

The Vermont Job Gap Study

Phase 3

The Costs of UnderEmployment: The Income Gap

A report by the Peace & Justice Center.
Ellen Kahler, Project Director
Doug Hoffer, Research Director
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Purpose of the Study

The Vermont Job Gap Study is an effort to investigate and better understand certain aspects of the Vermont economy. Primarily, we are interested in whether the economy is producing enough jobs that pay a livable wage (LW) defined as income sufficient to meet a family's basic needs.¹ The Study includes several phases that examine various aspects of the issue including:

Phase 1	Estimate the cost of meeting a family's basic needs;
Phase 2	Estimate the number of LW jobs in Vermont, the extent of under-employment, and the outlook for the future;
Phase 3	Assess the economic and societal costs of the Job Gap;
Phase 4	Recommendations.

Through this study, we hope to: a) examine some assumptions about economic development and job creation; b) develop expanded methodology for data collection and analysis that can be replicated in the future; c) provide information to help guide decision-makers regarding economic development and public assistance policies; and, d) create new indicators to measure the performance of the economy and evaluate the effectiveness of state policies and programs.

Phase 3 will attempt to answer two key questions: 1) what are the economic and societal costs of under-employment? 2) what are the potential benefits and costs of increasing wages for low-income workers?

The Peace & Justice Center acknowledges the groundbreaking work of Renwick & Bergmann², the Minnesota Jobs Now Coalition (which published the Minnesota Job Gap Study in 1995), and Stephanie Seguíno.³

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¹ We believe that, as a matter of public policy, full-time work should be adequate to ensure economic self-sufficiency and a decent standard of living. Nevertheless, we have adopted conservative assumptions for our basic needs budget. We recognize that there may be differences regarding such a standard & invite comment about our assumptions and methodology (see Phase 1 Appendix).

² Renwick, Trudi J. and Bergmann, Barbara R., "A Budget Based Definition of Poverty," *Journal of Human Resources*, V.28, #1, Winter 1993, p. 6.

³ Seguíno, Stephanie, "Living on the Edge: Women Working and Providing for Families in the Maine Economy, 1979-1993," and "Report of the Commission to Study Poverty Among Working Parents," November 1996.

Summary of Phases 1 & 2

Vermont's economy has been characterized recently as healthy and growing. Traditional indicators such as unemployment and per capita income tend to support such an assessment. But the evidence from **Phases 1** and **2** of this Study offer a more sobering view. Key findings from Phases 1 and 2 include:

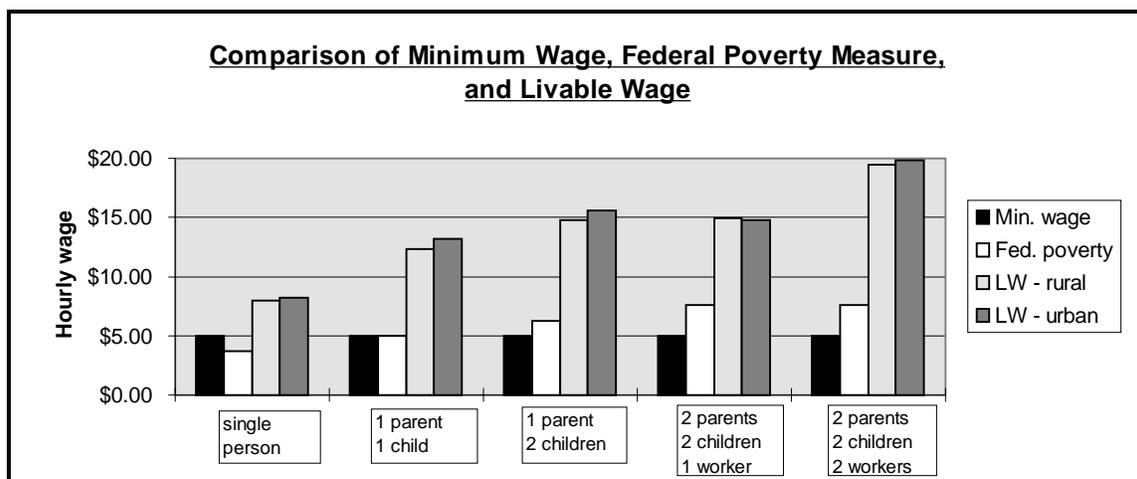
- the Federal Poverty Measure severely underestimates the cost of meeting a family's basic needs;
- depending on family size, a LW is between 52% and 197% greater than the Minimum Wage;
- a significant percentage of working families do not earn enough to meet their basic needs;
- the inflation-adjusted median wage has not grown in ten years; while aggregate income has increased, all of the growth was experienced by the top 40% of families;
- under-employment is a serious problem in Vermont; in 1995, 26,896 people wanted and were available for full-time (FT) work, including unemployed seeking FT work, involuntary part-time

(PT) workers, and discouraged workers; this was more than twice the official unemployment figure of 12,400;

- the number of net new jobs created in 1995 was 11,189 which meant there were 2.4 people competing for every job; competition for some LW jobs was even worse at 14.6 to one because so few new jobs were expected to pay a living wage.
- the VT economy has, and is expected to produce, a large percentage of low-skill, low-wage jobs.

