant at $7.50 and $8.50.

Increased earnings could increase tax revenues in several ways. At the federal level, the employees would contribute more in FICA and Medicare payments; Earned Income Tax Credit costs would decrease; and the employees' federal income tax payments would increase. At the state level, the cost of the earned income tax credit would decrease, employees' income tax payments would increase, and the cost of the rebate program would decrease. In addition, the state's cost of "income sensitivity" for Act 60 would decrease.[1]

[1] Because of data limitations, the estimates assum e all households with minimum-wage earners rent, therefore the savings to the state shows up in the rebate program rather than in Act 60 income sensitivity.

Chart 8A



Tables 8A - 8C show the increased tax revenue from employees if the minimum wage were increased from $5.75 to $6.50, $7.50, and $8.50. At $8.50, for example, the employees would pay an additional $81.9 million in FICA, Medicare, Federal Income Tax, and State Income Tax. In addition, the state would save $1.6 million in Earned Income Tax Credits and Rebates, and the Federal government would save about $4 million in Earned Income Tax Credits.

Increasing the minimum wage would also affect the tax payments made by the employer in two ways. First, the employer's FICA and Medicare payments would increase. Second, the employer's tax would be reduced to the extent that the increased costs of wages lowered the corporate income or the employer's personal income. The extent to which the wage increase would affect prices or profits, the change in the employers' taxes was not estimated, due to insufficient data.

We requested information from the Tax Department on Corporate Income revenues by Industry (SIC) in late September. However, we have yet to receive any data, or even an estimate of when such data may be provided. If and when these data are made available, we will include estimates of potential corporate income changes.

How might increased earnings affect the cost of public assistance programs?

As illustrated in Issue 2, the need for public assistance decreases as wages increase. The decreases in the costs of the following public assistance programs were estimated: Aid for Needy Families with Children (ANFC), Low Income Home Energy Assistance

Program (LIHEAP), Child Care Subsidy, Telephone Lifeline, and Medicaid (including VHAP and Dr. Dynasaur).

Many of these programs have a state/federal match requirement. In order to keep the federal money in the state, Vermont must continue to invest the state match. The challenge would be to rewrite the guidelines for eligibility and benefits so that the programs can serve more Vermont families and / or provide greater benefits. One logical initiative that follows from Issue 2 would be to redirect some of the savings so that the assistance programs, in combination, would offer a greater incentive to work. The combined benefit package could be restructured so that an additional dollar of wages would not result in a dollar of lost benefits.

Tables 8A - 8C provide the detailed figures to support the charts.

Table 8A

Changes in Tax Revenues and the Cost of Public Assistance Programs Minimum Wage Increased from $5.75 to $6.50 (Millions $$)								
	Program Cost with min. wage at		Change		Government Savings and Additional Revenue			
					Unrestricted		Matching grants to remain in program	
Program Affected by Change	$5.75	$6.50	Change (%)	Change ($)	New Federal revenue	New State revenue	Federal share	State share
Benefit Programs:								
ANFC	45.0	42.8	-4.8%	-2.2			1.3	0.9
LIHEAP	6.0	5.7	-4.8%	-0.3			0.3	
Child Care Subsidy	13.7	13.3	-2.6%	-0.4			0.2	0.2
Foodstamps	35.3	33.8	-4.1%	-1.5	1.5			
Renter Rebate	8.0	7.9	-1.7%	-0.1		0.1		
Telephone Lifeline	3.3	3.3	-1.4%	0.0	0.0	0.0		
EITC federal	31.9	30.9	-3.0%	-0.9	0.9			
EITC-VT	8.0	7.7	-3.0%	-0.2		0.2		
Dr. Dynasaur	166.9	166.3	-0.4%	-0.6			0.4	0.3
VHAP	50.4	46.8	-7.2%	-3.6			2.2	1.4
Revenue Programs:								
FICA	492.7	496.9	0.8%	4.2	4.2			
Medicare	115.2	116.2	0.8%	1.0	1.0			
Federal Tax	1323.5	1332.3	0.7%	8.8	8.8			
VT Tax	322.9	325.3	0.8%	2.4		2.4		
Net					**16.4**	**2.8**	**4.3**	**2.7**
Total Wage	7947.2	8014.7	0.8%	67.5				
Change in Income				41.1				

Total potential state & federal savings and revenues = $26.4 million

Table 8B

Changes in Tax Revenues and the Cost of Public Assistance Programs Minimum Wage Increased from $5.75 to $7.50 (Millions $$)								
	Program Cost with min. wage at		Change		Government Savings and Additional Revenue			
					Unrestricted		Matching grants to remain in program	
Program Affected by Change	$5.75	$7.50	Change (%)	Change ($)	New Federal revenue	New State revenue	Federal share	State share
Benefit Programs:								
ANFC	45.0	40.2	-10.7%	-4.8			2.9	1.9
LIHEAP	6.0	5.5	-8.8%	-0.5			0.5	
Child Care Subsidy	13.7	12.7	-7.3%	-1.0			0.6	0.4
Food stamps	35.3	31.9	-9.6%	-3.4	3.4			
Renter Rebate	8.0	7.7	-4.2%	-0.3		0.3		
Telephone Lifeline	3.3	3.2	-4.4%	-0.1	0.1			
EITC federal	31.9	29.5	-7.3%	-2.3	2.3			
EITC-VT	8.0	7.4	-7.3%	-0.6		0.6		
Dr. Dynasaur	166.9	164.6	-1.4%	-2.4			1.4	0.9
VHAP	50.4	43.6	-13.5%	-6.8			4.1	2.7
Revenue Programs:								
FICA	492.7	503.5	2.2%	10.8	10.8			
Medicare	115.2	117.8	2.2%	2.5	2.5			
Federal Tax	1323.5	1347.1	1.8%	23.6	23.6			
VT Tax	322.9	329.4	2.0%	6.5		6.5		
Net					**42.8**	**7.5**	**9.5**	**6.0**
Total Wage	7947.2	8121.7	2.2%	174.5				
Change in Income				108.7				

Total potential state & federal savings and revenues = $65.8 million

Table 8C

Changes in Tax Revenues and the Cost of Public Assistance Programs
Minimum Wage Increased from $5.75 to $8.50
(Millions $$)

	Program Cost with min. wage at		Change		Government Savings and Additional Revenue			
					Unrestricted		Matching grants to remain in program	
Program Affected by Change	$5.75	$8.50	Change (%)	Change ($)	New Federal revenue	New State revenue	Federal share	State share
Benefit Programs:								
ANFC	45.0	37.6	-16.5%	-7.4			4.4	3.0
LIHEAP	6.0	5.2	-14.0%	-0.8			0.8	
Child Care Subsidy	13.7	11.8	-13.7%	-1.9			1.1	0.8
Foodstamps	35.3	30.2	-14.4%	-5.1	5.1			
Renter Rebate	8.0	7.4	-7.2%	-0.6		0.6		
Telephone Lifeline	3.3	2.9	-11.4%	-0.4	0.3	0.1		
EITC federal	31.9	27.7	-13.0%	-4.1	4.1			
EITC-VT	8.0	6.9	-13.0%	-1.0		1.0		
Dr. Dynasaur	166.9	161.1	-3.5%	-5.8			3.5	2.3
VHAP	50.4	40.5	-19.5%	-9.8			5.9	3.9
Revenue Programs:								
FICA	492.7	512.6	4.0%	19.9	19.9			
Medicare	115.2	119.9	4.0%	4.6	4.6			
Federal Tax	1,323.5	1368.5	3.4%	45.1	45.1			
VT Tax	322.9	335.2	3.8%	12.3		12.3		
Net					**79.1**	**14.0**	**15.7**	**10.0**
Total Wage	7,947.2	8,267.8	4.0%	320.6				
Change in Income				201.7				

Total potential state & federal savings and revenues = $118.9 million

What other public costs and savings are likely to occur if the minimum wage is increased?

There are some state workers whose hourly wages would increase. This cost is estimated Table 8D:[2]

Table 8D

Estimated cost of increasing state workers' pay due to higher minimum wages			
	$6.50	$7.50	$8.50
Number of state workers with increased hourly wage	259	556	1,027
Total Cost	$28,660	$169,069	$543,686

If the taxable income of a firm or of an employer is reduced because of the increased payroll cost, federal and state tax revenues (FICA, Medicare, Income Taxes) would be reduced.

The correlation between poverty and public costs for education and public safety have been documented, although it is difficult to attribute a dollar savings in these public costs to a change in the minimum wage. The Children's Defense Fund states that children living in poverty were more likely to need special education services and more likely to repeat a grade than children who were not living in poverty.[3] See Issue #19 for a more complete discussion of these costs.

There are many private charitable organizations that provide services to low-income families. While many of these organizations operate with private funds and contributions, many also receive public funds.

If the wages of low-wage workers were to increase, it is likely that a high proportion of this money would be spent locally. This would increase sales and other excise tax revenues.

[2] Source: State Department of Personnel. FY 1999 data.

[3] Sherman, Arloc, Wasting America's Future: The Children's Defense Fund Report on the Costs of Child Poverty, Beacon Press, Boston, 1994. See the Vermont Job Gap Study, Phase 3, p. 7 for estimates of savings in educational costs.

Issue # 9

Conduct "an analysis, using historic data available in Vermont and other states and countries, of the impact of minimum wage increases on the number of jobs, the buying power of workers, wage compression, costs of goods and services, business closures and growth, economic development and any other factors deemed relevant." [Act 21 §2(c)(4)]

Related questions: "How does Vermont compare to other states with respect to its minimum wage rate? How does it compare with other countries? How has the minimum wage rate changed over time in the U.S. and Vermont? What is the connection between changes in the minimum wage rate and changes in employment? How do changes in the minimum wage rate affect the purchasing power of workers, wage compression, the costs of goods and services, business closures, general economic growth and development?" (Scope of Work)

There have literally been hundreds of studies of the effects of minimum wages. Their conclusions differ greatly, depending on the type and source of data, on the methods used, and on the time period examined.

The great majority of minimum wage research has looked at the effects on teenage employment, under the assumption that the lowest paid and least experienced workers are likely to experience the greatest disemployment effects. Far fewer studies address the effects of minimum wages on adult low-wage employment, prices, business formation and failure, or overall economic growth. This review will give an overview of the available research, highlighting studies of low-wage areas or low-wage industries when possible.[1]

How does Vermont compare to other states with respect to its minimum wage rate? How has the minimum wage rate changed over time in the U.S. and Vermont?

The 1938 Fair Labor Standards Act established a national minimum wage for the first time. The minimum wage was initially set at $0.25 and only covered 43.4% of non-supervisory employees. (Ehrenberg and Smith, 1997) As a result of increases in coverage over the years (for example, the extension of minimum wage coverage for retail sales, service and agricultural workers in the 1960s), about 90% of non-supervisory workers are now covered by the federal minimum wage, which currently is $5.15. Most of the exclusions are for workers employed in very small retail or service businesses that do not engage in interstate commerce.

Although the federal minimum wage has increased in nominal terms, it has fallen since the late 1960s in real, inflation-adjusted dollars.

[1] Because there are typically many factors, such as overall economic growth, which affect employment, prices, and other outcomes, this review will focus almost exclusively on the results of controlled studies, which estimate the effects of the minimum wage, net of the effects of these other factors. Such studies include regression analyses and "quasi-experiments". Other studies that do not control for other factors are not discussed here unless they address a question which has not been analyzed extensively with more rigorous methods.

The Vermont minimum wage started at $.75 in 1957, and is currently at $5.75, above the federal level. In the early years, along with many other states, Vermont simply raised its own minimum wage to match changes in the federal rate. However, starting in the late 1980s, several states, especially in New England, raised their minimum wages above the federal rate. Vermont joined this trend in 1986. Vermont has raised its minimum wage several times since, but it has never been adjusted automatically for inflation, with the result that it has fallen in terms of real purchasing power since the late 1960's (see Chart 9B). The highest effective Vermont rate was in 1968, which in today's dollars is equivalent to a minimum wage of about $7.85.

Table 9A shows state minimums above the federal level in the 1990s, along with changes in the federal minimum. None of these figures are adjusted for inflation.

Table 9A

State Minimum Wages above the Federal Rate*

State	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
Arkansas	4.30	4.75	4.75	4.75	4.75	5.25	5.65	5.65	5.65		
California								5.75	5.75		
Connecticut	4.27	4.27	4.27	4.27	4.27	4.77	5.18	5.18	5.65	6.15	
Wash. DC	5.25	5.25	5.25	5.25	5.25	5.75	6.15	6.15	6.15		
Delaware									5.65	6.15	
Hawaii			5.25	5.25	5.25	5.25	5.25	5.25	5.25		
Iowa		4.65	4.65	4.65	4.65						
Mass.							5.25	5.25	5.25	6.00	6.75
New Jersey		5.05	5.05	5.05	5.05	5.05					
Oregon	4.75	4.75	4.75	4.75	4.75		5.50	6.00	6.50		
Rhode Island		4.45	4.45	4.45	4.45				5.65		
Vermont					**4.50**	**4.75**	**5.25**	**5.25**	**5.75**		
Washington				4.90	4.90	4.90			5.70	6.50	indexed
U.S.	**4.25**	**4.25**	**4.25**	**4.25**	**4.25**	**4.75**	**5.15**	**5.15**	**5.15**		

* Blanks are years in which the state rate was not above the federal rate. Rates are those in effect as of December 31 each year; rates for 2000 and 2001 are those already passed into law.

The minimum wage of the District of Columbia is automatically set at $1.00 over the federal rate and Alaska's is automatically set at $0.50 above the federal rate.[2] Washington is the first state in the country to index its minimum wage. Beginning January 1, 2001, and annually thereafter, the rate will be increased to reflect increases in the cost of living, as measured by a selected CPI variant.

States also vary with respect to coverage under their minimum wage laws. Criteria used for exemption include the firm's volume of sales, whether the worker is a student / apprentice or a teenager, and specific occupations in specific industries. Exclusions from the Vermont minimum wage law include agriculture, domestic service, firms with less than two employees, U.S. government workers, executive, administrative and professional workers, newspaper carriers to homes, taxi cab drivers, outside sales

[2] Sources: Richard Nelson, U.S. Department of Labor, personal communication; Nelson, Monthly Labor Review, annually; and Council of State Governments, various years.

CHART 9A

U.S. (red) and Vermont (blue) Nominal Minimum Wage Rates Over Time

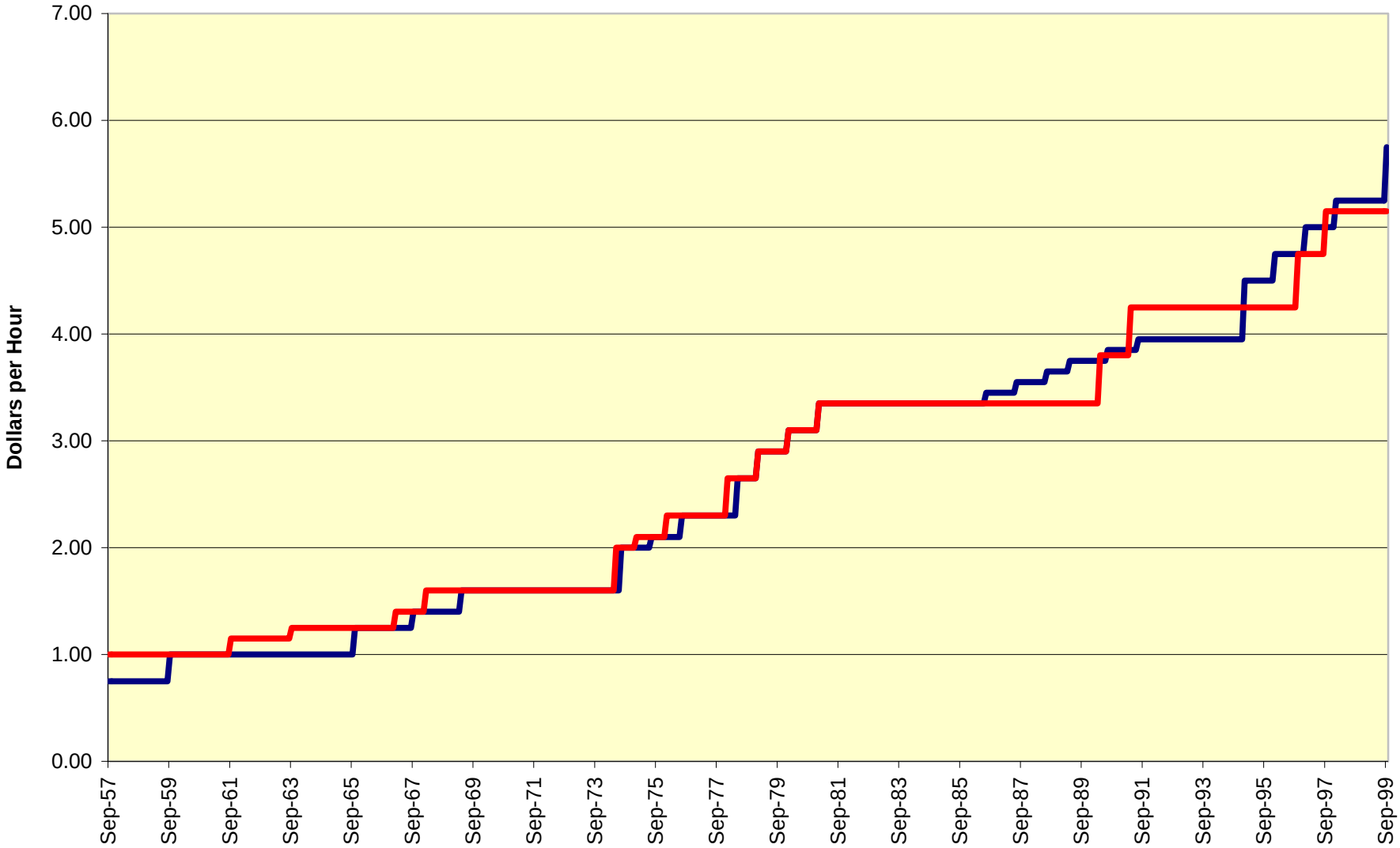
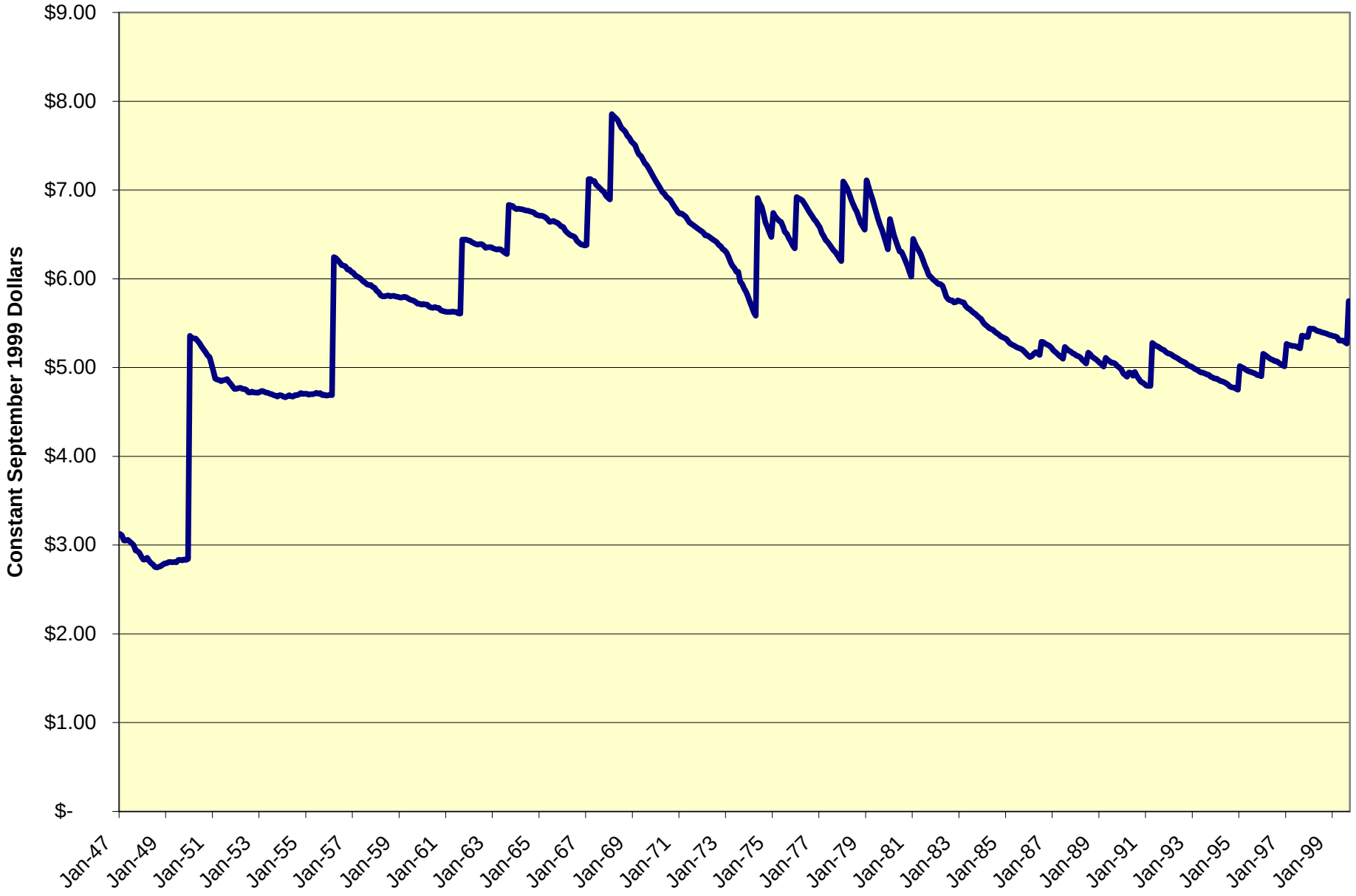


CHART 9B

Effective Real Vermont Minimum Wage Over Time

(higher of U.S. or Vermont minimum wage deflated with the Consumer Price Index)



people, and students who are employed part-time.[3] However, in Vermont and other states, it appears many employers do not use these exclusions.

Also, for Vermont employees in hotels, motels, tourist places, and restaurants, tips up to 45% of the state minimum wage may be credited toward the minimum, so that these employees may be paid as low as 55% of the state minimum.

For purposes of comparison, it is common to report minimum wages as a percentage of average wages (or average manufacturing wages). Table 9B contains this data for the fifty states plus the District of Columbia and Puerto Rico.

Table 9B

1999 Minimum Wages as a Percentage of 1998 State Average Hourly Earnings (for production workers on manufacturing payrolls)*							
MI	29.3%	KY	37.3%	UT	40.1%	NC	43.5%
OH	32.6	MT	37.4	ID	40.3	TN	44.0
IN	34.4	IL	37.5	NH	40.3	ND	45.0
LA	35.2	CO	37.5	OK	40.8	FL	45.1
NJ	35.3	WA	37.6	NM	41.2	**VT**	**45.3**
WY	35.4	WI	37.7	VA	41.2	OR	46.2
NV	35.7	NY	38.1	NE	41.8	AR	46.4
MD	36.0	MA	38.1	CA	42.1	MS	48.0
PA	36.6	CT	38.1	AZ	42.3	SC	49.8
DE	36.9	ME	38.1	DC	42.5	RI	50.0
IA	37.0	MO	38.6	AL	42.5	AK	50.9
MN	37.0	WV	39.1	GA	42.8	SD	51.7
KS	37.2	HI	40.0	TX	42.8	PR	64.5

* Source: For state minimums, see Table 9A. For state average wages, U.S. Bureau of Labor Statistics, May 1999, pp. 158-161. 1999 state averages are not yet available.

Note: The percentages in Table 9B reflect each state's average hourly manufacturing wage (for production workers) and the minimum wage. For example, although Vermont's minimum wage is higher than the national rate, its average manufacturing wage is $12.70 / hr, which is 6% less than the national average.

How does Vermont compare to other countries with respect to its minimum wage rate?

In 1998, the Organization for Economic Cooperation and Development (OECD) identified seventeen countries with statutory minimum wages, although quite a few others also had minimum wages tied in various ways to collective bargaining.[4] Confining

[3] Vermont Statutes as provided by the Vermont Joint Fiscal Office and Legislative Council.

[4] According to Dolado et. al., "There are five main types of systems. First, a statutory minimum can be set by government (possibly in consultation with employers and unions), as in France, Spain, the Netherlands, Portugal and Luxembourg. Second, as in Belgium, Greece, and Denmark, a national minimum wage can be set as part of national collective bargains. Third, different minimum wages can be determined in sectoral collective agreements (generally extended to employers who were not party to the original agreements), as in Germany, Italy, Austria, and to some extent, Switzerland. Fourth, as in Sweden, Norway and Finland, collective agreements can cover effectively everybody and generally contain minimum rates without any formal provision for extension of these

our attention to the seventeen with statutory minimum wages, there are tremendous differences in the level of the minimum as a percentage of the average country wage. There are also great differences in the ways that different countries deal with the erosion of the purchasing power of the minimum wage due to inflation.

Minimum wages are usually reported as a percentage of average or median country wages for purposes of comparison. In mid-1997, statutory minimum wages ranged from 21.2% of median full-time hourly earnings in the Czech Republic to 57.4% in France. The UK abolished all minimum wages except in agriculture in 1993. (Dolado, et. al., 1996) The U.S. stood at 38.1%. (OECD, 1998, p. 37)

There are significant differences in the minimum wage within countries depending on region, firm size, industry, on a worker's age, experience, occupation, and sometimes even marital, family and disability status. Sub-minimum wages for youth, apprentices or students are common. (OECD, 1998, and Dolado, et. al., 1996)

In some countries (France, Japan, Luxembourg, Poland and South Korea), the minimum wage rose through 1996 (the last year covered by the OECD survey), although in some cases this was only by enough to keep up with the average country wage. In other countries, (US, Canada, Mexico, Netherlands, Czech Republic and Hungary), the minimum wage has fallen in real terms. In yet others (Spain, Portugal, Greece), the minimum wage has not fallen recently but it has failed to keep up with average wages.

Automatic wage indexation for inflation is not common; the OECD reported it only for Belgium, Luxembourg, France, and the Netherlands. However there is some form of routine adjustment of the minimum wage in nine of the other countries, following consultation with tripartite boards.[5] Taken together, that implies that thirteen out of the seventeen countries have fairly routine ways of taking into account increases in the cost of living. Sometimes adjustment for inflation also depends on other aspects of economic performance.

What is the connection between changes in the minimum wage rate and changes in total employment?

There are two schools of thought on this question. The more traditional view is that increases in the minimum wage (above the full-employment level of wages for low-wage workers) decrease the employment rate of low-wage workers. When the minimum wage rises, employers may reduce their level of production, substitute more skilled workers, or use more capital-intensive production methods. A different school of thought is that within a certain range, increases in the minimum wage may not reduce employment and may actually increase it slightly. Employers who would have been operating with vacancies now recruit more workers. Employers may also offset the increased wage bill by increasing productivity and / or raising prices.

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rates to non-signatory employers. Finally, as in Ireland and the UK (prior to 1993), minimum wages can be set in selected low-paying industries. (Dolado, et. al., p. 321)

[5] Perhaps the most interesting is Poland, which introduced its minimum wage in 1990, and updates it 3 - 4 times a year according to a formula, taking into account various factors such as inflation and expenditures of low-income working households. (OECD 1998, p. 35)

The principal findings of the professional economics literature are:

A. The U.S. *teenage employment rate* decreases by a small proportion, around 1%, when the national minimum wage is raised by 10%.[6] Increases in the minimum wage are not likely to reduce the employment rate of older, more experienced workers by more than the employment rate of teenagers.
B. Studies of *all low-wage workers* (not just young workers) are rare, and provide very limited evidence one way or the other on the effect of minimum wages on this entire group of workers.
C. Studies of *low-wage industries* are somewhat more common, particularly for the fast food industry. Raising the minimum wage in fast food has been shown to have small effects on employment. Some researchers have found negative effects and some have found positive effects.
D. Studies of *low-wage areas* in the U.S. are also not common. Studies from Puerto Rico reach different conclusions about minimum wages and employment, while another study from Iowa concludes that the minimum wage has caused some disemployment, and a study from Texas suggests that the 1990 federal minimum wage hike actually increased employment.
E. For minimum wage increases within the range that the U.S. and various states have implemented, there is almost no evidence that any decreases in employment have outweighed the increases in earnings for *low-wage workers*. Thus, the total income of all such workers has increased when the minimum wage has been increased, even taking possible disemployment effects into account.

We will discuss each of these areas of research in turn.

A. Studies of young workers:

The great majority of the research on minimum wages and employment has examined the employment rate of workers aged 16 - 19, assuming that the minimum wage is most likely to affect the youngest and least experienced segment of the labor force. The 1981 U.S. Minimum Wage Study Commission reviewed dozens of studies on annual or quarterly national data for the 1950's through 1970's and concluded that a 10% increase in the minimum wage reduced the U.S. the teenage employment rate 1% to 3%.[7] (Brown, Gilroy and Kohen, 1982) Thus, if these rather old estimates are still valid, they imply that the 52.8% teenage employment rate of 1998 would have fallen within the range of 51.2% to 52.3%, if the minimum wage had risen by 10%.

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[6] The employment rate of a group is its ratio of total employment to total population. The employment rate is a better variable than the unemployment rate, because of the omission of discouraged workers in the unemployment rate.

[7] These studies were all time-series studies, meaning that the unit of observation was national data on employment, minimum wages, and other relevant factors for each year (or quarter) over a period of time. The actual minimum wage variable used was generally the Kaitz index, which is the coverage-weighted minimum wage relative to the average wage (or sometimes relative to the average manufacturing wage). The Kaitz index equals C*(M/W), where C is the coverage rate, or percentage of workers who are covered by the minimum wage provisions of the Fair Labor Standards Act; M is the minimum wage, and W is the average wage.

However, studies using similar methods with more recent data have generally shown a much smaller effect of the minimum wage on teenage employment. For example, using Card and Krueger's (1995) preferred estimate of a 0.72% teenage employment decline, the 1998 U.S. teenage employment rate would have fallen from 52.8% to 52.4% if the minimum wage had risen by 10%.

Table 9C

Results of studies using national data on teenagers over time		
Author, date	% change in teen employment rate for a 10% increase in the minimum wage	Years covered
Brown, Gilroy & Kohen, 1982	1% to 3% decrease	1950's – mid-1970's
Solon, 1985	0.83% to 1.08% decrease	1954-1979
Wellington, 1991	0.52% to 0.89% to decrease	1954-1986
Card & Krueger, 1995 pp. 197-199	0.50% to 0.87% decrease	1954-1993

Brown, Gilroy and Kohen also surveyed employment effects on workers aged 20 - 24. These were usually found to be smaller than those for teens. This is plausible since after a minimum wage hike, older workers may be substituted for teenagers. Wellington (1991) found no effects of minimum wages on the employment of 20 - 24 year-olds. Hamermesh (1981) and Boschen and Grossman (1981) found that the employment of somewhat older workers actually increases after a minimum wage increase.

Finally, these studies on teenagers fail to show consistently different impacts by race or sex. Thus there appears to be no substantial evidence for the idea that the minimum wage reduces black and female employment more than white male employment, even though more women and blacks earn minimum wages.

Card (1992a) adopted a different method to analyze the effects of the minimum wage on teenage employment. He used state variation in teenage wages to estimate the effect of the April, 1990 increase in the federal minimum wage rate from $3.35 / hr to $3.80 / hr (a 13% increase). He found that the change in the average teenage wage did not significantly affect teenage employment rates. He also found that state-to-state differences in the percentage of teenagers initially earning less than $3.80 / hr (the "bite" of the minimum wage increase) were not significantly related to changes in teenage employment rates. Most estimated effects of the minimum wage increase on employment were positive, small, and not statistically significant.

Neumark and Wascher (October, 1992) also used interstate variation in teenage wages to estimate employment effects. They obtained data for all states over 1973 - 1989, so the analysis incorporated differences in the level of minimum wages over time as well as across states. They estimated that a 10% increase in the minimum wage reduced teen employment by 1 - 2%, and the employment of 20 - 24 year-olds by 1.5 - 2%.[8] Finally, Card (1992b) analyzed the effect of the 1988 California minimum wage increase on teenage workers. The rate increased from $3.35 to $4.25 in one step. He compared

[8] Card and Krueger criticize the Neumark and Wascher study for several reasons. First is the inclusion of a poorly measured school enrollment rate in the employment equation. Second are criticisms of the minimum wage index itself, in particular the way in which teen coverage rates and average teenage wages were measured. Third the data should have been weighted to reflect different state sizes. Neumark and Wascher defended their results with varying degrees of success in a later response. (Neumark and Wascher, 1994)

trends in the California teen labor market with trends in similar states and cities (AZ, FL, GA, NM, Dallas / Forth Worth), which did not raise their minimum. Although in 1985, 1986, and 1987, the California teenage employment rate had grown slower than teen employment rates in the comparison areas, in 1988-89 it grew faster. This suggests that the higher California minimum wage did not reduce the employment rate of teenagers.

B. Studies of overall low-wage employment (not just young workers):

Such studies are rare. In the Card and Krueger analysis of the California minimum wage increase from $3.35 to $4.25 in 1988, they found that the growth of employment for all workers was faster in California than in the comparison states and cities. (Card and Krueger, 1995, p. 86) Results broken down by age, race and education varied, and usually indicated small employment changes, both positive and negative, but there were no statistically significant employment declines in California for any of these age / race / education groups, relative to the other states. (Card and Krueger, 1995, pp. 88 - 89)

Card and Krueger (1995, pp. 137-148) also examined the effect of the 1991 national minimum wage increase on all US low-wage workers. Of the 8.7% of the U.S. workforce earning between the old and new minimum wage just before the increase, only one-third were teenagers. They found that the greater the percentage of workers whose wages were raised by law, the greater the increase in the employment rate for workers likely to be affected (according to their education, experience, race, gender, etc.).[9]

C. Recent studies of low-wage industries:

1. Fast food:

The effect of the minimum wage on fast food employment has received a great deal of attention in the 1990s, because of a proliferation of studies using new data and new methods for this industry. Fast food is an important case to examine because there are so many minimum (and near-minimum) wage workers, there are almost no employment benefits such as health care to cloud the picture, and there are no tips.

[9] The Oregon Center for Public Policy described the effect on total employment of raising the state minimum wage to $5.50 in 1997, to $6.00 in 1998, and to $6.50 in 1999. The Oregon Employment Department (OED) reported in December 1998 that "The first two minimum wage increases appear to have had little or no adverse employment effect." (OED, Labor Trends, Dec. 1998) However, this has not been tested with the same degree of rigor as the other results reported here. In particular, it does not look at low-wage labor markets separately and it does not control for other factors such as the overall unemployment rate in 1998.

Table 9D

Results of the Longitudinal Fast Food Studies[10]			
Author, date of study	State, year of min. wage increase	Source of data	Change in employment resulting from min. wage increase
Card and Krueger, 1994	New Jersey, 1992	Authors' surveys of managers	employment increased (not statistically significant)
Katz and Krueger, 1992	Texas, 1991 US min. wage increase	Authors' surveys of managers	employment increased (statistically significant)
Neumark and Wascher, June 1999*	New Jersey, 1992	Authors' survey of payroll records	employment decreased (statistically significant)
Card and Krueger, 1998	New Jersey, 1992	BLS ES-202 data	employment increased (not statistically significant)
* The June 1999 Neumark and Wascher paper incorporates data collected and analyzed by the Richard Berman of the Employment Policies Institute; it is also a rewritten version of several earlier drafts by Neumark and Wascher.			

Card and Krueger (1994) examined fast food employment trends in New Jersey after that state's April 1992 increase in the minimum wage from $4.25 to $5.05 (an 18.8% increase). They compared it to fast food employment trends in neighboring Pennsylvania, which did not increase its minimum wage. They surveyed 410 restaurants in both states several months before the higher New Jersey minimum wage went into effect, and again several months afterward.

Card and Krueger concluded that the minimum wage hike had no significant effect on full-time equivalent (FTE) employment growth in the fast food sector in New Jersey relative to Pennsylvania. There were slightly greater (but usually statistically insignificant) increases in FTE employment in New Jersey relative to Pennsylvania. Notable features of the Card/Krueger study include:

- Unlike most minimum wage increases, the New Jersey increase went into effect during a recession, so the Card/Krueger study sheds some light on the effects of minimum wage hikes during economic downturns.
- Slightly more than half of non-supervisory fast food employees are over 20 yr/old.
- Several restaurants closed permanently (for unknown reasons) between the first and second surveys. These were included in the Card/Krueger data set as restaurants with zero employment after the minimum wage hike. Thus the estimated effect on employment *includes* the effect of closed establishments.
- However, the original study could not determine whether an increase in the minimum wage might reduce employment through a slower rate of business startups. A later (1998) study by Card/Krueger addressed this question. It found that even when including the possible effects on startups, employment in New Jersey fast food restaurants grew faster relative to employment in the Pennsylvania restaurants.

Katz and Krueger (1992) also studied the effect of the national minimum wage increase to $4.25 in April 1991 on fast food employment in Texas, a very low-wage state. Restaurants were surveyed before and after the increase. The authors found that restaurants which had initially paid the lowest wages, and therefore had to make the

[10] Longitudinal studies are done by following the same establishments over time. These longitudinal studies looked at the same fast-food restaurants before and after minimum wage increases.

greatest adjustment to the new minimum, expanded employment the fastest. In some cases the increase was statistically significant.

The Card, Katz and Krueger studies of fast food employment have been tremendously influential in policy discussions. Not surprisingly, they have attracted much comment by other economists. In particular, Neumark and Wascher (1999) have disputed the New Jersey results. Neumark and Wascher (also Welch, 1995) were particularly concerned about measurement error in the employment variable used by Card and Krueger. They suspected errors because the Card/Krueger survey had not been explicit about the time frame for measuring employment (for example, respondents could have been referring to employment figures for the week of the survey, the payroll period, month, etc.) Also Neumark and Wascher were concerned about imprecise measures of hours worked.[11] Because of these concerns, Neumark and Wascher conducted their own survey of payroll records for fast food restaurants in New Jersey and Pennsylvania, covering the same chains and geographic areas as Card and Krueger, and using the same analytical methods.[12] Using their payroll data, they found that a 10% increase in the New Jersey minimum wage (with no change in Pennsylvania) resulted in a 1.0% - 2.5% fast food employment decline in New Jersey (relative to Pennsylvania).

In 1998, Card and Krueger responded that the Neumark/Wascher data were decidedly non-random and non-representative. They argued that this was because 71 of the 235 restaurants in the sample had been identified informally rather than through any systematic sampling mechanism. In particular, they argued that the results were driven by a small set of restaurants owned by one Burger King franchisee that apparently provided data on his Pennsylvania but not his New Jersey restaurants.[13]

In addition, the Neumark/Wascher data were solicited via a letter which began: “I am writing to request data for research I am conducting in conjunction with the Employment Policies Institute, a restaurant-supported lobbying and research organization. In particular, we are collecting employment data from fast-food restaurants to re-examine the New Jersey - Pennsylvania minimum wage study.” (Neumark and Wascher, 1999, Appendix B)

Also, Card-Krueger found that results reported by Neumark-Wascher depended on whether the restaurants had provided data in weekly, bimonthly or monthly form.[14] When controls for payroll period (as well as chain and company ownership) were

[11] As Neumark/Wascher acknowledge, *random* errors in the dependent variable (employment) ordinarily would not bias estimates of the minimum wage effect (they would just decrease the explanatory power of the model). Neumark/Wascher speculate that severe measurement error in the context of Card and Krueger’s relatively small samples may have produced bias anyway. Or, Neumark/Wascher raise the possibility that the error may not have been random, although they acknowledge that they cannot explain why this might have happened. They found greater variance in the Card/Krueger data on employment than in their own survey of fast food payroll data in New Jersey and Pennsylvania, which would be consistent with either the small-sample or non-random interpretation of the suspected measurement error.

[12] Some of the data had originally been collected by Richard Berman of the Employment Policies Institute, as reported in Berman, 1995.

[13] These Pennsylvania restaurants comprised all of the Pennsylvania restaurants in the original Berman sample. (Card and Krueger, 1998, pp. 17, 20, 24, and 26)

[14] Card and Krueger were not sure why this should matter, but they suspected that it reflected different seasonal effects (for example, holidays on which restaurants were closed) or mis-scaling of hours.

introduced in the equation, there were no statistically significant declines in employment in New Jersey relative to Pennsylvania, in the Neumark/Wascher/Berman data itself.

Responding to the Neumark-Wascher concerns about measurement error in the Card-Krueger data, and their own concerns about non-representative sampling in the Neumark-Wascher data, Card-Krueger re-ran their original experiment using confidential ES-202 data collected by the Bureau of Labor Statistics from Unemployment Insurance records. The results were essentially the same as the results from their original survey: restaurants in New Jersey had slightly larger employment growth than restaurants in Pennsylvania, but the difference was statistically insignificant.

Card and Krueger also constructed a data file of repeated cross-sections of the same chains in New Jersey and Pennsylvania, from the fourth quarter of 1991 to the fourth quarter of 1996. (pp. 14-16) Unlike the sample which followed the same restaurants, this sample consisted of whatever restaurants were open on either date: before the minimum wage increase, or after, but not necessarily both. Thus unlike any of the previous fast food samples, this one can provide answers to the question: what happened to employment if the minimum wage caused the rate of new openings to slow down? Again, they found that employment in New Jersey fast food restaurants grew while employment in the Pennsylvania comparison group fell.[15]

Card and Krueger also extended the cross-section analysis to the effects of the 1996 increase in the federal minimum wage from $4.25 to $4.75. This raised pay in Pennsylvania but not New Jersey because the New Jersey minimum was already at $5.05. There was greater employment growth in Pennsylvania than in New Jersey after this minimum wage increase.

2. All Retail

There have also been a few other studies of retail employment more broadly defined than just fast food. Card and Krueger (1995) examined the effect of the 1988 California minimum wage increase ($3.35 to $4.25) on employment in retail trade. The California courts unexpectedly extended the new minimum to tipped employees in restaurants. Despite the surprise increase, there were no significant changes in weekly hours or the age and gender composition of the retail labor force relative to the comparison areas.

[15] Other criticisms have been made of the Card and Krueger studies. First, Hamermesh (1995) argued that employers might have adjusted their employment levels in advance of the minimum wage increase. In industries where workers typically stay with a firm for a long time, it is plausible that firms might take advantage of quits before the new higher minimum wage is enacted, to reduce the size of their labor force. But it is difficult to think of a reason for fast-food employers to do this: turnover is so high that adjustments can be made quite rapidly after the new minimum wage goes into effect. Second, the Card and Krueger study does not capture long-run effects, which are likely to be larger. (No one knows how to do this, since many other factors, which are exceedingly difficult to measure, also change over the long run.) Third, it may be that the New Jersey and Pennsylvania labor markets changed in different ways over the course of the fast-food experiment. Addressing this concern, Neumark and Wascher (1999) conducted a test that controlled for state-specific differences in the unemployment rate between New Jersey and Pennsylvania. They found – using BLS 790 and ES-202 data – that increases in the minimum wage over time in both New Jersey and Pennsylvania reduced employment in eating and drinking establishments, but results were not consistently statistically significant (and their results have not been subject to wide discussion yet). Fourth, the Card and Krueger study collapses the employment of workers who might have been laid off with the employment of workers who might have been hired in greater numbers to substitute for the laid-off minimum wage workers. (Orazem and Mattila, 1999)

Employment grew slightly faster in California than in the comparison areas for overall retail trade; employment grew about the same or slightly slower in restaurants alone (a 0% to 2% employment decline in California restaurants relative to the restaurants in the comparison areas).