Together, these findings demonstrate the inability of traditional economic indicators (e.g., unemployment, per capita income, etc.) to accurately reflect the condition of many working Vermonters. Because these indicators provide incomplete and often misleading information, they divert attention from the problems facing those suffering economic hardship. This prevents an open dialogue about how to address these issues.

Livable Wage (Basic Needs + Taxes): Estimated for 1995		
<i>Family Unit</i>	<i>Rural</i>	<i>Urban</i>
Single person	\$7.98 / hr (\$16,598)	\$8.21 / hr (\$17,086)
1 Parent, 1 Child	\$12.36 / hr (\$25,712)	\$13.24 / hr (\$27,546)
1 Parent, 2 Children	\$14.75 / hr (\$30,684)	\$15.61 / hr (\$32,478)
2 Parents, 2 Children (1 male wage earner)	\$14.94 / hr (\$31,082)	\$14.76 / hr (\$30,691)
2 Parents, 2 Children (2 wage earners)	\$19.46 / hr (\$40,474) Avg. \$9.73 / hr each	\$19.82 / hr (\$41,224) Avg. \$9.91 / hr each



Note: Data sources and methodology for the table and graph above can be found in Phases 1 and 2.

Introduction

The first four sections of this Phase are devoted to the costs of under-employment. We defined under-employment as FT workers who earn less than a LW for a single person (\$8.10 / hr or \$16,848 / yr) and those who work PT for economic reasons (i.e., slack work or an inability to find FT work).⁴ We excluded those who work PT voluntarily and those who were not in the workforce during the past year.⁵

We then addressed the following questions:

- How much money is needed to raise the annual earnings of the under-employed to \$16,848? (referred to as the “income gap,” see page 4)
- What are the estimated income and sales tax revenues from the increased earnings? (see page 5)
- How many low wage workers receive public assistance and what are the potential savings in public assistance if these workers were to earn \$16,848? (see page 6)
- What are the economic costs of childhood poverty? (see page 7)

The last two sections of this Phase deal with the costs of closing the “income gap.” In theory, there are numerous ways employers could increase the earnings of low wage workers. For example, to the extent possible, business owners could: 1) share some of their profits with workers directly through higher wages or incentive-based profit sharing programs (as some Vermont businesses do today); 2) distribute a larger percentage of cost of living increases and incentives to low wage workers; 3) increase company margins through greater efficiencies and / or more value-added products and services; or 4) increase prices.

Recognizing the complexity of the issue, and the enormous diversity among Vermont businesses, we

⁴ Involuntary PT work (PT for economic reasons) is a labor force category used by the Bureau of Labor Statistics.

⁵ We did not attempt to estimate the number of people who, because of limited opportunities, are unable to make full use of their education or work experience, which is another form of under-employment.

cannot predict how different sectors or individual businesses would respond. Nor can we say with any certainty which strategy (or combination of strategies) would be most effective with the least risk to the business or the economy.

Nevertheless, having estimated the benefits of increased wages (i.e., new revenues and avoided program costs), we must attempt to estimate the costs. Unfortunately, there are no comprehensive or reliable data on margins or profits. Therefore, we had to use the best available data which, in this case, led to an analysis of the potential impact on prices.

We do not recommend price increases as the preferred approach to closing the “income gap,” although it might be necessary in some cases. But by using available data, we were able to estimate the magnitude of the potential impact on prices in those sectors with a large number of low wage jobs. This type of analysis allows us to better understand the dimensions of the problem.

As we found in Phases 1 and 2, recent economic “growth” has not raised inflation-adjusted wages for the majority of working families. Moreover, recent national and international trends have put many Vermont businesses at risk. Indeed, some small business owners have experienced the same problems as low wage employees.

There is no simple solution to these problems. Our primary intention is to help lay the groundwork for informed debate instead of dueling anecdotes and unsubstantiated assertions. Hopefully, this Phase will lead to further research and a collaborative approach to finding equitable and cost-effective solutions.

It is our intention to offer some recommendations in Phase 4 of the Job Gap Study.

**A note on
methodological assumptions**

We believe Phase 1 estimates of basic needs and corresponding livable wages to be conservative and defensible. It would be impractical, however, to use five separate livable wages for this exercise. Therefore, **we decided to use the Phase 1 estimated livable wage for a single person as the basis for this study.** It is noteworthy, however, that this figure (\$8.10 / hr or \$16,848 / yr*) is only \$1,248 more than the 1995 Federal Poverty Measure for a family of four. Moreover, it is less than half of the estimated cost of meeting basic needs for a family of four with two wage earners (\$40,849*). As a result, the findings in this phase are very conservative.

* Avg. of urban & rural livable wage.

Table 2

No. of FT Workers⁶ Earning Less Than \$16,848 by Age*		
Age group	Number	% of FT wrkrs
16 - 30	8,460	23.6%
31 - 65	27,368	76.4%

* Source: Avg. March CPS 1994 - 1996.

Table 3

No. of FT Workers⁴ Earning Less Than \$16,848 by Education*		
Educ. Level	Number	% of total
No HS Dipl.	5,288	14.4%
HS Diploma	19,884	54.5%
Some college	3,861	10.5%
Assoc. Deg.	2,565	7.0%
BA / BS	4,125	11.3%
Grad. Deg.	858	2.3%

* Source: Avg. March CPS 1994 - 1996.

Findings: Phase 3

Under-employment and the Income Gap

We first estimated the number of people who participated in the workforce and, when they worked, worked full-time⁶ (FT) or part-time for economic reasons⁷ (Inv. PT) and earned less than our estimated livable wage for a single person (\$8.10 / hr or \$16,848 / yr). We then estimated the “**income gap**” for this group by subtracting their total wage and salary earnings from what they would have earned if each were paid \$16,848 / yr.

Table 1

Labor Force & the Income Gap (avg. 1994-96)	
	FT ⁶ and Inv. PT workers ⁸
Number < \$16,848	57,637
Income Gap	\$122,692,085

Source: March Current Population Survey for VT, avg. 1994 - 1996

Table 1 shows that on average over the past three years, 57,637 Vermonters (19% of all workers) who were in the workforce and who wanted and were available for FT work earned less than a livable wage for a single person.⁹ The aggregate income gap was over \$122 million which represents approximately 1.7% of total in-state adjusted gross income from wages and self-employment.¹⁰ This shortfall or income gap is a useful indicator of the inability of the economy to provide for the needs of those workers who want and are available for FT work.¹¹

It has been suggested that many who work at lower wage levels are young and can be expected to increase their wages as they gain experience and tenure. While this is true for many young people, the evidence shows that three quarters of low income workers are over 30 (see Table 2 at middle left). It is also assumed that low-income workers are less educated. However, while 69% of FT workers who earn less than \$16,848 have not attended college, fully 31% have some college or a degree (see Table 3 at bottom left).

⁶ Some FT workers experienced periods of unemployment or PT work. But when they worked, they usually worked more than 35 hr / wk.

⁷ Persons who work PT (< 35 hr / wk) involuntarily did so because of slack work or an inability to find FT work, rather than personal constraints or preferences.

⁸ Does not include those who work PT voluntarily or for non-economic reasons.

⁹ The magnitude (approx. 1 of 5 workers) is not surprising in light of our Phase 2 finding that 30% of all jobs in VT had a median wage less than \$7.50 / hr in 1995 and because many workers experienced a period of unemployment or worked PT involuntarily during the year.

¹⁰ Sources: Average 1994 - 1996 March CPS and VT Department of Taxes.

¹¹ Had we used the LW for a family of four (\$40,852 annually or an avg. of \$9.82 / hr for both working parents), the estimated income gap would be \$174,383,528.

Table 4

Estimated Annual Tax Revenue from Closure of the Income Gap*	
State income tax	\$2,821,918
State sales tax	2,632,208
Fed. income tax	11,287,672
FICA	7,606,909
Medicare tax	1,840,381
Tot. new revenue	\$26,189,088
Avoided EITC	+ \$3,466,127
Revenue + savings	\$29,655,215

* Based on estimated new income of \$122,692,085.

Other Impacts

- 1) Fewer families in poverty would: reduce the need for debt collection services by banks, utilities, hospitals, and landlords; lower company write-offs for bad debts; and therefore, decrease the cost of doing business. Furthermore, it would allow certain dedicated tax revenues (e.g., Universal Service Charge) to be targeted to the elderly, disabled, and non-working poor.
- 2) With more money available for housing, low-income homeowners would be able to do more routine maintenance and home improvements. This would improve the housing stock, save energy and money, and increase home equity, which is the primary source of savings for low-income workers.
- 3) With more disposable income, there would be less use of high interest rate credit cards for necessities and emergencies, and personal bankruptcies might decline.
- 4) Increased income could lead to higher child support payments which would further reduce the need for public assistance to single parents.

New Tax Revenues

If the income gap were closed and all FT and Involuntary PT workers earned at least \$16,848¹² there would be many positive benefits. For example, we estimate annual state income tax revenues of \$2.8 million from this new increment of income.¹³ Federal tax revenues would total \$20.7 million, including income tax, FICA, and Medicare tax.¹⁴ More-over, the Federal government could save \$3.5 million annually in avoided Earned Income Tax Credit (EITC) payments. Finally, we estimate annual state sales tax revenues of \$2.6 million from the after-tax income. **Total new revenues and avoided EITC payments would be approximately \$29.7 million annually**, which is equal to 24% of the income gap (see Table 4 at left).

Although we cannot know with certainty how families would spend their increased wages, it is possible to estimate such expenditures. The Bureau of Labor Statistics (BLS) publishes the Consumer Expenditure Survey (CES) which provides detailed information on the spending habits of American families. The BLS surveys and interviews over 30,000 families nationally and reports data for various family sizes, income levels, and regions.