However, Kim and Taylor (1995) argued that other factors increased labor demand in California retail that offset and hid employment losses due to the minimum wage hike. Card and Krueger in turn argued that the Kim/Taylor results were affected by problems in the measurement of wages in their data set (Card and Krueger, 1995, pp. 101-108).

Another important question for Vermont concerns how small businesses adjust their employment to minimum wage increases. National fast food chains may be better able to absorb or pass along to consumers the additional costs of minimum wage increases than small locally owned enterprises. Unfortunately, evidence on small businesses is very limited, and generally does not define small businesses in a way that would be appropriate for Vermont.[16]

One exception is a study of minimum wages in the non-professional services and retail trade industries in Iowa, which is summarized below in the section on low-wage areas.

3. Low-Wage Areas:

Recent studies of the effects of the minimum wage on employment are available for three low-wage areas: Texas, Puerto Rico and Iowa. The Texas study by Katz and Krueger (1992) is summarized above with studies of the fast food industry. It generally found that employment increased more in restaurants that needed to raise their wages by more in order to comply with the April 1991 increase in the national minimum wage.

Wages are very low in Puerto Rico. Due to a series of amendments to the Fair Labor Standards Act in the 1970s, the Puerto Rican minimum wage level and coverage rates were gradually increased to bring them in line with levels on the U.S. mainland. In 1983, after these changes had been fully enacted, one-fourth of all Puerto Rican workers were paid within five cents of the 1983 minimum wage of $3.35. Thus about the same percentage of all workers are affected by the minimum wage in Puerto Rico as teenage workers are affected in the U.S. (Card and Krueger, 1995)

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[16] For example, the Jerome Levy Economics Institute of Bard College conducted national surveys of small businesses (employing less than 1000 workers in 1998 and less than 500 workers in 1999) in winter 1998 and 1999. These businesses were small by national standards but large by Vermont standards. The businesses were asked if they had responded to the minimum wage increase from $4.25 to $5.15 in 1996, and whether they would respond to hypothetical increases to $6.00 and $7.25.

In 1998, 6.2% of respondents said that the recent hike from $4.25 to $5.15 had actually contributed to their hiring fewer workers or laying workers off. 8.4% said that said that the hypothetical increase to $6 would dispose them to hire fewer workers or lay workers off. In 1999, 42.7% of respondents said they would hire fewer total workers if the minimum wage were raised to $7.25. 18.2% said they would lay off current workers or reduce hours.

A similar questionnaire was distributed to Iowa employers concerning state minimum wage increases which went into effect in the early 1990s. 8.4% of employers said that they increased layoffs as a result of the minimum wage increase, while 1.5% said that they decreased layoffs. 7.4% said that they increased new hires, while 16.2% said that they decreased new hires. (Orazem and Mattila, 1995, table 1.5)

Since – unlike the other studies cited in this review -- these surveys do not track actual outcomes or control for other potential influences on employment, the conclusions must be treated with great caution.

The earliest detailed study of the minimum wage in Puerto Rico found mixed results on employment. (Reynolds and Gregory, 1965) One of the most unusual parts of the study was a case study of the foundation garment industry. The minimum wage increased more than 400% between 1950 and 1961, yet total employment increased by about 1,000%. During the same period prices fell about 15%. Reynolds and Gregory found that employers increased output and employment mainly by a dramatic increase in labor productivity and decreased profit margins. As wages increased, turnover and absenteeism declined, screening of job applicants increased, and managers and supervisors worked more effectively.

The most recent studies of Puerto Rico are by Castillo-Freeman and Freeman (1992) and Card and Krueger (1995). The former analyzed changes in employment in Puerto Rico due to changes in the minimum wage for 42 industries from 1956 to 1987. They found large and significant disemployment effects. However, their minimum wage variable was flawed and there were other problems with the study.[17] Taking steps to address just one of these problems, Card and Krueger (1995, p. 253) found that the effect of the minimum wage on employment became slightly positive (but insignificant). They concluded that the findings of previous studies that found a negative employment effect of the minimum wage were actually less conclusive than they had originally seemed.

Iowa is a low-wage state (except for some industries such as manufacturing). Due to a series of state minimum wage increases in the early 1990s, the Iowa minimum wage was temporarily above the federal minimum wage and also the minimum wages of all contiguous states. Orazem and Mattila (1998) analyzed the effects on earnings, employment and hours in non-professional service and retail trade industries (excluding eating and drinking). They were particularly interested in identifying the effects on the employment of that portion of the labor force that was initially below the minimum wage, rather on total employment. This is because employment of workers above the minimum might increase, if they are used as substitutes for the workers getting raises. They did find significant disemployment effects. They also found that reductions in hours were proportionately larger than increases in wages, so that the reduction in hours swamped the pay increase, leading to a reduction of total earnings for these Iowa workers.[18] However, this is in contrast to the Card and Krueger findings that the percentage of fulltime workers in New Jersey increased relative to the percentage in Pennsylvania. (Card and Krueger, 1995, pp. 48-49) (See Issue #4.)

D. How do changes in the minimum wage affect wage compression?

[17] Their minimum wage variable was the Kaitz index (see footnote 5). Because the minimum wage affects so many workers in Puerto Rico, it significantly raises the average wage which is the denominator of the Kaitz index, so that the Kaitz index will tend to overstate the disemployment effect of the minimum wage. Other problems include an assumption of constant elasticity of demand across industries, and a failure to weight industries of different sizes.

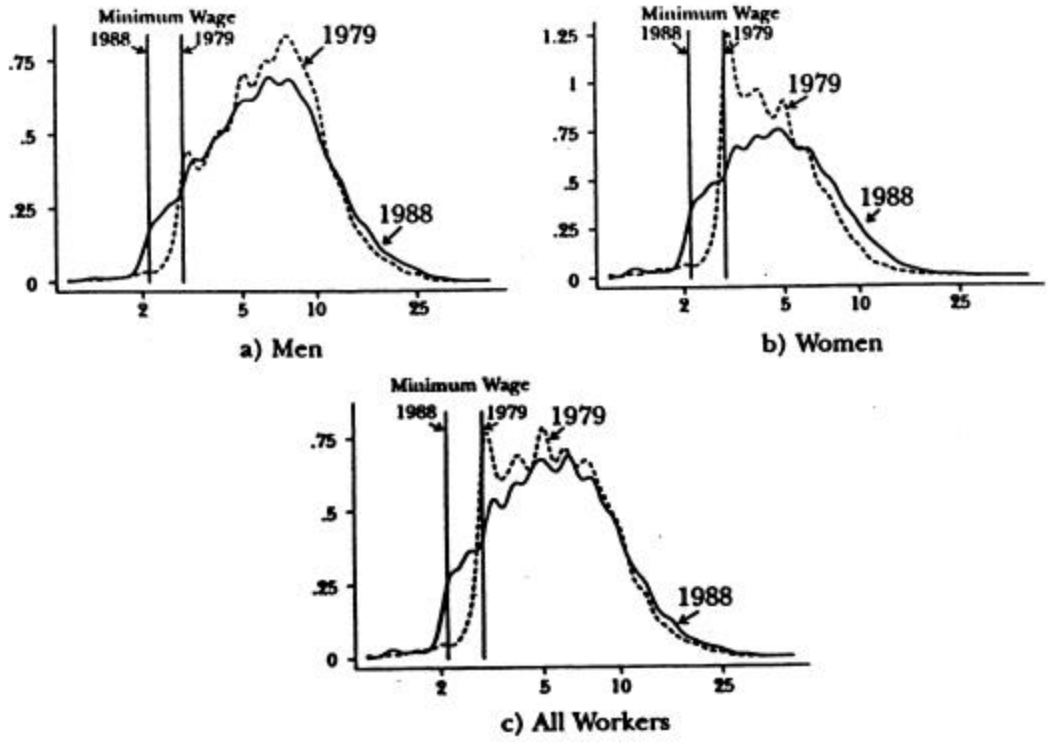
[18] This paper has not been as widely circulated as most of the other studies cited in this report. It has thus not yet been subject to the intense scrutiny that many of these other papers have undergone.

When the minimum wage is so low that it affects the earnings of very few workers, the effects on the wage distribution are predictably small. However, when the minimum wage is sufficiently above the market rate, there is a sharp “spike” in the number of workers affected. The spike is especially pronounced in the female wage distribution, because more women workers are affected by the minimum wage. The spike appears because workers who previously earned less than the minimum are swept up to the mandated level. This is illustrated in graphs produced by Fortin and Lemieux (1997, Reproduced by permission of the American Economics Association.)

The graphs illustrate another important employer response. When the minimum wage increases, employers typically “bump up” the pay of many workers *above* the required level, because they try to preserve existing wage hierarchies, a phenomenon which has been well documented over a long period of time. (Grossman, 1983; Fortin and Lemieux, 1997; Card and Krueger, 1995) This “ripple effect” only affected workers below the 25th percentile of wages after the 1990 minimum wage increase (Card and Krueger, 1995). The ripple effect is strongest right after a minimum wage increase and tends to diminish over time. There is not enough evidence to determine whether the size of the ripple effect varies with the size of the minimum wage increase.

Chart 9

Distributions of Hourly Wages in Constant 1979 Dollars
(logarithmic scale used on the horizontal axis)



How do changes in the minimum wage affect the costs of goods and services?

Although it is often predicted that prices will increase if the products are made by minimum wage workers who get mandated raises, this hypothesis has not been subject to many tests. Again, Card and Krueger's work (1995) provides some answers with respect to the prices in the restaurant industry, which has a very high concentration of minimum wage workers. Using the Consumer Price Index for food eaten away from home in 29 major urban areas, and a data set compiled by the American Chamber of Commerce covering about 300 cities, they found that the cost of restaurant food rose more quickly in cities containing higher percentages of workers affected by the increased minimum wage. Also, they found that fast-food prices increased about 4% faster in New Jersey than Pennsylvania after New Jersey raised its minimum wage. However, they did not find that prices rose faster in New Jersey restaurants that had more workers who were initially farther below the new minimum wage (and therefore had to be given more raises). Katz and Krueger (1992), looking at Texas fast food establishments, found no consistent or significant evidence for price increases, even though wages had been estimated to increase significantly.

Many livable wage studies have calculated the *potential* impact on prices by estimating the cost of living wage ordinances relative to total costs of goods and services. For example, livable wage ordinances proposed for Denver and Houston would have required a minimum wage of $6.50 for all employees of firms who work within the city limits. The average hourly wage increase for directly affected workers would have been $1.56/hour, but only 2.6 full-time equivalent employees per firm would have been so affected. Additional workers, however, would be likely to receive raises as a result of ripple effects (discussed above). Taking into account the direct wage increases, the ripple effects, and the resulting increased payroll taxes, total living wage costs amounted to $3.7 billion dollars, but this was only 0.9% of total production costs for the affected firms. (Pollin and Luce, 1998)

The Vermont Job Gap Study (Peace and Justice Center, 1998) also found that in the three Vermont industries which would have to spend the most to achieve across-the-board minimum livable wages of $8.10/hour, the increased expenditures as a percent of sales were modest. In retail, the new wages as a percent of sales were 0.7%; in food and beverage, 4.1%, and in health services, 0.5%. As a percent of payroll, new wages would amount to 5.8% (retail), 15.3% (food and beverage), and 1.2% (health services).[19]

Another analysis concluded that the total costs of raising the New Orleans minimum wage from $5.15 to $6.15 would be 0.9% of the average firm's operating budget. This included the direct effects of the increase, the ripple effects on near-minimum wage workers and the increase in payroll taxes. Among eating and drinking establishments, that percentage was 2.2%, followed by hotels and other lodging (1.7%), business services, food stores and wholesale trade (1.5% each). All other industries were at or below 0.9%. (Pollin, Luce and Brenner, 1999)

[19] This study did not take ripple effects into account.

The increase in total costs for all of these studies represent only potential price increases, because firms could alternatively increase productivity in order to compensate for the higher minimum wage, or use some combination of price increases and productivity increases.[20]

How do changes in the minimum wage affect the overall purchasing power of workers?

The overall effect of the minimum wage on the purchasing power of workers is the combined effect of price increases, nominal wage increases, changes in taxes and transfers, and employment changes. If the minimum wage were raised without any changes in the size of taxes and transfers, it is likely that the proportionate increase in take-home pay would exceed any (proportionate) decline in employment, so that total disposable earnings of low-wage workers would increase. Some studies have even found that increases in the minimum wage raise employment slightly, so that workers would benefit both from increases in pay and increases in employment.

Based on very limited evidence, price increases also appear to be modest, and to be confined to sectors such as retail trade (especially eating and drinking establishments), and nonprofessional services.

A very important question for the overall purchasing power of low-wage workers is how taxes and transfers change in response to changes in the minimum wage. This problem is addressed in Issue 8.

How do changes in the minimum wage affect business closures, startups and growth?

If minimum wages rise, if employment does not fall, and if prices and productivity do not increase, profits will decrease. Unfortunately, not enough is known about all these factors to assess the overall effects on firm profitability. In addition, there is no information on the ability of different kinds of firms to absorb decreases in profitability due to increases in the minimum wage.

We also know very little about how increases in the minimum wage affect business closures, startups and growth. Since there are so few studies, it will be impossible to reach firm conclusions from any individual study.

One study analyzed the rate of business failures from 1948 to 1983 with respect to the national minimum wage. It found no significant effects, but the level of aggregation and other factors limit the usefulness of the results. (Waltman, et. al., March 1998)

Card and Krueger (1995) examined the annual national directory of McDonald's restaurants to see if the number of establishments in a state or the rate of new openings

[20] A final source of information on price effects is a survey of Iowa employers after Iowa increased its state minimum above the federal rate in the early 1990s. Almost fifty eight percent (57.8%) of the surveyed firms said that they increased prices, but only 48% said it was due to the increase in the minimum wage. A small percentage (1.5%) said that they decreased prices. These data must be treated with caution since they do not measure actual price changes associated with the minimum wage. (Orazem and Mattila, 1995)

was affected by either state or national minimum wage increases between 1986 and 1991. They found no negative effects on either variable. All their estimates indicated that the effects were positive and, in some cases, statistically significant.[21]

These studies have only limited usefulness for Vermont. Small locally owned businesses may not be as successful as national fast food chains in dealing with the increased costs resulting from a minimum wage hike. The study with greatest relevance for Vermont is the Orazem and Mattila (1998) study of Iowa. These authors examined the effects of state minimum wage hikes on retail (excluding eating and drinking) and nonprofessional service firms in Iowa in the early 1990s. They found that a 10% increase in the minimum relative to the previous wage reduced the number of such firms by 1.67% after one quarter and by 2.55% after four quarters. Remaining firms became larger.

How do changes in the minimum wage affect general economic growth and development?

Under very traditional assumptions that a higher minimum wage reduces employment and firm growth by increasing labor costs, potential impacts of various minimum wage changes on the Vermont economy are detailed in Issue 3, with projections by economic sector over the next 10 years.

Implementation of higher minimum wage levels would deter the development and growth of firms that rely heavily on substandard wages.

Under alternative scenarios which have been supported by a great deal of economic analysis, but which were impossible to implement in the projections, modest increases in the minimum wage might not decrease low-wage employment at all. Under either scenario, however, raising the minimum wage is unlikely to affect development among the higher wage industries and firms the state most hopes to attract.

It is important that economic development policies be focused on attracting industries and firms that pay livable wages. A more complete analysis of the efficacy of various economic development policies and how they may affect wages and income in the State is beyond the scope of this initial analysis, but should be an important future study issue.

[21] Another possible result is that increases in the minimum wage decrease the value of the stock of publicly traded firms which have large numbers of minimum wage workers. Card and Krueger (1995) explored this possibility, and tentatively concluded that news about a minimum wage hike seems to be associated with less than 1-2% changes in shareholder wealth.

Issue #10

"A methodology to track, to the extent possible, the factors listed in subdivision (4) of this subsection to provide data for future policy making."

Related Questions: Do we have adequate economic and statistical information with which to measure the impacts of changes in the minimum wage in Vermont? If not, what needs to be done to develop such measurements? What are the most important statistical indicators affecting policy decisions associated with the minimum wage?

Do we have adequate economic and statistical information with which to measure the impacts of changes in the minimum wage in Vermont?

We currently have virtually no statistical or analytic capability with which to measure actual economic impacts of minimum wage changes in Vermont.

If not, what needs to be done to develop such measurements?

Two primary information capabilities need to be developed in order to accurately assess economic and fiscal impacts of minimum wage and related public policy changes. Both focus on the development of local, Vermont-specific data.

The first involves an existing proposal, developed at the behest of the Governor and legislative members of the Emergency Board, for an Analytic Income Tax Database. This database would consist of detailed IRS income tax information, which by law, must be secured, housed and administered by the State Tax Department. Initial development of this database is expected to cost about $65,000, with ongoing annual costs of less than about $16,000 (see Appendix 10A). A formal proposal for this information capability will be submitted to the Legislature and Administration within the next month or two.

This database will enable analysis of detailed income characteristics over time, including longitudinal studies of income changes. This encompasses analyses of transitional characteristics of income (i.e., how long individuals remain at given income levels). The database will also significantly enhance the accuracy of fiscal impact estimates associated with potential policy changes and provide a basic tool with which to understand a wide range of income related issues. It is the most relevant, timely, comprehensive and Vermont-specific data source available for analysis of these issues.

The second basic capability that needs to be developed is specific to Vermont minimum wage impacts and consists of original survey work to collect information that could provide empirical data with which to answer the following questions: What were actual disemployment effects, if any, observed by a given Vermont minimum wage change? How did these differ by industry? By size of firm? By region of the State? What were the actual wage "ripple" effects, if any? What productivity effects, if any, were observed in connection with the wage increases?

This type of study would require funding of about $150,000, however, it could yield valuable information with which to inform future policy decisions affecting thousands of citizens and millions of dollars. It would enable local, observed facts to replace the opinion and conjecture that is so often associated with this issue.

A third periodic information capability that will be of great value to this type of analysis is the year 2000 Census information that will be available in 2001 or 2002. Detailed micro-data for Vermont should be assembled into a database for analytic purposes in support of this and other policy issues. This could be accomplished for under $15,000.

What are the most important statistical indicators affecting policy decisions associated with the minimum wage?

The most important statistical indicator will probably be cost updates made to the basic needs budgets used to define livable income levels. These should be updated annually by the Agency of Human Resources or some other state agency. These budgets should be expanded to encompass all possible family configurations and utilize the best available current source information.

Detailed wage data from DET / BLS and income distribution data from an Analytic Income Tax Database will be critical in assessing progress towards the achievement of livable incomes in Vermont and associated minimum wage adjustments. The Vermont DET should issue an annual report estimating wage levels by industry, by occupation, by firm size, and by detailed wage groups (such as presented in this report). If additional survey, analytic or data estimation resources are required to accomplish this, the necessary funds should be allocated to DET.

Vermont-specific data from Census (Current Population Survey data), economic Census data and BEA employment and regional establishment information is also of considerable value and should be reviewed with respect to specific industry and other issues associated with this analysis.

Cyclical economic information and economic projections from NEEP/RFA will be of importance in assessing future minimum wage increases. Intelligence on other state minimum wage rates, especially those in close proximity to Vermont, should also be reviewed. Finally, this information should be synthesized in a brief annual report and recommendation to the legislature regarding possible minimum wage changes and related policy options.

DET survey data on hours worked and benefits would also be of great value, particularly if a tiered minimum wage is adopted that allows application of employer benefits against a nominal minimum wage.

Issue # 11

"Proposals for effective and realistic preferential purchasing policies, including procedures and criteria, for awarding state service contracts and state construction contracts to Vermont-based employers who pay all employees at livable wage rates." [Act 21, §2(c)(6)]

Related Questions: What are the pros and cons of preferential policies or requirements that state contracts stipulate payment of all employees and contractors a livable wage rate? What, if any, other states or cities have such policies? How many State of Vermont employees are currently paid less than a livable wage / income, including the cash value of all employee benefits? What would be the net cost to the State of paying all State employees a livable wage / income? (Scope of Work)

What are the pros and cons of preferential policies or requirements that state contracts stipulate payment of all employees and contractors a livable wage rate?

In theory, such policies could level the playing field among firms that bid on state contracts by eliminating any price differentials that result from the use of comparatively low-wage workers. On the other hand, it could increase the cost to the state for those contracts that rely on low-wage labor. Preliminary evidence from Baltimore (which first adopted a livable wage ordinance for contracts in 1994) suggests these costs may be minimal (see Issue #17).

Any effort to target Vermont-based firms (regardless of wages paid) could run afoul of both the Commerce Clause of the U.S. Constitution and NAFTA. We have not yet investigated these issues but will do so when we obtain data on other states and cities (see below).

What, if any, other states or cities have such policies?

We have made inquiries but have not yet received the information necessary to answer this question. We will provide a supplemental finding when the data becomes available.

How many State of Vermont employees are currently paid less than a livable wage / income, including the cash value of all employee benefits? What would be the net cost to the State of paying all State employees a livable wage / income?

This issue is detailed in Issue #8.

Issue # 12

"An analysis of the correlation between workforce training efforts and increased wages, including the impact on workers who participate in those training programs. This analysis shall integrate available data from the Human Resources Investment Council and other related data." [Act 21 Section c(c)(7).

Related questions: "Is there a correlation between workforce training efforts and increased wages? What happens to the wages of those who participate in such programs? What does analysis of actual data from the Human Resources Investment Council reveal about this question? Are existing training and education programs well matched to current and expected job openings?" [Scope of Work].

Is there a correlation between workforce training and increased wages?

In general, studies undertaken in Vermont and in other areas in the U.S. have found that there is a correlation between workforce training and increased wages, at least in the short term.

For the past 12 years, Professor Herb Kessel from Saint Michael's College has evaluated Vermont's training programs for the Department of Employment and Training. Because his evaluation does not include a control group—that is a group of similar people who did not receive the training—it is difficult to say that the wages of people who completed training are significantly higher than they would have been without training. However his evaluation does include a comparison of the pre-training wage with the wage at the 13-week follow up. He found that, for 1996-97 Title IIA-Adult Service participants, the average wage gain was 17%. Professor Kessel points out that "increases of this sort are well above the general drift in wages in the labor market as a whole."[1]

There are several reasons why statistical documentation of the efficacy of training programs is elusive.

- Training needs and training programs are extremely varied and changing constantly.
- The labor market situation at the time training is completed is different in different places and at different times. In Vermont, "post-program outcomes have improved as the economy has continued to expand from the recession in the early 1990's"[2]
- People participating in training generally have more employment barriers (such as low education levels, motivational problems, family problems, little work experience, history of substance abuse, etc.) than the public at large and so it is difficult to compare their employment gains with that of the general public.
- Different training programs train different types of people so the results of one training program might not be indicative of the results of the same program with a different group of people. Professor Kessel comments that "the characteristics that

[1] Kessel, Herbert. 1999. Vermont Job Training Partnership Act, *13 Week Follow-Up Study*. Prepared for Vermont Department of Employment and Training. Saint Michael's College Center for Social Science Research. p.10.

[2] ibid. p. 14

participants bring with them when they enter JTPA plays a major role in shaping outcomes."[3]

- The long-term effectiveness of the programs is probably most important, but its evaluation requires a longitudinal study of program participants. This is expensive and time-consuming and has not been undertaken in Vermont.
- Training for dislocated workers—those whose jobs have been terminated often because of a decline in a certain type of industry—often retrains a formerly high-wage experienced employee for a new type work. As such, it may result in lower wages—at least in the short term. In Vermont, "in the past, post program wages for these terminees fell substantially from pre-program levels."[4] In the most recent study, however, the decline was only 2%--the smallest recorded since 1989. A comparison of pre and post program wages for dislocated workers does not show the benefit of this training.

Similarly, a national study looked at sixteen JTPA programs across the U.S. and looked at the difference between the wages of the program enrollees and those of control groups. The results show a statistically significant difference in the wages of adult women (9.6%) and adult men (5.3%).[5]

In an overview of evaluations of job training programs in the United States, W. Norton Grubb concludes:

> "A conventional reading of the evaluations is that many (though not all) job training programs lead to small but statistically significant increases in employment and earnings, and (for welfare recipients) small decreases in welfare payments… However, the gains in employment and earnings are, from a practical standpoint, quite small: they are insufficient to move individuals out of poverty, or off of welfare; their effects very often decay over time, so that their benefits are short-lived; and as they are currently constructed they certainly do not give individuals a chance at a middle-class occupation or income."[6]

One of the main criticisms of job training in the United States has been that the emphasis has been on the short term rather than the long term, and on moving people into jobs as quickly and efficiently as possible rather than on advancing their careers over the long term. Many of the jobs that training programs move people into don't pay a livable wage. In addition, many of the jobs aren't exciting or challenging. Finally, the jobs often don't offer access to any career ladders.

U. S. Secretary of Labor Robert Reich pointed out in 1994 that, "from 1980 to 1991 the real earnings of full-time workers over age twenty-five who had graduated from college *rose* by 9 percent. But earnings for similar workers who had completed high school but had not gone to college *dropped* by 7 percent."[7] Most short-term job training programs

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3 ibid. p. 13.
4 ibid. p. 11.
5 Bloom, H.S., L.L. Orr, G. Cave, S.H. Bell, F. Doolittle and W. Lin. 1994. *The National JTPA Study: Overview: Impacts, benefits, and costs of Title II-A*. Bethesda, MD: Abt Associates.
6 Grubb, W. Norton. 1995. *Evaluating Job Training Programs in the United States: Evidence and Explanations*. Berkeley CA: National Center for Research in Vocational Education, Graduate School of Education, University of California at Berkeley. MDS-1047.
7 Reich, Robert B. 1994. "Getting America to Work: What's Working and What's Not Working in Workforce Policy." Evaluation Forum 10. p. 42. U.S. Department of Labor

do not even attempt to instill the basic and adaptable competencies such as critical thinking, analytical and problem-solving skills that are associated with a college education.

What is the impact of training programs on the workers?

The most frequently documented impact is employment. For many workers, getting a job is the most important result of training programs.

The Vermont study reported that 71% of the participants in Title 11A-Adult services were employed 13 weeks after training ended. Professor Kessel points out that the employment rate after training is dependent on the growth of state-wide employment opportunities.

As pointed out earlier, there is generally an increase in wages after training.

The majority of Vermont training participants who responded to questions about the training program felt that it helped them develop new skills or improve existing skills.

Can training programs solve the problem of low wages?

There is fairly consistent evidence that training boosts the wages of the low-wage workers who participate. However, several problems still remain:

- The wage increases resulting from training are usually not sufficient to lift families out of poverty.
- The jobs that many enrollees move into are often not challenging or interesting.
- Either because of limited training, personal employment barriers, or the types of jobs that enrollees move into, there is often little opportunity for advancement, so the benefits of the training programs tend to decay over time.
- While the people who receive training may move into a higher-wage job, their success may be at the expense of others who fail to get the same jobs.
- The Vermont economy has many low-wage jobs. (See Issue #7) This is not likely to change with training alone, particularly if the training emphasizes quick re-employment.

The short-term focus of job training programs probably results from their role in times of high unemployment. However the current problem seems to be low wages and low rates of advancement at the low end. This may argue for:

- more attention to the long term in training programs;
- partnerships and coordination between worker training (supply side) and employer needs (demand side);
- restructuring jobs so there are more opportunities for workers with more skills so they justify higher wages;
- more opportunity for advancement for low-wage jobs;
- more training opportunities throughout the career ladder.

Issue # 13

"Proposals for tax credit plans and other similar programs that would assist Vermont businesses to compete with multi-state companies as wages increase."

Related Questions: ***"****Should the State consider tax credits or other business subsidies to assist businesses whose existence may be threatened by minimum wager increases? If so, how might such subsidies work? Should these be targeted to firms that compete with lower wage out-of-state firms?" [Act 21, § 2(c)(8)]*

Should the State consider tax credits or other business subsidies to assist businesses whose existence may be threatened by minimum wager increases?

In general, tax subsidy programs are not considered optimal, due to the difficulty in appropriately targeting recipient firms. It is extremely difficult to be selective in setting targeting criteria (profitability? firm size? industry sector?) without essentially rewarding inefficiency, encouraging reliance on substandard wages and risking excessive program costs.

Changing minimum labor standards has costs and benefits. As detailed in Issues #3, #5 and #9, the costs associated with modest minimum wage changes, if any, are likely to be extremely low. It is preferable to set a standard and allow the market to adjust to this.

If so, how might such subsidies work? Should these be targeted to firms that compete with lower wage out-of-state firms?

As detailed in Issue #5, the Vermont firms that are most sensitive to out-of-state wage competition tend to be manufacturing firms. Most of these firms do not have a heavy reliance on substandard wages and thus are not likely to be significantly impacted by the minimum wage changes analyzed herein.

Hotel and lodging businesses were identified as the sector that is most sensitive to external competition and has a relatively high reliance on substandard wages. As detailed in Appendices 5A-I, maximum potential employment losses in this sector range from less than one half of one percent at $6.50 to just over 1% at $7.50 to about 3.9% at $8.50. If a substantial minimum wage increase were enacted, there could be a range of State actions considered to minimize these effects, including increased tourism advertising expenditures, offsetting reductions in meals and rooms taxes, phased out exclusions and temporary subsidies. Any one of these could have a substantial offsetting impact on potential job losses at higher minimum wage levels.

If temporary subsidization of firms that cannot meet minimum wage standards is considered essential, it might best be accomplished via temporary exclusions on a firm by firm basis, using criteria established by the legislature. A direct state subsidy could be provided to the employees of this firm based on hours worked and the exclusion differential from the minimum wage. The firm could be assigned a "caseworker" to

assist it in developing the business skills necessary to become efficient enough to comply with State wage standards. If it could not, after some period of time, state assistance would be terminated. Particular attention should be given to training and assisting workers laid off under such circumstances.

Issue # 14

"A comparison of the cash value of employment to basic needs as identified in studies such as the Vermont Job Gap Study and an assessment of the availability, type and amount of public assistance that has been provided to low-wage workers during the past ten years and projected public assistance expenditures during the next five years." [Act 21, Section 2(c)(9)].

Related questions: "What significant trends have occurred in the recent past with respect to a livable wage and/or income? What might be expected to occur over the next five years with respect to basic needs cost increases and wage growth? To what extent does public assistance fill the gap between actual wages and livable wages? Has this changed significantly over the past ten years?" [Scope of Work]

How has the cost of meeting basic needs changed?

There are no exact comparisons to indicate how the cost of meeting basic needs has changed in the past decade. However, there are several measures that indicate that the basic needs budget has increased by about 3% to 3.5% annually.

In 1989, Jane Kolodinsky and Thomas Arnold from U.V.M studied the cost of basic needs for the Vermont Health Insurance Plan. The purpose was to estimate the income necessary for a Vermont family to meet basic needs (not including health insurance) in order to determine at what income levels families would be able to begin to pay for health insurance. Their approach was similar to the approach taken in Issue 1, although some of the data sources were different. They concluded that: "not including health care payments and childcare, families above 250 percent of the federal poverty begin to have disposable incomes. However, if childcare payments are considered, disposable income for every household except two adult, one child families becomes negative, even at 250 – 299 percent of poverty." [1]

When the deflated 1989 cost of childcare is added, the basic needs budget was about 300 percent of the federal poverty level, although there is some variation depending on family configuration. The 1999 basic needs budget calculated in Issue 1 of this report is very close to 300% of the federal poverty level for the same equivalent family types. This comparison would indicate that the cost of meeting basic needs has been rising at an average annual rate of 3.3% over the last decade.

There are several other indications of the changing cost of the basic needs budget. The Vermont statutes specify that ANFC payments should be "adequate to maintain a reasonable standard of health and decency based on current cost of living indices."[2] To do this, a basic need standard was calculated using Vermont data and updated annually using the Consumer Price Index according to changes in similar components of a household budget. The ANFC basic needs standard has been rising at an average annual rate of 3.24% between 1989 and 1999.

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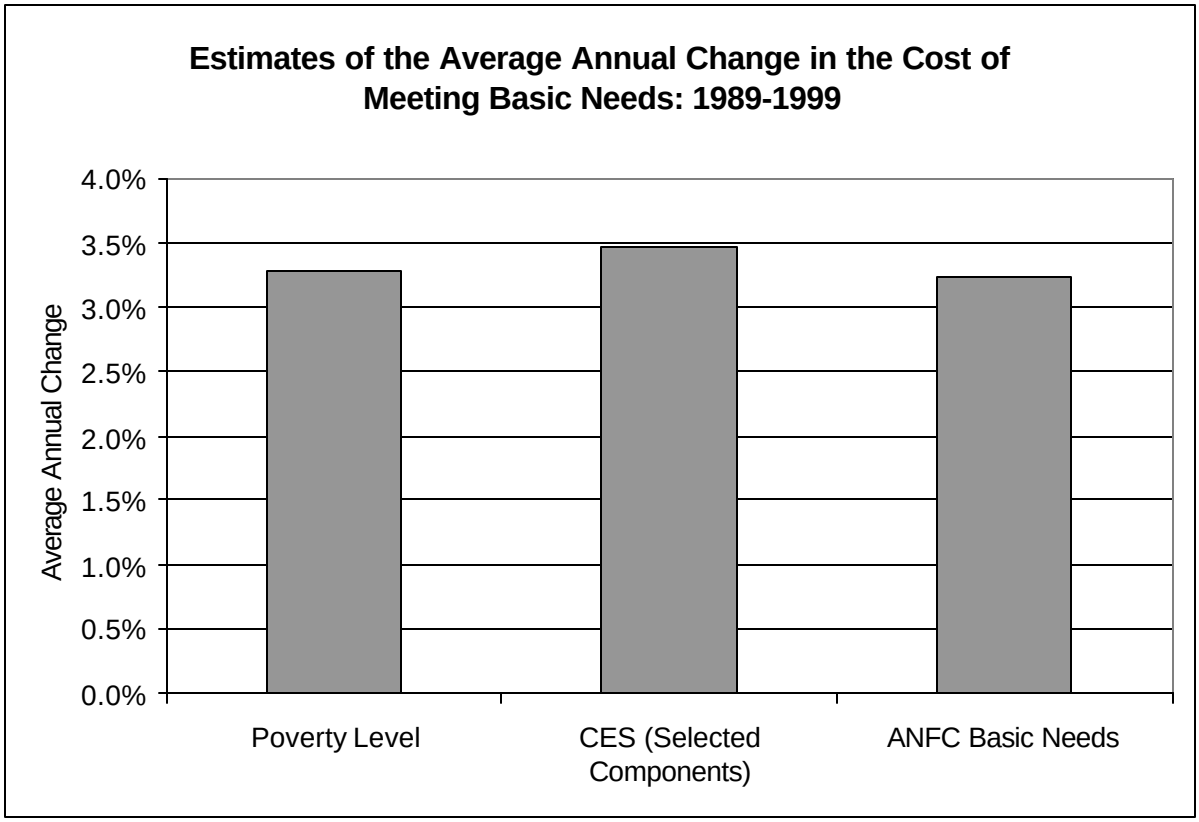
1 Kolodinsky, Jane and Thomas Arnold. 1989. Final Report: Developing a Sliding Fee Scale for Health Care Insurance in Vermont—The Calculation of Disposable Income. University of Vermont. p. 19.

2 33 V.S.A. Section 2501.

Although not specific to Vermont, the Federal Consumer Expenditure Survey can be used to look at the actual amounts families spend to meet their needs. Basic needs might include the following categories of expenses: food at home, housing, apparel, transportation, and health care. Expenditures in these categories increased by an average of 2.94% on average for U.S. families, but by 3.56% for the 20% of the families with the lowest incomes.

Finally, the federal poverty level can be used as measurement of an increase in a minimum budget, although it is clearly not a livable income. The federal poverty level has increased at an average annual rate of 3.27% in the past decade. This compares to an average annual increase of just under 3.0% for the consumer price index. Thus, growth in basic needs costs have significantly exceed overall consumer inflation over the past ten (10) years.

Chart 14A



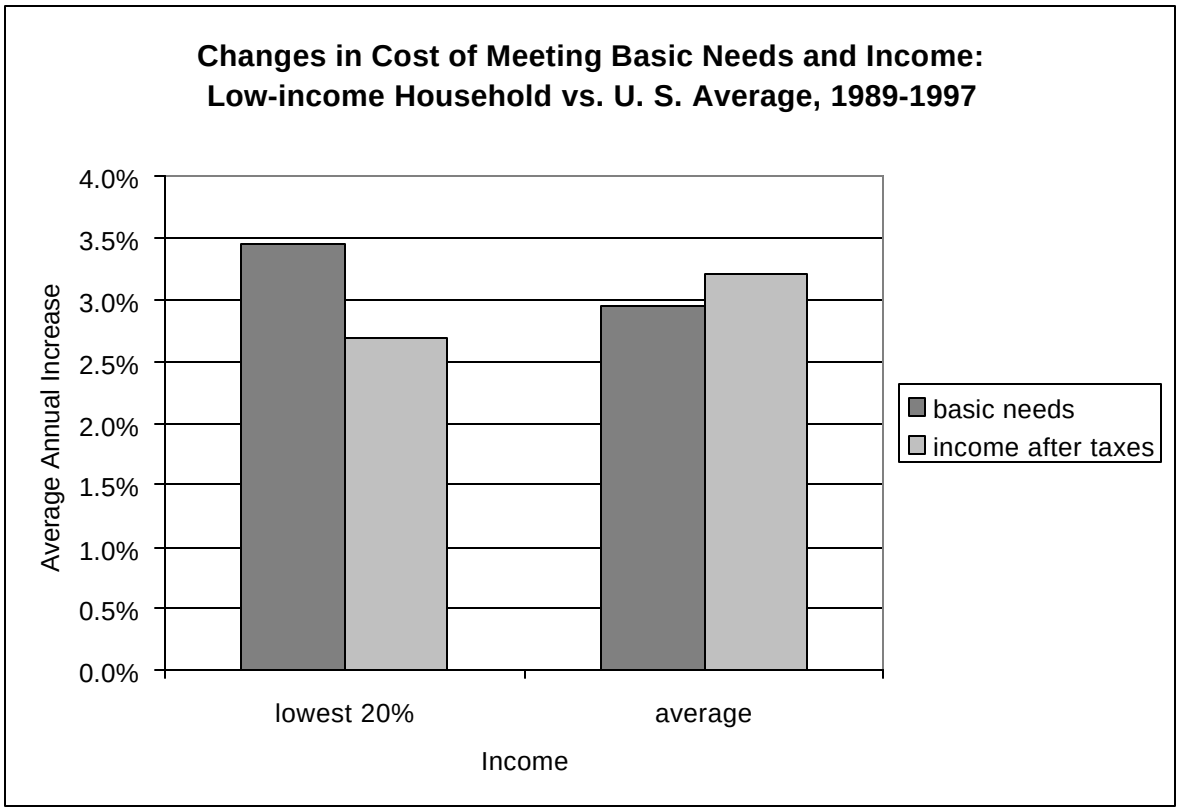
Although none of the measures is exactly the same as the basic needs budget presented in Issue 1, the rates of increase are remarkably similar.

Have incomes and wages increased at the same rate?

Looking at national data from the Consumer Expenditure Survey, it appears that incomes of families have grown faster than the cost of their basic needs. However, this is not true for the 20% of the families with the lowest incomes. For low-income families, the cost of their basic needs has been growing faster than their incomes.

Chart 14B looks at the amount that families spent on items in the Consumer Expenditure Survey categories of food at home, housing, apparel, transportation, and health care. Although, on average, income growth exceeded the growth of expenditures in the basic needs categories, the opposite was true for low-income households.

Chart 14B



The studies indicate that the gap between the minimum wage and livable wage is not new. Using the previously cited U.V.M. report as a basis, the livable wage for a single person was roughly twice the minimum wage in 1989. This is true today. In fact, the rate of increase in the minimum wage in Vermont exceeded that of the cost of basic needs over the decade so the gap has narrowed slightly.

Have benefits filled the gap between the minimum wage and a livable income?

In general, public assistance benefits have not kept up with the cost of basic needs during the decade. Between 1986 and 1996, the "family benefit package" (consisting of Telephone Lifeline, LIHEAP, Food Stamps, and ANFC) increased at an average annual rate of 2.7% -- below the rate of increase of the family's basic needs.[3]

Although the ANFC basic needs budget is calculated annually, actual ANFC payment levels are adjusted to what is known as the payment standard. While the basic needs budget calculated by the Department increased at an average annual rate of 3%, the payment standard increased by only 1%.

[3] Vermont Department of Social Welfare. *People, Payments and Programs* in Fiscal Year 1996.

LIHEAP payments have also not kept up with the increased cost of heat and have actually gone down (in actual dollars) since 1989.

Food stamp payments are based on the USDA Thrifty Food Plan. The cost of the food plan, and the food stamp payments, has roughly kept pace with increasing costs.

However, the information on average benefits does not necessarily indicate what would be available to a minimum wage worker. Unfortunately, there is little, if any, data on the wages of people receiving public assistance through the years. In fact, early welfare programs were generally designed to help families where the breadwinner could not work rather than to supplement the income in households where one or two adults were working full time.

Prior to the Welfare Restructuring Project, the ANFC program in Vermont was limited to families with children who were "deprived of the support, care and guidance of one of their parents resulting from one of the following conditions:

- the death of a parent;
- the continued absence of a parent;
- the physical or mental incapacity of a parent
- unemployment of the parent who is the family's principal earner.[4]

The Department projects that 30% of the ANFC caseload will be working in 2000. Part of this is due to the efforts of the Welfare Restructuring Project; part of it is due to the fact that low-wage workers can't make ends meet.

The work incentives that are part of the Welfare Restructuring Project make it difficult to compare the benefit package that was available to a minimum-wage worker in 1989 with the package that would be available today. There has been a concerted effort to change the way eligibility and benefits are calculated so that earned income is looked at more favorably.

Perhaps the most significant change in the ability of public assistance to fill the gap is with health care. In 1989, Medicaid covered 47,803 Vermonters. By 1999, the Department of Social Welfare projects that 91,680 Vermonters will be covered. For people who do not have employer-assisted health care, the expanded availability of Medicaid may be enough to offset declines in other benefits.

In combination, a minimum-wage worker may find that gap between livable income and actual income (combined wages + public assistance) is about the same as it was in 1989, after adjusting for inflation. First, the minimum wage has increased at a rate slightly exceeding that of the livable income. Second, although the "benefit package" in general has not kept pace with the cost of meeting basic needs, because of the changes resulting from the Welfare Restructuring Project working families may not have seen this erosion in benefits over the decade.

[4] Vermont Department of Social Welfare. *People, Payments and Programs* in Fiscal Year 1996.

What might be expected to occur over the next five years with respect to basic needs costs increase and wage growth?

Over the next five years, the Congressional Budget office forecasts CPI growth of about 2.6% per year. Based on the historical relationship between basic needs costs and the CPI, basic needs costs are expected to exceed the rate of growth in the CPI by at least half of one percentage point, posting an average annual growth rate of about 3.1%. Recent methodological changes made to the CPI (see Appendix 14A) may increase the spread between basic needs costs and overall consumer inflation.

Income growth among the lowest 20% of the population, as illustrated in the Executive Summary, has not even kept pace with CPI growth since 1989. There are many possible explanations for this including globalization, public policy and technological change, none of which is likely to reverse course significantly over the next five years.