By using the CES, it is possible to create a template for a family with a specific demographic and economic profile and, by using their existing spending patterns, estimate how they might spend additional disposable income. We developed such a model and applied Vermont's current sales and excise tax rates to all applicable expenditures.¹⁵ The result was that \$99 million in after-tax income (\$122 million minus all income taxes, see Table 4 above) would produce approximately \$2.6 million in annual sales tax revenues (see Table 11 on page 12).

For this exercise, we have assumed that the cost of closing the income gap would be paid for through price increases, which we estimate to be very small overall (see page 8). The magnitude of the price increases would vary by sector based on the number of low wage jobs, the percentage of overhead paid for labor, and the gross margin. Notwithstanding concerns about competitiveness, a large percentage of the responsibility for closing the income gap would be borne by sectors that are not directly threatened by low wage competitors (see pages 7 & 8). For now, it is enough to say that we believe the price increases would not seriously affect consumer demand. As a result, it is reasonable to assume the projected sales tax revenues would not be offset by revenue losses elsewhere in the system.

¹² This assumes all FT workers would be paid at least \$8.10 / hr and all Involuntary PT workers had enough hours to earn \$16,848 regardless of their hourly rate.

¹³ Based on the current state income tax rate of 2.3% (25% of the federal tax rate).

¹⁴ Based on 9.2% income tax, 6.2% FICA, and 1.5% Medicare tax.

¹⁵ We can only speculate how low-income families might spend new disposable income but it is at least plausible that it may follow current spending habits.

Table 5

Estimated Annual Program Savings from Closure of the Income Gap		
Program	Estimated Annual Savings	
	State	Fed Gov't
Medicaid	\$8,057,544	\$15,777,190
ANFC	\$3,891,479	\$7,167,892
Food Stamps	-----	\$14,776,861
LIHEAP	-----	\$1,912,600
Totals	\$11,949,023	\$39,634,543

Indirect Benefits

Along with reduced demand for public assistance, closing the income gap would also have a positive effect on families that rely on charity. Furthermore, as income from work replaced charity, it would decrease demand and allow more funds to be directed to the elderly, disabled, and the non-working poor.

For example, a recent report estimated that non-governmental charitable activities in Chittenden County totaled \$55 million in 1995 or about 23% of total human service expenditures (excluding education and social security).^{*} Higher wages for some would allow service agencies to redirect a portion of these funds to the elderly, disabled, and non-working poor.

^{*} "Funding Streams for Human Services and Public Education in Chittenden Co.: A Report of the Burlington Community Project," June 1996.

^{*} "The Food Stamp caseload trend [used to follow] the trend in changes to the unemployment rate. This relationship is changing [now] that more recipients are employed with lower wages [and] results in a caseload which is less likely to drop in relation to a drop in unemployment."

DSW, "People, Payments & Programs in FY96," p. 3 -- Food Stamps.

Public Assistance Program Savings

Because many low wage workers receive public assistance, there would be additional benefits to the state from closure of the income gap. For example, between 1994 - 1996, an average of 11.8% of Medicaid recipients worked FT or PT involuntarily and earned less than \$16,848.¹⁶ During that period, the Medicaid program averaged 83,047 participants with a total average annual cost of \$219.4 million per year. Therefore, assuming an average benefit for these recipients, the program could save \$23.8 million annually if these workers earned at least \$16,848.¹⁷ **Based on the allocation of costs,¹⁸ annual savings in the Medicaid program would be \$8 million for the State and \$15.8 million for the Federal government** (see Table 5 at left).

At least 19% of those who received Aid to Needy Families with Children (ANFC) worked in FY 94.¹⁹ Between 1994-96, ANFC averaged 26,046 recipients* (see Box bottom left) for a total average cost of \$62.2 million. Assuming an average benefit, the program could save \$11.8 million annually if these workers earned at least \$16,848.²⁰ **Based on the allocation of costs,²¹ annual savings in ANFC would be \$3.9 million for the State and \$7.2 million for the Federal government** (see Table 5 at left).

We estimate that the percentage of recipients who worked FT or PT involuntarily and earned less than \$16,848 was 34% for Food Stamps and 29% for fuel assistance (LIHEAP).²² The total average cost for each program between 1994 and 1996 was \$43.3 million for Food Stamps²³ and \$6.6 million for LIHEAP.²⁴ Both are funded almost entirely with federal funds. **Assuming an average benefit, the annual savings would be \$14.7 million for Food Stamps and \$1.9 million for LIHEAP.²⁵ Total estimated annual savings would be \$51.5 million (\$11.9 million state and \$39.6 million federal, see Table 5).**

¹⁶ Source 1994 - 1996 March CPS for Vermont.

¹⁷ We assumed administrative costs would decrease at the same rate as benefits.

¹⁸ Source: Dept. of Social Welfare (DSW), "People, Payments & Programs in FY 96," p. 2. Cost allocation is 31% state and 60% federal. Total does not equal 100% because we've excluded "special funds" (i.e., grants, donations & fees).

¹⁹ *ibid*, p. 1 ANFC. Our analysis of the CPS data found a higher percentage of ANFC recipients who worked but we used the DSW estimate to be conservative.