This means that income growth among low income workers over the next five years is likely to fall even further below growth in basic needs costs. This will serve to widen the livable income gap still further and exacerbate this problem.

The divergence between the CPI and basic needs costs also underscores the need to assess livable income levels using Vermont-specific basic needs budgets and update these budgets regularly.

Issue # 15

Conduct “an analysis of the advisability of implementing a probationary, training or apprentice wage that is lower than the minimum wage, and if advisable, the rate and criteria of such a wage.” [Act 21, §2(c)(10)]

Related Questions: What are the pros and cons of implementing exceptions to the minimum wage for probationary periods, teenagers and apprentice situations? If this is advisable, at what level(s) should these wage rates be set? (Scope of Work)

The question of sub-minimum wages is similar to the question of exclusions to minimum wage legislation. Both kinds of provisions allow some employers to pay less than the prevailing minimum wage to some of their employees. Although both kinds of provisions are common in state legislation, they take widely varying forms, and there are no summaries of all the exclusions and sub-minimum wages, much less thorough analyses of their effects.

Neumark and Wascher (1992) provided a partial accounting of sub-minimum wages. They examined states with minimum wage rates above the federal rate. Of these states, they found that in the 1970’s and 1980’s, California, Connecticut, the District of Columbia, New Jersey, Hawaii, Alaska, Maine, New Hampshire, Rhode Island, Vermont, Massachusetts, Minnesota, Rhode Island, Pennsylvania and Washington had student / apprentice sub-minimum wages at least part of the time. California, Connecticut, the District of Columbia, Massachusetts, New Jersey, New York, Alaska, Hawaii, Minnesota, New Hampshire, Rhode Island, Vermont and Washington had youth sub-minimum wages at least part of the time. They were using the term “sub-minimum” loosely to include exemptions.

The 1991 increase in the federal minimum wage included a new provision extending a sub-minimum wage, equal to 85% of the minimum, to all newly hired teenage workers, for as long as six months. For the first three months, no additional paperwork was required; for the second three months, the employer was required to file a training plan with the Department of Labor. This was included in the minimum wage bill on a trial basis and it expired after three years.

Neumark and Wascher (1992) found that sub-minimum wages did slightly attenuate disemployment effects of minimum wages for teenagers. However, Card and Krueger (1995, pp. 166-168) found no evidence that many employers actually took advantage of such provisions. Summarizing studies from sources such as the National Restaurant Association and the U.S. Department of Labor, they found that typically much less than 10% of employers used sub-minimum wages (even in some very low wage industries). This was despite the fact that most of these employers had been paying their exempt workers less than the new minimum wage, before that wage was implemented.

One important consideration in adopting a sub-minimum wage or an exemption is the extent to which sub-minimum employees might be substituted for employees earning the regular minimum wage. However, if few employers actually use sub-minimum wages, this concern is not particularly compelling.

Most U.S. and state minimum wage hikes have raised the minimum by less than one-third. We simply cannot tell how employers would make use of sub-minimums if the minimum wage were to rise by a very large amount. It is plausible that they would use the sub-minimum wages more. Limited evidence to this effect comes from Europe, where sub-minimums are also common. (Dolado, et. al., 1996)

Vermont currently excludes from its minimum wage all students who are part-time workers (about 25% of all Vermont workers now earning less than $6.50/hour), employees of firms which hire less than two people, all agricultural workers, taxi cab drivers, newspaper delivery persons, outside sales people, executive, administrative and professional workers, and U.S. government employees. Vermont also allows a substantial tip credit for employees of hotels, motels, tourist places, and restaurants. The lowest effective minimum wage for tipped employees, for example, is currently $3.16/hour, 55% of the stated legal minimum wage of $5.75/hour.

We do not know to what extent Vermont employers actually use these provisions. Based on the DET data we analyzed, however, it appears that Vermont employers, like their counterparts in other parts of the country, rarely utilize legal sub-minimum wage provisions. This may be because the current minimum wage is close to a prevailing market wage rate, or that the costs of administering a sub-minimum wage exceed potential savings. It may also be that sub-minimum wages are perceived as unfair by employees and therefore sub-minimum rates tend to increase quit rates, reduce work effort, and increase labor costs in other, less easily observed ways. Therefore, it seems unlikely that Vermont would need to expand the provisions for sub-minimum wages or exemptions in its law.

Note: At present, there is no source of data about the number of workers actually paid less than the minimum wage under the available exclusions. We made inquiries at both DET and Labor & Industry and were informed that no such data are collected.

Issue # 16

"Research interstate migration patterns"

Related Questions: "Have Vermont's relatively generous welfare policies had a noticeable impact on in-migration to the State? Might this be a problem if Vermont enacted a minimum wage that is much higher than surrounding states?" [Livable Income Committee Additional Study Request, July 16, 1999]

Have Vermont's relatively generous welfare policies had a noticeable impact on in-migration to the State?

There is currently relatively limited source data with which to answer this question. The Internal Revenue Service (IRS) Statistics of Income (SOI) data are the best source for interstate migration information. These data are based on year-to-year tax filings, providing summary data for those individuals who have changed their place of primary residence. This information is publicly available in aggregated form, revealing only the number of migrant returns and exemptions by state (and, more recently, county). Since 1993, the IRS has added summary statistics for aggregate money income (AGI) and median income for migrants by state / county / foreign country.

To date, there is no evidence that any relatively favorable variance that may exist in Vermont's welfare policies has caused disproportionate in-migration among poorer families or individuals. In fact, in each of the past six years for which there are aggregate income measures, in-migrants to Vermont have exhibited higher incomes than out-migrants. Over this period, the average gross income per return of those entering the State has been about 17% higher then those leaving the State (see Chart 16A, next page).

More detailed information with which to inform this issue could be derived by examining migration flows by income class using the proposed (herein and elsewhere) Analytic Income Tax Database. Development of this Database within the Vermont Department of Taxes would enable access to detailed Federal income tax information with which to address this and many other important analytic issues.

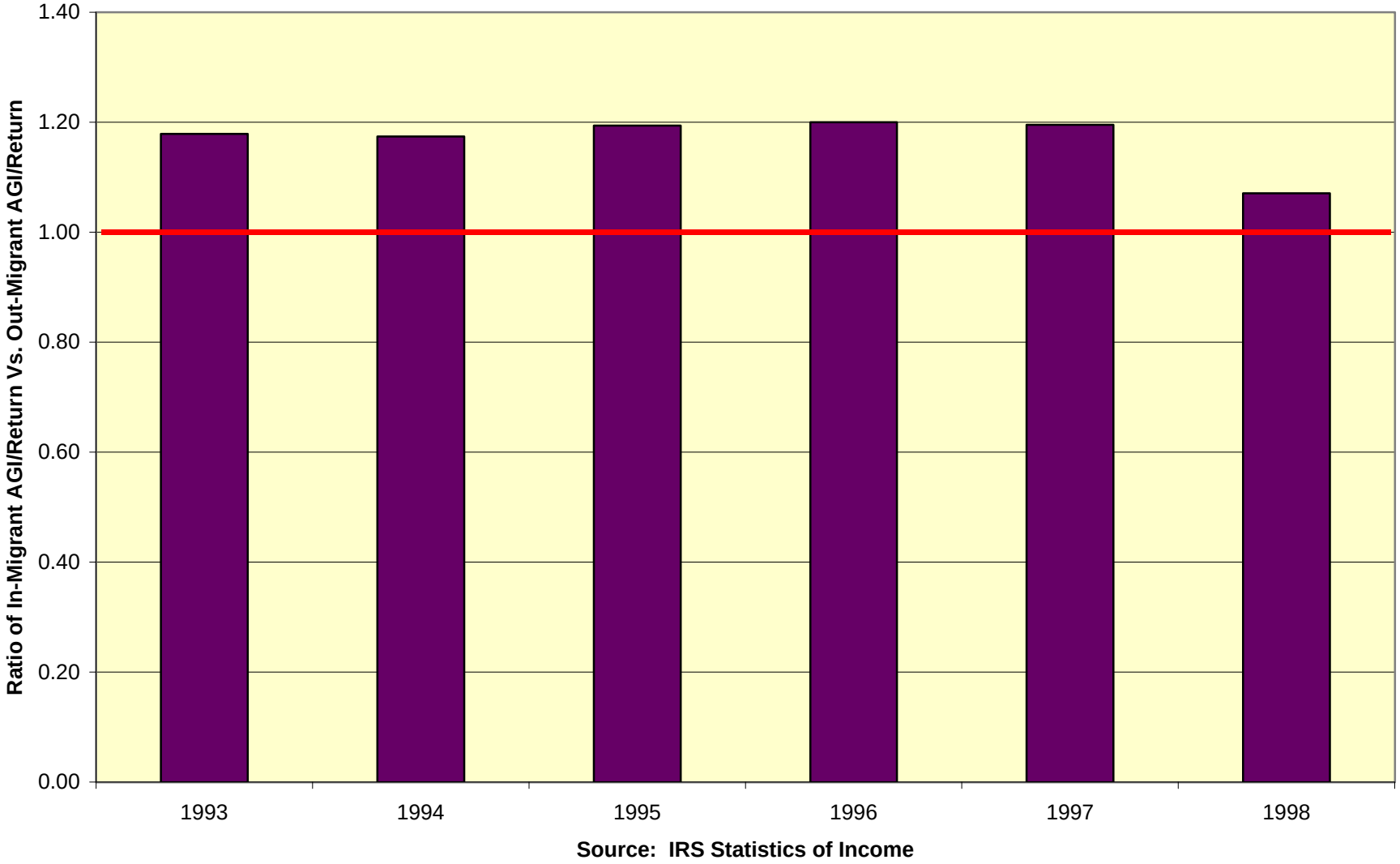
Might [increased low-income in-migration] be a problem if Vermont enacted a minimum wage that is much higher than surrounding states?

Traditional economic theory would suggest that this could be a short-term issue if there were a persistent and substantial variance between Vermont's minimum wage and that of nearby states. The Vermont State REMI model, for example, estimates very little population response to a $6.50 or $7.50 Vermont minimum wage, however, at $8.50, more than 1,000 additional "economic migrants" might be initially expected as a result of this wage differential. As unemployment rises due to initial disemployment effects, this trend tends to reverse itself and have little or no net effect after about 4-5 years.

If Vermont enacts a substantial or indexed minimum wage increase, this should be monitored to determine actual effects (if any) using the Analytic Income Tax Database.

CHART 16A

Average Household Income of Vermont In-Migrants Relative to Out-Migrants



Source: IRS Statistics of Income

Issue # 17

"Catalog and monitor related investigations during this interim by Vermont legislative and other policy groups and other states. State by state evaluation of livable wage initiatives and aftermath."

Related questions: What other similar research is taking place among other groups in the State of Vermont and elsewhere? What has the experience been in other states and cities where livable wage initiatives have been enacted?

For additional resources and useful information, please review contents of the "Livable Income Library" – available from the legislative support staff.

What livable wage policies have other cities and states enacted?

Twenty-nine (29) ordinances are on the books, counting "pre-cursors" such as Des Moines, IA (1988, amended 1996) and Gary, IN (1991). Twenty-six (26) ordinances have adopted since Baltimore in 1994.

25 City ordinances to date

6 County ordinances to date (Santa Clara, Milwaukee, Cook, Multnomah, Hudson, Dane).

1 School board (Milwaukee)

1 State Employees Contract (Vermont) lowest wage set at an equivalent of $8.10/hr.

Wage ranges from $6.25 (Milwaukee County) to $10.75/hour (San Jose, assuming employer doesn't pay health benefits, otherwise $9.50/hour).

City ordinances in **Burlington** = $7.50/hr for permanent FT and PT employees; **Montpelier** and **Barre** = $7.91/hr for permanent FT and PT employees.

Note: $9.00 in Des Moines stated as a "goal" and includes substantial exemptions; $10.00 an hour in Santa Clara County covers only manufacturers that get tax abatements.

1. Fifteen ordinances cover only **city or county service contractors**.

2. Seven cover only some form of **economic development subsidy** (Minneapolis, St. Paul, Duluth, Gary, Santa Clara County, Des Moines, San Antonio)

3. Seven cover both **city or county service contractors** and **economic development subsidies** (L.A., Boston, Oakland, Detroit, San Jose (sort of), Dane County, Madison).

4. Nine ordinances specifically **limit coverage to certain service contracts** (Hayward, Hudson County, San Jose, Chicago, Multnomah County, New York, Jersey City, Portland, Milwaukee County)

   Note: Job categories covered generally include: janitorial, food service, security, parking lot attendants, and clerical workers. Hayward and San Jose include more; Chicago includes home health care workers.

5. Seven ordinances include some **"jobs" language** – that is, job creation goals or targeted community hiring (Detroit, San Antonio, Minneapolis, St. Paul, Boston, New Haven, and Santa Clara County).

6. Two require covered firms to **work with community hiring halls to fill jobs created with a contract / subsidy** (Boston, New Haven).

7. Sixteen ordinances require (or encourage) some form of **health benefits** (Hayward, Hudson County, San Jose, Detroit, Multnomah County, Pasadena, Oakland, Los Angeles, St. Paul, Minneapolis, Gary, Santa Clara County, Des Moines, Jersey City, Duluth, and Portland, as amended in 1998.

   Note: In some ordinances, the health benefit requirement is simply stated as such (Santa Clara County, Gary, IN). Other ordinances require a wage at a higher percentage of the poverty calculation for firms that don't provide health benefits (Twin Cities); other ordinances just tack on an extra dollar-plus per hour (San Jose, Oakland, L.A., Hayward, Duluth, etc.)

8. Seven ordinances cover some **non-profits** (Hayward, Madison, Dane County, Detroit, Oakland, Boston, L.A.)

   Note: L.A. -- if non-profit executive director makes more than eight times lowest paid worker; Boston -- if non-profit has over 100 employees; Hayward, Madison, Dane County, Oakland and Detroit -- cover all (within established dollar and employee number thresholds) except certain training and educational programs.

9. Five include **vacation benefits** (Hayward, Hudson County, Jersey City, Los Angeles, Oakland).

10. Six ordinances include **specific labor language** (San Jose -- worker retention and good labor relations; Minneapolis -- preference given to firms with broadly defined "responsible labor relations"; Hayward, Madison, L.A. and Oakland -- collective bargaining super-session clause; many also prohibit retaliation against employees inquiring about coverage or making claims of non-compliance with the ordinance)

11. Some ordinances **set dollar-value and / or employee-minimum thresholds for coverage of service contractors**:

    - Madison, Dane County and Milwaukee (city): $5,000
    - San Jose: $20,000

- Hayward: $25,000
- Detroit: $50,000
- Los Angeles: at least $25,000 and at least 5 employees
- Boston: at least $100,000 and 25 employees for a for-profit firm, 100/non-profit.
- Oakland: at least $25,000 and 5 employees

12. Most ordinances **define subsidy thresholds**:

- Dane County -- $5,000
- Duluth -- $25,000/year
- Detroit -- $50,000
- Madison -- $100,000
- L.A. -- $1,000,000 in a year or $100,000 on a "continuing basis.
- Boston -- $100,000 in a year
- Oakland -- $100,000 in a year
- St. Paul -- $100,000/year
- Minneapolis -- $100,000/year.

Note: A **Compilation of Livable Wage Policies** in text and tabular form can be found in Appendices 17A and B

What has been the result of these livable wage policies?

To date, the only economic analyses have been conducted in Baltimore and Los Angeles with regard to the impact of their livable wage ordinances.

Although Livable Wage ordinances of varying types and minimum wage increases have been enacted in dozens of cities and states over the past 3 years, not enough time has elapsed to allow for comprehensive studies to be conducted. We anticipate that over the next two years, more in-depth tracking will occur. It should be noted, however, that in a number of instances, ordinances are not being enforced to the full extent of the law.[1] Thus, future analysis will also need to take enforcement and overall impact into account.

Summary of Research on Living Wage Ordinances

Baltimore's Living Wage Law: An Analysis of the Economic Costs of Baltimore City Ordinance 442, October 1996.

In October 1996, the **Preamble Center for Public Policy**, a Washington-based independent research and education organization, conducted a study on the effect of Baltimore's living wage ordinance. The 1994 ordinance mandated a minimum hourly wage of $6.10 for anyone working on a city service contract, with an increase to $6.60 on July 1, 1996. The wage is indexed to $7.70 by 1999.

The study found:

[1] August, 1999 telephone conversation with Jen Kern, ACORN, Washington, D.C.

- The real cost of city contracts actually decreased since the ordinance went into effect.
- Business investment in the city increased substantially in the year following the ordinance.
- Companies interviewed that held contracts before and after passage of the ordinance did not report reduced staff levels in response to the higher wage requirement. Some contractors praised the ordinance for "leveling the playing field" by relieving pressure on employers to squeeze labor costs in order to win low-bid contracts.
- The cost to taxpayers of compliance with the ordinance has been minimal, with the City allocating about 17 cents per person annually for this purpose.

The authors noted that while the study effectively disproves the predicted negative effects of the ordinance, their analysis included no assessment of the potentially significant benefits of the living wage ordinance including substantially higher incomes for low wage workers and their families, higher quality of life, and cost savings as a result of decreased demand on federal, state and local government assistance programs.

The Effects of the Living Wage in Baltimore, February 1999.

This study, commissioned by the **Economic Policy Institute** (EPI) in Washington, D.C. and carried out by researchers at Johns Hopkins University, updates and largely confirms the earlier findings of the Preamble study. Benefiting from an additional year of data since the 1996 study, the EPI study examined the impact of the 1994 living wage ordinance on the City budget, comparing contract data from before the ordinance was adopted to data from living wage-covered contracts as of August 1997. In addition, the new study surveyed the impact on workers covered by the ordinance using payroll data and interviews,. In short, the researchers concluded that the living wage ordinance has had direct positive impact on a relatively modest number of workers in Baltimore without significant financial cost to the city. The study's findings also suggested that the City may be failing to sufficiently implement the ordinance:

- For contracts that could be directly compared before and after the law went into effect, the real aggregate cost to the city for these contracts actually declined slightly, when adjusted for inflation, despite the increase in wage rates.
- Cost changes varied considerably by contract type, with the largest percentage increase in the labor-intensive janitorial sector. However, other contracts with concentrations of low-wage workers (i.e. bus aides) did not produce proportional contract cost increases.
- The number of workers directly affected by the ordinance is estimated to be around 1,500. Since some part time workers "share" living wage jobs, the number could be substantially higher.
- Payroll data suggests that higher wages and hours improve the stability of the workforce.
- Non-compliance with the living wage ordinance with respect to both wage rates and payroll reporting is a significant problem that limits the benefits of the ordinance to an unknown degree.

While praising the ordinance, the majority of living wage workers interviewed work only part-time and report a need for full-time work to raise themselves above poverty. Workers indicated a greatly enhanced sense of recognition for work, which may in turn be linked to increased job commitment, reduced turnover, and increased productivity.

Economic Analysis of the Los Angeles Living Wage Ordinance, October 1996.

The Living Wage: Building a Fair Economy by Robert Pollin and Stephanie Luce: New Press, 1998.

In 1996, a research team at the University of California-Riverside lead by Professor Robert Pollin of the Department of Economics, was commissioned by the Los Angeles City Council to conduct an extensive study to estimate the economic impact of the proposed Los Angeles Living Wage Ordinance. The Ordinance was passed unanimously by the Council in March, 1997.

- The study reviewed experiences with federal and state minimum wage laws as well as existing living wage and prevailing wage regulations and concluded that these measures did not result in either unemployment or significant cost to their respective cities.
- The study calculated the total cost of the proposed wage increase to affected firms as a percentage of their total output (production of goods and services) and concluded that the ordinance could be implemented while causing no net increase in the City budget, no employment loss and no loss of city services to the residents of Los Angeles.
- The study also quantified the potential benefits of the proposed ordinance, including a 50.4% reduction in the amount of government subsidies received by affected workers and their families, as well as growth in spending, home-ownership, and small business markets for at least three areas of the city.
- Researchers documented case studies of successful "high road" employers and predicted that the ordinance had the potential to encourage "high road" competition among businesses, characterized by decent wages, increased productivity, reduced turnover, and increased efficiency.

Among the researchers' other findings were:

- The living wage ordinance would not increase unemployment among less-skilled workers in Los Angeles.
- The living wage ordinance would not place small business at any disadvantage.
- The ordinance would not discourage businesses from either locating in Los Angeles or doing business with the city itself.

In their 1998 book, *The Living Wage: Building a Fair Economy*, Pollin and Luce presented a revised version of the original L.A. study, and they sought to investigate the same impacts under alternative (hypothetical) coverage scenarios of a minimum wage increase and an ordinance covering just service contracts (like Baltimore).

The authors also provided a useful review of the available economic research on the effects of comparable wage interventions -- minimum wage and prevailing wage laws -- noting the positive affects of both. In addition, they discussed evidence of the failure of the prevailing “business subsidy model” of economic development to produce living wage jobs and effectively reduce poverty, giving specific city examples and proposing alternative sustainable development policies predicated on the creation of living wage jobs.

Living Wage Campaigns: A Small Step in the Right Direction, February, 1998.

Labor economist Jared Bernstein of the **Economic Policy Institute** issued a paper examining the growing phenomenon of living wage campaigns as a strategy to raise the wages of low-wage workers. The paper reviewed both the research on the impact of living wage ordinances and the more substantial economic evidence on the impact of past minimum wage increases.

Bernstein concluded that living wage ordinances as they are currently being proposed clearly raise the earnings of covered workers while not lowering their employment opportunities. He further noted that by counteracting trends that have negative distributional consequences for low wage workers -- such as privatization and increased use of tax abatements – living wage policies take the place of some of the eroded bargaining power that has been lost by low-wage workers.

[Dr. Bernstein is a labor economist who specializes in the analysis of wage and income inequality, with an emphasis on low-wage labor markets and poverty. Between 1995 and 1996, he held the post of deputy chief economist at the U.S. Department of Labor.]

Employer’s Wage Detail, the Minnesota Investment Program Dollars, and Nursing Home Jobs -- Minnesota

As a result of the Minnesota Job Gap Study conducted by the JOBS NOW Coalition (1995-1999), employers must now report the number of hours each employee works, rather than just whether they worked at all during a given week – as part of the Employer’s Wage Detail reporting requirements.

In addition, the Minnesota Department of Trade and Economic Development (DTED) adopted the Study’s definition of a livable wage as the basis for revising their standards and practices. It will now be possible to more accurately pinpoint labor market conditions, such as turnover, wages paid and wage mobility, resulting in a clearer picture of conditions that affect the low-wage labor market. Finally, to underscore this intent, the Governor signed a bill that prohibits DTED from allocating any funds to the Minnesota Investment Program for jobs that pay less than a starting wage of $8.01 (between 8,500 and 10,000 a year).

Due to state legislation in 1998, nursing home workers received a raise of 4.25% in wages. Another raise is expected soon.

What other similar research is taking place throughout the United States?

To date, we have examined 17 livable wage studies similar to the Vermont Job Gap Study. Not every study created basic needs budgets for multiple family sizes. Findings of our analysis are found in Table 17A.

However, other than the Vermont Job Gap Study, no other research project has examined the cost of under-employment nor have any gone into as much depth on issues of under-employment.

Most Job Gap Studies have employed similar methodologies to create basic needs budgets – with some differences in data sources. The Washington-based Economic Policy Institute is currently conducting an analysis of the different methodologies being used to calculate basic needs budgets around the US. They plan to offer recommendations about the most appropriate data sources. The Vermont Job Gap Study was one of the dozen studies reviewed.

Diana Pearce, a researcher from the University of Washington, has used a basic needs budget approach to calculate county-specific budgets for eight (8) family sizes for the states of Pennsylvania, Connecticut, and Massachusetts.

Table 17A

Basic Needs / Livable Wage Figures in Other Parts of the United States

Location	Data Year	Healthcare (employer: employee share)	single person	1 adult 1 child	1 adult 2 children	2 adults 2 children 1 wage	2 adults 2 children 2 wages
Vermont* rural statewide	1998	80-20 split	$8.57	$12.99	$14.97	$15.35	$20.39 total $10.20 each
Western Mass.**	1997	100-0	$6.16	$11.68	$13.98	n/a	$16.16 total $8.08 each
Maine rural statewide ave.	1998	yes (HMO)	$8.33	$11.41	$14.61	$16.61	$20.66 total $10.33 each
Minnesota statewide ave.	1998	70-30 split	$7.18	$10.51	$13.81	$13.00	18.53 total $9.27 each
Idaho	1996	84-16 split	$9.22	$11.68	$14.42	$12.51	$16.36 total $8.18 each
Montana	1996	84-16 split	$9.02	$11.71	$14.80	$12.29	$16.58 total $8.29 each
Oregon	1996	84-16 split	$10.07	$13.08	$16.36	$14.04	$17.98 total $8.99 each
Washington	1996	84-16 split	$10.25	$13.12	$16.86	$13.95	$18.45 total $9.22 each
Memphis, TN	1997	0-100		$11.15	$13.61		$17.84 total $8.92 each
Pennsylvania	1998	split unknown			$12.97		$32,158 total $7.73 each
Kentucky (rural)	1996	0-100			$9.26		
Nebraska statewide ave.	1997	70-30		$8.18	$10.37		
Midwest **Michigan** **Indiana** **Wisconsin** **Illinois** **Ohio**	1997			$12.45	$12.82 $15.72	$10.39	$34,112 total $8.20 each

**The livable wage figures in this table are taken from the Vermont Job Gap Study, Phase 5, August, 1998.*

*** The data sets used in the Western Mass. basic needs calculations were lower than Vermont's in the areas of Transportation and Health Care, and they combined clothing/HH, personal, and telephone under a general misc. category which combined was significantly less than what was found to be conservative in Vermont. We believe that the Western Mass. fingure is extremely conservative.*

NOTE: The Josiah Bartlett Center for Public Policy in NH expects to complete its own basic needs analysis by January 2000. Thus, Vermont will soon be able to compare its basic needs budgets to Western Mass., NH and ME.

Issue # 18

"Current status of Welfare to Work -- relation of subsidies to private business ability to absorb former welfare clients and pay livable wages. Consequence of welfare to work – effect of welfare reform on child development, including adequate child care, and remediation of problems through SRS, Mental Health, Corrections, Special Education, etc." [Livable Income Committee Additional Study Request, July 16, 1999]

Related Questions**:** "How might increases in the minimum wage impact the ability of private business to absorb former welfare clients? Are public subsidies necessary to effect this? What are some of the human costs to welfare to work? How does the policy of requiring public assistance recipients to work in sub-livable wage jobs affect their children's development? How does if affect the wages and employment of all low-wage workers – not just welfare recipients? Have there been increases in State costs to solve problems created by welfare to work?" [Scope of Work]

How might an increased minimum wage affect the Welfare to Work Program?

Vermont's Welfare Restructuring Project (WRP) was designed with the goal of increasing work and self-support among ANFC recipients. There is a requirement for recipients to find work after they have received benefits for a certain period of time. There are also incentives to work. The program differs from most other Welfare to Work programs in that people do not lose benefits if they do not work. Instead, the state takes over the benefits and uses them to pay the recipients' bills.

The "work-trigger" time limit is generally 30 months for single parents and 15 months for two-parent families. The Reach Up Program assesses barriers to employment and training needs and opportunities early in the time period.

The work incentives that are part of the WRP attempt to alter the perception that working doesn't pay because any gain in earnings is offset by losses in benefits. Under the WRP, Vermont's ANFC recipients who work are allowed to own a more valuable car and to accumulate more savings from earnings without losing their eligibility. In addition, the ANFC calculation of income disregards some earned income, making a family with earned income look more needy for the purposes of determining benefits.

Other benefits are available for Vermont working families with low incomes to help make ends meet. A family transitioning off welfare would continue to be eligible for Medicaid coverage for three years, even if their income exceeded the limit. And, the childcare subsidy and Low Income Home Energy Assistance are available based on income.

In a preliminary report evaluating the first 42 months of Vermont's WRP, the Manpower Demonstration Research Corporation found that the program began to substantially increase employment rates, reduce the proportion of parents who received welfare without working, and reduce the amount of ANFC benefits received. However, they also found that the incentives did not seem to make much difference. The reason for this may be that the incentives were not great enough to convince ANFC recipients that they would be better off receiving wages. In fact, the study found that, although earnings

increased as a result of WRP, there was little difference in the families' combined income of ANFC, Food Stamps and Earned Income.

- "The work-trigger time limit was necessary for producing impacts: WRP's financial incentives alone generated no significant changes in employment or income for single-parent families.
- "WRP changed the composition of income for single-parent families: They relied more on earnings and less on cash assistance. However, because the decrease in cash assistance largely offset the increase in earnings, the program did not affect these families' total combined income from public assistance and earnings." [1]

This is similar to the findings presented in Issue 2. The main difference is that the WRP study did not consider Earned Income Tax Credit, Renter Rebate, Child Care Subsidy, LIHEAP, or Telephone Lifeline.

As illustrated in Issue 2, families with children will not see much more money in their pockets with minor changes in the minimum wage. This is mainly because the minimum wage is well below a livable wage for a family with children, and the loss in benefits would offset the gain in wages. As such, it is unlikely that small changes in the minimum wage would change the findings of the WRP evaluation.

This situation is not unique to Vermont. A report by the National Governors' Association points out that "for many welfare recipients, work will not provide a path out of poverty."[2] This is mainly because minimum-wage jobs do not pay enough to support a family an many welfare recipients do not have the skills for high-paying jobs.

There are basically two approaches to breaking through this barrier: enable the low-skilled worker to gain skills and advance, and/or increase the wage to a livable wage.

Nationally, there is significant effort being placed on making sure the pieces are in place so that welfare recipients not only get jobs, but also keep the jobs and advance into higher paying jobs. These efforts include:

- increasing access to benefits such as child care and health care for workers;
- creating state/employer partnerships to identify placement opportunities, training needs, and opportunities for advancement;
- training supervisors;
- creating subsidized employment opportunities that help prepare people for other work;
- aggressively publicizing the availability of Earned Income Tax Credits;
- subsidizing training programs;
- providing ongoing counseling; and
- helping recipients who lose jobs to find new jobs quickly.

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1 Hendra, Richard and Charles Michalopoulos. 1991. *Forty-Two-Month Impacts of Vermont's Welfare Restructuring Project*. Manpower Demonstration Research Corporation. p.1.

2 Brown, Rebecca, Evelyn Ganzglass, Susan Golonka, Jill Hyland, and Martin Simon. 1998. *Working out of Poverty: Employment Retention and Career Advancement for Welfare Recipients*. National Governors' Association.

At the same time, momentum is growing to provide a livable wage. There are currently 39 cities that have passed a livable wage ordinance. As the minimum wage approaches the livable wage, the incentive to work will grow and former beneficiaries (now workers) will experience both financial gain and greater self esteem by getting off the system.

Increasing the minimum wage to a livable wage would change the costs of the benefit programs in Vermont in two ways. First, it would move many families that are now dependent on public benefits off of public assistance, freeing up that money. However, there would also be employment costs. In Vermont, if an ANFC recipient is unable to find work, the state is authorized to subsidize a position in a public or non-profit organization. It would seem that, as the minimum wage increased, it would be more difficult for the private sector to absorb these transitioning workers and the state would need to subsidize more positions. Although the savings from benefits generally would offset the earnings, the state must also pay FICA and Medicare tax, Worker's Compensation, and liability insurance.

For a more thorough discussion of Vermont's WRP, please see the two reports that have been issued to date by the Manpower Demonstration Research Corporation.

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Issue # 19

"Quality of life: access to health care for the working poor; burden of health insurance cost on small business; offering of state financed health care through business to enable a livable wage. A qualitative assessment of societal impact in the absence of a livable wage, e.g., effect on children."

Related Questions: "What are some of the human costs of not having a livable wage, especially as this pertains to children? How does the absence of a livable wage affect quality of life issues that may be difficult to quantify? How does it affect basic health care access for the working poor? How might the State contribute to a livable income for all Vermonters by subsidizing health care for the working poor?" [Livable Income Committee Additional Study Request, July 16, 1999]

What are some of the human costs of not having a livable wage, especially as this pertains to children? How does the absence of a livable wage affect quality of life issues that may be difficult to quantify?

There are many human issues associated with this analysis that do not lend themselves to easy quantification and may take many years to be fully recognized. Many of these relate to the needs of workers with children. Such workers are often required to perform two jobs: one that earns sufficient income to survive and one of being a responsible parent. There are tremendous social and public costs to requiring parents to sacrifice the latter for the former. It is important that public policy pay particular attention to the time requirements associated with parenting and not ignore the real costs of parental neglect. Childcare benefits could be adjusted to avoid the rapid loss of benefits with income gains, and consideration should be given to more expansive tax credits for working families with children.

It is now a necessity for many families with children that two adults work in order to earn a livable income. This may have far-reaching social consequences and public costs in the years to come. Even with two working parents, we estimate that nearly 3,500 Vermont families still fall below livable income levels.

Poverty and Children's Health

While many children avoid serious or lasting harm from childhood poverty, they are exposed to greater risk of negative outcomes. A substantial amount of research has documented that poor children fare worse than those who grow up in families that are able to meet their basic needs. Poverty is rarely the sole cause of greater risk but, after controlling for other factors that may contribute to such outcomes, researchers attribute sizable impacts to poverty. Examples include:

Table 19

Estimated health risks to children from poverty	
Condition	Poor children's higher risk*
Infant death	1.3 x more likely
Childhood death	3 x more
Low birthweight	1.2 - 2.2 x more
Stunted growth	2 - 3 x more
Fatal accidental injuries	2 - 3 x more
Severe asthma	2 x more
HS dropout	2 x more
Rate of abuse	5 x more

* Source: Wasting America's Future, Children's Defense Fund, 1994.

The human and economic costs of the effects of the greater risks have not been estimated but are undoubtedly significant.

How does it affect basic health care access for the working poor?

The absence of a livable wage requires reliance on public assistance in order to have basic health care. Without public health care programs, many low-income workers would not have access to health care. However, as demonstrated in Issues #2 and #8, public health benefits expire well below livable income levels for many families.

How might the State contribute to a livable income for all Vermonters by subsidizing health care for the working poor?

Extending eligibility for health care benefits to livable income levels would be of great benefit to low income workers (as has been done for children through Dr. Dynasaur). Since health care is a major component of the basic needs budget, this could play a significant role in closing the livable income gap.

Note: Although not included in the scope of this study, we offer the following information and comments about some potential savings from avoided child poverty.

As noted in the Vermont Job Gap Study,[1] the Children's Defense Fund (CDF) estimated some of the economic costs of childhood poverty.[2] In particular, the findings on educational costs were especially relevant for this report. For example:

- For each year a child spends in poverty, the likelihood that he / she will be behind his / her class is at least 1.56% greater than for non-poor children.[3] With an estimated 22,800 Vermont children in poverty[4], this means approximately 356

1 Phase 3, p. 7.
2 Sherman, Arloc, Wasting America's Future: The Children's Defense Fund Report on the Costs of Child Poverty, Beacon Press, Boston, 1994.
3 Chaikind, Stephen, "The Effects of Short-term and Long-term Poverty on Educational Attainment of Children," in Mary Kennedy, et al *Poverty, Achievement, and the Distribution of Compensatory Education Services*, Interim Report from the National Assessment of Chapter 1, US Dept. of Educ., 1986; cited in Wasting America's Future, Fn. 35, p. 145. The estimate holds constant other variables such as single parent families, race, mother's education, gender and parental involvement in schooling.
4 *Kids Count*, Vermont Children's Forum.

additional children may fall behind in school due to poverty. If each of them repeats one year of school at an average cost of $5,642,[5] the annual statewide cost would be $2,008,552.

- It has been estimated that school-age children living in poverty were 2.4% more likely than children not living in poverty to be enrolled in special education.[6] This means that approximately 547 children in Vermont may need special education due to poverty. At an average per pupil cost of $8,510,[7] the annual statewide cost is $4,654,970.

- Finally, the long-term economic effects of childhood poverty are evident in the CDF estimate that "for each one-year reduction in time a child spends in poverty, lifetime earnings would increase $12,105 per child. With an estimated 22,800 Vermont children in poverty, the present value of the potential lost earnings and productivity is approximately $276 million."[8]

In addition to the human costs in lost potential, the magnitude of these estimated costs is significant and the issue warrants further investigation and research.

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5 Source: VT Dept. of Education. This is a 1997 average of the statewide cost / pupil for elementary ($5,277) and secondary ($6,007).

6 Chaikind, Stephen and Hope Corman, "The Impact of low birth weight on special education costs," Journal of Health & Economics 10 (1991); cited in WastingAmerica's Future, Fn. 36, p. 146. Again, other key variables were held constant.

7 Source: VT Dept. of Education, 1997.

8 Vermont Job Gap Study, Phase 3, p. 7.

Issue # 20

"At the close of the July 16 meeting, we were given verbal instructions to think about this issue in terms of both livable wages and household income. Although the statute is written with emphasis on "livable wages" it is the intention of the Committee that we also examine "livable incomes." This extended to a change in the name of the Committee, from the "Livable Wage Rate Study Committee" (as cited in Act 21) to the "Study Committee on a Livable Income" (per Rep. Postman's memo of 7/21/99)."

Related Questions: What are the pros and cons of focusing on a livable wage vs. a livable income? What are the advantages and disadvantages of policy actions directed towards wages vs. incomes? Which is more important? [Livable Income Committee Additional Study Request, July 16, 1999]

What are the pros and cons of focusing on a livable wage vs. a livable income? What are the advantages and disadvantages of policy actions directed towards wages vs. incomes?

Focusing on income has the following advantages:

1) It more precisely reflects household and family living standards. For example, a teenager or other worker with a low wage job may be a member of a higher wage family and thus have a different need for public assistance than a worker who is not a member of a higher wage family. Focusing on family or household income allows better targeting of public and other assistance to those most in need.
2) Income measures can account for the number of hours worked, as well as non-wage income. A worker may have a job that pays a high hourly wage, but if it is part-time or seasonal, it may still leave him or her with inadequate annual family income. Families and workers may have other sources of income such as rent, dividends, alimony, child support, interest, etc. Income measures can take these into consideration, wage rates cannot.
3) Most public assistance programs are income-based. Thus, in analyzing the interaction between public benefits and earnings, income-based measures allow a more precise measurement of public assistance that may be available.
4) Income-based measurements allow for greater individualization of expenses. Exact measurements of individual childcare expenses, transportation, health care and other basic needs can be specific to individual circumstances instead of based on broad averages.

Focusing on income has the following disadvantages:

1) It requires the development and maintenance of detailed IRS and Tax Department databases with which to obtain accurate information for policy decisions.
2) It does not address gender-based pay discrimination in the workplace.
3) It is more difficult to integrate with measurements of the cash value of private employer-based benefits.

Focusing on wages has the following advantages:

1) It attributes minimum standards and values to work and enhances the dignity of work.
2) It can more easily integrate private employer benefits into assessments of need and policy options.
3) It addresses gender-based wage discrimination and related issues, which is particularly prevalent among substandard wage jobs.

Focusing on wages has the following disadvantages:

1) It cannot adjust for actual individual need based on household or family income or expenses for basic needs. Because of this, policies associated with wages will tend to be a more expansive and expensive way to address the livable income gap.
2) It cannot adjust for actual hours worked, and thus does not always reflect annual earnings.

The relationship between wage levels and total family income is illustrated in the three following charts (Charts 20A-C). These charts show that although most low wage workers tend to be members of families with low total income, about 25% of all low wage workers live in families with more than $50,000 of total family income.

Which is more important?

Both are important. Throughout this analysis, we have focused on both measures to illustrate some of the above-mentioned advantages and disadvantages. Income-based analyses and policies should be the primary standard used to identify and specifically target programs to assist those in greatest need. Wage-based measures are useful in defining minimum labor standards, and insuring that all work is accorded a minimum level of value and dignity.