²⁰ The sum of the projected state and fed. savings shown in Table 5 does not equal \$11.8 million because a portion of the savings would accrue to "special funds."

²¹ *op cit.*, DSW, p. 2. Cost Allocation estimated to be 33% state and 61% federal.

²² Source 1994 - 1996 March CPS for Vermont.

²³ Jan. 20, 1998 telephone conversation with DSW staff.

²⁴ Jan. 20, 1998 telephone conversation with Richard Moffi (DSW). LIHEAP experienced a significant drop in federal funding after 1995 and the grant is unlikely to return to its previous levels. Therefore, we only averaged the last two years.

²⁵ Estimated LIHEAP savings could be used to increase benefits for non-working recipients, or for weatherization.

Savings From Avoided Child Poverty

Human Costs Linked to Poverty

In addition to the estimated economic costs of childhood poverty, there are many human costs as well. 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:

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 accid. 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.

* Note: It is likely that some of the estimated 22,800 children in poverty are in families without a parent in the workforce. We did not estimate the number of poor parents not in the workforce because employment status changes over time and we assumed that very few parents of children in poverty will never work. Therefore, the total educational costs of poverty shown at right may be somewhat inflated.

"When children do not succeed as adults, all of society pays the price: businesses are able to find fewer good workers, consumers pay more for their goods, hospitals and health insurers spend more treating preventable illnesses, teachers spend more time on remediation and special education, ... mayors must pay to shelter homeless families, judges must hear more criminal, domestic, and other cases, [and] taxpayers pay for problems that could have been prevented."²⁶

The Children's Defense Fund has attempted to estimate the economic costs of childhood poverty. Some key findings include:

- Child poverty's effects on future earnings: For each one year reduction in time a child spends in poverty, future lifetime earnings would increase \$12,105 per child.²⁷ **With an estimated 22,800 Vermont children in poverty,²⁸ the present value of the potential lost earnings and productivity is approximately \$276 million.**
- Public education for students who fall behind and must repeat grades for poverty-related reasons: 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.²⁹ **With an estimated 22,800 Vermont children in poverty, this means that approximately 356 additional children fall behind in school due to poverty. If each of them repeats one year of school at an average cost of \$5,642,³⁰ the annual statewide cost would be \$2,008,552.**
- Special education costs for poor children: 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.³¹ **This means that approximately 547 additional children need special education due to poverty. At an average per pupil cost of \$8,510,³² the annual statewide cost is \$4,654,970.**

²⁶ Sherman, Arloc, Wasting America's Future: The Children's Defense Fund Report on the Costs of Child Poverty, Beacon Press, Boston, 1994, p. 99.

²⁷ *ibid*, p. 112, Mary Corcoran & Terry Adams. See Appendix for details.

²⁸ Kids Count, Vermont Children's Forum.

²⁹ 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.

³⁰ Source: VT Dept. of Education, 12/8/97 phone conversation. We averaged the statewide cost / pupil for elementary (\$5,277) and secondary (\$6,007).

³¹ Chaikind, Stephen and Hope Corman, "The Impact of low birthweight on special education costs," *Journal of Health & Economics* 10 (1991); cited in Wasting America's Future, Fn. 36, p. 146. Again, other key variables were held constant.

³² Source: VT Dept. of Educ., 12/8/97 telephone conversation.

Table 6

1995 Occup. & No. of Jobs w/Median Hourly Wage less than \$8.10/hr ³³		
Occupation	Med. Wage	Jobs
Retail sales	\$6.50	8,165
Cashiers	5.40	6,787
Custodians/Janitors	7.00	4,306
Food Prep/Dishwash	5.90	3,554
Teacher Aides	7.40	3,284
Food Prep/Service	5.40	3,114
Stock Clerks-Retail	5.50	3,087
Nurses Aides	7.20	2,629
Maid/Housekeeping	6.30	2,622
Cooks/Chefs	7.50	2,389
Packers/Hand Labor	7.20	1,570
Landscaping Laborers	7.50	1,522
Stock Movers-Hand	7.90	1,516
Stock Clerks-Warehouse	8.00	1,511
Tellers	8.00	1,328
Cafeteria Cooks	7.50	1,217
Home Health Aides	7.10	1,119
Lunchroom Attendants	5.60	978
Packaging Mach Oprtr	8.00	957
Clerical Teacher Aides	7.10	953
Spec. Fast Food Cooks	5.00	873
Din. Rm. Attendants	5.80	869
Counter Clerks	5.10	868
Child Care Workers	5.90	828
Guards	6.50	763
Gas Sta. Attendants	5.90	730
Hairdressers	6.60	724
Driver/Sales Workers	7.00	722
Bakers- Bread/Pastry	6.20	706
Data Entry	7.30	680
Hotel Desk Clerks	6.80	665
Sew. Mach. Oprtr-garment	6.50	604
Short Order Cooks	6.20	516
Hosts/Hostesses	6.10	508
Vehicle Washers-Hand	6.90	458
Teachers-Presch/Kindr	7.50	457
Butchers & Meat Cutters	8.00	451
Switchboard Operators	7.40	439
Home Health Aides	6.90	397
Recreation Attendants	6.10	344
Library Assistants	7.20	341
Laundry Operators	6.20	340
Refuse Collectors	7.90	340
File Clerks	7.10	339
Radio/TV Announcers	7.90	328
Elec. Assemblers	7.30	324
Taxi/Van Drivers	6.40	277
Emerg. Medical Tech.	7.50	255
Mech. Helpers	7.10	245
Photo Proc. Mach. Oprtr	6.70	242
Cleaning & Building Serv.	7.70	228
Crossing Guards/Flaggers	7.90	206
Tire Repairers/Changers	7.80	199
Weighers/Measurers	7.00	171
Animal Caretakers-ex	6.20	152
Veterinary Tech.	8.00	146
Textile Mach. Operators	5.90	127
Sew. Mach. Oprtr-non-	7.90	119
Mail Clerks-exc P.O.	7.60	109
Electrician/Utility Helpers	7.70	98
Veterinary Assistants	7.10	95
Private Investigators	8.00	88
Messengers/Couriers	7.10	86
Pharmacy Aides	7.40	86
Transit Clerks	7.10	68
Porters & Bellhops	5.20	63
Screen Print. Mach. Oprtr	7.60	60
Office Mach. Operators	7.90	56
Funeral Attendants	7.70	51
Sewers/Custom Tailors	8.00	38

Low Wage Jobs by Occupation and Sector

The majority of low wage jobs are concentrated in a few occupational categories. According to the Department of Employment & Training (DET), there were 70,505 non-farm jobs with a median wage of less than \$8.10 / hr in 1995³³ (not including 7,454 waiters / waitresses and bartenders who earn gratuities). Of these 70,505, 69% were in service and sales (see Tables 6 & 7).

Table 7

Low-wage Jobs by Occupational Category in 1995 ³³					
Occupational Category	Total Unemp. Ins. Covered Employ't		Median Wage < \$8.10 / hr		
	No.	% of Tot.	No.	% of Tot.	% of Categ.
Service ³⁴	34,189	15%	29,629	42%	86%
Sales	29,585	13%	18,907	27%	64%
Production/Construction/Operating & Maint.	56,514	24%	8,984	13%	16%
Clerical	41,587	18%	6,746	10%	16%
Prof./Paraprof. & Tech.	53,295	23%	4,470	6%	8%
Agric./Forestry & related	2,157	1%	1,769	3%	82%
Managerial & Admin.	13,583	6%	0	0%	0%
Totals	230,910	100%	70,505	100%	30%

A closer examination of the data shows that 56% of the low wage jobs are found in only four sectors (see Table 8 below). This makes it possible to estimate the impact that closing the income gap would have on employers and prices in those sectors.

Table 8

Low Wage Jobs by Sector ³⁵	
Retail (sales)	18,907
Food & Bev. ³⁴ (service)	10,412
Education ³⁶ (prof/paraprof, service & clerical)	5,522
Health Care (service)	4,400

Note: The number of jobs in an industry group such as "Services" (e.g., health, legal, engineering, hotels, etc.) will exceed the number of jobs in "service" occupations because industry totals include non-service occupations such as management, professional and clerical. This is one reason average wage by industry can be misleading.

³³ DET Occup. Employment & Wage Survey 1993-95. Includes only jobs covered by Unemployment Insurance. Our earlier estimate (57,637) is lower because it excluded PT jobs held by those who worked PT voluntarily.

³⁴ Does not include 7,454 waiters / waitresses and bartenders.

³⁵ Although some work PT voluntarily, we estimate that the percentage of FT and Inv. PT workers was 43% in retail and 62% in service.

³⁶ This includes 828 child care workers (service) and 953 (clerical) teacher aides.

Impacts on Employers, Prices and Consumer Spending

Without new growth, the money to close the income gap must come from the existing pool. For this exercise, we have assumed the costs would be passed along in higher prices. The exact effects are uncertain but we have created a model using available data to estimate the impacts (see Introduction, p. 3).

It is important first to note the relative magnitude of the income gap. We estimate that \$122 million is 1.7% of the total average (in-state) wage and salary earnings over the past three years. But responsibility for much of the income gap would fall to employers in sectors with a large number of low wage jobs.

We assumed that distribution of new wages would be comparable to each sector's percentage of low wage jobs. For example, since retail accounted for 26.8% of all jobs with a median hourly wage of less than \$8.10, we would expect the retail sector to pay 26.8% of the income gap (\$32.9 million). Thirty three million dollars is equivalent to 5.8% of total payroll for the retail sector. But the likely impact on prices would be much less since \$32.9 million is only 0.7% of total retail sales (see Table 9 below).

Note: Impacts will vary somewhat based on the gross margin for a given sector.

The food and beverage sector accounts for 14.8% of the low wage jobs and would absorb approximately \$18.1 million in new wages. This is equivalent to 15.3% of total payroll but only 4.1% of total sales.