CHART 20A

Family Income of Workers Earning Less Than $6.50 Per Hour

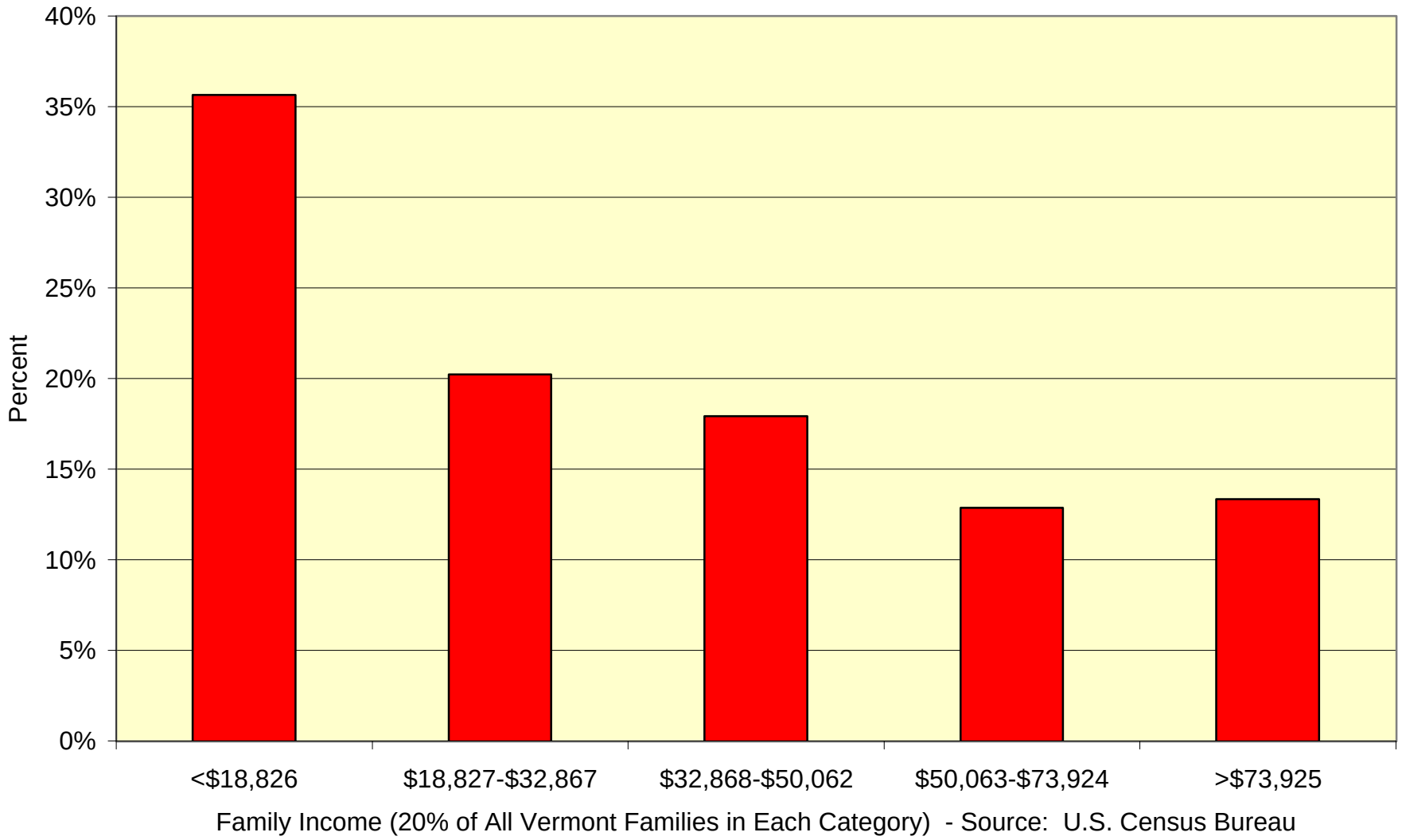


CHART 20B

Family Income of Workers Earning Less Than $7.50 Per Hour

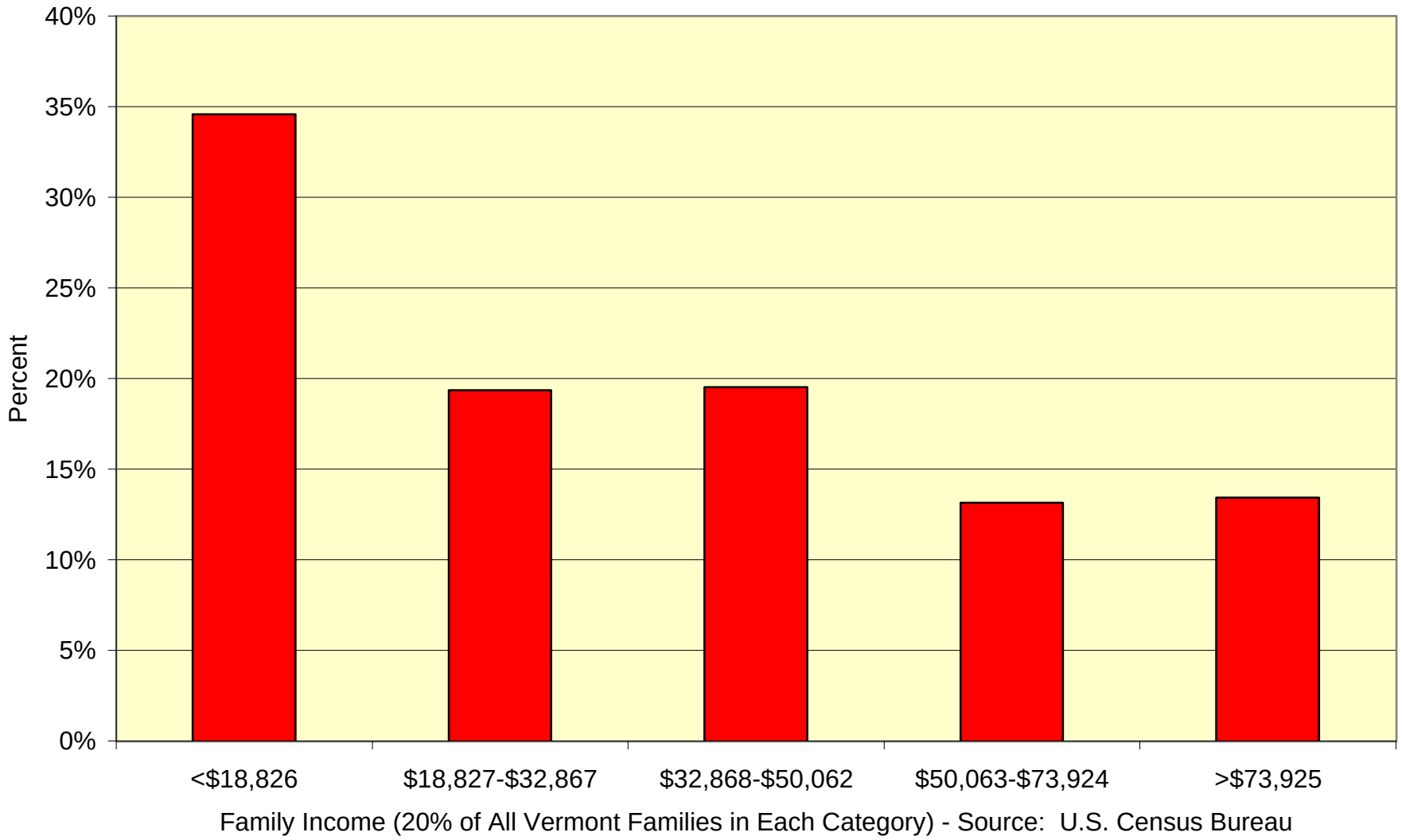
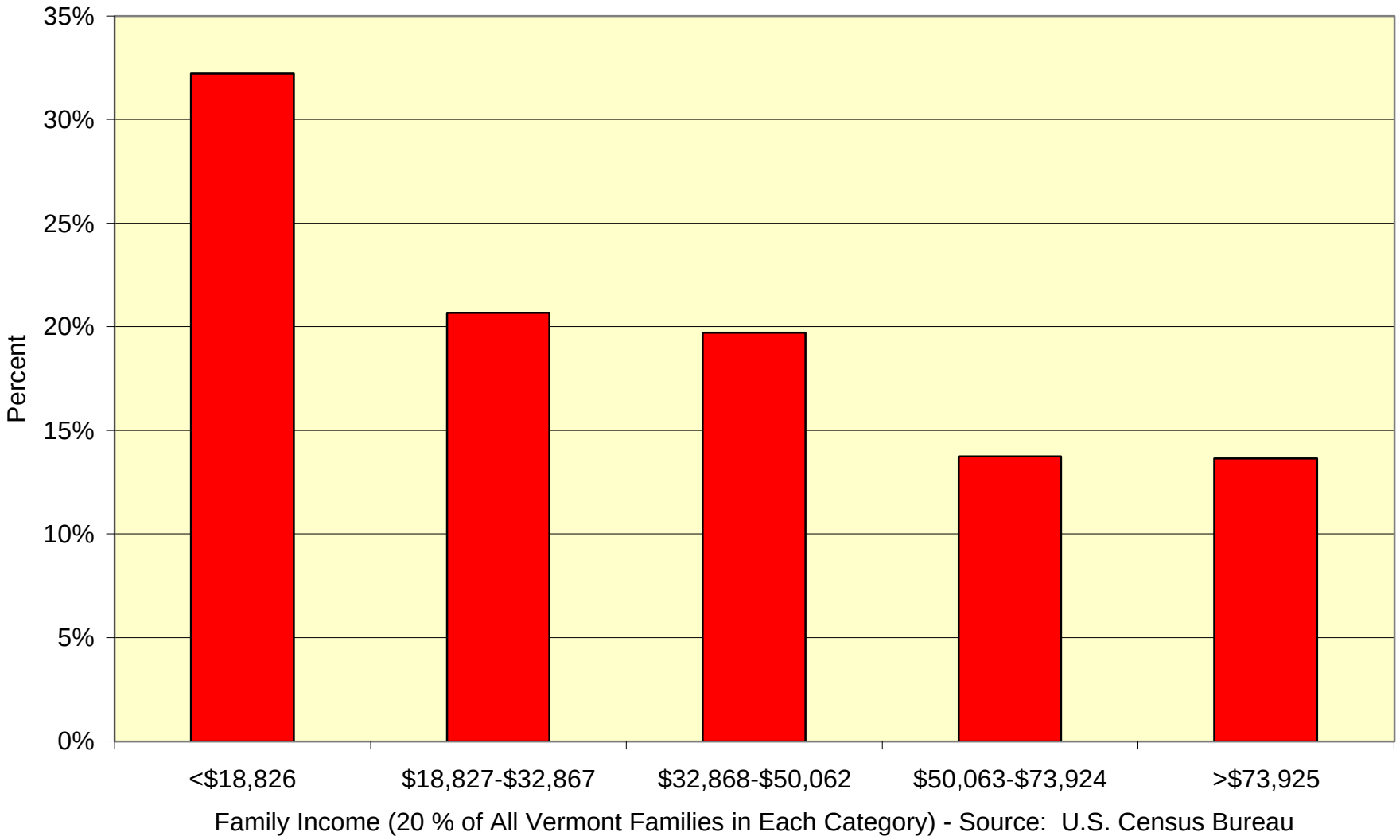


CHART 20C

Family Income of Workers Earning Less Than $8.50 Per Hour



Act 21 Research and Analysis In Support of the Livable Income Study Committee

Part III

Appendices to
Act 21 Research Goals and
Committee Work Scope Interrogatory

APPENDIX 1A

Basic Needs Budget: Methodology and Sources

Assumptions:

- Single persons and single parents are women between 20 & 50 yrs old and work outside the home; all other adults are between 20 & 50 yrs old;
- All families live independently (i.e., not as sub-families living with others);
- One child is 4 yrs old; two children are 4 & 6 yrs. old:[1]
- Housing: estimates are for rental units[2] with 1 bedroom for the single person and 2 bedrooms for families with 1 or 2 children;
- Single parents receive no child support.[3]
- The urban designation covers Chittenden County and rural is the rest of the state.

Food: USDA has four food plans for the cost of food at home at four levels. Each plan includes detailed information about the quantities of specific foods to be consumed by children and adults by gender. The costs of each plan are based on the 1977-78 Nationwide Food Consumption Survey updated (by USDA) to current dollars using the CPI for specific food items. After discussing the various Food Plans, the Committee requested that we use the Moderate-cost plan. For comparative purposes, we prepared budgets using both the low-cost and the moderate-cost food plans.

Table 1A

Monthly Cost of USDA Food Plans: June 1999[4]				
	Thrifty	Low-cost	**Moderate**	Liberal
Child				
1-2 years	66.70	82.80	**96.60**	117.90
3-5 years	72.40	90.10	**111.40**	133.90
6-8 years	89.70	120.00	**149.10**	173.30
9-11 years	106.20	136.10	**173.30**	201.10
Adult				
Male 20-50 years	121.30	156.40	**195.00**	236.10
Female 20-50 years	109.20	136.50	**166.40**	213.20

The figures were adjusted for Vermont based on a regional variation of 3.1% more than the national average for food consumed at home according to the Consumer Expenditure Survey. We assumed no urban / rural distinction for food costs.[5]

For more information on USDA food plans, see www.usda.gov/cnpp

[1] According to 1994 Census estimates, the distribution by age of children under 16 in Vermont is very even. Thus, using children of these ages in our family units is no more or less justifiable than any other age groups.

[2] More than 70% of rural Vermonters own their homes but we used rental figures to be conservative because they are less on average and easier to update.

[3] We did not independently estimate the impacts of child support on the livable income but Phase 5 of the Job Gap Study contains data and a brief analysis of this subject.

[4] Costs are for individuals in 4-person families. For individuals in other size families, USDA recommends the following adjustments: 1-person - add 20%; 2-person - add 10%; 3-person - add 5%; 5- or 6-person - subtract 5%.

[5] We did not attempt to estimate the value of food grown in home gardens because not all families have the means (land & time), families produce different items and costs and yields may vary widely.

Housing: HUD's Fair Market Rents (FMR) are based on random digit dialing survey data and reflect the 40th percentile of area rents including all utilities except telephone. The sample is drawn from the distribution of rents of units occupied by recent movers (within the last 15 months) and excludes units less than two years old. Adjustments are made to correct for the below market rents of public housing units included in the database. HUD establishes FMR's for units of varying size (0 – 4 bedrooms) for every county in Vermont. After a period of comment, the FMR's are finalized in October.

For the rural housing estimate, we took the average of the counties' population-weighted FMR's. The range of unadjusted FMR's for a two-bedroom apartment was $480/mo. to $625/mo. For a three-bedroom apartment, the range was $605/mo. to $818/mo. We used the FMR for the Burlington MSA for the urban housing estimate,

Note: In 1997, Vermont public housing administrators and advocates challenged the accuracy of the FMR's. A consortium of organizations commissioned a statewide survey using HUD-approved methodology to ensure that the data was reliable (see the June 16, 1997 report by Macro International). The survey was funded by VHFA, the Department of Housing & Community Affairs, the State Housing Authority, and local housing authorities. HUD accepted the results and the data became the basis for the 1997 FMR's that HUD later updated in 1998.

For more information about FMR's, see www.hudusers.org/datasets/fmr/fmrover.wp

Transportation: The 1990 National Personal Transportation Survey (NPTS) contains information on travel behavior from 21,869 households selected by random digit dialing. We used data from a Demographic Special Report (Tables 8 & 9) on the average annual miles driven by gender, work status, and urban / rural settings.

Table 1B

1990 National Personal Transportation Survey (US DOT): Annual Miles Driven by Travelers Aged 16 – 64[6]				
	Working women	Non-working women	Working men	Non-working men
Urban	10,746	7,365	17,676	11,474
Rural	12,282	8,497	21,035	12,746

The IRS cost per mile for business travel ($0.325) is intended to cover all reasonable and necessary costs of auto ownership including purchase price and interest (with a five-year replacement), insurance, fuel, fees, and maintenance. We multiplied the miles driven by the IRS mileage allowance and then adjusted for Vermont based on a regional variation of 9.7% less than national average annual transportation costs (1997 Consumer Expenditure Survey, Table 8). Finally, we adjusted for income because it's an important contributing factor in transportation expenditures (e.g., cost of auto). Therefore, we accounted for the difference between the average number of vehicles in the overall national sample and the number of vehicles for those with incomes between $15,000 and $19,999 (multiplier = 0.85).

For more information about the 1990 NPTS, see www-cta.ornl.gov/npts/1990/index.html

[6] The 1995 NPTS is complete but DOT has not yet published detailed information comparable to the 1990 report.

Health care: More than any other category, health care costs are extremely difficult to estimate due to variables such as whether the family has insurance, whether the employer pays all or part of the premiums, varying levels of co-payments and deductibles, relative health of family members, and out-of-pocket expenditures.

We prepared budget and wage estimates for two scenarios. The first assumed families paid the total cost of insurance and out-of-pocket expenses. In the second, all adults received employer-provided insurance and Dr. Dynasaur covered the children.

We obtained current HMO premium costs for single and two person policies from Community Health Plan (Small Group Plans) assuming a $10 co-payment per visit, and a $500 deductible for inpatient hospitalization. The costs of the policies were $188/mo. single and $375/mo. for two persons. Using data from the Vermont Health Care Administration (VHCA), we multiplied these costs by the average percentage employee contribution (single - 34% and family - 21%[7]). We then added monthly per capita out-of-pocket expenses[8] for each family based on the number of family members. The cost of premiums is current, so no CPI inflator was used. The data on out-of-pocket expenditures is two years old so we applied a 4.7% inflator for this subset of health care costs.[9]

Note: According to the VHCA,[10] the health insurance market in Vermont is now about evenly split between indemnity plans, HMO's, and large employers that self-insure. In order to be conservative, we selected HMO rates because they are less expensive than indemnity plans. Our choice in this matter is not intended to be an endorsement of HMO's.

For more information about estimates of national aggregate and per capita health care expenditures, see www.hcfa.gov/stats/nhe-oact/nhe.htm

Dental care: We obtained prices from Northeast Delta Dental for the "Preventer 1" plan for small businesses. As of July 1, 1999, the premiums are $36/mo. for a single person, $62/mo. for two persons, and $105/mo. for a family.

Note: At present, we have no reliable data on average or per capita out-of-pocket expenditures for dental care.

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7 Source: A 1996 survey funded by the Robert Wood Johnson Foundation for the Vermont Health Care Authority.

8 We obtained the per capita estimates from the 1997 National Health Care Expenditure Analysis (U.S. Health Care Financing Administration). Out-of-pocket expenses include all expenditures not paid by insurers or other third parties, except insurance co-payments. Out-of-pocket expenses include hospital services, physician and dental services, other professional services, home health care, drugs and other medical nondurables, vision products and other medical durables, and nursing home care. According to the VHCA, Vermont's estimated annual per capita out-of-pocket expenditures in 1996 were 24% less than national average. Thus, applying that percentage to the '97 national figure of $674/yr., Vermonters average $512/yr. ($43/mo.)

9 GDP chain-weighted deflator for medical expenditures. US Dept. of Commerce, Bureau of Economic Analysis, Survey of Current Business, V. 79, No. 7, July 1999, p. D-18. The figure covers 1997 through the 1st quarter of 1999.

10 Telephone conversation with Dian Kahn (VHCA) on March 23, 1999.

Childcare: Urban figures are based on data collected by Child Care Resource (CCR, December 1998[11]). The amounts shown are the average of the Countywide averages for child care centers and family day care homes. We assumed 50 weeks of full-time care for the 4 yr. old, and 40 weeks of part-time / after school care and 10 weeks of full-time care for the 6 yr. old. We assumed no childcare costs for the older children.

Rural figures are derived from data collected by the office of Child Care Services in the Department of Social & Rehabilitation Services. The amounts shown are the average of the statewide averages for childcare centers and family day care homes, excluding Chittenden County. Since this is current data, no CPI inflator is needed.

Clothing & household expenses: This category includes housekeeping supplies, household furnishings and equipment, and clothing. The figures are from the 1997 Consumer Expenditure Survey (CES). We used the following CES tables to adjust for income:

- Single person, Table 4, "Size of Consumer Unit," single person, average annual income = $22,174;
- Single parents with 1 & 2 children, Table 2, "Income Before Taxes," $15,000 - $19,999, average annual income = $17,393;
- Single parent with 3 children, Table 2, "Income Before Taxes," $20,000 - $29,999, average annual income $24,599;
- Two adults (no children) and two parents, one wage earner, Table 2, "Income Before Taxes," $20,000 - $29,999, average annual income = $24,599;
- Two parents, two wage earners, Table 2, "Income Before Taxes," $30,000 - $39,999, average annual income = $34,583.

Finally, we adjusted for Vermont based on a regional variation of 6.6% more than the national average expenditures for these items (CES, Table 8). We assumed there is no urban / rural distinction for these costs.

Note: Because we assume these families rent, we excluded expenditures for major appliances or miscellaneous household equipment, which are a sub-category of household furnishings and equipment.

For more information about the CES, see www.bls.gov/csxhome.htm

Telephone: This category includes the Bell Atlantic Standard Use Measured Service (SUMS), the FCC Line Charge, Vermont Universal Service Fund charge, and applicable state and federal taxes. SUMS includes a Local Usage Allowance that makes this tariff more cost-effective than the Low Use Measured Service (LUMS), which has a cheaper base rate but a comparatively expensive per minute charge. By definition, LUMS is for those who use the phone infrequently and was therefore deemed inappropriate for this exercise.

[11] According to CCR staff, Census data shows that relatives care for 48% of children whose parents work. For this exercise, we could not reduce the average costs to reflect free care since it would grossly understate the costs for those who do pay for the services. Thus, it's easier to simply subtract the cost of childcare entirely for parents who may have services provided without cost. An ancillary issue is that such providers are not paid for their labor and therefore receive no benefits, pay no taxes, and may well receive public assistance themselves.

The configuration and limitations of Vermont's local calling areas make it practically unavoidable that families will incur some in-state long distance charges each month. Moreover, it is not uncommon for one or more family members to live out-of-state. Therefore, we have included a modest $10.00 monthly allowance for long distance charges.[12]

Personal expenses: This category includes expenditures for miscellaneous goods and services such as diapers, books / magazines, children's birthday gifts / toys, movies / video rentals, and newspapers. We decided not to use data from the CES because of wide variations in expenditures per family per month. Expenditures for personal expenses in the CES ranged from 4% to 9% of gross income. In order to be conservative, we assumed all families spent no more than $2.00 per person per day on personal expenses. For comparative purposes, we assumed no more than $1.00 per person per day for personal expenses (see the final column in each table that includes the low-cost food plan).

Renter's insurance: Rates from Smith, Bell & Thompson. Coverage includes $20,000 replacement value, $1,000 medical, $300,000 liability, $250 deductible, and loss of use.

Life insurance: We assumed the families would purchase term life insurance because there are a number of other long-term investment options with comparable rates of return and more favorable tax treatment [e.g., 401(k)]. Moreover, term life policies are considerably cheaper than whole life policies. Thus, a term life policy would provide protection in the event of an unexpected loss, while an alternative savings plan would provide long-term security. Although circumstances vary considerably between families, a standard industry assumption for the appropriate amount of the policy is 4 – 6 time's annual earnings.[13]

Table 1C

Monthly Cost of Term Life Insurance by Family Unit[14]

	Single person	2 Adults	1 parent, 1 child	1 parent, 2 children	2 parents, 2 children, 1 income	2 parents, 2 children, 2 incomes
Rate / yr / $1,000	$0.58	$0.58 + $0.70	$0.58	$0.58	$0.70	$0.70 + $0.58
Coverage	$80k	$120k ($60k each)	$120k	$150k	$150k	$200k ($100k each)
Sub-total	$46	$77	$70	$87	$105	$128
Processing fee	$75	$150	$75	$75	$75	$150
Total	$121	$227	$145	$162	$180	$278
Monthly equiv.	**$10**	**$19**	**$12**	**$14**	**$15**	**$23**

Note: DET conducted a survey of private employers in 1997 and found that a considerable percentage of companies offered life insurance as a fringe benefit, although the percentage was much higher for larger firms. Based on DET survey data, we estimate that about 100,000 private sector workers do not receive life insurance through their employers.

[12] Based on CES data, low-income families spend approximately $10-$15 per month on long distance charges.
[13] August 3, 1999 telephone conversation with National Life agent Jim Handy.
[14] Rates from National Life of Vermont, August, 1999 for adults 30 yrs. old, in good health, and non-smokers.

Table 1D

Life insurance as a fringe benefit[15]						
	Size of Firm (private employers only)					
	4 or less	5 - 9	10 - 49	50 - 249	250+	All sizes
Life insurance provided as a fringe benefit by size of firm	NA[16]	24%	43%	79%	100%	41%
No. of companies by size[17]	12,360	4,109	3,868	632	64	21,033
No. of employees by size of firm[18]	24,461	27,982	76,469	60,904	38,559	230,674
Estimated no. of employees receiving life insurance[19]	NA	6,716	32,882	48,114	38,559	126,271

Savings (for children's education, emergencies, supplemental retirement, and other long-term needs): In light of the number of unknown variables in people's lives, we elected to use a fixed percentage (5%) of before-tax income as the benchmark for savings. For comparative purposes, we excluded savings in the final column of each table.

Debt service: Although we did not include debt service in the basic needs budget, we offer the following information for your consideration. According to the Federal Reserve Board,[20] 42% of all households with income between $10,000 and $24,999 had installment and credit card debt in 1995. Median consumer debt per family was $5,100 (not including auto or mortgage loans) and the median ratio of debt payments to income was 17%. Thus, $5,100 of debt at an annual interest rate of 15% would require a minimum monthly payment of $114 ($63 in interest and $51 in principal).

15 DET 1997 Fringe Benefit Survey (includes public & private entities).

16 Businesses with fewer than five (5) employees were not included in the sample. However, based on the trend observed in the data, it's unlikely that a large percentage of small businesses provide life insurance to their employees.

17 Source: VT DET, 1997 Employment & Wages, Table 10, p. 49 (private sector only).

18 Ibid.

19 We multiplied the number of employees by the percentage of firms providing the benefit. However, even in those firms that offer life insurance, it's not likely that all employees are eligible due to part-time or temporary status. The total does not include public sector employees, most of whom are offered life insurance as a fringe benefit.

20 Kennickell, Starr-McCluer & Sunden, "Family Finances in the US: Recent Evidence from the Survey of Consumer Finances," Federal Reserve Bulletin, Vol. 83, (Jan. `97), pp. 1-24.

APPENDIX 2A

EARNINGS

Wages, Salaries and Tips

+

PRIVATE BENEFITS

Cash value of employer benefits, such as health care, life insurance, retirement savings, etc.

+

OTHER PRIVATE INCOME

Other private income, such as alimony, child support, interest, dividends, capital gains, rent, etc.

=

PRIVATE INCOME

+

PUBLIC BENEFITS

Cash value of State and Federal public benefits such as Dr. Dynasaur, food stamps, EITCs, etc.

=

GROSS INCOME

Also referred to as "Total Income"

-

INCOME TAXES

=

NET INCOME

Also referred to as "disposable income"

APPENDIX 2B

Assumptions Associated With Issue 2 Data and Charts:

- Household characteristics are derived from Issue 1 except that the urban/rural distinctions are weighted to reflect the state average. (18.6 % urban).
- Households have no other income than wages and public assistance as noted.
- This does not include child support received or child support paid.
- Households are renters and not owners of their residences.
- Households pass “resource” tests for eligibility for public assistance programs.
- In Charts 2-1 through 2-6 and 2-13 through 2-18, livable income assumes no employer-assisted health care. (Column A from the Livable Wage Tables 1B-1G in Issue 1).
- In Charts 2A through 2L, livable income assumes employer-assisted health care for the adults and Dr. Dynasaur for the children. (See Issue 1 for an explanation of the health care costs assumed).
- The charts do not show transitional Medicaid because they show different households at different wage levels—not necessarily the same household moving through the wage levels.

APPENDIX 3A

REMI Model Specification and Output

The REMI EDFS-53 economic model for the State of Vermont was used to quantify potential dynamic economic impacts of various minimum wage changes analyzed in this study. Appendix 3B details the origins and structure of this model.

All of the model simulations were based on and compared to the REMI Regional Control Forecast of June 16, 1999. This Control Forecast is displayed in Appendix 3D. Thus, all output (except levels) for various minimum wage simulations presented herein are expressed as differences or the percent change in differences as compared to the REMI Control Forecast. For example, the REMI model predicts a loss of about 204 manufacturing jobs in the year 2000 associated with a minimum wage change to $8.50 (see Appendix 3L). This loss represents the difference between what the REMI Control Forecast predicts with no minimum wage increase (Appendix 3D) and that associated with an $8.50 minimum wage (Appendix 3K). This difference is also expressed as a percent change as compared to the Control Forecast in Appendix 3M.

All REMI model simulations were run with a ten year forecast horizon. There are thousands of economic variables forecast as a part of the REMI model. We have chosen selected variables to display various aspects of the Vermont economy. Complete forecast detail, however, has been saved for each simulation and is available upon request.

REMI industry groupings correspond roughly to 2 digit SIC codes, as detailed in Appendix 3C. All source data (Census, DET, etc.) was mapped to these industry groupings for input into the model.

Considerable effort external to the REMI model was applied in order to best specify the multitude of REMI model inputs necessary to estimate potential minimum wage changes in Vermont. We estimated average wage changes for 50 REMI sectors for each minimum wage level using confidential DET occupational and industry survey data. These are summarized in Appendix 3N.

We have included estimates of wage “ripple” effects – the tendency for a minimum wage increase to affect wages above but close to the minimum wage, based on both theoretical constructs and review of all available quantitative studies on the subject (see Issue #9, et. al.). Wage ripple effects can significantly increase overall minimum wage impacts. Appendix 3P illustrates these effects at various wage levels.

Estimates were made of minimum wage exclusions by wage level, such as student/part-time workers (1990 Census), self-employed workers (1990 Census), taxi cab drivers (DET), agricultural and domestic service workers (DET and REMI), newspaper delivery persons (DET), outside sales persons (DET), and executive, administrative and professional workers (DET). Adjustments to tipped employees wages were made to reflect reported tips, which, since 1997 in Vermont, may be applied to reduce the

minimum wage by as much as 45% (DET and Census CPS data). These exclusions can significantly impact average wage changes in affected industries. For example, the share of student/part-time workers earning less than $6.50/hour is estimated to be over 60% in motion picture and video establishments, and about 30% in the larger retail trade sector. These shares are illustrated in Appendix 3Q.

In consultation with REMI founder and President, Dr. George Treyz and other senior REMI economists, we have also included model adjustments to account for the relatively higher tax impacts of wage increases among the lowest income workers and tested efficiency wage theory constructs and monopsony emulation approaches for possible future use with the Vermont REMI model. Using this tax adjustment, all economic impacts have been estimated on a current law basis (assuming all current exclusions), and are depicted in Appendices 3D-3M. We have also run versions of the REMI model to measure a wide range of assumptions associated with tax, productivity, wage indexation and minimum wage exclusions.

APPENDIX 3B

OVERVIEW OF THE REMI EDFS-53 MODEL

Regional Economic Models, Inc. (REMI) was established in 1980 to respond to the demand for regional forecasting and simulation models. The REMI methodology was first initiated in the mid-1970's as the TFS methodology, named after its original authors, Treyz, Friedlander, and Stevens. The Massachusetts Economic Policy Analysis model, developed in 1977, was the first implementation of this methodology. A core version of the model was then developed for the National Academy of Sciences. Now available for any county/state or combination of counties/states in the U.S., the standard REMI model is the Economic and Demographic Forecasting and Simulation 53-sector (EDFS-53) model.

Policy makers and analysts can use the EDFS-53 model to forecast and simulate policy changes in the regional economy. The baseline forecast (also called a control forecast) does not include any policy variable changes. A forecast that does include one or more policy variable changes is called an alternative forecast or a simulation. The difference between the control and alternative forecasts shows the effects of the policy change. Examples of such policy changes include decisions relating to tourism, the environment, transportation, energy, taxation, utility rates, and a wide variety of regional development projects.

Interindustry relationships are included in the REMI model, as well as behavioral equations from economic theory. This creates a model that will respond in a logical way to changes in an area's economy. The coupling of proven economic theory with customized data ensures state-of-the-art accuracy of your REMI EDFS-53 forecast and simulation. The result of the REMI modeling technique is a representation of a regional economy that predicts demand and supply conditions across 53 sectors, 94 occupations, 25 final-demand sectors, and 202 age/sex cohorts.

In contrast to traditional regional econometric models, REMI models are estimated using data from all regions and then calibrated to the specific region. This method allows us to estimate model

parameters using a large data set that produces more econometrically reliable results than would be possible using data from only a single area. The model embodies a consistent internal structure that is widely documented in academic publications. We feel our users benefit from our on-going model research and development program at REMI.

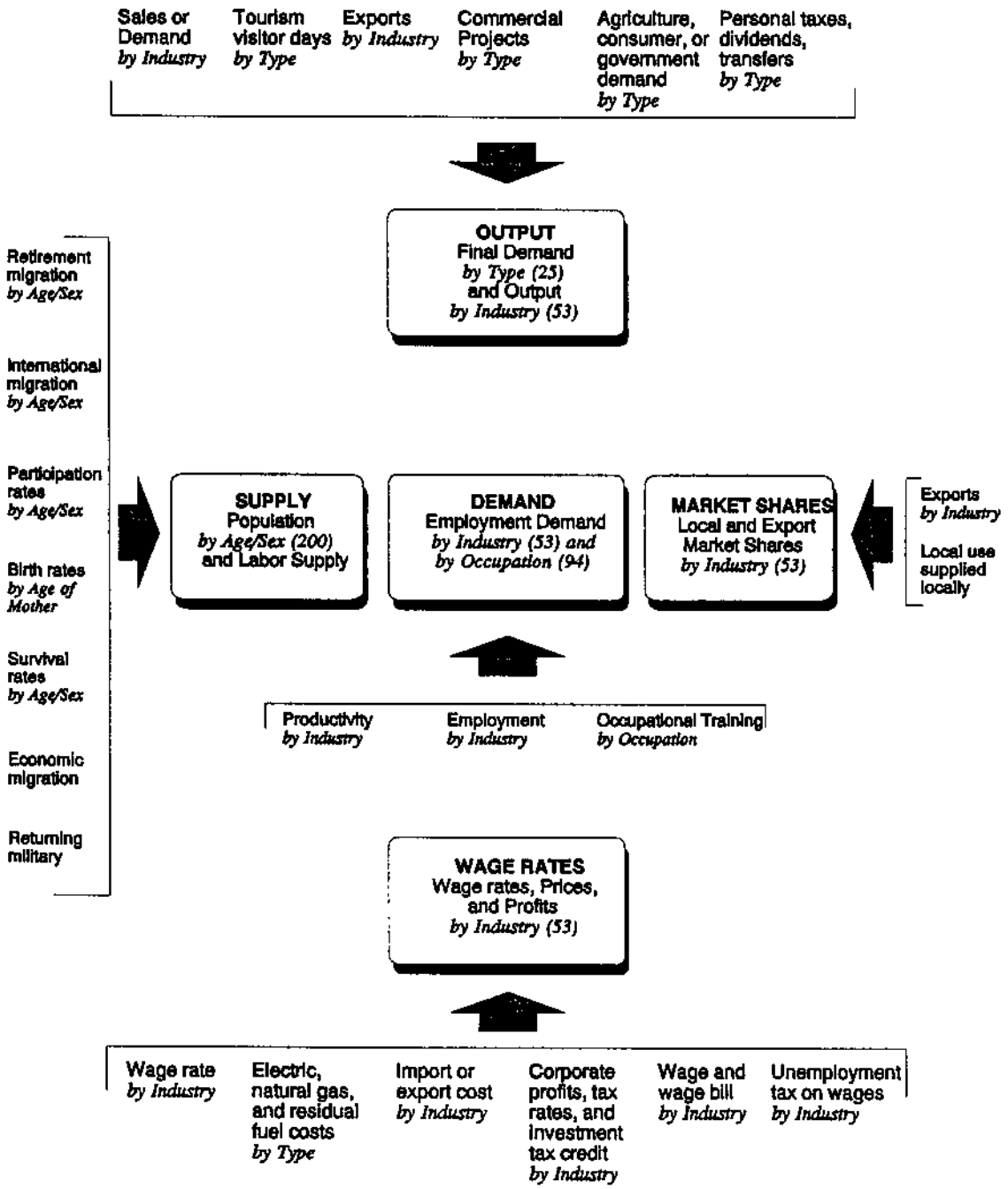
A. SIMULATING THE EFFECTS OF POLICY CHANGE

A large variety of policy variables are available to the user for introducing the direct effects of a policy initiative into a REMI model. These are shown, together with the major components of the model which are directly influenced, in Figure 1. Along with a general discussion of policy variables, the effect of changing two policy variables (commercial and industrial electrical rates), will be described briefly in this section.

The effect of a policy change is the difference between a control forecast and an alternative forecast. The model is first used to generate a control forecast for as many years into the future, up to the year 2035, as the user wishes to evaluate. Next, the model is run to generate an alternative forecast, based in this case on the changed values for the relative electric fuel cost policy variables. In the REMI EDFS-53 model, there are over 1,000 regular economic policy variables and hundreds of translator policy variables (each of which uses a combination of regular economic policy variables) and demographic policy variables (which can be used to change over 1,300 variables for age/sex cohorts). Because of the large number of policy variables provided in the REMI model, the types of simulations that the user may run are considerable. For instance, the user may change regular economic policy variables for the policy simulation, such as tax rates (including rates for the corporate profit tax, equipment tax, investment tax, personal income tax, and property tax), costs (including relative production cost, import cost, and export cost), wage rate (or wage bill), employment, occupational demand, population, transfer payments and

APPENDIX 3B

Figure 1 Some of the Policy Variables and the Parts of the Model They Directly Influence



unemployment compensation, and final demand. A complete list of policy variables is presented in Chapter 11.

Each policy variable has a default value based on whether it is additive or multiplicative. In our simulation example, because the two policy variables for electric rates are multiplicative, their default values are 1.0. For a 10 percent increase, we changed their values to 1.10 by entering 10.0 when prompted by the simulation procedure.

Currently, the user can examine the forecast results of the REMI EDFS model for over 2,000 economic variables and several hundred demographic variables. The values for these variables are contained in 49 economic and 11 demographic tables which are output for the EDFS model. The user may choose to print one or several of the tables for the control forecast, the simulation, or the difference between the two. The user can also select the values of one or more variables and use them for other purposes, such as importing into LOTUS® for graphing.

Table 1-1 below shows the difference between the simulation and control forecasts from a sample session for selected variables and forecast years. Each element in the table represents an aggregated value from a detailed table for 49 private industries. In the sample shown, the effect of the 10% increase in rates can be seen in the fuel costs line where the average increase in fuel cost is shown to be 6.9 percent. This increase raised selling prices for the regional industries[1] which pass on their price increases to local markets by an average of .1 percent in 1991. For national industries that cannot pass on their cost increases, the 10% increase in rates decreased relative profits by .095 percent in the first forecast year and by .118 percent by 2035. The increased cost and reduced profits decreased exports by $24.77 million 1987 dollars in 1991, and by $279.39 million in 2035. However, some offset in the employment decline that this might have caused came through, resulting in an increase in labor intensity by .142 percent in the year 2035 as labor was substituted for fuel. Not shown on this table is a decrease

[1] For the definition of regional and national industries, see Chapters 2 and 3.

APPENDIX 3B

MASSACHUSETTS: EFFECT OF 10% INCREASE IN ELECTRIC COST FOR INDUSTRIAL & COMMERCIAL USERS

TABLE 2: SUMMARY TABLE FOR PRIVATE NONFARM SECTORS.

(DETAILED TABLE # REF IN PARENS-(10 SECT,49 SECT))

	1991 FCST	1992 FCST	1993 FCST	1994 FCST	1995 FCST	2000 FCST	2005 FCST	2010 FCST	2020 FCST	20 FC
PRIVATE NONFARM EMPLOYMENT (IN THOUSANDS OF PEOPLE) AND ITS DECOMPOSTION BY SOURCE OF DEMAND:										
TOTAL EMPLYMNT (7,18)	-3.294	-3.803	-4.198	-4.482	-4.622	-4.757	-4.752	-4.509	-3.990	-3.9
INTERMEDIATE (7,19)	-.802	-1.040	-1.220	-1.352	-1.440	-1.691	-1.880	-1.939	-1.935	-1.8
LOCAL CONSUM (7,20)	-1.836	-2.006	-2.127	-2.240	-2.291	-2.327	-2.285	-2.127	-1.820	-2.0
GOVT DEMAND (7,21)	-.017	-.036	-.049	-.062	-.072	-.106	-.124	-.118	-.091	-.1
INVEST ACTVTY(8,22)	-.526	-.525	-.552	-.550	-.532	-.401	-.318	-.261	-.227	-.2
EXPORT TO US (8,23)	-.113	-.196	-.250	-.279	-.287	-.232	-.146	-.064	.083	.3
EXP - MULTREG(8,24)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.0
EXOGENOUS (8,25)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.0
COSTS AND SELLING PRICES RELATIVE TO THE U.S.:										
SELLING PRICE (9,26)	.00102	.00106	.00102	.00101	.00100	.00109	.00120	.00129	.00136	.001
FACTOR INPUTS (9,27)	.00171	.00179	.00176	.00175	.00176	.00193	.00208	.00220	.00228	.002
LABOR (9,28)	-.00026	-.00009	-.00012	-.00012	-.00010	.00016	.00039	.00057	.00065	.000
FUEL (9,29)	.06938	.06938	.06938	.06938	.06938	.06938	.06938	.06938	.06938	.069
CAPITAL (10,30)	.00030	.00029	.00026	.00023	.00022	.00022	.00025	.00029	.00035	.000
INTRMED INPUTS(10,31)	.00055	.00056	.00053	.00050	.00049	.00054	.00062	.00069	.00076	.000
OTHER VARIABLES:										
REL FACT PROD (10,32)	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.000
REL PROF MFG (10,33)	-.00095	-.00099	-.00098	-.00098	-.00098	-.00108	-.00116	-.00122	-.00125	-.001
LABOR INTENSTY(11,34)	.00011	.00021	.00030	.00039	.00047	.00079	.00100	.00114	.00129	.001
MULT ADJ (11,35)	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.000
EMP % OF U.S. (11,36)	-.003	-.003	-.004	-.004	-.004	-.004	-.003	-.003	-.003	-.0
RPC=SS/DEMAND (11,37)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.0
AVG WAGE-THOUS(12,38)	-.003	.000	-.001	-.002	-.001	.006	.016	.030	.059	.0
INDL MIX INDX (12,39)	-.00011	-.00010	-.00008	-.00006	-.00005	.00002	.00005	.00005	.00003	.000
IN BILLIONS OF 1987 $'S:										
DEMAND (12,40)	-.29758	-.35085	-.40010	-.43153	-.45602	-.53159	-.59332	-.62231	-.66428	-.835
IMPORTS (12,41)	-.09333	-.10398	-.11451	-.11992	-.12357	-.12880	-.12986	-.12512	-.11709	-.166
SELF SUPPLY (13,42)	-.20427	-.24688	-.28558	-.31158	-.33250	-.40279	-.46346	-.49722	-.54721	-.668
EXPORTS (13,43)	-.02477	-.04609	-.06628	-.08145	-.09487	-.14687	-.19031	-.22095	-.25836	-.279
INTRA-REG TRD (13,44)	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.000
EXOGENOUS PRDN(13,45)	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.000
OUTPUT (14,46)	-.22905	-.29295	-.35185	-.39304	-.42737	-.54965	-.65375	-.71817	-.80557	-.947
GRP(VAL ADDED)(14,47)	-.12992	-.16372	-.19454	-.21626	-.23430	-.29895	-.35510	-.38943	-.43710	-.519
IN BILLIONS OF NOMINAL $'S:										
WAGE&SAL DISB (14,48)	-.08422	-.08952	-.10479	-.11964	-.12975	-.15363	-.17172	-.18262	-.24829	-.778

in population of 1,593 people in 1991 and 10,078 people in 2035. This decrease is caused by the employment effects of the policy and its effects on the real wage rate.

The above analysis gives an overview of the effects of a policy change. By examining detailed tables, the effects on individual occupations and industries can be determined.

APPENDIX 3B

B. MAJOR COMPONENTS AND LINKAGES

The REMI model can be separated into five key linkages. Each linkage contains a number of equations and performs a certain function in the model. These key linkages are: (1) *output* linkage; (2) labor and capital *demand* linkage; (3) population and labor *supply* linkage; (4) *wage*, price and profit linkage; and (5) market *share* linkage. The interaction among these five linkages is shown in Figure 2. Directly and indirectly, they are all interrelated with each other. In the model, a forecast result is obtained to satisfy all the equations simultaneously.

The *output* linkage in the model determines local demand for components of personal consumption which depends on real income, for investment demand which depends on relative factor prices and anticipated economic activity, and for government demand which is influenced by the size of the local population. These demands are translated into industry demand which also depends on the interstate and international exports, as well as on intra-regional exports in the context of a multi-area model.

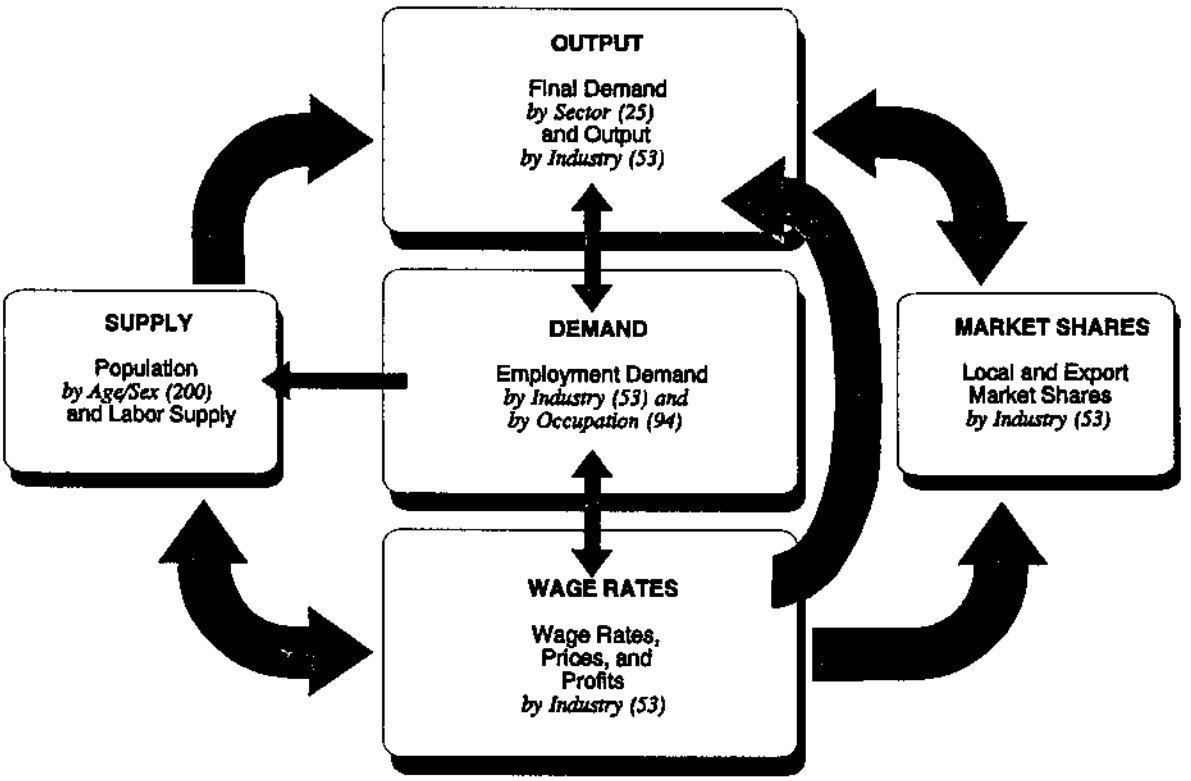
Employment *demand* is, of course, affected by local output. However, it is also determined by the number of employees per dollar of output. This in turn depends, in part, on the relative costs of all of the factors of production.