With 6.2% of the low-wage jobs, health care would absorb a \$7.7 million wage increase, which is about 1.2% of total wages but only 0.5% of total revenues.

Note: Areas for further research beyond the scope of this project include the ripple effects of such wage increases on higher wage jobs, and the possibility of differing impacts based on the size of a business.

The impact of price increases on consumer spending will vary based on the percentage increase in prices, the nature of the goods and services, and income level. There are several factors that mitigate against significant reductions in consumer demand, however: a) price increases are expected to be very small; b) wage increases for vulnerable low-income families means their spending will increase (although for some, the extra income may simply replace public assistance); c) small price increases should not be a problem for middle- and upper-income families; and d) generally, demand for essential goods and services is unlikely to drop in response to a small price increase.

Table 9

Estimated Impact of Higher Wages on Prices in Low Wage Sectors								
Sector	Low wage jobs		New wages ³⁷ (millions)	Tot. payroll (millions)	Tot. sales (millions)	Wages as a % of sales ⁴⁰	New wages as % of:	
	Number	% of tot.					Payroll	Sales
Retail	18,907	26.8%	\$32.9	\$563.5 ³⁸	\$4,734.8 ³⁹	11.9% ⁴⁰	5.8%	0.7%
Food & Bev.	10,412	14.8%	\$18.1	\$118.1 ⁴¹	\$442.3 ⁴²	26.7% ⁴³	15.3%	4.1%
Health Serv.	4,400	6.2%	\$7.7	\$659.8 ⁴⁴	\$1,552.5 ⁴⁵	42.5% ⁴⁶	1.2%	0.5%

³⁷ Multiply sector percentage of low wage jobs x the estimated income gap of \$122,692,085.

³⁸ Census Bureau, 1992 VT Economic Census Profile, Table 1.

³⁹ *ibid.*

⁴⁰ *op cit.*, 1992 VT Economic Census.

⁴¹ Multiply total sales x the percentage "wages as a % of sales."

⁴² *op cit.*, 1992 VT Economic Census.

⁴³ Census Bureau, 1992 Assets and Expenditures Survey, Table 1 (national data).

⁴⁴ DET, 1996 Employment and Wage Survey. Multiply total sector employment (25,873) x average wage for health care (\$25,502).

⁴⁵ Divide total payroll by the percentage "wages as a % of sales" (not available from the 1992 VT Economic Census).

⁴⁶ *op cit.*, 1992 Assets and Expenditures Survey.

Summary and Conclusions

Table 10

Estimated new revenues, avoided tax credits, and program savings from closure of the \$122 million income gap			
Item	Vermont	Federal Gov't.	Totals
Income taxes	\$2,821,918	\$11,287,672	\$14,109,590
FICA	-----	7,606,909	7,606,909
Medicare Tax	-----	1,840,381	1,840,381
Avoided EITC	-----	3,466,127	3,466,127
Sales taxes	2,632,208	-----	2,632,208
ANFC	3,891,479	7,167,892	11,059,371
Medicaid	8,057,544	15,777,190	23,834,734
Education	6,663,522	-----	6,663,522
Food Stamps	-----	14,776,861	14,776,861
LIHEAP	-----	1,912,600	1,912,600
Totals	\$24,066,671	\$63,835,632	\$87,902,303

- We estimate that, on average over the past three years, 57,637 working Vermonters (who wanted and were available for FT work) earned less than the LW for a single person (\$16,848).
- The amount needed to raise the wages of all members of this group to at least \$16,848 (which is well below the LW for a family) is approximately \$122 million. We estimate this to be 1.7% of the state's total wage and salary income.
- \$122 million in increased wages would result in approximately \$29.7 million in annual state and federal tax revenues and avoided tax credits.
- Closure of the income gap would reduce demand for public assistance (and preventable education costs) and produce estimated annual savings of \$58.2 million (\$18.6 million for the state and \$39.6 million for the federal government (see Table 10 above).
- The costs of closing the income gap would be borne proportionally by those sectors with large numbers of low wage jobs. The impact on operating costs and prices would be modest, however, since the new wages represent a relatively small percentage of total sales in the affected sectors.
- The effect of the expected price increases on consumer demand should not be significant.

There are innumerable additional benefits that cannot be easily quantified but can be expected to have posi-

tive economic, fiscal, and quality of life impacts. Among others, these include: 1) improving the likelihood that more children will become healthy and productive adults; 2) improving the likelihood that more adults and children will receive adequate health care which would improve the quality of their lives and save money in preventable illness; 3) decreasing the incidence of poverty-related domestic and child abuse; and 4) decreasing poverty-related crime.

Notwithstanding concerns about competitiveness, a large percentage of the responsibility for closing the income gap would be borne by sectors that are not directly threatened by low wage competitors in other states or countries.

For example, education and health care services are almost always provided within the community. Moreover, with the exception of border towns, the majority of retail sales are to local residents, and labor, unlike goods purchased for resale, is not subject to competitive pressures from Mexico or other regions of the U.S. As for the food and beverage sector, it could be argued that, as a discretionary expenditure, there is less of a need to be concerned about price impacts. In any case, the impact on these sectors is likely to be rather modest and should not result in significant price increases.