The *supply* of labor depends on the population and its age/sex distribution. Population in turn depends on economic migration which is determined by expected income. This earnings expectation is determined by the probability of employment (the employment/labor force ratio), the real wage rate and, in part, by the mix of industries. In the EDFS model, the other types of migration (retirement, military, and international) are treated explicitly, as are the cohort survival aspects of population change.

Wage rates in the model depend on both demand and supply conditions. The overall supply and demand is reflected in the employment to labor force ratio, while occupation-specific demand/supply conditions depend on the rate of growth for occupation-specific employment.

APPENDIX 3B

Figure 2 Linkages Among the Major Parts of Your REMI Model



Finally, the local and export *shares* depend on local profitability and local selling prices. Both will be influenced by costs for all inputs to production, including labor costs.

C. ECONOMIC FOUNDATION OF THE REMI MODEL

The structure of the REMI model is based on economic assumptions that are shared by most economic professions. We assume that businesses are motivated by profit and individuals are motivated by a desire to maximize their well-being. We assume that firms buy inputs from other firms, and these linkages change in predictable ways over time. We also assume that firms can change the relative inputs into production based on relative cost changes. While we assert that individuals and firms in various parts of the country have similar motivations, we realize that each area of the country has differences that influence its economy uniquely and, therefore, that these differences must be estimated individually for each industry in each area.

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D. USES OF THE REMI MODEL

For almost a decade, the REMI model has been widely used in the analysis of a variety of regional economic issues. Current clients for the model are located in over 20 states. They include state governments, planning agencies, universities, utility companies, and private consulting firms. Some of the recent applications of the REMI model are:

- Evaluation of the effects of a new auto plant, conducted separately for Michigan, Kentucky, Wisconsin, and Illinois;
- Analysis of a military facility expansion: Fort Drum in northern New York State;
- Separate studies of the effects of increases in utility costs for Georgia, Kansas City, and Central Illinois;
- Study of the best allocation of federal business start-up loans for Lehigh-Northampton counties in Pennsylvania;
- Effect of water rate changes for Denver and other cities in Colorado;
- Analysis of a new port development in Maine;
- Occupational forecasts conducted for the Boston region;
- Impact of a decline in the Georgia textile industry;
- Effect of an increase in higher education spending in Connecticut;
- Effect of changes in Minnesota's welfare policy;
- Industrial growth forecasts for Maine;
- Economic and demographic forecasts for El Paso, Texas;
- Multi-regional effect of federal military procurement for all the states in the U.S.;
- Effect of tax changes in separate studies for Colorado and Wisconsin;
- Impact of increased tourism on Kentucky;
- Effect of increased coal use in Illinois;
- Forecast of occupational and industrial wage rates for Massachusetts and New England;
- Impact of a horse racing track in Minnesota;
- Impact of the construction of a minor league baseball stadium in Buffalo, New York;

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- Effect of heat and electricity cogeneration in Illinois;
- Long-term planning forecasting for Maine;
- Effect of new offshore drilling for three counties in California;
- Impact of a new shopping and entertainment complex in Minnesota;
- Analysis of increased labor productivity from education expenditures in Arkansas;
- Effect of urban transportation systems in San Francisco, Washington, D.C., Atlanta, and Boston;
- Analysis of alternative transportation investments for the entire U.S.;
- Impact of environmental air quality regulation on Illinois;
- Effect of a new paper mill in Wisconsin;
- Effect of an increase in the state minimum wage in Maine;
- Analysis of the economic effects of constructing nuclear waste dumps in the states of Nevada and Washington;
- Evaluation of the economic effects of options for improving a major road in Wisconsin;
- Identification and analysis of trends in Michigan's export base;
- Impact of reduced activity at a Nevada nuclear test site;
- Linkage to the ENERGY 2020 model for evaluation of energy price changes, conservation, and construction programs for state energy offices, regulators, and utilities;
- Impact of changing energy prices in Maine;
- Impact estimation of enforcement of chemical pollution control laws on sub-state areas of Illinois;
- Evaluation of the effects of proposed solid waste management rules on Minnesota; and
- Impact of pollution control regulations in the Los Angeles Basin.

APPENDIX 3C

MANUFACTURING

		1987 SIC Code
1. *Durable Goods*		
(1)	Lumber and wood products	24
[1]	Logging	241
[2]	Sawmills and planing mills	242
[3]	Millwork, plywood, and structural members	243
[4]	Wood containers and miscellaneous wood products	244, 249
[5]	Wood buildings and mobile homes	245
(2)	Furniture and fixtures	25
[6]	Household furniture	251
[7]	Partitions and fixtures	254
[8]	Office and misc. furniture and fixtures	252, 253, 259
(3)	Stone, clay, and glass products	32
[9]	Glass and glass products	321, 322, 323
[10]	Hydraulic cement	324
[11]	Stone, clay, and miscellaneous mineral products	325, 326, 328, 329
[12]	Concrete, gypsum, and plaster products	327
(4)	Primary metal industries	33
[13]	Blast furnaces and basic steel products	331
[14]	Iron and steel foundries	332
[15]	Primary nonferrous smelting & refining	333
[16]	All other primary metals	334, 339
[17]	Nonferrous rolling and drawing	335
[18]	Nonferrous foundries	336
(5)	Fabricated metal products	34
[19]	Metal cans and shipping containers	341
[20]	Cutlery, hand tools, and hardware	342
[21]	Plumbing and non-electric heating equipment	343
[22]	Fabricated structural metal products	344
[23]	Screw machine products, bolts, rivets, etc.	345
[24]	Metal forgings and stampings	346
[25]	Metal coating, engraving, and allied services	347
[26]	Ordance and ammunition	348
[27]	Miscellaneous fabricated metal products	349
(6)	Machinery and computer equipment	35
[28]	Engines and turbines	351
[29]	Farm and garden machinery and equipment	352
[30]	Construction and related machinery	353
[31]	Metalworking machinery and equipment	354
[32]	Special industry machinery	355
[33]	General industrial machinery and equipment	356
[34]	Computer and office equipment	357
[35]	Refrigeration and service industry machinery	358
[36]	Industrial machinery, nec	359
(7)	Electronic equipment, except computer equipment	36
[37]	Electric distribution equipment	361
[38]	Electrical industrial apparatus	362

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	[39]	Household appliances	363
	[40]	Electric lighting and wiring equipment	364
	[41]	Household audio and video equipment	365
	[42]	Communications equipment	366
	[43]	Electronic components and accessories	367
	[44]	Miscellaneous electrical equipment	369
(8)		Motor vehicles and equipment	371
	[45]	Motor vehicles and equipment	371
(9)		Transportation equipment excluding motor vehicles	372-379
	[46]	Aerospace	372, 376
	[47]	Ship and boat building and repairing	373
	[48]	Railroad equipment	374
	[49]	Miscellaneous transportation equipment	375, 379
(10)		Instruments and related products	38
	[50]	Search and navigation equipment	381
	[51]	Measuring and controlling devices	382
	[52]	Medical equipment, instruments, and supplies	384
	[53]	Ophthalmic goods	385
	[54]	Photographic equipment and supplies	386
	[55]	Watches, clocks, and parts	387
(11)		Miscellaneous manufacturing industries	39
	[56]	Jewelry, silverware, and plated ware	391
	[57]	Toys and sporting goods	394
	[58]	Manufactured products, nec	393, 395, 396, 399

2. *Nondurable Goods*

(12)		Food and kindred products	20
	[59]	Meat products	201
	[60]	Dairy products	202
	[61]	Preserved fruits and vegetables	203
	[62]	Grain mill products and fats and oils	204, 207
	[63]	Bakery products	205
	[64]	Sugar and confectionery products	206
	[65]	Beverages	208
	[66]	Miscellaneous food and kindred products	209
(13)		Tobacco products	21
	[67]	Tobacco products	21
(14)		Textile mill products	22
	[68]	Weaving, finishing, yarn, and thread mills	221-224, 226, 228
	[69]	Knitting mills	225
	[70]	Carpets and rugs	227
	[71]	Miscellaneous textile goods	229
(15)		Apparel and other textile products	23
	[72]	Apparel	231-238
	[73]	Miscellaneous fabricated textile products	239

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(16)	Paper and allied products	26
[74]	Pulp, paper, and paperboard mills	261-263
[75]	Paperboard containers and boxes	265
[76]	Converted paper products except containers	267
(17)	Printing and publishing	27
[77]	Newspapers	271
[78]	Periodicals	272
[79]	Books	273
[80]	Miscellaneous publishing	274
[81]	Commercial printing and business forms	275, 276
[82]	Greeting cards	277
[83]	Blankbooks and bookbinding	278
[84]	Service industries for the printing trade	279
(18)	Chemicals and allied products	28
[85]	Industrial chemicals	281, 286
[86]	Plastics materials and synthetics	282
[87]	Drugs	283
[88]	Soap, cleaners, and toilet goods	284
[89]	Paints and allied products	285
[90]	Agricultural chemicals	287
[91]	Miscellaneous chemical products	289
(19)	Petroleum and coal products	29
[92]	Petroleum refining	291
[93]	Miscellaneous petroleum and coal products	295, 299
(20)	Rubber and miscellaneous plastics products	30
[94]	Tires and inner tubes	301
[95]	Rubber products and plastic hose and footwear	302, 305, 306
[96]	Miscellaneous plastics products, nec	308
(21)	Leather and leather products	31
[97]	Footwear, except rubber and plastic	313, 314
[98]	Luggage, handbags, and leather products, nec	311, 315-317, 319

PRIVATE NONMANUFACTURING

3. *Mining*

(22)	Mining	10, 12-14
[99]	Metal mining	10
[100]	Coal mining	12
[101]	Crude petroleum, natural gas and gas liquids	131, 132
[102]	Oil and gas field services	138
[103]	Nonmetallic minerals, except fuels	14

4. *Construction*

(23)	Construction	15-17
[104]	Construction	15, 16, 17

5. *Transportation and Public Utilities*

(24)	Railroad transportation	40
	[105] Railroad transportation	40
(25)	Trucking and warehousing	42
	[106] Trucking and warehousing	42
(26)	Local and interurban passenger transit	41
	[107] Local and interurban passenger transit	41
(27)	Transportation by air	45
	[108] Air transportation	45
(28)	Other transportation and transportation services	44, 46, 47
	[109] Water transportation	44
	[110] Pipelines, except natural gas	46
	[111] Passenger transportation arrangement	472
	[112] Miscellaneous transportation services	473, 474, 478
(29)	Communications	48
	[113] Communications	48
(30)	Electric, gas, and sanitary services	49
	[114] Electric utilities	491, 493
	[115] Gas utilities	492, 493
	[116] Water and sanitation	494-497, 493

6. *Finance, Insurance, and Real Estate*

(31)	Depository and non-depository credit institutions	60
	[117] Depository institutions	60
(32)	Insurance carriers, agents, brokers, and services	63, 64
	[118] Insurance carriers	63
	[119] Insurance agents, brokers, and services	64
(33)	Security and commodity brokers and investment services	61, 62, 67
	[120] Non-depository; holding and investment offices	61, 67
	[121] Security and commodity brokers	62
(34)	Real estate	65
	[122] Real estate	65
	[123] Royalties	N/A
	[124] Owner-occupied dwellings	N/A

7. *Retail Trade*

(35)	Eating and drinking places	58
	[125] Eating and drinking places	58

(36)	Other retail trade	52-57, 59
	[126] Retail trade exc. eating and drinking places	52-57, 59

Wholesale Trade

(37)	Wholesale trade	50, 51
	[127] Wholesale trade	50, 51

Services

(38)	Hotels and other lodging places	70
	[128] Hotels and other lodging places	70
(39)	Personal and miscellaneous repair services	72, 76
	[129] Laundry, cleaning, and shoe repair	721, 725
	[130] Personal services, nec	722, 729
	[131] Beauty and barber shops	723, 724
	[132] Funeral service and crematories	726
	[133] Electrical repair shops	762
	[134] Watch, jewelry, & furniture repair	763-764
	[135] Miscellaneous repair services	769
(40)	Private households	88
	[136] Private households	88
(41)	Auto repair, services, and parking	75
	[137] Automotive rentals, without drivers	751
	[138] Automobile parking, repair, and services	752-754
(42)	Business services	73
	[139] Advertising	731
	[140] Services to buildings	734
	[141] Miscellaneous equipment rental and leasing	735
	[142] Personnel supply services	736
	[143] Computer and data processing services	737
	[144] Miscellaneous business services	732, 733, 738
(43)	Amusement and recreation services	79
	[145] Producers, orchestras, and entertainers	792
	[146] Bowling centers	793
	[147] Commercial sports	794
	[148] Amusement and recreation services, nec	791, 799
(44)	Motion pictures	78
	[149] Motion pictures	781-783
	[150] Video tape rental	784
(45)	Health services	80
	[151] Offices of health practitioners	801-804
	[152] Nursing and personal care facilities	805
	[153] Hospitals	806

	[154] Health services, nec	807-809
(46)	Legal, engineering and management, and misc. services	81, 87, 89
	[155] Legal services	81
	[156] Engineering and architectural services	871
	[157] Research and testing services	873
	[158] Management and public relations	874
	[159] Accounting, auditing, and other services	872, 89
(47)	Educational services	82
	[160] Educational services	82
(48)	Social services, membership organizations, museums, etc.	83, 84, 86
	[161] Individual and miscellaneous social services	832, 839
	[162] Job training and related services	833
	[163] Child day care services	835
	[164] Residential care	836
	[165] Museums, botanical, zoological gardens	84
	[166] Membership organizations	86

10. Agricultural Services, Forestry, Fisheries, and Other

(49)	Agricultural services, forestry, fisheries, and other	07-09
	[167] Agricultural services	07
	[168] Forestry, fishing, hunting, & trapping	08, 09

GOVERNMENT

11. State and Local

(50)	State and local	
	[169] State and local	

12. Federal, Civilian

(51)	Federal, civilian	
	[170] Federal, civilian	

13. Federal, Military

(52)	Federal, military	
	[171] Federal, military	

FARM

14. Farm

(53)	Farm	
	[172] Farm	01, 02

APPENDIX 3D

REMI Standard Reg Control - Selected Vermont Economic Variables - Levels

Variable	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Employment (Thous)	388.067	394.48	398.584	404.406	410.287	414.579	419.247	424.228	428.98	432.643	436.67	440.754	444.711	448.558
Manufacturing	51.649	50.612	49.343	48.894	48.768	48.563	48.49	48.352	48.195	48.428	48.489	48.55	48.591	48.605
Durables	34.053	33.117	32.058	31.674	31.578	31.437	31.399	31.293	31.19	31.496	31.644	31.78	31.9	31.994
Non-Durables	17.595	17.495	17.285	17.22	17.19	17.126	17.091	17.059	17.006	16.932	16.845	16.77	16.691	16.612
Non-Manufact	279.04	286.047	291.207	297.384	303.235	307.607	312.22	317.23	322.027	325.317	329.122	332.958	336.707	340.359
Mining	0.679	0.653	0.609	0.614	0.606	0.609	0.613	0.618	0.629	0.62	0.609	0.6	0.59	0.58
Construction	25.475	25.942	25.746	25.759	25.995	25.866	25.772	25.771	25.828	25.917	26.054	26.195	26.323	26.453
Trans./Public Util.	15.436	15.632	15.741	15.862	16	16.063	16.147	16.241	16.347	16.414	16.46	16.507	16.549	16.583
Fin/Ins/Real Est	22.261	22.659	22.956	23.342	23.61	23.814	24.04	24.283	24.535	24.623	24.753	24.889	25.019	25.144
Retail Trade	67.49	68.763	69.226	69.811	70.483	70.686	70.829	70.997	70.764	70.711	71.298	71.885	72.44	72.978
Eating & Drinking	18.752	19.1	19.452	19.897	20.377	20.753	21.147	21.58	21.926	22.229	22.594	22.971	23.348	23.733
Rest of Retail	48.738	49.662	49.773	49.914	50.106	49.933	49.682	49.416	48.837	48.482	48.704	48.914	49.092	49.244
Wholesale Trade	14.246	14.479	14.65	14.847	15.16	15.407	15.674	15.952	16.204	16.37	16.557	16.739	16.907	17.063
Services	127.75	132.153	136.457	141.228	145.362	149.065	152.962	157.098	161.346	164.187	166.814	169.464	172.096	174.674
Agri/For/Fish Serv	5.703	5.767	5.822	5.92	6.018	6.097	6.182	6.271	6.374	6.474	6.576	6.68	6.782	6.884
Pers Inc (Bil Nom $)	14.076	14.644	15.127	15.725	16.356	16.999	17.678	18.378	19.104	19.883	20.708	21.572	22.451	23.367
Wage & Sal Disb	7.702	8.099	8.442	8.779	9.137	9.5	9.882	10.274	10.674	11.107	11.561	12.033	12.513	13.01
PCE-Price Index 92$	103.067	104.547	106.732	108.996	111.315	113.69	116.119	118.617	121.168	123.881	126.684	129.554	132.482	135.485
Population (Thous)	588.803	589.131	589.729	590.728	592.623	594.188	595.629	597.007	598.333	600.325	602.742	605.505	608.546	611.913
Labor Force	331.97	334.345	336.867	339.796	343.266	346.326	349.506	352.092	354.628	356.98	359.177	361.601	363.945	365.996
Demand (Bil 92$)	24.633	25.579	26.076	26.862	27.398	27.931	28.501	29.102	29.697	30.382	31.126	31.887	32.639	33.392
Output (Bil 92$)	24.167	24.956	25.296	26.089	26.643	27.277	27.964	28.683	29.435	30.089	30.773	31.469	32.159	32.841
Wage Rate (Thous Nom$)	19.147	19.792	20.41	20.92	21.463	22.085	22.722	23.353	23.999	24.763	25.534	26.328	27.131	27.963
GRP (Bil 92$)	15.735	16.26	16.532	17.037	17.413	17.829	18.277	18.743	19.223	19.635	20.062	20.497	20.928	21.356

APPENDIX 3E

Act 21 Research and Analysis
$6.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Levels

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	398.185	404.194	410.102	414.433	419.135	424.143	428.915	432.594	436.632
Manufacturing	49.323	48.878	48.756	48.556	48.486	48.351	48.195	48.429	48.49
Durables	32.046	31.663	31.57	31.433	31.397	31.293	31.19	31.497	31.645
Non-Durables	17.277	17.214	17.186	17.123	17.089	17.058	17.005	16.931	16.845
Non-Manufact	290.824	297.185	303.064	307.474	312.118	317.153	321.969	325.274	329.09
Mining	0.609	0.613	0.606	0.609	0.613	0.618	0.629	0.62	0.609
Construction	25.725	25.75	25.982	25.857	25.766	25.768	25.826	25.917	26.055
Trans./Public Util.	15.729	15.856	15.994	16.059	16.144	16.239	16.346	16.413	16.46
Fin/Ins/Real Est	22.941	23.336	23.605	23.81	24.037	24.281	24.534	24.621	24.752
Retail Trade	69.039	69.736	70.417	70.632	70.786	70.962	70.736	70.689	71.281
Eating & Drinking	19.381	19.873	20.356	20.736	21.134	21.569	21.918	22.222	22.589
Rest of Retail	49.658	49.863	50.061	49.896	49.653	49.393	48.818	48.467	48.692
Wholesale Trade	14.645	14.841	15.154	15.403	15.671	15.95	16.202	16.369	16.556
Services	136.319	141.135	145.289	149.01	152.921	157.067	161.324	164.171	166.802
Agri/For/Fish Serv	5.817	5.918	6.016	6.095	6.181	6.27	6.373	6.474	6.576
Pers Inc (Bil Nom $)	15.15	15.723	16.35	16.994	17.673	18.374	19.1	19.88	20.705
Wage & Sal Disb	8.468	8.777	9.131	9.494	9.877	10.271	10.672	11.105	11.559
PCE-Price Index 92$	106.958	109.003	111.301	113.675	116.106	118.606	121.158	123.873	126.677
Population (Thous)	589.801	590.785	592.586	594.111	595.533	596.901	598.225	600.219	602.64
Labor Force	336.859	339.778	343.198	346.245	349.423	352.012	354.555	356.914	359.118
Demand (Bil 92$)	26.064	26.851	27.385	27.921	28.494	29.097	29.693	30.38	31.125
Output (Bil 92$)	25.277	26.079	26.635	27.27	27.959	28.68	29.433	30.088	30.773
Wage Rate (Thous Nom$)	20.508	20.925	21.458	22.08	22.718	23.349	23.996	24.761	25.533
GRP (Bil 92$)	16.522	17.031	17.408	17.825	18.274	18.741	19.222	19.634	20.061

APPENDIX 3F

Act 21 Research and Analysis
$6.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Differences as Compared to REMI Standard Reg Control

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	-0.3984	-0.2115	-0.1853	-0.1454	-0.1119	-0.08545	-0.06451	-0.04907	-0.03772
Manufacturing	-0.02036	-0.0167	-0.0118	-0.007217	-0.003895	-0.00164	-0.0002174	0.0006142	0.001038
Durables	-0.01149	-0.01081	-0.007376	-0.004116	-0.001787	-0.0002594	0.000658	0.001146	0.001341
Non-Durables	-0.008869	-0.005892	-0.004421	-0.003103	-0.002106	-0.001381	-0.0008774	-0.0005322	-0.0003033
Non-Manufact	-0.3828	-0.1987	-0.171	-0.133	-0.1015	-0.07672	-0.05707	-0.0426	-0.03186
Mining	-0.0003517	-0.0002425	-0.0002289	-0.0001767	-0.000132	-0.00009769	-0.00007302	-0.00005394	-0.00004089
Construction	-0.02184	-0.009405	-0.01271	-0.009197	-0.00588	-0.003319	-0.001404	-0.000124	0.0007057
Trans./Public Util.	-0.01209	-0.006529	-0.005508	-0.004101	-0.00296	-0.00209	-0.00144	-0.0009842	-0.0006638
Fin/Ins/Real Est	-0.01484	-0.006191	-0.005507	-0.00429	-0.003262	-0.002457	-0.001844	-0.001404	-0.001102
Retail Trade	-0.1863	-0.07453	-0.06612	-0.05379	-0.04325	-0.03465	-0.02738	-0.02184	-0.01755
Eating & Drinking	-0.07121	-0.02405	-0.02097	-0.01705	-0.01369	-0.01092	-0.008518	-0.006645	-0.005119
Rest of Retail	-0.1151	-0.05048	-0.04515	-0.03675	-0.02956	-0.02374	-0.01886	-0.01519	-0.01243
Wholesale Trade	-0.00512	-0.005821	-0.005814	-0.004518	-0.003335	-0.002381	-0.001635	-0.001074	-0.0006866
Services	-0.1379	-0.09346	-0.07301	-0.0553	-0.0414	-0.03065	-0.02249	-0.01646	-0.01204
Agri/For/Fish Serv	-0.004408	-0.002488	-0.002138	-0.001692	-0.00132	-0.001026	-0.0007982	-0.0006247	-0.000495
Pers Inc (Bil Nom $)	0.02278	-0.001949	-0.005726	-0.005436	-0.004734	-0.004034	-0.003401	-0.002886	-0.002474
Wage & Sal Disb	0.02608	-0.002349	-0.005969	-0.005376	-0.004439	-0.003567	-0.002814	-0.002219	-0.001761
PCE-Price Index 92$	0.2262	0.007339	-0.01416	-0.01505	-0.01343	-0.01151	-0.009712	-0.008156	-0.00692
Population (Thous)	0.07214	0.0575	-0.03735	-0.07678	-0.09625	-0.1055	-0.1078	-0.1061	-0.1021
Labor Force	-0.007874	-0.01837	-0.0675	-0.08099	-0.08279	-0.07974	-0.07355	-0.0665	-0.05914
Demand (Bil 92$)	-0.01143	-0.01135	-0.01305	-0.01015	-0.007399	-0.005142	-0.003347	-0.002098	-0.00116
Output (Bil 92$)	-0.01845	-0.01042	-0.008928	-0.006531	-0.004524	-0.002968	-0.001783	-0.0009575	-0.0003853
Wage Rate (Thous Nom$)	0.09786	0.00507	-0.004557	-0.004906	-0.004236	-0.003454	-0.002752	-0.002169	-0.001724
GRP (Bil 92$)	-0.01018	-0.005878	-0.005259	-0.003994	-0.002895	-0.002026	-0.001347	-0.0008545	-0.0005074

APPENDIX 3G

Act 21 Research and Analysis
$6.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Percent Change as Compared to REMI Standard Reg Control

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	-0.100%	-0.052%	-0.045%	-0.035%	-0.027%	-0.020%	-0.015%	-0.011%	-0.009%
Manufacturing	-0.041%	-0.034%	-0.024%	-0.015%	-0.008%	-0.003%	0.000%	+0.001%	+0.002%
Durables	-0.036%	-0.034%	-0.023%	-0.013%	-0.006%	-0.001%	+0.002%	+0.004%	+0.004%
Non-Durables	-0.051%	-0.034%	-0.026%	-0.018%	-0.012%	-0.008%	-0.005%	-0.003%	-0.002%
Non-Manufact	-0.131%	-0.067%	-0.056%	-0.043%	-0.033%	-0.024%	-0.018%	-0.013%	-0.010%
Mining	-0.058%	-0.040%	-0.038%	-0.029%	-0.022%	-0.016%	-0.012%	-0.009%	-0.007%
Construction	-0.085%	-0.037%	-0.049%	-0.036%	-0.023%	-0.013%	-0.005%	0.000%	+0.003%
Trans./Public Util.	-0.077%	-0.041%	-0.034%	-0.026%	-0.018%	-0.013%	-0.009%	-0.006%	-0.004%
Fin/Ins/Real Est	-0.065%	-0.027%	-0.023%	-0.018%	-0.014%	-0.010%	-0.008%	-0.006%	-0.004%
Retail Trade	-0.269%	-0.107%	-0.094%	-0.076%	-0.061%	-0.049%	-0.039%	-0.031%	-0.025%
Eating & Drinking	-0.366%	-0.121%	-0.103%	-0.082%	-0.065%	-0.051%	-0.039%	-0.030%	-0.023%
Rest of Retail	-0.231%	-0.101%	-0.090%	-0.074%	-0.060%	-0.048%	-0.039%	-0.031%	-0.026%
Wholesale Trade	-0.035%	-0.039%	-0.038%	-0.029%	-0.021%	-0.015%	-0.010%	-0.007%	-0.004%
Services	-0.101%	-0.066%	-0.050%	-0.037%	-0.027%	-0.020%	-0.014%	-0.010%	-0.007%
Agri/For/Fish Serv	-0.076%	-0.042%	-0.036%	-0.028%	-0.021%	-0.016%	-0.013%	-0.010%	-0.008%
Pers Inc (Bil Nom $)	+0.151%	-0.012%	-0.035%	-0.032%	-0.027%	-0.022%	-0.018%	-0.015%	-0.012%
Wage & Sal Disb	+0.309%	-0.027%	-0.065%	-0.057%	-0.045%	-0.035%	-0.026%	-0.020%	-0.015%
PCE-Price Index 92$	+0.212%	+0.007%	-0.013%	-0.013%	-0.012%	-0.010%	-0.008%	-0.007%	-0.005%
Population (Thous)	+0.012%	+0.010%	-0.006%	-0.013%	-0.016%	-0.018%	-0.018%	-0.018%	-0.017%
Labor Force	-0.002%	-0.005%	-0.020%	-0.023%	-0.024%	-0.023%	-0.021%	-0.019%	-0.016%
Demand (Bil 92$)	-0.044%	-0.042%	-0.048%	-0.036%	-0.026%	-0.018%	-0.011%	-0.007%	-0.004%
Output (Bil 92$)	-0.073%	-0.040%	-0.034%	-0.024%	-0.016%	-0.010%	-0.006%	-0.003%	-0.001%
Wage Rate (Thous Nom$)	+0.479%	+0.024%	-0.021%	-0.022%	-0.019%	-0.015%	-0.011%	-0.009%	-0.007%
GRP (Bil 92$)	-0.062%	-0.035%	-0.030%	-0.022%	-0.016%	-0.011%	-0.007%	-0.004%	-0.003%

APPENDIX 3H

Act 21 Research and Analysis
$7.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Levels

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	397.574	403.529	409.548	414.019	418.823	423.917	428.757	432.487	436.563
Manufacturing	49.265	48.821	48.712	48.527	48.469	48.342	48.192	48.43	48.493
Durables	32.01	31.628	31.544	31.417	31.388	31.29	31.191	31.5	31.649
Non-Durables	17.256	17.192	17.168	17.111	17.08	17.053	17.001	16.929	16.844
Non-Manufact	290.253	296.558	302.552	307.097	311.838	316.952	321.832	325.184	329.036
Mining	0.608	0.613	0.606	0.609	0.613	0.617	0.629	0.62	0.609
Construction	25.719	25.715	25.944	25.827	25.746	25.756	25.82	25.916	26.057
Trans./Public Util.	15.711	15.838	15.98	16.048	16.137	16.234	16.343	16.412	16.459
Fin/Ins/Real Est	22.918	23.317	23.588	23.797	24.027	24.274	24.529	24.618	24.75
Retail Trade	68.777	69.455	70.209	70.482	70.668	70.871	70.668	70.639	71.244
Eating & Drinking	19.271	19.744	20.256	20.667	21.078	21.525	21.883	22.195	22.568
Rest of Retail	49.505	49.711	49.953	49.815	49.59	49.347	48.786	48.444	48.677
Wholesale Trade	14.639	14.826	15.138	15.39	15.661	15.943	16.198	16.367	16.555
Services	136.07	140.883	145.077	148.852	152.807	156.989	161.273	164.14	166.786
Agri/For/Fish Serv	5.81	5.912	6.011	6.092	6.178	6.268	6.372	6.473	6.575
Pers Inc (Bil Nom $)	15.2	15.732	16.339	16.978	17.659	18.362	19.09	19.871	20.698
Wage & Sal Disb	8.524	8.785	9.119	9.478	9.863	10.259	10.663	11.098	11.554
PCE-Price Index 92$	107.381	109.152	111.301	113.63	116.06	118.565	121.123	123.842	126.651
Population (Thous)	590.062	591.069	592.614	593.983	595.321	596.647	597.954	599.947	602.375
Labor Force	336.935	339.799	343.077	346.059	349.214	351.805	354.36	356.739	358.964
Demand (Bil 92$)	26.064	26.82	27.347	27.89	28.471	29.081	29.683	30.374	31.123
Output (Bil 92$)	25.248	26.046	26.607	27.25	27.946	28.671	29.428	30.087	30.773
Wage Rate (Thous Nom$)	20.706	20.989	21.459	22.064	22.702	23.335	23.984	24.751	25.524
GRP (Bil 92$)	16.507	17.014	17.393	17.813	18.266	18.735	19.219	19.632	20.06

APPENDIX 3I

Act 21 Research and Analysis
$7.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Differences as Compared to REMI Standard Reg Control

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	-1.01	-0.8765	-0.7387	-0.5603	-0.4234	-0.3116	-0.2227	-0.1563	-0.1066
Manufacturing	-0.0779	-0.07372	-0.05558	-0.03582	-0.02065	-0.009876	-0.002808	0.001637	0.004166
Durables	-0.04803	-0.04581	-0.03376	-0.02053	-0.01018	-0.003021	0.001451	0.004049	0.005276
Non-Durables	-0.02987	-0.0279	-0.02182	-0.01529	-0.01047	-0.006855	-0.004261	-0.002413	-0.001112
Non-Manufact	-0.9538	-0.8256	-0.6825	-0.5107	-0.382	-0.2776	-0.1945	-0.1324	-0.08618
Mining	-0.0007688	-0.0008213	-0.0007566	-0.000576	-0.0004106	-0.0002763	-0.0001775	-0.0001054	-0.00005746
Construction	-0.02721	-0.0439	-0.05132	-0.039	-0.02635	-0.01543	-0.007103	-0.001362	0.002508
Trans./Public Util.	-0.02961	-0.02497	-0.02007	-0.01455	-0.01013	-0.006653	-0.004051	-0.002228	-0.0009537
Fin/Ins/Real Est	-0.03798	-0.02478	-0.02206	-0.01705	-0.01286	-0.009443	-0.006788	-0.004856	-0.003502
Retail Trade	-0.4488	-0.3564	-0.2742	-0.2034	-0.161	-0.1255	-0.09538	-0.0722	-0.05394
Eating & Drinking	-0.1809	-0.1533	-0.1211	-0.08565	-0.06944	-0.05568	-0.04363	-0.03403	-0.02613
Rest of Retail	-0.268	-0.203	-0.1531	-0.1178	-0.0916	-0.0698	-0.05175	-0.03817	-0.02781
Wholesale Trade	-0.01073	-0.02104	-0.02162	-0.01747	-0.0129	-0.008933	-0.005781	-0.003401	-0.001722
Services	-0.3872	-0.3449	-0.2856	-0.2136	-0.1547	-0.1087	-0.07338	-0.04712	-0.0278
Agri/For/Fish Serv	-0.01147	-0.008771	-0.00696	-0.005067	-0.003725	-0.002638	-0.001795	-0.001163	-0.0006938
Pers Inc (Bil Nom $)	0.07332	0.006398	-0.01701	-0.0208	-0.01889	-0.01614	-0.01354	-0.01137	-0.0096
Wage & Sal Disb	0.08276	0.005953	-0.01829	-0.02129	-0.01841	-0.01491	-0.01177	-0.009247	-0.007261
PCE-Price Index 92$	0.6485	0.1565	-0.01414	-0.06046	-0.05895	-0.05203	-0.04491	-0.03859	-0.03338
Population (Thous)	0.333	0.3416	-0.009399	-0.2054	-0.3085	-0.36	-0.379	-0.3788	-0.3672
Labor Force	0.06738	0.00354	-0.1887	-0.2677	-0.2915	-0.2869	-0.2678	-0.2416	-0.2135
Demand (Bil 92$)	-0.0118	-0.04243	-0.05023	-0.04139	-0.03071	-0.02115	-0.01338	-0.007767	-0.003588
Output (Bil 92$)	-0.04754	-0.04345	-0.03655	-0.02652	-0.01827	-0.01158	-0.006416	-0.002731	-0.0001373
Wage Rate (Thous Nom$)	0.2958	0.06874	-0.003939	-0.02099	-0.02047	-0.01764	-0.01481	-0.01245	-0.01061
GRP (Bil 92$)	-0.02567	-0.02379	-0.0209	-0.01579	-0.01137	-0.007687	-0.004761	-0.002625	-0.001076

APPENDIX 3J

Act 21 Research and Analysis
$7.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Percent Change as Compared to REMI Standard Reg Control

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	-0.253%	-0.217%	-0.180%	-0.135%	-0.101%	-0.073%	-0.052%	-0.036%	-0.024%
Manufacturing	-0.158%	-0.151%	-0.114%	-0.074%	-0.043%	-0.020%	-0.006%	+0.003%	+0.009%
Durables	-0.150%	-0.145%	-0.107%	-0.065%	-0.032%	-0.010%	+0.005%	+0.013%	+0.017%
Non-Durables	-0.173%	-0.162%	-0.127%	-0.089%	-0.061%	-0.040%	-0.025%	-0.014%	-0.007%
Non-Manufact	-0.328%	-0.278%	-0.225%	-0.166%	-0.122%	-0.088%	-0.060%	-0.041%	-0.026%
Mining	-0.126%	-0.134%	-0.125%	-0.095%	-0.067%	-0.045%	-0.028%	-0.017%	-0.009%
Construction	-0.106%	-0.170%	-0.197%	-0.151%	-0.102%	-0.060%	-0.028%	-0.005%	+0.010%
Trans./Public Util.	-0.188%	-0.157%	-0.125%	-0.091%	-0.063%	-0.041%	-0.025%	-0.014%	-0.006%
Fin/Ins/Real Est	-0.165%	-0.106%	-0.093%	-0.072%	-0.053%	-0.039%	-0.028%	-0.020%	-0.014%
Retail Trade	-0.648%	-0.510%	-0.389%	-0.288%	-0.227%	-0.177%	-0.135%	-0.102%	-0.076%
Eating & Drinking	-0.930%	-0.771%	-0.594%	-0.413%	-0.328%	-0.258%	-0.199%	-0.153%	-0.116%
Rest of Retail	-0.538%	-0.407%	-0.306%	-0.236%	-0.184%	-0.141%	-0.106%	-0.079%	-0.057%
Wholesale Trade	-0.073%	-0.142%	-0.143%	-0.113%	-0.082%	-0.056%	-0.036%	-0.021%	-0.010%
Services	-0.284%	-0.244%	-0.196%	-0.143%	-0.101%	-0.069%	-0.045%	-0.029%	-0.017%
Agri/For/Fish Serv	-0.197%	-0.148%	-0.116%	-0.083%	-0.060%	-0.042%	-0.028%	-0.018%	-0.011%
Pers Inc (Bil Nom $)	+0.485%	+0.041%	-0.104%	-0.122%	-0.107%	-0.088%	-0.071%	-0.057%	-0.046%
Wage & Sal Disb	+0.980%	+0.068%	-0.200%	-0.224%	-0.186%	-0.145%	-0.110%	-0.083%	-0.063%
PCE-Price Index 92$	+0.608%	+0.144%	-0.013%	-0.053%	-0.051%	-0.044%	-0.037%	-0.031%	-0.026%
Population (Thous)	+0.056%	+0.058%	-0.002%	-0.035%	-0.052%	-0.060%	-0.063%	-0.063%	-0.061%
Labor Force	+0.020%	+0.001%	-0.055%	-0.077%	-0.083%	-0.081%	-0.076%	-0.068%	-0.059%
Demand (Bil 92$)	-0.045%	-0.158%	-0.183%	-0.148%	-0.108%	-0.073%	-0.045%	-0.026%	-0.012%
Output (Bil 92$)	-0.188%	-0.167%	-0.137%	-0.097%	-0.065%	-0.040%	-0.022%	-0.009%	0.000%
Wage Rate (Thous Nom$)	+1.449%	+0.329%	-0.018%	-0.095%	-0.090%	-0.076%	-0.062%	-0.050%	-0.042%
GRP (Bil 92$)	-0.155%	-0.140%	-0.120%	-0.089%	-0.062%	-0.041%	-0.025%	-0.013%	-0.005%

APPENDIX 3K

Act 21 Research and Analysis
$8.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Levels

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	396.757	402.2	407.945	412.532	417.559	422.966	428.078	432.01	436.241
Manufacturing	49.139	48.683	48.595	48.439	48.41	48.313	48.186	48.439	48.512
Durables	31.921	31.537	31.473	31.37	31.363	31.284	31.199	31.518	31.672
Non-Durables	17.218	17.146	17.122	17.069	17.047	17.029	16.987	16.921	16.84
Non-Manufact	289.519	295.309	301.035	305.694	310.653	316.07	321.209	324.751	328.748
Mining	0.608	0.612	0.605	0.608	0.612	0.617	0.629	0.619	0.609
Construction	25.767	25.661	25.848	25.734	25.657	25.693	25.782	25.896	26.051
Trans./Public Util.	15.69	15.801	15.941	16.017	16.113	16.218	16.334	16.408	16.459
Fin/Ins/Real Est	22.886	23.284	23.548	23.759	23.994	24.249	24.511	24.606	24.742
Retail Trade	68.468	68.886	69.556	69.919	70.182	70.5	70.391	70.424	71.079
Eating & Drinking	19.133	19.519	19.98	20.385	20.823	21.328	21.733	22.074	22.471
Rest of Retail	49.335	49.367	49.576	49.534	49.359	49.172	48.658	48.35	48.608
Wholesale Trade	14.638	14.798	15.104	15.357	15.631	15.921	16.184	16.36	16.553
Services	135.663	140.369	144.435	148.219	152.294	156.609	161.009	163.966	166.68
Agri/For/Fish Serv	5.8	5.897	5.997	6.081	6.17	6.263	6.369	6.471	6.575
Pers Inc (Bil Nom $)	15.298	15.768	16.344	16.956	17.624	18.324	19.055	19.841	20.673
Wage & Sal Disb	8.632	8.822	9.123	9.454	9.827	10.222	10.63	11.072	11.533
PCE-Price Index 92$	108.103	109.56	111.545	113.666	116.018	118.467	121.01	123.742	126.564
Population (Thous)	590.695	591.938	593.081	594.05	595.009	596.068	597.226	599.152	601.565
Labor Force	337.201	340.02	342.991	345.739	348.71	351.215	353.759	356.166	358.442
Demand (Bil 92$)	26.098	26.769	27.262	27.8	28.383	29.012	29.636	30.344	31.106
Output (Bil 92$)	25.208	25.979	26.53	27.182	27.89	28.634	29.406	30.076	30.771
Wage Rate (Thous Nom$)	21.064	21.177	21.573	22.095	22.69	23.302	23.946	24.717	25.495
GRP (Bil 92$)	16.486	16.978	17.35	17.774	18.233	18.712	19.204	19.623	20.057

APPENDIX 3L

Act 21 Research and Analysis
$8.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Differences as Compared to REMI Standard Reg Control

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	-1.827	-2.205	-2.342	-2.047	-1.688	-1.263	-0.9016	-0.6335	-0.4294
Manufacturing	-0.2036	-0.211	-0.1729	-0.1244	-0.0794	-0.0396	-0.009541	0.01092	0.02371
Durables	-0.1365	-0.1371	-0.1046	-0.06755	-0.03515	-0.008966	0.00959	0.02163	0.02817
Non-Durables	-0.06705	-0.07396	-0.06834	-0.05681	-0.04424	-0.03064	-0.01913	-0.01071	-0.004457
Non-Manufact	-1.688	-2.075	-2.2	-1.913	-1.567	-1.16	-0.8177	-0.5657	-0.3741
Mining	-0.001104	-0.001803	-0.001872	-0.001524	-0.001183	-0.0007504	-0.0003916	-0.000129	0.00004989
Construction	0.02074	-0.09881	-0.1469	-0.1323	-0.115	-0.07815	-0.04546	-0.02126	-0.003538
Trans./Public Util.	-0.05144	-0.061	-0.05876	-0.04538	-0.03425	-0.02239	-0.0128	-0.006052	-0.001266
Fin/Ins/Real Est	-0.06993	-0.05766	-0.06252	-0.05517	-0.04615	-0.03453	-0.02433	-0.01667	-0.01109
Retail Trade	-0.7575	-0.9249	-0.9262	-0.7665	-0.6476	-0.4965	-0.3721	-0.2869	-0.2191
Eating & Drinking	-0.3193	-0.3781	-0.3966	-0.368	-0.3242	-0.2524	-0.193	-0.1546	-0.1228
Rest of Retail	-0.4382	-0.5468	-0.5296	-0.3985	-0.3234	-0.2441	-0.1791	-0.1323	-0.09637
Wholesale Trade	-0.01259	-0.04863	-0.05599	-0.05044	-0.04279	-0.03116	-0.02007	-0.0108	-0.003944
Services	-0.7942	-0.8593	-0.9271	-0.8457	-0.6678	-0.4882	-0.3375	-0.221	-0.134
Agri/For/Fish Serv	-0.02172	-0.02304	-0.02058	-0.01626	-0.01232	-0.008239	-0.005077	-0.00284	-0.001162
Pers Inc (Bil Nom $)	0.1709	0.043	-0.01233	-0.04313	-0.05408	-0.05412	-0.04882	-0.04154	-0.03486
Wage & Sal Disb	0.1907	0.04297	-0.01446	-0.04534	-0.05432	-0.05209	-0.0448	-0.03587	-0.0281
PCE-Price Index 92$	1.371	0.564	0.2297	-0.02412	-0.1009	-0.1501	-0.1574	-0.1386	-0.1197
Population (Thous)	0.9662	1.211	0.4576	-0.1377	-0.6207	-0.9393	-1.107	-1.173	-1.177
Labor Force	0.3339	0.2242	-0.275	-0.5876	-0.7962	-0.8765	-0.8693	-0.8141	-0.7353
Demand (Bil 92$)	0.02194	-0.09318	-0.1352	-0.1314	-0.1186	-0.08963	-0.06098	-0.0381	-0.02026
Output (Bil 92$)	-0.08755	-0.1109	-0.1137	-0.09494	-0.07397	-0.04941	-0.02853	-0.01321	-0.001972
Wage Rate (Thous Nom$)	0.6534	0.2574	0.1103	0.01046	-0.03235	-0.05113	-0.05344	-0.04664	-0.03987
GRP (Bil 92$)	-0.04597	-0.05965	-0.06386	-0.05498	-0.04434	-0.03125	-0.01974	-0.01106	-0.004532

APPENDIX 3M

Act 21 Research and Analysis
$8.50 Minimum Wage - Current Law Basis (T) - Selected Vermont Economic Variables - Percent Change as Compared to REMI Standard Reg Control

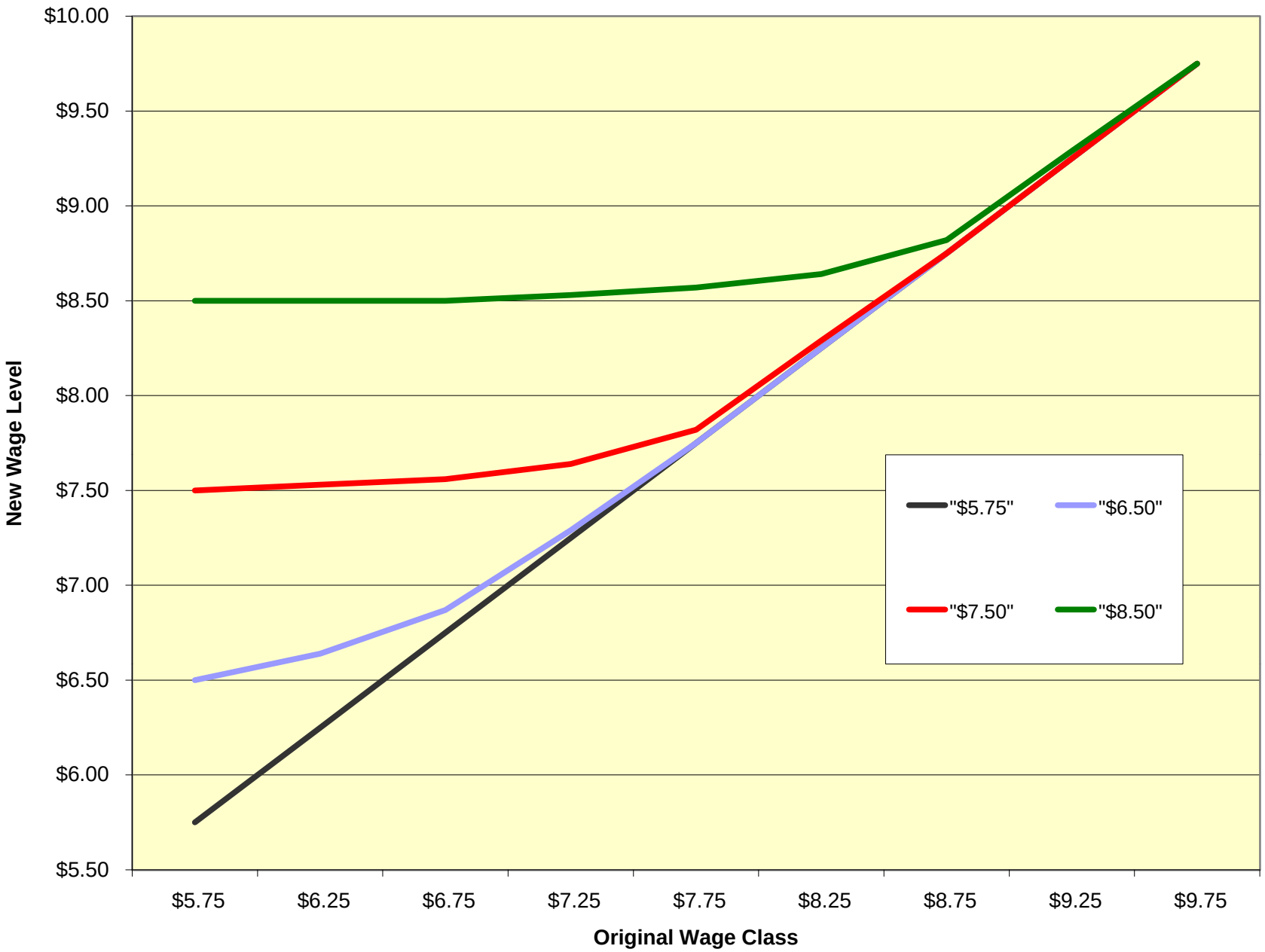
Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment (Thous)	-0.458%	-0.545%	-0.571%	-0.494%	-0.403%	-0.298%	-0.210%	-0.146%	-0.098%
Manufacturing	-0.413%	-0.432%	-0.355%	-0.256%	-0.164%	-0.082%	-0.020%	+0.023%	+0.049%
Durables	-0.426%	-0.433%	-0.331%	-0.215%	-0.112%	-0.029%	+0.031%	+0.069%	+0.089%
Non-Durables	-0.388%	-0.429%	-0.398%	-0.332%	-0.259%	-0.180%	-0.113%	-0.063%	-0.026%
Non-Manufact	-0.580%	-0.698%	-0.726%	-0.622%	-0.502%	-0.366%	-0.254%	-0.174%	-0.114%
Mining	-0.181%	-0.294%	-0.309%	-0.250%	-0.193%	-0.121%	-0.062%	-0.021%	+0.008%
Construction	+0.081%	-0.384%	-0.565%	-0.512%	-0.446%	-0.303%	-0.176%	-0.082%	-0.014%
Trans./Public Util.	-0.327%	-0.385%	-0.367%	-0.283%	-0.212%	-0.138%	-0.078%	-0.037%	-0.008%
Fin/Ins/Real Est	-0.305%	-0.247%	-0.265%	-0.232%	-0.192%	-0.142%	-0.099%	-0.068%	-0.045%
Retail Trade	-1.094%	-1.325%	-1.314%	-1.084%	-0.914%	-0.699%	-0.526%	-0.406%	-0.307%
Eating & Drinking	-1.641%	-1.900%	-1.946%	-1.773%	-1.533%	-1.170%	-0.880%	-0.695%	-0.543%
Rest of Retail	-0.880%	-1.096%	-1.057%	-0.798%	-0.651%	-0.494%	-0.367%	-0.273%	-0.198%
Wholesale Trade	-0.086%	-0.328%	-0.369%	-0.327%	-0.273%	-0.195%	-0.124%	-0.066%	-0.024%
Services	-0.582%	-0.608%	-0.638%	-0.567%	-0.437%	-0.311%	-0.209%	-0.135%	-0.080%
Agri/For/Fish Serv	-0.373%	-0.389%	-0.342%	-0.267%	-0.199%	-0.131%	-0.080%	-0.044%	-0.018%
Pers Inc (Bil Nom $)	+1.130%	+0.273%	-0.075%	-0.254%	-0.306%	-0.294%	-0.256%	-0.209%	-0.168%
Wage & Sal Disb	+2.259%	+0.489%	-0.158%	-0.477%	-0.550%	-0.507%	-0.420%	-0.323%	-0.243%
PCE-Price Index 92$	+1.284%	+0.517%	+0.206%	-0.021%	-0.087%	-0.127%	-0.130%	-0.112%	-0.094%
Population (Thous)	+0.164%	+0.205%	+0.077%	-0.023%	-0.104%	-0.157%	-0.185%	-0.195%	-0.195%
Labor Force	+0.099%	+0.066%	-0.080%	-0.170%	-0.228%	-0.249%	-0.245%	-0.228%	-0.205%
Demand (Bil 92$)	+0.084%	-0.347%	-0.494%	-0.470%	-0.416%	-0.308%	-0.205%	-0.125%	-0.065%
Output (Bil 92$)	-0.346%	-0.425%	-0.427%	-0.348%	-0.265%	-0.172%	-0.097%	-0.044%	-0.006%
Wage Rate (Thous Nom$)	+3.201%	+1.230%	+0.514%	+0.047%	-0.142%	-0.219%	-0.223%	-0.188%	-0.156%
GRP (Bil 92$)	-0.278%	-0.350%	-0.367%	-0.308%	-0.243%	-0.167%	-0.103%	-0.056%	-0.023%

APPENDIX 3N
Average Wage Change by REMI Sector

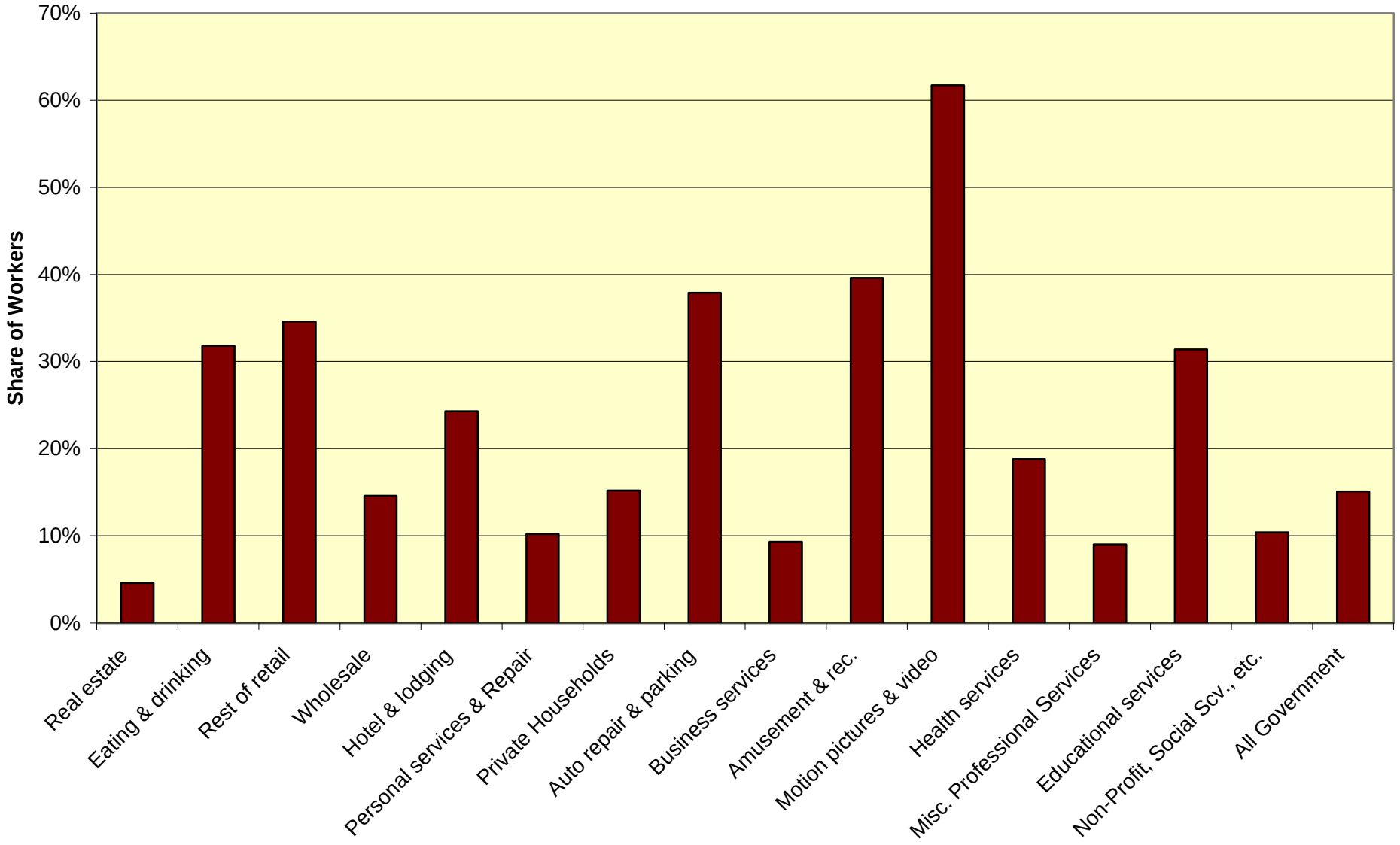
		TOTAL WITH SPILLOVER EFFECTS		
		$6.50 MINIMUM Average Wage % Change	$7.50 MINIMUM Average Wage % Change	$8.50 MINIMUM Average Wage % Change
MFG	Lumber & wood products	0.2%	0.8%	2.4%
	Furniture & fixtures	0.1%	0.8%	2.8%
	Stone, clay, glass & concrete	0.1%	0.3%	0.9%
	Primary metal industries	0.1%	0.5%	1.6%
	Fabricated metal products	0.1%	0.4%	1.4%
	Industrial machinery	0.1%	0.5%	1.1%
	Electronic equipment	0.2%	1.2%	4.0%
	Motor Vehicles	0.1%	0.6%	2.5%
	Rest Trans Equip	0.0%	0.0%	0.2%
	Instruments & related products	0.0%	0.1%	0.3%
	Misc. manufacturing	0.4%	1.7%	4.2%
	Food	0.4%	1.5%	3.6%
	Tobacco	0.0%	0.0%	0.0%
	Textile mill products	0.3%	1.5%	4.3%
	Apparel & other textiles	1.9%	6.6%	14.4%
	Paper & allied products	0.1%	0.2%	0.6%
	Printing & publishing	0.2%	0.6%	1.4%
	Chemicals & allied products	0.0%	0.4%	1.2%
	Petroleum & coal products	0.1%	0.4%	1.3%
	Rubber & misc. plastics	0.1%	1.0%	3.4%
	Leather & leather products	4.1%	10.4%	18.5%
MINING	Mining	0.5%	1.4%	3.0%
CONSTR	Construction	0.1%	0.4%	1.0%
TRANS	Railroads	0.1%	0.2%	0.4%
	Trucking	0.3%	0.8%	1.7%
	Local & interurban trans.	1.6%	4.3%	7.8%
	Air transport	0.5%	1.3%	3.0%
	All other trans.	0.2%	0.6%	1.6%
COMM	Communications	0.1%	0.5%	1.4%
UTILITIES	Utilities	0.0%	0.1%	0.2%
FIRE	Banking	0.2%	0.9%	2.8%
	Insurance	0.1%	0.3%	0.6%
	Credit & finance	0.0%	0.1%	0.4%
	Real estate	0.4%	1.4%	3.3%
TRADE	Eating & drinking	2.5%	7.0%	13.9%
	Rest of retail	1.7%	4.3%	8.1%
	Wholesale	0.3%	0.9%	2.2%
SERVICE	Hotel & lodging	1.7%	4.9%	10.9%
	Personal services & Repair	0.6%	1.9%	4.2%
	Private Households	0.0%	0.0%	0.0%
	Auto repair & parking	0.3%	0.8%	1.7%
	Business services	0.4%	1.3%	3.1%
	Amusement & rec.	1.0%	3.1%	6.6%
	Motion pictures & video	2.4%	4.8%	7.6%
	Health services	0.2%	0.6%	1.6%
	Misc. Professional Services	0.1%	0.3%	0.7%
	Educational services	0.2%	0.7%	1.8%
	Non-Profit, Social Scv., etc.	0.5%	1.7%	4.0%
AGRI	Agricutural Services	0.8%	2.2%	4.6%
GOVT	All Government	0.1%	0.4%	0.8%
	Government - REMI	0.0%	0.0%	0.0%
TOTAL		0.5%	2.1%	4.5%

APPENDIX 3P

Assumed Wage Compression and Ripple Effects of Selected Minimum Wage Increases



APPENDIX 3Q
Vermont Student/Part-Time Workers Earning Less Than $6.50/hour as a Share of Total Workers Who Earn Less Than $6.50/hour for Selected Sectors



Source: U.S. Census Bureau

APPENDIX 3R

Percent Change in Total Output for Selected Industrial Sectors Relative to REMI Regional Control Forecast

$8.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Output (Bil 92$)	0.00%	-0.35%	-0.43%	-0.43%	-0.35%	-0.27%	-0.17%	-0.10%	-0.04%	-0.01%	0.02%
Durables Manuf	0.00%	-0.45%	-0.46%	-0.34%	-0.22%	-0.11%	-0.02%	0.04%	0.08%	0.10%	0.11%
Lumber	0.00%	-0.34%	-0.34%	-0.27%	-0.18%	-0.11%	-0.04%	0.01%	0.04%	0.06%	0.07%
Furniture	0.00%	-0.47%	-0.52%	-0.43%	-0.30%	-0.17%	-0.07%	0.02%	0.07%	0.10%	0.12%
Stone,Clay,Etc.	0.00%	-0.13%	-0.27%	-0.30%	-0.24%	-0.19%	-0.11%	-0.05%	-0.01%	0.02%	0.04%
Primary Metals	0.00%	-0.28%	-0.27%	-0.21%	-0.13%	-0.06%	0.00%	0.04%	0.06%	0.07%	0.08%
Fabricated Metals	0.00%	-0.18%	-0.19%	-0.14%	-0.09%	-0.03%	0.01%	0.04%	0.05%	0.06%	0.06%
Machin & Comput	0.00%	-0.29%	-0.31%	-0.22%	-0.12%	-0.02%	0.05%	0.10%	0.12%	0.13%	0.12%
Electric Equip	0.00%	-0.81%	-0.77%	-0.56%	-0.37%	-0.21%	-0.08%	0.01%	0.07%	0.11%	0.13%
Motor Vehicles	0.00%	-0.57%	-0.50%	-0.37%	-0.23%	-0.11%	-0.02%	0.04%	0.08%	0.10%	0.10%
Rest Trans Equip	0.00%	-0.05%	-0.06%	-0.01%	0.04%	0.08%	0.11%	0.12%	0.12%	0.12%	0.10%
Instruments	0.00%	-0.14%	-0.22%	-0.12%	0.03%	0.16%	0.26%	0.31%	0.33%	0.31%	0.28%
Misc. Manufact	0.00%	-0.44%	-0.47%	-0.36%	-0.25%	-0.16%	-0.09%	-0.03%	0.01%	0.04%	0.05%
Non-Durbls Manuf	0.00%	-0.34%	-0.37%	-0.33%	-0.27%	-0.20%	-0.13%	-0.07%	-0.03%	0.00%	0.02%
Food	0.00%	-0.42%	-0.39%	-0.30%	-0.20%	-0.12%	-0.05%	0.00%	0.03%	0.04%	0.05%
Textiles	0.00%	-0.47%	-0.48%	-0.36%	-0.25%	-0.16%	-0.08%	-0.03%	0.01%	0.04%	0.05%
Apparel	0.00%	-1.13%	-1.66%	-1.87%	-1.84%	-1.64%	-1.29%	-0.93%	-0.65%	-0.43%	-0.25%
Paper	0.00%	-0.10%	-0.11%	-0.08%	-0.05%	-0.02%	0.01%	0.03%	0.03%	0.04%	0.04%
Printing	0.00%	-0.14%	-0.14%	-0.12%	-0.09%	-0.06%	-0.03%	-0.01%	0.00%	0.01%	0.02%
Chemicals	0.00%	0.00%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
Petro Products	0.00%	-0.25%	-0.46%	-0.51%	-0.41%	-0.33%	-0.22%	-0.12%	-0.05%	0.00%	0.03%
Rubber	0.00%	-0.55%	-0.49%	-0.37%	-0.24%	-0.13%	-0.04%	0.02%	0.06%	0.09%	0.10%
Leather	0.00%	-0.23%	-0.26%	-0.23%	-0.18%	-0.13%	-0.08%	-0.05%	-0.02%	0.00%	0.01%
Mining	0.00%	-0.12%	-0.25%	-0.28%	-0.22%	-0.17%	-0.10%	-0.05%	-0.01%	0.02%	0.03%
Construction	0.00%	0.08%	-0.38%	-0.57%	-0.52%	-0.45%	-0.31%	-0.18%	-0.09%	-0.02%	0.03%
Trans./Public Util.	0.00%	-0.24%	-0.30%	-0.29%	-0.23%	-0.17%	-0.11%	-0.06%	-0.03%	0.00%	0.01%
Retail Trade	0.00%	-0.91%	-1.06%	-1.00%	-0.77%	-0.61%	-0.43%	-0.28%	-0.18%	-0.11%	-0.05%
Eating & Drinking	0.00%	-1.48%	-1.62%	-1.59%	-1.37%	-1.11%	-0.77%	-0.51%	-0.35%	-0.22%	-0.12%
Rest of Retail	0.00%	-0.75%	-0.90%	-0.84%	-0.60%	-0.47%	-0.33%	-0.22%	-0.14%	-0.07%	-0.03%
Wholesale Trade	0.00%	-0.05%	-0.30%	-0.35%	-0.31%	-0.26%	-0.19%	-0.12%	-0.06%	-0.02%	0.01%
Services	0.00%	-0.46%	-0.47%	-0.50%	-0.44%	-0.33%	-0.23%	-0.14%	-0.08%	-0.04%	-0.01%
Hotels	0.00%	-2.28%	-3.29%	-3.55%	-3.25%	-2.47%	-1.77%	-1.22%	-0.79%	-0.46%	-0.21%
Pers Serv & Rep	0.00%	-0.60%	-0.46%	-0.41%	-0.31%	-0.24%	-0.15%	-0.09%	-0.04%	-0.01%	0.01%
Private Household	0.00%	-0.24%	-0.24%	-0.23%	-0.17%	-0.12%	-0.05%	-0.01%	0.02%	0.04%	0.04%
Auto Rep/Serv	0.00%	-0.50%	-0.45%	-0.38%	-0.26%	-0.20%	-0.12%	-0.07%	-0.03%	0.00%	0.02%
Misc. Bus Serv	0.00%	-0.44%	-0.52%	-0.52%	-0.44%	-0.34%	-0.24%	-0.15%	-0.09%	-0.04%	-0.01%
Amusem & Recr	0.00%	-0.72%	-0.51%	-0.45%	-0.34%	-0.26%	-0.16%	-0.09%	-0.05%	-0.01%	0.01%
Motion Pictures	0.00%	-0.54%	-0.57%	-0.51%	-0.39%	-0.29%	-0.20%	-0.12%	-0.07%	-0.03%	0.00%
Medical	0.00%	0.06%	0.19%	0.10%	0.01%	0.00%	-0.01%	-0.01%	0.00%	0.00%	-0.01%
Misc. Prof Serv	0.00%	-0.26%	-0.46%	-0.51%	-0.44%	-0.36%	-0.26%	-0.17%	-0.10%	-0.05%	-0.02%
Education	0.00%	-0.57%	-0.36%	-0.29%	-0.19%	-0.11%	-0.04%	0.02%	0.05%	0.06%	0.07%
Non-Profit Org	0.00%	-0.96%	-0.53%	-0.45%	-0.33%	-0.23%	-0.13%	-0.06%	-0.01%	0.02%	0.04%
Agri/For/Fish Serv	0.00%	-0.35%	-0.36%	-0.31%	-0.24%	-0.18%	-0.11%	-0.06%	-0.03%	0.00%	0.01%

APPENDIX 3S

Percent Change in Total Output for Selected Industrial Sectors Relative to REMI Regional Control Forecast

$7.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Output (Bil 92$)	0.00%	-0.19%	-0.17%	-0.14%	-0.10%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.01%
Durables Manuf	0.00%	-0.16%	-0.15%	-0.11%	-0.07%	-0.03%	-0.01%	0.01%	0.02%	0.02%	0.02%
Lumber	0.00%	-0.14%	-0.13%	-0.09%	-0.06%	-0.03%	-0.01%	0.00%	0.01%	0.01%	0.01%
Furniture	0.00%	-0.14%	-0.18%	-0.14%	-0.09%	-0.05%	-0.02%	0.00%	0.01%	0.02%	0.02%
Stone,Clay,Etc.	0.00%	-0.10%	-0.11%	-0.10%	-0.07%	-0.05%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Primary Metals	0.00%	-0.10%	-0.10%	-0.07%	-0.04%	-0.02%	0.00%	0.01%	0.02%	0.02%	0.02%
Fabricated Metals	0.00%	-0.06%	-0.07%	-0.05%	-0.03%	-0.01%	0.00%	0.01%	0.01%	0.02%	0.01%
Machin & Comput	0.00%	-0.12%	-0.13%	-0.09%	-0.05%	-0.01%	0.01%	0.02%	0.03%	0.03%	0.03%
Electric Equip	0.00%	-0.25%	-0.22%	-0.16%	-0.10%	-0.06%	-0.03%	-0.01%	0.01%	0.01%	0.02%
Motor Vehicles	0.00%	-0.16%	-0.15%	-0.10%	-0.06%	-0.03%	0.00%	0.01%	0.02%	0.02%	0.02%
Rest Trans Equip	0.00%	-0.01%	-0.02%	0.00%	0.02%	0.03%	0.04%	0.04%	0.04%	0.03%	0.03%
Instruments	0.00%	-0.04%	-0.09%	-0.04%	0.02%	0.06%	0.09%	0.10%	0.10%	0.09%	0.08%
Misc. Manufact	0.00%	-0.19%	-0.16%	-0.12%	-0.08%	-0.05%	-0.03%	-0.02%	0.00%	0.00%	0.01%
Non-Durbls Manuf	0.00%	-0.16%	-0.14%	-0.11%	-0.07%	-0.05%	-0.03%	-0.01%	0.00%	0.00%	0.01%
Food	0.00%	-0.20%	-0.15%	-0.10%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Textiles	0.00%	-0.17%	-0.14%	-0.10%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.00%	0.01%
Apparel	0.00%	-0.54%	-0.63%	-0.54%	-0.40%	-0.29%	-0.20%	-0.14%	-0.08%	-0.04%	-0.01%
Paper	0.00%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.01%	0.01%	0.01%	0.01%
Printing	0.00%	-0.07%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%
Chemicals	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Petro Products	0.00%	-0.20%	-0.18%	-0.17%	-0.12%	-0.08%	-0.05%	-0.02%	-0.01%	0.01%	0.01%
Rubber	0.00%	-0.18%	-0.16%	-0.12%	-0.08%	-0.04%	-0.02%	0.00%	0.01%	0.01%	0.01%
Leather	0.00%	-0.10%	-0.10%	-0.08%	-0.06%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Mining	0.00%	-0.10%	-0.11%	-0.10%	-0.08%	-0.05%	-0.03%	-0.01%	0.00%	0.00%	0.01%
Construction	0.00%	-0.11%	-0.17%	-0.20%	-0.15%	-0.10%	-0.06%	-0.03%	-0.01%	0.01%	0.02%
Trans./Public Util.	0.00%	-0.14%	-0.12%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%	0.00%
Retail Trade	0.00%	-0.55%	-0.40%	-0.28%	-0.20%	-0.14%	-0.10%	-0.07%	-0.04%	-0.02%	0.00%
Eating & Drinking	0.00%	-0.84%	-0.64%	-0.46%	-0.29%	-0.21%	-0.15%	-0.10%	-0.06%	-0.03%	-0.01%
Rest of Retail	0.00%	-0.47%	-0.33%	-0.23%	-0.17%	-0.12%	-0.09%	-0.06%	-0.03%	-0.02%	0.00%
Wholesale Trade	0.00%	-0.06%	-0.13%	-0.13%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%
Services	0.00%	-0.23%	-0.20%	-0.16%	-0.12%	-0.08%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%
Hotels	0.00%	-1.05%	-1.15%	-0.87%	-0.63%	-0.45%	-0.30%	-0.19%	-0.10%	-0.04%	0.01%
Pers Serv & Rep	0.00%	-0.32%	-0.18%	-0.13%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.00%
Private Household	0.00%	-0.19%	-0.11%	-0.08%	-0.04%	-0.02%	-0.01%	0.01%	0.01%	0.01%	0.01%
Auto Rep/Serv	0.00%	-0.29%	-0.16%	-0.11%	-0.08%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%	0.01%
Misc. Bus Serv	0.00%	-0.23%	-0.21%	-0.17%	-0.13%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%
Amusem & Recr	0.00%	-0.38%	-0.20%	-0.13%	-0.08%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.00%
Motion Pictures	0.00%	-0.32%	-0.27%	-0.20%	-0.15%	-0.11%	-0.08%	-0.05%	-0.03%	-0.01%	0.00%
Medical	0.00%	0.08%	0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
Misc. Prof Serv	0.00%	-0.16%	-0.19%	-0.18%	-0.13%	-0.10%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%
Education	0.00%	-0.29%	-0.14%	-0.09%	-0.04%	-0.02%	-0.01%	0.01%	0.01%	0.02%	0.02%
Non-Profit Org	0.00%	-0.50%	-0.22%	-0.15%	-0.10%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.00%
Agri/For/Fish Serv	0.00%	-0.18%	-0.14%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%	0.00%

APPENDIX 3T

Percent Change in Total Output for Selected Industrial Sectors Relative to REMI Regional Control Forecast

$6.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Output (Bil 92$)	0.00%	-0.07%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Durables Manuf	0.00%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.00%
Lumber	0.00%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Furniture	0.00%	-0.03%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%
Stone,Clay,Etc.	0.00%	-0.05%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Primary Metals	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
Fabricated Metals	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Machin & Comput	0.00%	-0.04%	-0.04%	-0.03%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%
Electric Equip	0.00%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Motor Vehicles	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
Rest Trans Equip	0.00%	0.00%	-0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Instruments	0.00%	-0.01%	-0.03%	-0.01%	0.01%	0.02%	0.02%	0.03%	0.03%	0.02%	0.02%
Misc. Manufact	0.00%	-0.05%	-0.05%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Non-Durbls Manuf	0.00%	-0.05%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Food	0.00%	-0.06%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Textiles	0.00%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Apparel	0.00%	-0.16%	-0.11%	-0.08%	-0.06%	-0.05%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%
Paper	0.00%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Printing	0.00%	-0.03%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Chemicals	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Petro Products	0.00%	-0.10%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Rubber	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Leather	0.00%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Mining	0.00%	-0.05%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Construction	0.00%	-0.09%	-0.04%	-0.05%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Trans./Public Util.	0.00%	-0.06%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Retail Trade	0.00%	-0.23%	-0.08%	-0.07%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%
Eating & Drinking	0.00%	-0.33%	-0.09%	-0.08%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%
Rest of Retail	0.00%	-0.20%	-0.08%	-0.07%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%
Wholesale Trade	0.00%	-0.03%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Services	0.00%	-0.08%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Hotels	0.00%	-0.36%	-0.28%	-0.21%	-0.16%	-0.11%	-0.08%	-0.06%	-0.04%	-0.02%	-0.01%
Pers Serv & Rep	0.00%	-0.13%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Private Household	0.00%	-0.09%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Auto Rep/Serv	0.00%	-0.12%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Misc. Bus Serv	0.00%	-0.09%	-0.05%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%
Amusem & Recr	0.00%	-0.15%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Motion Pictures	0.00%	-0.15%	-0.09%	-0.07%	-0.06%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%
Medical	0.00%	0.05%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.07%	-0.05%	-0.05%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Education	0.00%	-0.11%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.19%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Agri/For/Fish Serv	0.00%	-0.07%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%

APPENDIX 5A

Potential Employment Changes By Sector Relative to REMI Control Forecast

Percent Change
$6.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment (Thous)	0.00%	-0.10%	-0.05%	-0.05%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
Manufacturing	0.00%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Durables	0.00%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Lumber	0.00%	-0.05%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Furniture	0.00%	-0.03%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%
Stone,Clay,Etc.	0.00%	-0.05%	-0.03%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Primary Metals	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
Fabricated Metals	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%
Machin & Comput	0.00%	-0.04%	-0.04%	-0.03%	-0.01%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%
Electric Equip	0.00%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Motor Vehicles	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%
Rest Trans Equip	0.00%	0.00%	-0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Instruments	0.00%	-0.01%	-0.03%	-0.01%	0.01%	0.02%	0.03%	0.03%	0.03%	0.03%	0.02%
Misc. Manufact	0.00%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Non-Durables	0.00%	-0.05%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Food	0.00%	-0.07%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Textiles	0.00%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Apparel	0.00%	-0.18%	-0.13%	-0.10%	-0.08%	-0.06%	-0.04%	-0.03%	-0.03%	-0.02%	-0.01%
Paper	0.00%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Printing	0.00%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Chemicals	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Petro Products	0.00%	-0.10%	-0.05%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.01%
Rubber	0.00%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Leather	0.00%	-0.04%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%
Non-Manufact	0.00%	-0.13%	-0.07%	-0.06%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
Mining	0.00%	-0.06%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Construction	0.00%	-0.09%	-0.04%	-0.05%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.01%
Trans./Public Util.	0.00%	-0.08%	-0.04%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Fin/Ins/Real Est	0.00%	-0.07%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Banking	0.00%	-0.11%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Insurance	0.00%	-0.07%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Credit & Finance	0.00%	-0.12%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Real Estate	0.00%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Retail Trade	0.00%	-0.27%	-0.11%	-0.09%	-0.08%	-0.06%	-0.05%	-0.04%	-0.03%	-0.03%	-0.02%
Eating & Drinking	0.00%	-0.37%	-0.12%	-0.10%	-0.08%	-0.07%	-0.05%	-0.04%	-0.03%	-0.02%	-0.02%
Rest of Retail	0.00%	-0.23%	-0.10%	-0.09%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.03%	-0.02%
Wholesale Trade	0.00%	-0.04%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Hotels	0.00%	-0.39%	-0.30%	-0.24%	-0.18%	-0.14%	-0.10%	-0.07%	-0.05%	-0.04%	-0.03%
Pers Serv & Rep	0.00%	-0.13%	-0.05%	-0.04%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Private Household	0.00%	-0.09%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Auto Rep/Serv	0.00%	-0.13%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Misc. Bus Serv	0.00%	-0.09%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
Amusem & Recr	0.00%	-0.16%	-0.04%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Motion Pictures	0.00%	-0.19%	-0.13%	-0.11%	-0.09%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.03%
Medical	0.00%	0.05%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Education	0.00%	-0.11%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.19%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%
Agri/For/Fish Serv	0.00%	-0.08%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Government	0.00%	0.01%	0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

APPENDIX 5B

Potential Employment Changes By Sector Relative to REMI Control Forecast

Differences (thousands)
$6.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment (Thous)	0.000	-0.398	-0.212	-0.185	-0.145	-0.112	-0.085	-0.065	-0.049	-0.038	-0.029
Manufacturing	0.000	-0.020	-0.017	-0.012	-0.007	-0.004	-0.002	0.000	0.001	0.001	0.001
Durables	0.000	-0.011	-0.011	-0.007	-0.004	-0.002	0.000	0.001	0.001	0.001	0.001
Lumber	0.000	-0.003	-0.002	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000
Furniture	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Stone,Clay,Etc.	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Primary Metals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fabricated Metals	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Machin & Comput	0.000	-0.002	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Electric Equip	0.000	-0.003	-0.003	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000
Motor Vehicles	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rest Trans Equip	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instruments	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Misc. Manufact	0.000	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Non-Durables	0.000	-0.009	-0.006	-0.004	-0.003	-0.002	-0.001	-0.001	-0.001	0.000	0.000
Food	0.000	-0.003	-0.002	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000
Textiles	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apparel	0.000	-0.003	-0.002	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000
Paper	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Printing	0.000	-0.002	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Chemicals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Petro Products	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rubber	0.000	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Leather	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Non-Manufact	0.000	-0.383	-0.199	-0.171	-0.133	-0.102	-0.077	-0.057	-0.043	-0.032	-0.024
Mining	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Construction	0.000	-0.022	-0.009	-0.013	-0.009	-0.006	-0.003	-0.001	0.000	0.001	0.001
Trans./Public Util.	0.000	-0.012	-0.007	-0.006	-0.004	-0.003	-0.002	-0.001	-0.001	-0.001	0.000
Fin/Ins/Real Est	0.000	-0.015	-0.006	-0.006	-0.004	-0.003	-0.002	-0.002	-0.001	-0.001	-0.001
Banking	0.000	-0.006	-0.002	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000
Insurance	0.000	-0.004	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Credit & Finance	0.000	-0.003	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Real Estate	0.000	-0.001	-0.002	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001
Retail Trade	0.000	-0.186	-0.075	-0.066	-0.054	-0.043	-0.035	-0.027	-0.022	-0.018	-0.014
Eating & Drinking	0.000	-0.071	-0.024	-0.021	-0.017	-0.014	-0.011	-0.009	-0.007	-0.005	-0.004
Rest of Retail	0.000	-0.115	-0.050	-0.045	-0.037	-0.030	-0.024	-0.019	-0.015	-0.012	-0.010
Wholesale Trade	0.000	-0.005	-0.006	-0.006	-0.005	-0.003	-0.002	-0.002	-0.001	-0.001	0.000
Hotels	0.000	-0.049	-0.039	-0.031	-0.024	-0.018	-0.014	-0.010	-0.007	-0.005	-0.004
Pers Serv & Rep	0.000	-0.012	-0.005	-0.004	-0.003	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001
Private Household	0.000	-0.003	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Auto Rep/Serv	0.000	-0.006	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.000
Misc. Bus Serv	0.000	-0.019	-0.013	-0.011	-0.008	-0.007	-0.005	-0.004	-0.003	-0.002	-0.002
Amusem & Recr	0.000	-0.011	-0.003	-0.003	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001
Motion Pictures	0.000	-0.003	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	0.000
Medical	0.000	0.016	-0.007	-0.003	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Misc. Prof Serv	0.000	-0.013	-0.010	-0.010	-0.007	-0.006	-0.004	-0.003	-0.002	-0.002	-0.001
Education	0.000	-0.016	-0.004	-0.003	-0.002	-0.001	0.000	0.000	0.000	0.001	0.001
Non-Profit Org	0.000	-0.021	-0.006	-0.005	-0.003	-0.003	-0.002	-0.001	-0.001	-0.001	0.000
Agri/For/Fish Serv	0.000	-0.004	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	0.000	0.000
Government	0.000	0.005	0.004	-0.002	-0.005	-0.006	-0.007	-0.007	-0.007	-0.007	-0.006

APPENDIX 5C

Potential Employment Changes By Sector Relative to REMI Control Forecast

Percent Change
$7.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment (Thous)	0.00%	-0.25%	-0.22%	-0.18%	-0.14%	-0.10%	-0.07%	-0.05%	-0.04%	-0.02%	-0.02%
Manufacturing	0.00%	-0.16%	-0.15%	-0.11%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Durables	0.00%	-0.15%	-0.15%	-0.11%	-0.07%	-0.03%	-0.01%	0.01%	0.01%	0.02%	0.02%
Lumber	0.00%	-0.15%	-0.13%	-0.10%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Furniture	0.00%	-0.14%	-0.18%	-0.15%	-0.10%	-0.06%	-0.03%	-0.01%	0.01%	0.01%	0.02%
Stone,Clay,Etc.	0.00%	-0.10%	-0.11%	-0.10%	-0.07%	-0.04%	-0.02%	-0.01%	0.01%	0.01%	0.01%
Primary Metals	0.00%	-0.10%	-0.10%	-0.08%	-0.04%	-0.02%	0.00%	0.01%	0.02%	0.02%	0.02%
Fabricated Metals	0.00%	-0.07%	-0.07%	-0.05%	-0.03%	-0.01%	0.00%	0.01%	0.02%	0.02%	0.02%
Machin & Comput	0.00%	-0.12%	-0.13%	-0.09%	-0.05%	-0.01%	0.01%	0.02%	0.03%	0.03%	0.03%
Electric Equip	0.00%	-0.27%	-0.23%	-0.17%	-0.11%	-0.07%	-0.04%	-0.02%	0.00%	0.01%	0.01%
Motor Vehicles	0.00%	-0.16%	-0.15%	-0.11%	-0.06%	-0.03%	0.00%	0.01%	0.02%	0.02%	0.02%
Rest Trans Equip	0.00%	-0.01%	-0.02%	0.00%	0.02%	0.03%	0.04%	0.04%	0.04%	0.04%	0.03%
Instruments	0.00%	-0.04%	-0.09%	-0.04%	0.02%	0.07%	0.09%	0.10%	0.10%	0.09%	0.08%
Misc. Manufact	0.00%	-0.21%	-0.19%	-0.14%	-0.10%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.00%
Non-Durables	0.00%	-0.17%	-0.16%	-0.13%	-0.09%	-0.06%	-0.04%	-0.03%	-0.01%	-0.01%	0.00%
Food	0.00%	-0.23%	-0.18%	-0.13%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%
Textiles	0.00%	-0.19%	-0.16%	-0.12%	-0.08%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%	0.00%
Apparel	0.00%	-0.60%	-0.72%	-0.63%	-0.48%	-0.36%	-0.27%	-0.20%	-0.14%	-0.10%	-0.06%
Paper	0.00%	-0.05%	-0.05%	-0.03%	-0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%
Printing	0.00%	-0.08%	-0.06%	-0.05%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Chemicals	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Petro Products	0.00%	-0.21%	-0.21%	-0.19%	-0.13%	-0.08%	-0.04%	-0.01%	0.01%	0.02%	0.03%
Rubber	0.00%	-0.20%	-0.18%	-0.13%	-0.09%	-0.05%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Leather	0.00%	-0.12%	-0.12%	-0.10%	-0.07%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%
Non-Manufact	0.00%	-0.33%	-0.28%	-0.23%	-0.17%	-0.12%	-0.09%	-0.06%	-0.04%	-0.03%	-0.02%
Mining	0.00%	-0.13%	-0.13%	-0.13%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%	-0.01%
Construction	0.00%	-0.11%	-0.17%	-0.20%	-0.15%	-0.10%	-0.06%	-0.03%	-0.01%	0.01%	0.02%
Trans./Public Util.	0.00%	-0.19%	-0.16%	-0.13%	-0.09%	-0.06%	-0.04%	-0.03%	-0.01%	-0.01%	0.00%
Fin/Ins/Real Est	0.00%	-0.17%	-0.11%	-0.09%	-0.07%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%
Banking	0.00%	-0.31%	-0.17%	-0.13%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%
Insurance	0.00%	-0.19%	-0.10%	-0.07%	-0.05%	-0.03%	-0.01%	0.00%	0.00%	0.01%	0.01%
Credit & Finance	0.00%	-0.31%	-0.16%	-0.11%	-0.07%	-0.05%	-0.03%	-0.01%	0.00%	0.01%	0.01%
Real Estate	0.00%	-0.02%	-0.06%	-0.08%	-0.08%	-0.07%	-0.06%	-0.05%	-0.04%	-0.04%	-0.03%
Retail Trade	0.00%	-0.65%	-0.51%	-0.39%	-0.29%	-0.23%	-0.18%	-0.14%	-0.10%	-0.08%	-0.05%
Eating & Drinking	0.00%	-0.93%	-0.77%	-0.59%	-0.41%	-0.33%	-0.26%	-0.20%	-0.15%	-0.12%	-0.09%
Rest of Retail	0.00%	-0.54%	-0.41%	-0.31%	-0.24%	-0.18%	-0.14%	-0.11%	-0.08%	-0.06%	-0.04%
Wholesale Trade	0.00%	-0.07%	-0.14%	-0.14%	-0.11%	-0.08%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%
Hotels	0.00%	-1.13%	-1.25%	-0.96%	-0.71%	-0.52%	-0.37%	-0.25%	-0.16%	-0.09%	-0.04%
Pers Serv & Rep	0.00%	-0.35%	-0.21%	-0.16%	-0.11%	-0.08%	-0.06%	-0.04%	-0.02%	-0.02%	-0.01%
Private Household	0.00%	-0.19%	-0.11%	-0.08%	-0.04%	-0.02%	-0.01%	0.01%	0.01%	0.01%	0.01%
Auto Rep/Serv	0.00%	-0.30%	-0.18%	-0.12%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.00%
Misc. Bus Serv	0.00%	-0.25%	-0.23%	-0.19%	-0.14%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%
Amusem & Recr	0.00%	-0.40%	-0.22%	-0.15%	-0.10%	-0.07%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%
Motion Pictures	0.00%	-0.40%	-0.35%	-0.28%	-0.22%	-0.18%	-0.14%	-0.11%	-0.08%	-0.06%	-0.04%
Medical	0.00%	0.07%	0.02%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
Misc. Prof Serv	0.00%	-0.18%	-0.21%	-0.19%	-0.15%	-0.11%	-0.08%	-0.05%	-0.03%	-0.02%	-0.01%
Education	0.00%	-0.30%	-0.14%	-0.09%	-0.05%	-0.02%	-0.01%	0.01%	0.01%	0.02%	0.02%
Non-Profit Org	0.00%	-0.50%	-0.23%	-0.16%	-0.10%	-0.07%	-0.05%	-0.03%	-0.01%	-0.01%	0.00%
Agri/For/Fish Serv	0.00%	-0.20%	-0.15%	-0.12%	-0.08%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%
Government	0.00%	0.04%	0.05%	0.00%	-0.03%	-0.04%	-0.05%	-0.05%	-0.05%	-0.05%	-0.05%

APPENDIX 5D

Potential Employment Changes By Sector Relative to REMI Control Forecast

Differences (thousands)
$7.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment (Thous)	0.000	-1.010	-0.877	-0.739	-0.560	-0.423	-0.312	-0.223	-0.156	-0.107	-0.070
Manufacturing	0.000	-0.078	-0.074	-0.056	-0.036	-0.021	-0.010	-0.003	0.002	0.004	0.005
Durables	0.000	-0.048	-0.046	-0.034	-0.021	-0.010	-0.003	0.001	0.004	0.005	0.006
Lumber	0.000	-0.009	-0.008	-0.006	-0.004	-0.002	-0.001	0.000	0.000	0.000	0.001
Furniture	0.000	-0.004	-0.005	-0.004	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000
Stone,Clay,Etc.	0.000	-0.002	-0.003	-0.002	-0.002	-0.001	0.000	0.000	0.000	0.000	0.000
Primary Metals	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fabricated Metals	0.000	-0.002	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Machin & Comput	0.000	-0.005	-0.006	-0.004	-0.002	-0.001	0.000	0.001	0.001	0.002	0.001
Electric Equip	0.000	-0.019	-0.016	-0.011	-0.008	-0.005	-0.002	-0.001	0.000	0.000	0.001
Motor Vehicles	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rest Trans Equip	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001
Instruments	0.000	-0.001	-0.001	-0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001
Misc. Manufact	0.000	-0.004	-0.004	-0.003	-0.002	-0.001	-0.001	-0.001	0.000	0.000	0.000
Non-Durables	0.000	-0.030	-0.028	-0.022	-0.015	-0.010	-0.007	-0.004	-0.002	-0.001	0.000
Food	0.000	-0.010	-0.008	-0.006	-0.004	-0.002	-0.002	-0.001	-0.001	0.000	0.000
Textiles	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apparel	0.000	-0.009	-0.011	-0.009	-0.007	-0.005	-0.004	-0.003	-0.002	-0.001	-0.001
Paper	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Printing	0.000	-0.005	-0.004	-0.003	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000
Chemicals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Petro Products	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rubber	0.000	-0.004	-0.003	-0.002	-0.002	-0.001	0.000	0.000	0.000	0.000	0.000
Leather	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Non-Manufact	0.000	-0.954	-0.826	-0.683	-0.511	-0.382	-0.278	-0.195	-0.132	-0.086	-0.052
Mining	0.000	-0.001	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
Construction	0.000	-0.027	-0.044	-0.051	-0.039	-0.026	-0.015	-0.007	-0.001	0.003	0.005
Trans./Public Util.	0.000	-0.030	-0.025	-0.020	-0.015	-0.010	-0.007	-0.004	-0.002	-0.001	0.000
Fin/Ins/Real Est	0.000	-0.038	-0.025	-0.022	-0.017	-0.013	-0.009	-0.007	-0.005	-0.004	-0.003
Banking	0.000	-0.016	-0.009	-0.007	-0.005	-0.003	-0.002	-0.001	-0.001	0.000	0.000
Insurance	0.000	-0.011	-0.005	-0.004	-0.003	-0.002	-0.001	0.000	0.000	0.000	0.000
Credit & Finance	0.000	-0.009	-0.005	-0.004	-0.002	-0.002	-0.001	0.000	0.000	0.000	0.000
Real Estate	0.000	-0.002	-0.006	-0.008	-0.007	-0.007	-0.006	-0.005	-0.004	-0.004	-0.003
Retail Trade	0.000	-0.449	-0.356	-0.274	-0.203	-0.161	-0.126	-0.095	-0.072	-0.054	-0.039
Eating & Drinking	0.000	-0.181	-0.153	-0.121	-0.086	-0.069	-0.056	-0.044	-0.034	-0.026	-0.020
Rest of Retail	0.000	-0.268	-0.203	-0.153	-0.118	-0.092	-0.070	-0.052	-0.038	-0.028	-0.020
Wholesale Trade	0.000	-0.011	-0.021	-0.022	-0.017	-0.013	-0.009	-0.006	-0.003	-0.002	-0.001
Hotels	0.000	-0.144	-0.162	-0.126	-0.095	-0.070	-0.050	-0.034	-0.022	-0.013	-0.005
Pers Serv & Rep	0.000	-0.031	-0.019	-0.014	-0.010	-0.007	-0.005	-0.003	-0.002	-0.001	-0.001
Private Household	0.000	-0.005	-0.003	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000
Auto Rep/Serv	0.000	-0.015	-0.009	-0.007	-0.005	-0.003	-0.002	-0.001	-0.001	0.000	0.000
Misc. Bus Serv	0.000	-0.050	-0.048	-0.042	-0.033	-0.025	-0.018	-0.013	-0.009	-0.006	-0.004
Amusem & Recr	0.000	-0.029	-0.017	-0.012	-0.008	-0.006	-0.005	-0.003	-0.002	-0.002	-0.001
Motion Pictures	0.000	-0.007	-0.006	-0.005	-0.004	-0.003	-0.003	-0.002	-0.002	-0.001	-0.001
Medical	0.000	0.025	0.005	-0.009	-0.010	-0.006	-0.004	-0.003	-0.003	-0.003	-0.004
Misc. Prof Serv	0.000	-0.032	-0.039	-0.037	-0.029	-0.022	-0.015	-0.011	-0.007	-0.004	-0.002
Education	0.000	-0.043	-0.021	-0.013	-0.007	-0.003	-0.001	0.001	0.002	0.003	0.003
Non-Profit Org	0.000	-0.056	-0.026	-0.019	-0.013	-0.009	-0.006	-0.004	-0.002	-0.001	0.000
Agri/For/Fish Serv	0.000	-0.011	-0.009	-0.007	-0.005	-0.004	-0.003	-0.002	-0.001	-0.001	0.000
Government	0.000	0.022	0.023	-0.001	-0.014	-0.021	-0.024	-0.025	-0.025	-0.025	-0.023

APPENDIX 5E

Potential Employment Changes By Sector Relative to REMI Control Forecast

Percent Change
$8.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment (Thous)	0.00%	-0.46%	-0.55%	-0.57%	-0.49%	-0.40%	-0.30%	-0.21%	-0.15%	-0.10%	-0.06%
Manufacturing	0.00%	-0.41%	-0.43%	-0.36%	-0.26%	-0.16%	-0.08%	-0.02%	0.02%	0.05%	0.06%
Durables	0.00%	-0.43%	-0.43%	-0.33%	-0.22%	-0.11%	-0.03%	0.03%	0.07%	0.09%	0.10%
Lumber	0.00%	-0.38%	-0.36%	-0.29%	-0.20%	-0.12%	-0.05%	0.00%	0.03%	0.05%	0.06%
Furniture	0.00%	-0.51%	-0.55%	-0.45%	-0.32%	-0.19%	-0.08%	0.01%	0.06%	0.10%	0.11%
Stone,Clay,Etc.	0.00%	-0.14%	-0.28%	-0.30%	-0.24%	-0.18%	-0.11%	-0.04%	0.00%	0.03%	0.05%
Primary Metals	0.00%	-0.30%	-0.29%	-0.22%	-0.14%	-0.06%	0.00%	0.04%	0.07%	0.08%	0.08%
Fabricated Metals	0.00%	-0.19%	-0.20%	-0.15%	-0.09%	-0.04%	0.01%	0.04%	0.06%	0.07%	0.07%
Machin & Comput	0.00%	-0.30%	-0.31%	-0.22%	-0.12%	-0.02%	0.05%	0.10%	0.13%	0.13%	0.13%
Electric Equip	0.00%	-0.86%	-0.82%	-0.60%	-0.41%	-0.24%	-0.11%	-0.02%	0.05%	0.09%	0.11%
Motor Vehicles	0.00%	-0.59%	-0.52%	-0.38%	-0.24%	-0.12%	-0.02%	0.04%	0.08%	0.10%	0.11%
Rest Trans Equip	0.00%	-0.05%	-0.05%	-0.01%	0.05%	0.09%	0.12%	0.14%	0.14%	0.13%	0.11%
Instruments	0.00%	-0.14%	-0.22%	-0.11%	0.04%	0.18%	0.28%	0.33%	0.35%	0.33%	0.30%
Misc. Manufact	0.00%	-0.49%	-0.54%	-0.42%	-0.30%	-0.20%	-0.12%	-0.05%	-0.01%	0.02%	0.04%
Non-Durables	0.00%	-0.39%	-0.43%	-0.40%	-0.33%	-0.26%	-0.18%	-0.11%	-0.06%	-0.03%	0.00%
Food	0.00%	-0.49%	-0.46%	-0.36%	-0.26%	-0.17%	-0.09%	-0.03%	0.00%	0.03%	0.04%
Textiles	0.00%	-0.52%	-0.55%	-0.42%	-0.30%	-0.20%	-0.12%	-0.06%	-0.01%	0.02%	0.03%
Apparel	0.00%	-1.25%	-1.87%	-2.13%	-2.14%	-1.95%	-1.59%	-1.21%	-0.91%	-0.67%	-0.48%
Paper	0.00%	-0.11%	-0.11%	-0.08%	-0.04%	-0.01%	0.02%	0.04%	0.05%	0.06%	0.06%
Printing	0.00%	-0.16%	-0.15%	-0.13%	-0.09%	-0.06%	-0.03%	-0.01%	0.01%	0.02%	0.02%
Chemicals	0.00%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Petro Products	0.00%	-0.26%	-0.52%	-0.56%	-0.44%	-0.34%	-0.20%	-0.08%	0.00%	0.05%	0.08%
Rubber	0.00%	-0.60%	-0.54%	-0.41%	-0.28%	-0.16%	-0.06%	0.01%	0.05%	0.08%	0.10%
Leather	0.00%	-0.27%	-0.30%	-0.28%	-0.23%	-0.18%	-0.13%	-0.09%	-0.06%	-0.04%	-0.03%
Non-Manufact	0.00%	-0.58%	-0.70%	-0.73%	-0.62%	-0.50%	-0.37%	-0.25%	-0.17%	-0.11%	-0.07%
Mining	0.00%	-0.18%	-0.29%	-0.31%	-0.25%	-0.19%	-0.12%	-0.06%	-0.02%	0.01%	0.03%
Construction	0.00%	0.08%	-0.38%	-0.57%	-0.51%	-0.45%	-0.30%	-0.18%	-0.08%	-0.01%	0.03%
Trans./Public Util.	0.00%	-0.33%	-0.39%	-0.37%	-0.28%	-0.21%	-0.14%	-0.08%	-0.04%	-0.01%	0.01%
Fin/Ins/Real Est	0.00%	-0.31%	-0.25%	-0.27%	-0.23%	-0.19%	-0.14%	-0.10%	-0.07%	-0.05%	-0.03%
Banking	0.00%	-0.62%	-0.43%	-0.39%	-0.30%	-0.23%	-0.14%	-0.08%	-0.03%	0.00%	0.02%
Insurance	0.00%	-0.35%	-0.22%	-0.20%	-0.15%	-0.10%	-0.05%	-0.01%	0.01%	0.03%	0.03%
Credit & Finance	0.00%	-0.59%	-0.40%	-0.37%	-0.29%	-0.21%	-0.13%	-0.06%	-0.02%	0.01%	0.03%
Real Estate	0.00%	-0.01%	-0.11%	-0.20%	-0.23%	-0.22%	-0.20%	-0.17%	-0.15%	-0.13%	-0.11%
Retail Trade	0.00%	-1.09%	-1.33%	-1.31%	-1.08%	-0.91%	-0.70%	-0.53%	-0.41%	-0.31%	-0.23%
Eating & Drinking	0.00%	-1.64%	-1.90%	-1.95%	-1.77%	-1.53%	-1.17%	-0.88%	-0.70%	-0.54%	-0.42%
Rest of Retail	0.00%	-0.88%	-1.10%	-1.06%	-0.80%	-0.65%	-0.49%	-0.37%	-0.27%	-0.20%	-0.14%
Wholesale Trade	0.00%	-0.09%	-0.33%	-0.37%	-0.33%	-0.27%	-0.20%	-0.12%	-0.07%	-0.02%	0.01%
Hotels	0.00%	-2.43%	-3.55%	-3.87%	-3.59%	-2.79%	-2.07%	-1.50%	-1.05%	-0.70%	-0.43%
Pers Serv & Rep	0.00%	-0.66%	-0.54%	-0.48%	-0.37%	-0.28%	-0.19%	-0.11%	-0.06%	-0.03%	0.00%
Private Household	0.00%	-0.24%	-0.24%	-0.23%	-0.17%	-0.12%	-0.05%	-0.01%	0.02%	0.04%	0.04%
Auto Rep/Serv	0.00%	-0.53%	-0.47%	-0.41%	-0.28%	-0.21%	-0.13%	-0.07%	-0.02%	0.01%	0.03%
Misc. Bus Serv	0.00%	-0.48%	-0.56%	-0.57%	-0.49%	-0.39%	-0.28%	-0.19%	-0.13%	-0.08%	-0.04%
Amusem & Recr	0.00%	-0.77%	-0.57%	-0.51%	-0.41%	-0.32%	-0.22%	-0.15%	-0.10%	-0.07%	-0.05%
Motion Pictures	0.00%	-0.66%	-0.74%	-0.68%	-0.54%	-0.43%	-0.32%	-0.24%	-0.17%	-0.12%	-0.08%
Medical	0.00%	0.05%	0.19%	0.09%	0.01%	0.00%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.29%	-0.50%	-0.55%	-0.49%	-0.40%	-0.29%	-0.20%	-0.13%	-0.08%	-0.04%
Education	0.00%	-0.58%	-0.36%	-0.29%	-0.19%	-0.11%	-0.04%	0.02%	0.05%	0.06%	0.07%
Non-Profit Org	0.00%	-0.97%	-0.55%	-0.46%	-0.34%	-0.24%	-0.14%	-0.06%	-0.02%	0.02%	0.04%
Agri/For/Fish Serv	0.00%	-0.37%	-0.39%	-0.34%	-0.27%	-0.20%	-0.13%	-0.08%	-0.04%	-0.02%	0.00%
Government	0.00%	0.13%	0.16%	0.06%	-0.02%	-0.08%	-0.12%	-0.15%	-0.15%	-0.15%	-0.15%

APPENDIX 5F

Potential Employment Changes By Sector Relative to REMI Control Forecast

Differences (thousands)
$8.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment (Thous)	0.000	-1.827	-2.205	-2.342	-2.047	-1.688	-1.263	-0.902	-0.634	-0.429	-0.276
Manufacturing	0.000	-0.204	-0.211	-0.173	-0.124	-0.079	-0.040	-0.010	0.011	0.024	0.030
Durables	0.000	-0.137	-0.137	-0.105	-0.068	-0.035	-0.009	0.010	0.022	0.028	0.031
Lumber	0.000	-0.023	-0.022	-0.018	-0.012	-0.007	-0.003	0.000	0.002	0.003	0.004
Furniture	0.000	-0.013	-0.014	-0.011	-0.008	-0.004	-0.002	0.000	0.001	0.002	0.002
Stone,Clay,Etc.	0.000	-0.003	-0.007	-0.007	-0.006	-0.004	-0.003	-0.001	0.000	0.001	0.001
Primary Metals	0.000	-0.002	-0.002	-0.002	-0.001	0.000	0.000	0.000	0.000	0.001	0.001
Fabricated Metals	0.000	-0.006	-0.006	-0.004	-0.003	-0.001	0.000	0.001	0.002	0.002	0.002
Machin & Comput	0.000	-0.013	-0.014	-0.010	-0.005	-0.001	0.002	0.005	0.006	0.007	0.007
Electric Equip	0.000	-0.059	-0.055	-0.040	-0.027	-0.016	-0.007	-0.001	0.003	0.006	0.008
Motor Vehicles	0.000	-0.003	-0.003	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.001	0.001
Rest Trans Equip	0.000	-0.001	-0.001	0.000	0.001	0.002	0.003	0.003	0.003	0.003	0.002
Instruments	0.000	-0.002	-0.003	-0.001	0.001	0.002	0.003	0.004	0.004	0.004	0.003
Misc. Manufact	0.000	-0.010	-0.011	-0.009	-0.006	-0.004	-0.003	-0.001	0.000	0.000	0.001
Non-Durables	0.000	-0.067	-0.074	-0.068	-0.057	-0.044	-0.031	-0.019	-0.011	-0.004	0.000
Food	0.000	-0.022	-0.020	-0.016	-0.011	-0.007	-0.004	-0.001	0.000	0.001	0.002
Textiles	0.000	-0.003	-0.003	-0.002	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000
Apparel	0.000	-0.019	-0.028	-0.032	-0.032	-0.029	-0.024	-0.018	-0.013	-0.010	-0.007
Paper	0.000	-0.002	-0.002	-0.002	-0.001	0.000	0.000	0.001	0.001	0.001	0.001
Printing	0.000	-0.010	-0.009	-0.008	-0.005	-0.004	-0.002	0.000	0.000	0.001	0.001
Chemicals	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Petro Products	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Rubber	0.000	-0.011	-0.010	-0.008	-0.005	-0.003	-0.001	0.000	0.001	0.002	0.002
Leather	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Non-Manufact	0.000	-1.688	-2.075	-2.200	-1.913	-1.567	-1.160	-0.818	-0.566	-0.374	-0.229
Mining	0.000	-0.001	-0.002	-0.002	-0.002	-0.001	-0.001	0.000	0.000	0.000	0.000
Construction	0.000	0.021	-0.099	-0.147	-0.132	-0.115	-0.078	-0.045	-0.021	-0.004	0.009
Trans./Public Util.	0.000	-0.051	-0.061	-0.059	-0.045	-0.034	-0.022	-0.013	-0.006	-0.001	0.002
Fin/Ins/Real Est	0.000	-0.070	-0.058	-0.063	-0.055	-0.046	-0.035	-0.024	-0.017	-0.011	-0.007
Banking	0.000	-0.033	-0.023	-0.021	-0.016	-0.012	-0.007	-0.004	-0.002	0.000	0.001
Insurance	0.000	-0.020	-0.012	-0.012	-0.009	-0.006	-0.003	-0.001	0.001	0.002	0.002
Credit & Finance	0.000	-0.017	-0.012	-0.012	-0.009	-0.007	-0.004	-0.002	-0.001	0.000	0.001
Real Estate	0.000	0.000	-0.010	-0.019	-0.021	-0.021	-0.020	-0.017	-0.015	-0.013	-0.011
Retail Trade	0.000	-0.758	-0.925	-0.926	-0.767	-0.648	-0.497	-0.372	-0.287	-0.219	-0.164
Eating & Drinking	0.000	-0.319	-0.378	-0.397	-0.368	-0.324	-0.252	-0.193	-0.155	-0.123	-0.096
Rest of Retail	0.000	-0.438	-0.547	-0.530	-0.399	-0.323	-0.244	-0.179	-0.132	-0.096	-0.068
Wholesale Trade	0.000	-0.013	-0.049	-0.056	-0.050	-0.043	-0.031	-0.020	-0.011	-0.004	0.001
Hotels	0.000	-0.310	-0.460	-0.508	-0.475	-0.374	-0.281	-0.206	-0.146	-0.099	-0.062
Pers Serv & Rep	0.000	-0.058	-0.048	-0.043	-0.034	-0.026	-0.017	-0.010	-0.006	-0.002	0.000
Private Household	0.000	-0.007	-0.007	-0.006	-0.004	-0.003	-0.001	0.000	0.001	0.001	0.001
Auto Rep/Serv	0.000	-0.027	-0.025	-0.022	-0.016	-0.012	-0.008	-0.004	-0.001	0.000	0.002
Misc. Bus Serv	0.000	-0.098	-0.120	-0.126	-0.111	-0.092	-0.069	-0.049	-0.033	-0.021	-0.012
Amusem & Recr	0.000	-0.056	-0.043	-0.041	-0.033	-0.027	-0.019	-0.013	-0.010	-0.007	-0.004
Motion Pictures	0.000	-0.011	-0.013	-0.012	-0.010	-0.008	-0.006	-0.004	-0.003	-0.002	-0.002
Medical	0.000	0.018	0.066	0.035	0.002	0.001	-0.003	-0.003	0.000	0.000	-0.002
Misc. Prof Serv	0.000	-0.052	-0.093	-0.105	-0.095	-0.080	-0.060	-0.042	-0.028	-0.017	-0.009
Education	0.000	-0.084	-0.055	-0.044	-0.030	-0.018	-0.006	0.003	0.008	0.011	0.012
Non-Profit Org	0.000	-0.108	-0.063	-0.054	-0.041	-0.030	-0.018	-0.008	-0.002	0.002	0.005
Agri/For/Fish Serv	0.000	-0.022	-0.023	-0.021	-0.016	-0.012	-0.008	-0.005	-0.003	-0.001	0.000
Government	0.000	0.064	0.081	0.031	-0.009	-0.042	-0.063	-0.074	-0.079	-0.079	-0.077

APPENDIX 5G

Potential Changes in Dollar Value of State Exports By Sector Relative to REMI Control Forecast

Percent Change
$6.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Exports US/ROW (Bil 92$)	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Durables Manuf	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
Lumber	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Furniture	0.00%	-0.04%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%
Stone,Clay,Etc.	0.00%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Primary Metals	0.00%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.00%
Fabricated Metals	0.00%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Machin & Comput	0.00%	-0.04%	-0.04%	-0.02%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
Electric Equip	0.00%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Motor Vehicles	0.00%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%
Rest Trans Equip	0.00%	0.00%	-0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Instruments	0.00%	-0.02%	-0.02%	-0.01%	0.01%	0.02%	0.03%	0.03%	0.03%	0.02%	0.02%
Misc. Manufact	0.00%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Non-Durbls Manuf	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Food	0.00%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Textiles	0.00%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Apparel	0.00%	-0.14%	-0.11%	-0.08%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%
Paper	0.00%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Printing	0.00%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Chemicals	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rubber	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Leather	0.00%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Mining	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Construction	0.00%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Trans./Public Util.	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Fin/Ins/Real Est	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Retail Trade	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
Eating & Drinking	0.00%	-0.08%	-0.07%	-0.06%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%
Rest of Retail	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
Wholesale Trade	0.00%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Hotels	0.00%	-0.34%	-0.28%	-0.21%	-0.15%	-0.11%	-0.08%	-0.05%	-0.04%	-0.02%	-0.01%
Pers Serv & Rep	0.00%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Private Household	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%
Auto Rep/Serv	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Bus Serv	0.00%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Amusem & Recr	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Motion Pictures	0.00%	-0.09%	-0.08%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%
Medical	0.00%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Education	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%
Agri/For/Fish Serv	0.00%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Amusem & Recr	0.00%	-0.16%	-0.04%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Motion Pictures	0.00%	-0.19%	-0.13%	-0.11%	-0.09%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.03%
Medical	0.00%	0.05%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Education	0.00%	-0.11%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.19%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%
Agri/For/Fish Serv	0.00%	-0.08%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%

APPENDIX 5H

Potential Changes in Dollar Value of State Exports By Sector Relative to REMI Control Forecast

Percent Change
$7.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Exports US/ROW (Bil 92$)	0.00%	-0.12%	-0.12%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Durables Manuf	0.00%	-0.16%	-0.14%	-0.10%	-0.06%	-0.03%	-0.01%	0.01%	0.02%	0.02%	0.02%
Lumber	0.00%	-0.10%	-0.09%	-0.07%	-0.04%	-0.02%	-0.01%	0.00%	0.01%	0.01%	0.01%
Furniture	0.00%	-0.18%	-0.17%	-0.12%	-0.07%	-0.03%	-0.01%	0.01%	0.02%	0.02%	0.02%
Stone,Clay,Etc.	0.00%	-0.02%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%
Primary Metals	0.00%	-0.09%	-0.09%	-0.06%	-0.03%	-0.01%	0.00%	0.01%	0.02%	0.02%	0.02%
Fabricated Metals	0.00%	-0.06%	-0.06%	-0.04%	-0.02%	-0.01%	0.01%	0.01%	0.01%	0.02%	0.01%
Machin & Comput	0.00%	-0.14%	-0.13%	-0.08%	-0.04%	-0.01%	0.01%	0.02%	0.03%	0.03%	0.03%
Electric Equip	0.00%	-0.25%	-0.22%	-0.16%	-0.10%	-0.06%	-0.03%	-0.01%	0.01%	0.01%	0.02%
Motor Vehicles	0.00%	-0.16%	-0.14%	-0.09%	-0.05%	-0.02%	0.00%	0.01%	0.02%	0.02%	0.02%
Rest Trans Equip	0.00%	-0.02%	-0.02%	0.00%	0.02%	0.03%	0.04%	0.04%	0.04%	0.03%	0.03%
Instruments	0.00%	-0.07%	-0.09%	-0.03%	0.03%	0.07%	0.09%	0.10%	0.10%	0.09%	0.08%
Misc. Manufact	0.00%	-0.19%	-0.16%	-0.11%	-0.08%	-0.05%	-0.03%	-0.01%	0.00%	0.00%	0.01%
Non-Durbls Manuf	0.00%	-0.11%	-0.12%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.00%	0.01%
Food	0.00%	-0.12%	-0.11%	-0.08%	-0.05%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.01%
Textiles	0.00%	-0.16%	-0.13%	-0.10%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.00%	0.01%
Apparel	0.00%	-0.48%	-0.61%	-0.53%	-0.39%	-0.28%	-0.20%	-0.13%	-0.08%	-0.04%	-0.01%
Paper	0.00%	-0.04%	-0.04%	-0.03%	-0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%
Printing	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Chemicals	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rubber	0.00%	-0.17%	-0.15%	-0.11%	-0.07%	-0.04%	-0.02%	0.00%	0.01%	0.01%	0.01%
Leather	0.00%	-0.10%	-0.10%	-0.08%	-0.06%	-0.04%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Mining	0.00%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Construction	0.00%	-0.03%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.01%
Trans./Public Util.	0.00%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Fin/Ins/Real Est	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%
Retail Trade	0.00%	-0.19%	-0.21%	-0.17%	-0.13%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%
Eating & Drinking	0.00%	-0.23%	-0.31%	-0.30%	-0.23%	-0.18%	-0.14%	-0.10%	-0.07%	-0.05%	-0.03%
Rest of Retail	0.00%	-0.18%	-0.19%	-0.15%	-0.11%	-0.08%	-0.06%	-0.04%	-0.03%	-0.01%	0.00%
Wholesale Trade	0.00%	-0.05%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%
Hotels	0.00%	-1.01%	-1.13%	-0.85%	-0.62%	-0.44%	-0.29%	-0.18%	-0.10%	-0.03%	0.01%
Pers Serv & Rep	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%
Private Household	0.00%	0.01%	0.00%	0.01%	0.01%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Auto Rep/Serv	0.00%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Misc. Bus Serv	0.00%	-0.06%	-0.07%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Amusem & Recr	0.00%	-0.06%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Motion Pictures	0.00%	-0.19%	-0.20%	-0.15%	-0.12%	-0.09%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%
Medical	0.00%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.07%	-0.07%	-0.06%	-0.05%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%
Education	0.00%	-0.04%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.09%	-0.08%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Agri/For/Fish Serv	0.00%	-0.09%	-0.08%	-0.06%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%
Amusem & Recr	0.00%	-0.16%	-0.04%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Motion Pictures	0.00%	-0.19%	-0.13%	-0.11%	-0.09%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.03%
Medical	0.00%	0.05%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Education	0.00%	-0.11%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.19%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%
Agri/For/Fish Serv	0.00%	-0.08%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%

APPENDIX 5I

Potential Changes in Dollar Value of State Exports By Sector Relative to REMI Control Forecast

Percent Change
$8.50 Minimum Wage

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Exports US/ROW (Bil 92$)	0.00%	-0.30%	-0.33%	-0.29%	-0.22%	-0.15%	-0.08%	-0.03%	0.00%	0.03%	0.04%
Durables Manuf	0.00%	-0.47%	-0.44%	-0.32%	-0.20%	-0.09%	-0.01%	0.05%	0.09%	0.10%	0.11%
Lumber	0.00%	-0.27%	-0.25%	-0.18%	-0.12%	-0.06%	-0.01%	0.02%	0.04%	0.05%	0.05%
Furniture	0.00%	-0.60%	-0.51%	-0.37%	-0.23%	-0.11%	-0.02%	0.05%	0.09%	0.11%	0.12%
Stone,Clay,Etc.	0.00%	-0.06%	-0.06%	-0.05%	-0.03%	-0.01%	0.00%	0.01%	0.02%	0.02%	0.02%
Primary Metals	0.00%	-0.27%	-0.24%	-0.17%	-0.10%	-0.03%	0.02%	0.05%	0.07%	0.07%	0.07%
Fabricated Metals	0.00%	-0.19%	-0.17%	-0.12%	-0.07%	-0.02%	0.02%	0.04%	0.06%	0.06%	0.06%
Machin & Comput	0.00%	-0.34%	-0.30%	-0.21%	-0.10%	-0.01%	0.06%	0.10%	0.12%	0.13%	0.12%
Electric Equip	0.00%	-0.81%	-0.76%	-0.55%	-0.36%	-0.20%	-0.08%	0.01%	0.07%	0.11%	0.13%
Motor Vehicles	0.00%	-0.57%	-0.48%	-0.34%	-0.21%	-0.09%	-0.01%	0.05%	0.08%	0.10%	0.10%
Rest Trans Equip	0.00%	-0.05%	-0.05%	-0.01%	0.04%	0.09%	0.11%	0.13%	0.13%	0.12%	0.10%
Instruments	0.00%	-0.21%	-0.22%	-0.09%	0.06%	0.19%	0.28%	0.33%	0.34%	0.32%	0.28%
Misc. Manufact	0.00%	-0.45%	-0.45%	-0.34%	-0.23%	-0.14%	-0.07%	-0.02%	0.02%	0.04%	0.05%
Non-Durbls Manuf	0.00%	-0.28%	-0.30%	-0.28%	-0.23%	-0.17%	-0.11%	-0.06%	-0.02%	0.00%	0.02%
Food	0.00%	-0.29%	-0.27%	-0.20%	-0.13%	-0.07%	-0.03%	0.01%	0.03%	0.04%	0.05%
Textiles	0.00%	-0.45%	-0.46%	-0.34%	-0.23%	-0.14%	-0.07%	-0.02%	0.02%	0.04%	0.06%
Apparel	0.00%	-1.04%	-1.59%	-1.81%	-1.81%	-1.61%	-1.27%	-0.92%	-0.64%	-0.42%	-0.25%
Paper	0.00%	-0.09%	-0.09%	-0.06%	-0.03%	-0.01%	0.01%	0.03%	0.04%	0.04%	0.04%
Printing	0.00%	-0.06%	-0.06%	-0.04%	-0.03%	-0.01%	0.00%	0.01%	0.01%	0.02%	0.02%
Chemicals	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rubber	0.00%	-0.53%	-0.46%	-0.34%	-0.22%	-0.11%	-0.03%	0.03%	0.06%	0.08%	0.09%
Leather	0.00%	-0.23%	-0.26%	-0.23%	-0.18%	-0.13%	-0.08%	-0.05%	-0.02%	0.00%	0.01%
Mining	0.00%	-0.10%	-0.09%	-0.07%	-0.05%	-0.03%	-0.01%	0.01%	0.01%	0.02%	0.02%
Construction	0.00%	-0.07%	-0.07%	-0.06%	-0.04%	-0.02%	0.00%	0.01%	0.02%	0.02%	0.02%
Trans./Public Util.	0.00%	-0.09%	-0.09%	-0.08%	-0.05%	-0.03%	-0.01%	0.00%	0.01%	0.02%	0.02%
Fin/Ins/Real Est	0.00%	-0.03%	-0.03%	-0.03%	-0.02%	-0.01%	0.00%	0.01%	0.02%	0.02%	0.03%
Retail Trade	0.00%	-0.36%	-0.51%	-0.53%	-0.44%	-0.35%	-0.27%	-0.19%	-0.13%	-0.09%	-0.05%
Eating & Drinking	0.00%	-0.46%	-0.71%	-0.83%	-0.85%	-0.78%	-0.64%	-0.49%	-0.37%	-0.27%	-0.18%
Rest of Retail	0.00%	-0.34%	-0.47%	-0.47%	-0.37%	-0.28%	-0.20%	-0.14%	-0.09%	-0.05%	-0.02%
Wholesale Trade	0.00%	-0.11%	-0.11%	-0.09%	-0.06%	-0.04%	-0.02%	0.00%	0.01%	0.02%	0.02%
Hotels	0.00%	-2.21%	-3.23%	-3.49%	-3.19%	-2.42%	-1.74%	-1.20%	-0.78%	-0.45%	-0.20%
Pers Serv & Rep	0.00%	-0.16%	-0.17%	-0.13%	-0.10%	-0.07%	-0.04%	-0.02%	0.00%	0.01%	0.02%
Private Household	0.00%	0.01%	0.00%	0.02%	0.04%	0.05%	0.06%	0.07%	0.07%	0.07%	0.06%
Auto Rep/Serv	0.00%	-0.09%	-0.09%	-0.08%	-0.06%	-0.04%	-0.02%	-0.01%	0.00%	0.01%	0.01%
Misc. Bus Serv	0.00%	-0.14%	-0.17%	-0.16%	-0.14%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%
Amusem & Recr	0.00%	-0.14%	-0.17%	-0.16%	-0.13%	-0.10%	-0.07%	-0.05%	-0.03%	-0.02%	-0.01%
Motion Pictures	0.00%	-0.31%	-0.41%	-0.36%	-0.28%	-0.20%	-0.14%	-0.09%	-0.05%	-0.02%	0.00%
Medical	0.00%	-0.09%	-0.08%	-0.06%	-0.04%	-0.02%	0.00%	0.01%	0.01%	0.01%	0.01%
Misc. Prof Serv	0.00%	-0.15%	-0.19%	-0.18%	-0.15%	-0.11%	-0.08%	-0.05%	-0.03%	-0.02%	-0.01%
Education	0.00%	-0.10%	-0.09%	-0.07%	-0.04%	-0.02%	-0.01%	0.01%	0.01%	0.02%	0.02%
Non-Profit Org	0.00%	-0.21%	-0.18%	-0.13%	-0.09%	-0.05%	-0.02%	0.00%	0.01%	0.03%	0.03%
Agri/For/Fish Serv	0.00%	-0.19%	-0.21%	-0.17%	-0.12%	-0.09%	-0.05%	-0.03%	-0.01%	0.00%	0.01%
Amusem & Recr	0.00%	-0.16%	-0.04%	-0.03%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Motion Pictures	0.00%	-0.19%	-0.13%	-0.11%	-0.09%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.03%
Medical	0.00%	0.05%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Misc. Prof Serv	0.00%	-0.07%	-0.06%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
Education	0.00%	-0.11%	-0.03%	-0.02%	-0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Profit Org	0.00%	-0.19%	-0.05%	-0.04%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%
Agri/For/Fish Serv	0.00%	-0.08%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%

APPENDIX 7A

Profile of Vermont Jobs

Table 7A

Number of low wage jobs by key industries statewide				
Sector	Number of jobs < $8.50/hr	Total number of jobs by sector	Percent of low wage jobs by sector	Percent of all VT jobs < $8.50/hr
Trade (retail & wholesale)	40,657	66,251	61%	41%
Services	36,609	104,309	35%	37%
Manufacturing	12,615	47,352	27%	13%
Totals	**89,881**	**217,073**	**41%**	**91%**

Table 7B

Number of jobs by $0.50 increments by industry statewide[1]												
Range	Agricultural Services	Mining	Construction	Manufacturing	Transportation	Communications	Utilities	Trade (retail & wholesale)	FIRE[2]	Services	Government	Totals
<$6.00	259	40	194	808	590	15	3	20,057	193	7,960	440	30,559
$6.00-6.49	23	3	125	559	73	66	13	3,403	89	2,996	145	7,492
$6.50-6.99	68	8	222	2,403	227	29	0	5,452	430	5,581	246	14,666
$7.00-7.49	240	27	632	2,498	190	75	41	4,583	495	7,484	245	16,509
$7.50-7.99	139	4	292	3,605	408	204	13	4,560	828	8,050	328	18,430
$8.00-8.49	55	56	361	2,742	214	56	16	2,603	270	4,538	346	11,256
No. < $8.50/hr	**784**	**138**	**1,826**	**12,615**	**1,702**	**445**	**86**	**40,658**	**2,305**	**36,609**	**1,750**	**98,912**
$8.50-8.99	314	19	596	1,986	324	52	13	2,387	542	3,789	480	10,502
$9.00-9.49	175	59	694	2,729	288	132	11	2,222	638	4,779	738	12,462
$9.50-10.00	50	28	872	3,111	395	81	15	2,042	582	3,693	954	11,281
No. < $10.00/hr	1,323	244	3,988	**20,441**	2,709	710	125	**47,309**	4,067	**48,870**	3,922	133,696
Total jobs	2,011	566	14,422	**47,352**	7,601	2,573	2,037	**66,251**	11,676	**104,309**	20,611	279,409
Percent < $8.50/hr	**35%**	**24%**	**12%**	**26%**	**21%**	**19%**	**5%**	**61%**	**20%**	**35%**	**8%**	**35%**
Percent < $10.00/hr	73%	51%	27%	43%	36%	25%	6%	71%	33%	47%	16%	48%

1 Some totals don't match due to rounding.
2 Finance, insurance & real estate.

Table 7C

Number of low wage jobs in key retail businesses statewide				
Type of business	Number of jobs < $8.50/hr	Total number of jobs by type of business	Percent of low wage jobs by type of business	Percent of all Trade jobs < $8.50/hr
Eating and drinking establishments	14,837[3]	17,648	84%	36%
Food stores	8,784	10,506	84%	22%
Miscellaneous retail	5,089	9,228	55%	13%
General merchandise	2,907	3,330	87%	7%
Auto dealers & gas stations	2,726	6,242	44%	7%
Totals	**34,343**	**46,954**	**73%**	**84%**

Table 7D

Number of jobs in trade (retail & wholesale) by $0.50 increments statewide[4]											
	Wholesale		**Retail**								**Totals**
Range	Durable goods	Non-durable goods	Bldg. & garden supply	General merch.	Food Stores	Auto dealers & gas Stations	Apparel & access.	Furn. & Home Furnish.	Eating & Drinking	Misc.	
<$6.00	203	318	38	1,898	4,487	1,294	427	36	10,061	1,296	20,057
$6.00-6.49	71	58	115	265	786	139	128	43	1,112	687	3,403
$6.50-6.99	169	372	135	169	974	294	691	45	1,745	858	5,452
$7.00-7.49	260	371	413	369	1,115	612	121	221	553	549	4,583
$7.50-7.99	142	365	117	158	787	149	304	127	1,158	1,253	4,560
$8.00-8.49	223	352	237	48	635	238	175	40	208	447	2,603
No. < $8.50/hr	**1,068**	**1,836**	**1,054**	**2,907**	**8,784**	**2,726**	**1,846**	**512**	**14,837**	**5,089**	**40,657**
$8.50-8.99	211	199	203	38	121	204	5	253	857	297	2,387
$9.00-9.49	290	506	116	71	154	167	60	62	155	641	2,222
$9.50-10.00	362	378	173	49	46	214	6	129	408	278	2,042
No. < $10.00/hr	**1,931**	**2,919**	**1,545**	**3,065**	**9,104**	**3,310**	**1,916**	**956**	**16,257**	**6,305**	**47,307**
Total jobs	5,842	6,741	2,563	**3,330**	**10,506**	**6,242**	2,344	1,807	**17,648**	**9,228**	66,251
Percent < $8.50/hr	**18%**	**27%**	**41%**	**87%**	**84%**	**44%**	**79%**	**28%**	**84%**	**55%**	**61%**
Percent <$10.00/hr	33%	43%	60%	92%	87%	53%	82%	53%	92%	68%	71%

[3] 8,082 of these low wage workers are either waiters/waitresses (6,421) or bartenders (1,661) and, presumably, some earn additional income from gratuities.

[4] Some totals don't match due to rounding.

Table 7E

Number of low wage jobs in key service businesses statewide				
Type of business	Number of jobs < $8.50/hr	Total number of jobs by type of business	Percent of low wage jobs by type of business	Percent of all Service jobs < $8.50/hr
Educational services	9,083	33,369	27%	25%
Hotel & lodging	7,385	9,843	75%	20%
Health services	5,710	26,265	22%	16%
Business services	5,168	10,354	50%	14%
Totals	**27,346**	**79,831**	**34%**	**75%**

Table 7F

Number of jobs in services by $0.50 increments statewide[5]																
Range	Hotels & Lodging	Personal Services	Business Services	Auto repair & parking	Misc. repair	Motion pictures & video	Amusement & Rec.	Health services	Legal services	Educational services	Social services	Museums & botanical gardens	Membership organizations	Engin. & Mgmt. Services	Other prof. services	**Totals**
<$6.00	3,505	266	405	223	32	597	623	645	24	761	327	244	201	108	0	7,960
$6.00-6.49	548	45	611	14	11	61	97	170	0	1,119	147	17	133	25	0	2,996
$6.50-6.99	994	319	814	71	6	71	256	1,211	17	1,288	234	16	87	190	9	5,581
$7.00-7.49	1,237	159	1,829	161	28	39	360	1,197	5	1,084	864	12	357	137	18	7,484
$7.50-7.99	864	166	936	17	6	80	63	1,499	87	3,534	530	17	131	122	0	8,050
$8.00-8.49	238	427	574	99	8	48	106	988	38	1,298	436	17	157	97	9	4,538
# < $8.50/hr	7,385	**1,382**	**5,168**	**584**	**91**	**895**	**1,504**	**5,710**	**171**	**9,083**	**2,537**	**323**	**1,064**	**678**	**35**	**36,609**
$8.50-8.99	549	61	322	106	17	24	58	835	15	**1,309**	396	4	41	55	0	3,789
$9.00-9.49	386	55	493	48	38	13	272	1,667	11	1,276	319	17	78	101	9	4,779
$9.50-10.00	265	237	324	149	40	16	14	1,024	32	992	362	13	68	134	26	3,693
# < $10.00/hr	**8,585**	**1,734**	**6,307**	**887**	**185**	**946**	**1,847**	**9,235**	**228**	12,660	**3,613**	**357**	**1,251**	**967**	**70**	**48,870**
Total jobs	9,843	2,102	10,354	2,333	901	1,164	2,900	26,265	2,030	33,369	5,891	488	2,012	4,568	89	104,309
% < $8.50/hr	**73%**	**76%**	**50%**	**26%**	**8%**	**78%**	**46%**	**23%**	**5%**	**28%**	**39%**	**66%**	**54%**	**15%**	**39%**	**35%**
% <$10.00/hr	90%	84%	61%	34%	29%	83%	62%	36%	7%	39%	65%	73%	65%	19%	79%	47%

[5] Some totals don't match due to rounding.

Table 7G

Number of low wage jobs in major occupational categories statewide		
Major occupational category	Number of jobs < $8.50/hr	Percent of all VT jobs < $8.50/hr
Service	36,448	37%
Production, construction, operating, maint. & material handling[6]	20,788	21%
Sales & related occupations	18,629	19%
Totals	**75,865**	**77%**

Table 7H

Number of low wage jobs in key occupational categories statewide			
Occupational categories	Number of jobs < $8.50/hr	Total number of jobs by Occup. title	Percent of jobs < $8.50/hr by Occup. category
Service			
Food & beverage preparation and service	21,591	24,389	89%
Cleaning & building service occupations	6,435	8,348	77%
Health service occupations[7]	3,346	5,770	58%
Sales & related occupations			
Merchandise, products & other sales occupations	18,220	25,210	72%
Production, construction, operating, maint. & material handling			
Hand working occupations (incl. assemblers & fabricators)	5,026	8,159	62%
Helpers, laborers & material movers (except agric.)	4,850	8,117	60%
Machine setters, set-up operators, operators & tenders	4,888	12,295	40%
Professional, paraprofessional & technical			
"Other" teachers & instructors[8]	5,555	19,697	28%
Clerical & administrative support			
"Other" secretarial & related general office occupations[9]	4,996	16,341	31%
Totals	**74,907**	**128,326**	**58%**

6 Wage estimates for production jobs do not include shift differentials and overtime pay.
7 Dental & medical assistants; nursing, home health & psychiatric aides; physical & occupational therapy aides; ambulance drivers & attendants.
8 Primarily teacher aides (educ. assistants), paraprofessionals and elementary school teachers & instructors.
9 Including various types of clerks but not including secretaries.

Table 7I

Education & Training Requirements for All UI Covered Jobs		
Category	Number	Percentage
!st Professional degree	2,889	1.0%
Doctoral degree	4,228	1.5%
Master's degree	8,243	3.0%
Work experience + Bachelor's degree	12,267	4.4%
Bachelor's degree	33,818	12.1%
Associate's degree	9,206	3.3%
Postsecondary vocational training	14,453	5.2%
Work experience in related occupation	22,721	8.1%
Long-term on-the-job training	24,423	8.7%
Moderate-term on-the-job training	34,036	12.2%
Short-term on-the-job training	113,125	40.5%
Totals	**279,409**	**100%**

Table 7J

Education & training requirements for jobs that pay less than $8.50 / hr								
Category	Wage Range						Totals	
	<6.00	6.00-6.49	6.50-6.99	7.00-7.49	7.50-7.99	8.00-8.49	#	%
!st Professional degree	0	0	0	3	0	0	**3**	**<0.1%**
Doctoral degree	391[10]	46	0	0	7	0	**444**	**0.4%**
Master's degree	4	0	0	408	5,518[11]	0	**5,930**	**6.0%**
Work experience + Bachelor's degree	56	0	0	35	0	65	**156**	**0.2%**
Bachelor's degree	217	0	53	203	172	178	**823**	**0.8%**
Associate's degree	39	0	0	13	0	3	**55**	**0.1%**
Post-secondary vocational training	234	48	121	594	389	843	**2,229**	**2.3%**
Work experience in related occupation	141	12	55	208	843	596	**1,855**	**1.9%**
Long-term on-the-job training	347	0	427	536	1,337	483	**3,130**	**3.2%**
Moderate-term on-the-job training	489	193	827	1,899	2,156	1,714	**7,278**	**7.4%**
Short-term on-the-job training	28,553	3,584	9,906	17,641	12,507	4,513	**76,704**	**77.8%**
Totals	**30,471**	**3,883**	**11,389**	**21,540**	**22,929**	**8,395**	**98,607**	**100%**

[10] Doctoral candidates working as post-secondary graduate assistants.

[11] Two occupational titles account for most of the jobs in this wage range: 3,645 "Teachers & Instructors – All others" (teachers not specifically identified in other categories) and 1,852 "Teacher aides – paraprofessionals." We think it's very unlikely that these two occupational titles require a Master's degree.

Appendix 8A

Methodology:

To calculate the total savings and costs to the state, Census data were used to estimate which families would see an increase in wages and what effect that would have on their eligibility for benefits.

The March Current Population Survey (CPS) files for Vermont were used for 1995 - 1999. The earnings and income figures in prior years were brought up to 1999 dollars.

For each family, eligibility for each of the current assistance programs was determined based on the family characteristics and income information in the CPS file, after increasing the minimum wage to $5.75. Eligibility was recalculated after a change in the minimum wage to one of three new rates (i.e., $6.50, $7.50 & $8.50). Because the file data indicated that more families were eligible for benefits in 1999 than are anticipated to participate in FY 2000, the totals were adjusted to reflect actual participation.

Estimates of taxes were calculated similarly. First, state and federal taxes were calculated based on current information in the file, after adjusting the minimum wage to $5.75. Then, tax payments were recalculated for each change in the minimum wage.

Assumptions:

- All families affected by the change in minimum wage rent, rather than own, their housing. The cost of their rent is explained in Issue 1. This assumption overestimates the savings in the renter rebate program but under-estimates any savings in Act 60 income sensitivity.
- Childcare costs are explained in Issue 1.
- No costs were included for dependent care for family members who are not children.
- An increase in the minimum wage would “slope” slightly, as explained in Issue ****.
- All households pass the “resource tests” for eligibility for public assistance programs. This would tend to overestimate the number of households eligible for public assistance programs. However, because the calculated participation is normalized to reflect actual participation, this should not make a significant difference in the total.
- Current (October, 1999) eligibility thresholds and benefit amounts were used.
- Tax calculations were based on 1998 tax schedules.

APPENDIX 10A
DRAFT BUDGET FOR ANALYTIC INCOME TAX DATABASE
(September 1999)

Expense Item	First Year	Second Year	Subsequent Years
*Tape formatting equipment to read and format IRS tapes for system input (see attached for detailed equipment description)**	*$14,000**	*$0**	*$0**
Stand-alone computer system for Analytic Income Tax Database, Dell Dimension PC with 34GB hard drive, RW 2nd CD, no modem, MS Office Pro software (includes MSAccess), printer, and monitor (see attached for detailed equipment description.	*$3,900*	*$0*	*$0*
Professional consulting for database design, programming, updating software and analytic software and database testing.	*$36,000*	*$6,000*	*$2,000*
Analytic Software, SPSS 9.0 for Windows, SPSS Regression, Trends and Advanced Models modules	*$2,200*	*$0*	*$0*
25% of one FTE Level X Tax Department employee, fully loaded @ 1.3x base salary of $38,000, to update, maintain and perform specified periodic analyses with database.	*$0*	*$12,350*	*$12,350*
Software Training and Educational Materials	*$0*	*$1,800*	*$500*
Miscellaneous Expenses (office supplies, etc.)	*$300*	*$1,000*	*$500*
TOTAL	**$56,400**	**$21,150**	**$15,350**

**Note: If tape formatting equipment may be utilized on a contractual basis, first year costs may be $4-$7K and second and subsequent year costs $1-$2K, until such time as the IRS provides these data on CD-ROM or in some other more commonly readable format, at which time this cost will be eliminated.*

APPENDIX 12A

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APPENDIX 14A

Trends in Income Using the CPI-U-X1 Versus the CPI-U-RS

In order to accurately assess changes in economic well-being, an adjustment for cost-of-living changes is required. Incomes from different years need to be compared in dollars with the same purchasing power. In order to adjust for cost-of-living changes, the Census Bureau uses the Consumer Price Index (CPI-U) provided by the Bureau of Labor Statistics (BLS). This is an index of the cost of a market basket of goods and services representing the average consumption of the urban population.

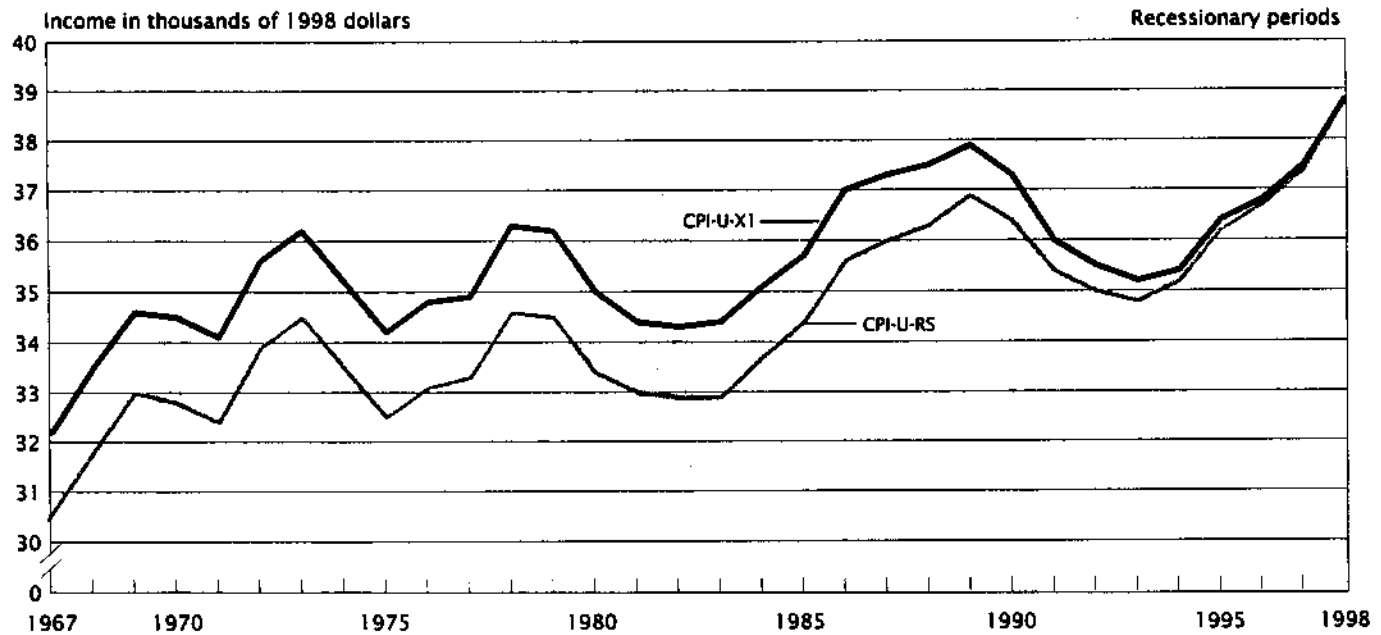
In 1983, the BLS began using a revised method to calculate the CPI-U. This method uses estimates of the cost of renting equivalent housing to measure homeownership costs. As a result, it is less affected than the earlier measure by changes in housing prices and mortgage rates. The official CPI-U time series is based on the old methodology prior to 1983 and on the new methodology for the years 1983 to the present.

In order to create a consistent series over time, the BLS also created an experimental series (the CPI-U-X1) based on the new methodology for the 1967 to 1982 period. The Census Bureau currently uses the CPI-U-X1 for the historical series of income from 1967 to the present, and for years prior to 1967, extrapolates the X1 based on its ratio to the CPI-U observed in 1967.

The BLS recently released a new series, the Consumer Price Index research series using current methods (CPI-U-RS).[1] The CPI-U-RS is an index of inflation from 1978 to 1998 that incorporates most of the improvements in methodology made to the CPI-U over that time span into the entire series. Among other improvements, the CPI-U-RS makes quality adjustments for the aging of housing units and for the prices of used cars, personal computers, and televisions, and it employs a geometric mean formula to account for consumer substitution within CPI item categories. Although the research series has some limitations, including being subject to annual revisions, the BLS states

[1]See Kenneth J. Stewart and Stephen B. Reed, "CPI Research Series Using Current Methods, 1978-98," *Monthly Labor Review*, June 1999.

Figure D-1.
Median Household Income by Inflation Index: 1967 to 1998



Note: For years previous to 1978, the CPI-U-RS is extrapolated based on the ratio of the CPI-U-RS to the CPI-U-X1 in 1978.
Source: U.S. Census Bureau, Current Population Survey, March 1968-1999.

APPENDIX 14A

Table D–1. **Median Household Income by Inflation Index: 1967 to 1998**

Year	Consumer Price Index (1982-1984 = 100.0)		Median household income		
				1998 dollars	
	CPI-U-X1	CPI-U-RS	Current dollars	CPI-U-X1	CPI-U-RS
1998	163.0	156.7	38,885	38,885	38,885
1997	160.5	154.6	37,005	37,581	37,508
1996	156.9	151.3	35,492	36,872	36,759
1995	152.4	147.3	34,076	36,446	36,251
1994	148.2	143.4	32,264	35,486	35,256
1993	144.5	140.4	31,241	35,241	34,868
1992	140.3	136.9	30,636	35,593	35,067
1991	136.2	133.4	30,126	36,054	35,388
1990	130.7	128.6	29,943	37,343	36,486
1989	124.0	122.5	28,820	37,884	36,866
1988	118.3	117.4	27,225	37,512	36,339
1987	113.6	113.3	26,061	37,394	36,044
1986	109.6	109.5	24,897	37,027	35,629
1985	107.6	107.5	23,618	35,778	34,427
1984	103.9	104.0	22,415	35,165	33,773
1983	99.6	100.0	21,018	34,397	32,935
1982	95.6	96.0	20,171	34,392	32,925
1981	90.1	90.6	19,074	34,507	32,990
1980	82.3	82.8	17,710	35,076	33,516
1979	74.0	74.5	16,461	36,259	34,623
1978	67.5	68.1	15,064	36,377	34,663
1977[1]	63.2	63.8	13,572	35,004	33,334
1976	59.4	59.9	12,686	34,812	33,187
1975	56.2	56.7	11,800	34,224	32,611
1974	51.9	52.4	11,197	35,166	33,484
1973	47.2	47.6	10,512	36,302	34,606
1972	44.4	44.8	9,697	35,599	33,918
1971	43.1	43.5	9,028	34,143	32,522
1970	41.3	41.7	8,734	34,471	32,821
1969	39.4	39.8	8,389	34,706	33,029
1968	37.7	38.0	7,743	33,478	31,930
1967	36.3	36.6	7,143	32,075	30,582

[1]For years previous to 1978, the CPI-U-RS is extrapolated based on the ratio of the CPI-U-RS to the CPI-U-X1 in 1978.

Source: U.S. Census Bureau, Current Population Survey, March 1968-1999.

that it is the most detailed and systematic estimate available of a consistent CPI series. (See Appendix C.)

Table D-1 and Figure D-1 show the effect of using the CPI-U-RS in the historical series of median household income from 1967 to 1998. The CPI-U-RS shows a lower rise in prices than the CPI-U-X1 over this period, and thus lowers the factors used to convert historical figures into 1998 dollars. This creates a greater increase in "real" income over the 1967 to 1998 period than is evident with the CPI-U-X1. In fact, with the CPI-U-RS, the all-time high level of median household income reached in 1989 may have been reached again in 1996, 1 year earlier than stated in the Census Bureau's 1997 income report. With the CPI-U-RS, 1998 income was 27.2 percent higher than 1967 levels. With the CPI-U-X1, income was only 21.2 percent higher. Similarly, 1998 income was 5.5 percent higher than in 1989 with the CPI-U-RS series, while this is only 2.6 percent higher with the CPI-U-X1 series.

In order to understand income trends properly, we are very interested in receiving opinion and evidence on the relative technical merits of income series deflated by the two indexes, as input into a decision about which constant-dollar income series will appear in future reports. If you have comments, please write to:

Edward J. Welniak
Chief, Income Statistics Branch
Housing and Household Economic Statistics Division
U.S. Census Bureau
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APPENDIX 17A

A Compilation of Livable Wage Policies

Listed below, in reverse chronological order, are examples of local living wage laws tying wage and/or benefits requirements to government contract eligibility or other government financial assistance.

Los Angeles County, CA (1999) -- In June, the Los Angeles County Board of Supervisors became the largest governmental entity in the nation to adopt a living wage law. The ordinance requires that a living wage of $8.32 an hour with health insurance, or $9.46 without, be provided to full time employees of firms contracting with the County (and their subcontractors) for over $25,000 worth of services. The ordinance provides for the retention of employees on contracts that the County terminates before they expire. In addition, the ordinance prohibits the use of part time employees on county contracts without justifiable cause and prohibits the use of County funds to inhibit employee organization. The ordinance provides that its provisions may be expressly superseded by a collective bargaining agreement.

Ypsilanti, MI (1999) -- In June, the Ypsilanti City Council passed a living wage ordinance that requires companies receiving City service contracts or financial assistance valued at over $20,000 in a given year to pay employees on that contract or project at least $8.50 an hour, or $10.00/hr. if no health care is provided. The law also requires tax abated firms to make good faith efforts to hire local residents for jobs created by the assistance and provides that the City give preference, when possible, to local contractors.

Ypsilanti, MI (1999) -- In June, the Ypsilanti Township Board passed a living wage ordinance that requires companies receiving City service contracts or financial assistance valued at over $10,000 ($20,000 for non-profits) in a given year to pay employees on that contract or project (and employees of their subcontractors or leaseholders) at least $8.50 an hour, or $10.00/hr. if no health care is provided.

Somerville, MA (1999) -- In May, the Somerville Board of Aldermen unanimously passed an ordinance requiring that a living wage be paid to full and part time direct employees of the City of Somerville, as well as employees of firms carrying out service contracts with the city for at least $50,000 (this threshold will decrease to $30,000 in 2 years and again to encompass all contracts valued at $10,000 or more two years after that). The living wage is set at no less than $8.35 an hour, the poverty line for a family of four (based on 40 hours a week for 50 weeks), adjusted annually in accordance with the poverty guidelines.

Miami-Dade County, FL (1999) -- In May, the Board of County Commissioners of Miami-Dade County voted unanimously to enact a living wage ordinance requiring that the County itself, certain of its service contractors, and airport licensees (for ground service personnel) pay employees a living wage of no less than $8.56 an hour if

employer-paid health benefits are offered, or $9.81 without health benefits. The ordinance covers the following categories of county service contracts worth at least $100,000: food preparation and/or distribution; security services; routine maintenance services such as custodial, cleaning, refuse removal, repair, refinishing, and recycling; clerical or other non-supervisory office work, whether temporary or permanent; transportation and parking services including airport and seaport services; printing and reproduction services; and, landscaping, lawn, and/or agricultural services. The ordinance establishes a Living Wage Commission to enhance compliance and review the effectiveness of the law.

Cambridge, MA (1999) -- In May, the Cambridge City Council adopted an ordinance requiring a living wage of at least $10.00 an hour be paid to employees of the City of Cambridge, as well as to employees of companies or non-profits that enter into service contracts or subcontracts with the city worth at least $10,000 and to employees of firms that benefit from at least $10,000 in city subsidies in a year (as well as their tenants and lease-holders). The wage level is to be adjusted yearly in accordance with the area Consumer Price Index. The ordinance directs the city agencies to report annually on subsidies and establishes a Community Advisory Board to review and recommend action on waiver requests.

Hayward, CA (1999) -- In April, the Hayward City Council approved the Hayward Living Wage Ordinance which provided that a living wage be paid to direct employees of the City of Hayward, as well as employees of certain firms contracting with the city for at least $25,000. The living wage is set at no less than $8.00 an hour if health benefits are paid to the employees, or $9.25 per hour if no such benefits are paid. The wage will be upwardly adjusted annually in accordance with the area cost of living calculation. The contracted service categories covered under the policy are: automotive repair and maintenance, facility and building maintenance, janitorial and custodial, landscaping, laundry services, temporary personnel, pest control, security services, and social service agencies. The ordinance entitles covered workers to a minimum of 12 paid days off and 5 uncompensated days off per year. The ordinance also allows for the terms of a collective bargaining agreement to provide that said agreement may supersede the requirements of the living wage ordinance upon mutual agreement by both parties.

Madison, WI (1999) -- In March, the Madison City Council passed an ordinance that requires employers holding city service contracts (and their subcontractors) worth at least $5,000 and firms receiving $100,000 or more in financial assistance (and their contractors) from the city to pay employees on city funded projects a living wage of at least $7.91 an hour. The wage will be upwardly adjusted in two steps to 110% of the federal poverty guidelines for a family of four by January 1, 2001 and continuing thereafter. City of Madison employees are also covered. The ordinance also allows that the terms of a collective bargaining agreement may supersede the requirements of the living wage ordinance.

Dane County, WI (1999) -- In March, the Dane County Board of Supervisors passed an ordinance requiring that a living wage be paid to county employees, employees of county service contractors, subcontractors, and beneficiaries of economic development assistance of $5,000 or more from the county. The living wage is established at the federal poverty level for a family of four, currently $8.03 an hour. By July 1, 1999 a Living Wage Review Council will make recommendations on possible adjustments for employers that do not provide health insurance.

Hudson County, NJ (1999) -- In January, the Hudson County Board of Freeholders unanimously adopted an ordinance requiring County service contractors employing security, food service, and janitorial workers to pay all employees working at least 20 hours per week on County contracts at an hourly rate of pay of 150% of the federal minimum wage, currently $7.73 an hour. Contractors must also provide health benefits and one week paid vacation to these employees.

San Jose, CA (1998) -- In November, the San Jose City Council voted to require companies holding city service contracts worth at least $20,000 to pay those employed on such contracts a wage of at least $9.50 an hour with health benefits, or $10.75 if the company does not provide benefits. In addition, the ordinance requires companies seeking these service contracts to provide assurances of good labor relations and requires successor contractors to offer jobs to employees of predecessor contractors who performed those services. Employees of companies receiving direct financial grants from the city valued at $100,000 or more in a year are also covered. The contracted service categories covered under the policy are: automotive repair and maintenance, food service, janitorial, landscaping, laundry, office/clerical, parking lot management, pest control, property maintenance, recreation, security shuttle services, street sweeping, and towing.

Detroit, MI (1998) -- At the ballot box on November 3, Detroit voters overwhelmingly approved a living wage measure that requires city service contractors or recipients of city financial assistance worth $50,000 or more to pay employees a wage equivalent to the federal poverty line for a family of four, currently $8.35 an hour (the ordinance calculates the work year at 40 hrs./50 weeks a year), or 125% of the poverty line, $10.44 an hour, if no health benefits are provided. The ordinance also requires companies to attempt to hire Detroit residents to fill any new jobs created as a result of the contract or assistance granted by the city.

Multnomah County, OR (1998) -- In October, the Multnomah County Board of Commissioners passed a living wage policy that requires county janitorial and security services contractors to pay their employees a combined wage and benefit package of $9.00 per hour (adjusted annually by the Consumer Price Index). The County's action will also apply to food-service contracts when those are re-bid in 2000. In addition, the resolution includes a retention provision requiring new janitorial contractors to first interview employees of the previous contractor before hiring new workers. Language in the ordinance commits living wage advocates and County officials to a joint lobbying

effort aimed at increasing state funding sources that would enable the County to extend the current living wage policy to social service contract workers.

Boston, MA (1997, amended 1998) -- In September of 1998, the Boston City Council approved an amended version of an earlier, more comprehensive living wage ordinance. In its current form, the ordinance requires companies getting city service contracts worth at least $100,000 (or subcontracts of at least $25,000) to pay their employees a wage at least $8.23 an hour, equal to the poverty level for a family of four upon date of passage (assuming 40 hrs/50 wks. a yr.), indexed annually on July 1 to whichever is higher of the adjusted poverty guidelines or 110% of the state minimum wage. The measure also includes community hiring provisions for both contractors and recipients of subsidies or other financial assistance, requires covered companies to report on jobs created and wages paid, and creates a Living Wage Advisory Committee to oversee the implementation of the ordinance (ACORN, Greater Boston Labor Council and the Massachusetts AFL-CIO led the 40-member Boston Jobs and Living Wage Coalition).

Pasadena, CA (1998) -- On September 14, the Pasadena City Council adopted a living wage ordinance which requires city service contractors (with contracts worth at least $25,000) to pay employees $7.25 per hour, $8.50 if health benefits are not provided. In August, the Coalition succeeded in getting the City to make a permanent budget adjustment to provide the same wage and benefits package to City employees. Coalition set to work on expanding coverage to recipients of economic development and other city subsidies.

Cook County, IL (1998) -- In September, the Cook County Board of Commissioners passed an ordinance that requires County contractors of any size to pay employees working under such contracts at least $7.60 an hour (Commissioners Stroger, Maldonado, and Daley; Chicago Jobs and Living Wage Coalition led by ACORN, SEIU Local 880).

Chicago, IL (1998) -- In July, the Chicago City Council voted 49-0 to require for-profit city contractors and subcontractors to pay their workers at least $7.60 an hour in the following categories: home and health care workers, security guards, parking attendants, day laborers, cashiers, elevator operators, custodial workers and clerical workers.

San Antonio, TX (1998) -- In July, the San Antonio City Council passed an ordinance adopting guidelines and criteria pertaining to tax abatements that includes a requirement for beneficiaries to pay at least 70% of employees in new jobs created at least $9.27 per hour (non-durable goods manufacturing and service companies; and $10.13/hr for durable goods manufacturing). The guidelines deem retail industry facilities ineligible for tax abatements. In addition, businesses may be eligible for more tax abatement if they fill 25% of new jobs created with economically disadvantaged individuals.

Portland, OR (1996, amended 1998) -- June 1996 City Council ordinance required city contractors employing janitors, parking lot attendants, temporary clerical services and security workers to pay their employees $6.75/hour starting July 1, 1996, $7.00/hour in 1997. April 1998 amendment requires a new wage floor of $7.50 an hour beginning July 1, 1998 and $8.00/hour beginning July, 1999 through the year 2000. In addition, the amendment requires that such service contractors offer basic medical benefits to their employees performing work for the City.

Oakland, CA (1998) -- In March, the Oakland City Council unanimously approved an ordinance requiring companies or non-profits that enter into service contracts with the city worth at least $25,000 or and firms that benefit from at least $100,000 in city subsidies in a year (as well as their tenants and lease-holders) to pay workers a minimum of $9.25 an hour or $8.00 if the firm provides health benefits. The wage level is to be adjusted by April 1 each year in accordance with the Bay Region Consumer Price Index, bringing the current wage requirements to $8.35 and $9.60 an hour. The ordinance entitles covered workers to 12 paid days off per year. The ordinance also allows for the terms of a collective bargaining agreement to provide that said agreement may supersede the requirements of the living wage ordinance.

Durham, NC (1998) -- In January, 1998 the Durham City Council passed an ordinance requiring City service contractors to pay their employees working on city projects an hourly wage at least equal to the minimum hourly wage rate paid to Durham City employees, currently $7.55 an hour.

Duluth, MN (1997) -- In July, 1997, the City Council passed a living wage ordinance requiring recipients of city economic development assistance of $25,000 or more to pay at least 90% of employees on the assisted project at least $7.25 an hour. ($6.50 with health benefits).

Milwaukee, WI (1995,1996,1997) -- November 1995 City Council ordinance requires certain city service contractors to pay employees at least $6.05/hr, adjusted annually to the poverty level for a family of three (currently $6.67). Jan. 1996 school board measure requires all Milwaukee Public School system employees and employees of MPS contractors to be paid $7.70/hr. County Board of Supervisors voted in May 1997 to require county contractors to pay at least $6.25/hr. in the areas of janitorial, security, and parking lot attendant, indexed to increased wages of county employees.

New Haven, CT (1997) -- In April, 1997, the Board of Aldermen passed living wage ordinance requiring city service contractors to pay their employees a wage at least equivalent to the poverty line for a family of four. The wage will be phased up to 120% of poverty over 5 years beginning July '97. The ordinance also requires such contractors to give first consideration to referrals from community based hiring halls to fill vacant service positions.

Los Angeles, CA (1997) -- On March 18, 1997, City Council overwhelmingly approved a living wage ordinance requiring recipients of public service contracts worth $25,000 or more as well as any business benefiting from a subsidy of at least $1,000,000 in one year or $100,000 on a continuing annual basis to pay their employees a living wage. The wage-- indexed yearly to the rise in cost of living-- is set at $7.25 an hour plus family health benefits, or $8.50 without. The wage is to be adjusted annually to correspond with adjustments to retirement benefits paid to members of the City Employees Retirement System, bringing the current wage requirements up to $7.39 and $8.64 an hour. Affected workers are entitled to 12 paid days off a year. The ordinance also allows that a collective bargaining agreement may supersede the requirements of the living wage ordinance.

Minneapolis, MN (1997) -- In March, 1997 city council unanimously passed a living wage policy requiring businesses benefiting from $100,000 or more in city assistance in one year to pay employees a living wage. The wage will be defined and indexed as 110% of the federal poverty level for a family of four, currently $8.83. Recipients of such assistance must also set a goal that 60% of new jobs created will be held by City residents. Additional provisions prohibit privatization of services currently performed by city employees that would result in lower wages, and preferences for assistance to union-friendly businesses (defined as neutrality on union organizing, providing complete list of names and addresses of employees, access to facilities during non-work hours, card-check recognition, etc.). Administrative guidelines determine implementation details.

St. Paul, MN (1997) -- In January 1997, city council unanimously passed a directive requiring recipients of $100,000 or more of city economic development assistance in one year to pay employees a living wage, defined as 110% of the federal poverty level for a family of four, currently about $8.83 an hour (100% of poverty line required for companies who provide health insurance; currently $8.03). At least 60% of new jobs created as a result of such assistance must go to St. Paul residents.

New York City, NY (1996) -- September 1996 City Council ordinance requires that employees of city contractors for security, temporary, cleaning and food services be paid the applicable prevailing wage for the industry to be determined by the City Comptroller.

Jersey City, NJ (1996) -- June 1996 City Council ordinance requires that city contractors employing clerical, food service, janitorial workers, or security guards pay these workers $7.50/hour and provide health benefits and vacation.

Santa Clara County, CA (1995) -- County Board of Supervisors law requires manufacturing firms applying for tax abatements to disclose how many jobs they will create, what wages and benefits they will pay, and what other subsidies they are seeking. Businesses benefiting from abatements must also pay a minimum wage of $10/hr. and provide health insurance or a suitable alternative to all permanent

employees. The measure gives the county money-back guarantee protection if goals are not met.

Baltimore, MD (1994) -- In December 1994 the Baltimore City Council passed a bill requiring companies that have service contracts with the city of Baltimore to pay workers$6.10/hr. The bill included steps to increase the wage to its current level of $7.70/hr. over a four year period.

San Jose, CA (1991) -- Prevailing wage ordinance requires city contractors to pay union-scale wages and requires the city to evaluate health benefits, workplace grievance procedures, workplace health and safety standards, and labor standard compliance records of companies bidding for city contracts.

Gary, IN (1991) -- Ordinance requires recipients of any tax abatement to pay prevailing wage and provide complete health care package to employees working over 25 hours a week. Also includes public disclosure provisions.

Des Moines, IA (1988, amended 1996) -- In 1988 City Council set a $7.00/hr. minimum compensation policy for City-funded urban renewal and loan projects. In 1996, this policy was amended to require such city funded projects to set a goal of a $9.00/hr. average wage, including benefits.

Source: *Living Wage Successes: A Compilation of Living Wage Policies on the Books*, Association of Community Organizations for Reform Now, July 1999.

Appendix 17B

Livable Wage Ordinances for Service Contracts as of May, 1999

City and Year Enacted	Wages and Benefits	Employers Covered	Employees Exempt	Enforcement Mechanism	Miscellaneous Provisions
Baltimore, MD; 1994	$6.10 in 1996 to $7.70 in 1999	Service contractors; construction contracts over $5,000; includes subcontractors	n/a	Payroll information to Wage Commission	Must pay employees biweekly
Boston, MA; 1997	$7.49; adjusted annually by the higher of the federal poverty line for a family of four, CPI or 110% of the federal minimum wage	Subsidies (grant, loan, tax incentive, bond financing) over $100,000 for for-profits with over 25 employees and non-profits with over 100 employees; includes subcontractors and leaseholders or renters of beneficiaries; exemptions for hardship.	Seasonal part-time youth employment programs; construction, prevailing wage and union jobs	Report on job creation, wages and training programs quarterly. Monitored by citizen advisory committee	Must hire city residents from community based hiring halls or one-stop centers.
Chicago, IL; 1998	$7.60	Service contracts with over 25 employees; includes subcontractors; exemptions for non-profits	n/a	n/a	n/a
Cook County, IL; 1998	$7.60	Service contractors	n/a	n/a	n/a
Dane County, WI; 1999	100% of poverty line for a family of four	Service contracts and subsidies over $5,000.	n/a	n/a	n/a
Des Moines, IA; 1994, updated 1996 and 1998	$7.00 in 1988 to $9.00 in 1996	Subsidies (revolving loan fund, enterprise community business capital fund); exemptions for start-up or hardship.	Management and part-time employees	n/a	n/a
Detroit, MI; 1998	100% of poverty line for a family of four with health benefits; 125% of poverty line without benefits	Service contracts or subsidies (federal grant programs, revenue bond financing, planning assistance, tax increment financing, tax credits) over $50,000; includes subcontractors and leaseholders	n/a	City Purchasing Department	Must attempt to hire city residents for new jobs
Duluth, MN; 1997	$6.50 with health benefits; $7.25 without health benefits; adjusted annually by CPI	Subsidies (investment fund loans, enterprise zone credits, business loans and grants, tax increment financing land write downs, industrial part land write downs, lease abatements); includes subcontractors; exemptions for small employers and community development block grant recipients.	Job readiness and training programs; summer youth employment programs	Payroll reports biannually to appropriate city staff.	n/a
Durham, NC; 1998	$8.14 (federal poverty line for a family of four)	Service contracts; includes subcontractors	n/a	n/a	Must post wage schedule
Gary, IN; 1989	Prevailing wage for similar occupations in the county	Subsidies (industrial revenue bonds, economic grants or other economic development incentives); includes subcontractors	n/a	Submit wage schedule to the Common Council of the City of Gary	n/a
Hayward, CA; 1999	$8.00 with health benefits; $9.25 without benefits; adjusted yearly by CPI; paid and unpaid leave	Service contracts over $25,000; includes subcontractors	n/a	n/a	n/a
Hudson County, NJ; 1999	150% of federal minimum wage	Service contractors	Employees who work less than 20 hours per week	n/a	n/a
Jersey City, NJ; 1996	$7.50; 5 days vacation; $2,000 annually for health benefits	Contractors	Only applies to clerical workers, food service workers, janitorial workers and unarmed security guards; does not apply to workers who work less than 25 hours per week	n/a	n/a

Sources: ACORN. "Living Wage Successes," December 1998; AFL-CIO. "A Living Wage Primer," December 1998 (and updates); Spain, Selena and Jean Wiley, "The Living Wage Ordinance," *Clearinghouse Review*, Sept.-Oct. 1998

Appendix 17B

Livable Wage Ordinances for Service Contracts as of May, 1999

City and Year Enacted	Wages and Benefits	Employers Covered	Employees Exempt	Enforcement Mechanism	Miscellaneous Provisions
Los Angeles, CA; 1997	$7.50 with benefits; $8.50 without benefits; 12 paid days for vacation, sick or personal leave	Service contracts over $25,000 and a term over 3 months and subsidies over $100,000; includes subcontractors; exemptions for first time recipients of financial assistance and employers with fewer than 5 employees	Training organizations serving homeless, chronically unemployed or Temporary Assistance for Needy Families recipients	Bureau of Contract Administration	Must inform employees of possible eligibility for Earned Income Tax Credit
Los Angeles County, CA; 1999	$8.32 with health benefits; $9.46 without health benefits	Contractors	n/a	n/a	n/a
Madison, WI; 1999	100% of poverty line for a family of four in 1999; 105% of poverty line in 2000; 110% of poverty line in 2001	Certain contracts over $5,000 and certain subsidies over $100,000	n/a	n/a	n/a
Miami-Dade County, FL; 1999	$8.56 with health benefits; $9.81 without benefits	County workers, service contractors, and airport licensees	n/a	n/a	n/a
Milwaukee (City), WI; 1995	$6.05 adjusted annually by federal poverty line for a family of three.	Service contracts; excludes contracts that involve the purchase of goods; includes subcontractors	n/a	Department of Public Works and Procurement Division of Administrations	n/a
Milwaukee (County), WI; 1997	$6.25; adjusted by union pay scales	County workers	Only applies to janitors, parking lot attendants, and unarmed security guards	n/a	n/a
Milwaukee (School Board), WI; 1996	$7.70	School board workers	n/a	n/a	n/a
Minneapolis, MN; 1997	110% of poverty line for a family of four without benefits; 100% of poverty line with benefits	Subsidies over $100,000 in one year (economic development contracts; land sales at less than the fair market price, loans, bonds excluding conduit bonds, grants and city tax incentives); exemptions for community development corporations and small businesses.	Job training and job readiness programs	City of Minneapolis and Minnesota Community Development Agency	60% of new jobs will go to city residents
Missoula, MT; 1999	details under development	n/a	n/a	n/a	n/a
Multnomah County, OR; 1998	$9.00 (wage and benefits combined); adjusted annually by CPI	Service contracts; new and renewed contracts only	Only applies to custodial and security service workers; will be expanded to food service workers; supervisory employees excluded	Facility and Property Management Division	Worker retention provisions; must post information regarding Earned Income Tax Credit; the county will request increases for social service contract workers from the state legislature.

Sources: ACORN. "Living Wage Successes," December 1998; AFL-CIO. "A Living Wage Primer," December 1998 (and updates); Spain, Selena and Jean Wiley, "The Living Wage Ordinance," *Clearinghouse Review*, Sept.-Oct. 1998

Appendix 17B

Livable Wage Ordinances for Service Contracts as of May, 1999

City and Year Enacted	Wages and Benefits	Employers Covered	Employees Exempt	Enforcement Mechanism	Miscellaneous Provisions
New Haven, CT; 1997	1997-1998 100% of federal poverty line for a family of four; increases annually to 120% of federal poverty line by 2001	Service contracts; includes subcontractors	n/a	City Controller	Encourages employers to hire and train current or former welfare recipients
New York, NY; 1996	Prevailing wage of similar occupations in the city	Service contracts; includes subcontractors; exemptions for non-profits	Only applies to cleaning, food services, security and temporary workers	Payroll information submitted to City Comptroller's Office	n/a
North Hampton, MA; 1999	$7.49 with health benefits; $9.00 without benefits	Contractors	n/a	n/a	n/a
Oakland, CA; 1998	$8.00 with health benefits; $9.25 without benefits; adjusted yearly by regional CPI; 12 days paid leave	Service contracts over $25,000 or subsidies over $100,000; includes subcontractors	Employees covered by collective bargaining agreements; job training programs; youth employment training programs	Quarterly list of employees to City Manager	Must inform employees of possible eligibility for Earned Income Tax Credit
Orange County, NC; 1998	$8.00	County workers	n/a	n/a	n/a
Pasadena, CA; 1998	$7.25 with health benefits; $8.50 with no benefits	Service contracts over $25,000	n/a	n/a	n/a
Portland, OR; 1996	$6.75 in 1996; $7.00 in 1998; adjusted by cost of living increase received by city workers	Service contracts; exemptions for training or educational work	Only applies to janitors, security guards, parking attendants and temporary clerical workers	n/a	n/a
San Antonio, TX; 1998	$9.27 for non-durable goods manufacturing and service; $10.13 for durable goods manufacturing	Subsidies (tax abatements)	Only applies to 70% of new jobs created by beneficiaries	n/a	n/a
San Jose, CA; 1998	Higher of prevailing wage (union scale wages) or $9.50 with benefits; $10.75 without benefits; adjusted annually based on federal poverty line, geographic cost of living differentials, or CPI.	Service contracts over $20,000; exemptions for hardship to small businesses	Part-time employees (less than half time); employees under 18; employees in training period; employees covered by collective bargaining agreements	n/a	Worker retention, "Third Tier Review" and labor peace provisions.
Santa Clara County, CA; 1995	$10.00 with health benefits	Manufacturers who would not have located in the county without the rebate who create and sustain at least 10 full time, permanent manufacturing jobs	n/a	County Board of Supervisors and Finance Director	Preference for companies that provide benefits, hire local residents, provide job training, locate near public transportation

Sources: ACORN. "Living Wage Successes," December 1998; AFL-CIO. "A Living Wage Primer," December 1998 (and updates); Spain, Selena and Jean Wiley, "The Living Wage Ordinance," *Clearinghouse Review*, Sept.-Oct. 1998

Appendix 17B

Livable Wage Ordinances for Service Contracts as of May, 1999

City and Year Enacted	Wages and Benefits	Employers Covered	Employees Exempt	Enforcement Mechanism	Miscellaneous Provisions
St. Paul, MN; 1997	110% of poverty line for a family of four without benefits; 100% of poverty line with benefits	Subsidies over $100,000 in one year (economic development contracts; land sales at less than the fair market price, loans, bonds excluding conduit bonds, grants and city tax incentives); exemptions for community development corporations and small businesses.	Job training and job readiness programs	Department of Planning and Economic Development	
Thompkins County, NY, 1998	$16,500 annually (phased in over two years)	Human service contractors	Part-time employees		
West Hollywood, CA; 1997	$7.25 with health benefits; $8.50 with no benefits; 12 paid days for vacation, sick or personal leave	Service contracts over $25,000 and a term over 3 months; includes subcontractors.	n/a	n/a	n/a

Sources: ACORN. "Living Wage Successes," December 1998; AFL-CIO. "A Living Wage Primer," December 1998 (and updates); Spain, Selena and Jean Wiley, "The Living Wage Ordinance," *Clearinghouse Review*, Sept.-Oct. 1998

APPENDIX 17C

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