The estimated \$87.9 million in new revenues and program savings (see Table 10) could be considered an indirect subsidy for those sectors with large numbers of low wage workers. To the extent some

sectors pay low wages resulting in lower tax revenues and the need for public assistance for their workers, the state's taxpayers pay the bill.

The use of taxpayer funds to subsidize certain economic activities is not uncommon or necessarily inappropriate. In this case, however, there has been no opportunity to discuss the need for or extent of such subsidies, their equity, or their cost-effectiveness.

At present, Vermonters pay about \$18.6 million every year to help support low wage workers and the federal government (using our tax dollars) pays an additional \$39.6 million (ANFC, Medicaid, Food Stamps, LIHEAP and education costs -- see Table 10 on page 9). This is \$58.2 million employers don't have to pay which has the effect of subsidizing the prices of their goods and services -- and the owners' profits. If these workers were paid at least \$16,848, taxpayers could avoid these costs and benefit from \$29.7 million in new tax revenues (see Table 4).

Another way of looking at the problem is that we now invest about \$58.2 million annually in public assistance for low wage workers and their families. This aid provides important benefits for needy families but produces limited direct economic return (sales taxes). If we paid \$122 million to close the income gap, we would get a return of about \$30 million in new tax revenues, resulting in a total cost of \$92 million. After subtracting \$58.2 million (formerly public assistance, now wages), **the net cost of increasing the self-sufficiency and dignity of 57,637 workers and their families is about \$34 million.** This is equal to less than three tenths of one percent (0.0026%) of the state's annual gross product.⁴⁷

Obviously, the state would not get to retain all of the potential savings and new revenues since a large percentage accrues to the federal government. Nevertheless, if Vermont were to work with businesses to increase wages, the state could request a percentage of the estimated \$39.6 million in federal program savings to be redirected for other purposes.

We have not analyzed the distributive impacts of closing the income gap but we know that the state's share of the current costs of public assistance are paid through taxes (over 60% of which are from income and

sales taxes). We also know that most of the 57,637 workers who earn less than \$16,848 pay little if any income taxes (and some receive earned income tax credits). Therefore, the current state cost of \$18.6 million is borne primarily by the remaining 250,000 workers.

If, as we have assumed, the costs of higher wages were to be paid through increased prices, then all consumers would share the burden (regardless of income source), including the low-income workers who formerly received public assistance. This is a much larger pool of contributors. And, finally, the investment in higher wages would result in approximately \$5.4 million in new income and sales tax revenues from the workers who benefit from the increase (see Table 4).

It is possible the Legislature could decide to forego a portion of the new revenues and program savings, and fund a tax cut. Such a tax cut could be used to mitigate the possible adverse impacts experienced by small businesses and middle-income working families. Although modest, the order of magnitude of such a potential tax cut is not insignificant when we consider that the state's share (\$24 million) is equal to either 9.6% of state revenues from the FY 95 personal income tax, 13.8% of sales and use taxes, or 53% of corporate taxes.

In summary, our research suggests that an increase in wages for low-income workers would have a positive effect on state revenues and dramatically reduce public assistance program costs. The resulting impacts on prices and consumer spending are expected to be quite modest.

Note: It's important to remember that our analysis was based on a LW for a single person. Based on our earlier research, a wage increase to this level would not meet the basic needs of most families -- even with two incomes.

⁴⁷ According to the U.S. Dept. of Commerce, Bureau of Economic Analysis, Vermont's gross state product for 1994 was \$13.282 billion.

Sources and Methodology

Primary Sources

1. Current Population Survey (CPS): The CPS is produced by the U.S. Department of Commerce, Bureau of the Census. The CPS is the source of official government statistics on many facets of employment and unemployment and has been conducted monthly for over 50 years. The survey includes monthly interviews with about 57,000 scientifically selected households in order to represent the nation as a whole. The March CPS contains additional information on income and non-cash benefits which was particularly useful for this Study.

The Vermont portion of the national sample is comparatively small and, in any given year, may not accurately reflect Vermont's current demographics. Therefore, in order to avoid the possibility of reporting misleading information from an abnormal year, we averaged data from the three most recent March surveys. The Vermont sample typically consists of about 500 households including over 700 people who had wage and salary income in the previous year.⁴⁸

2. Vermont Occupational Employment and Wage Survey 1993 - 1995 (VT Dept. of Employment & Training): "The Occupational Employment Statistics (OES) program is an annual mail survey conducted by [DET] in cooperation with the Bureau of Labor Statistics (BLS). The survey is designed to collect data on occupational employment and wage rates of workers in non-farm industries. All of Vermont's nonfarm industries are surveyed over a three-year period to complete one OES cycle. Occupational employment estimates are based on survey results expanded to reflect total employment as reported by the Unemployment Insurance Covered Employment & Wages program. Employment and wage estimates ... are adjusted to the most current OES survey [in this case] 1995. Respondent [companies] did not report actual wages. Rather, they reported employment in 11 wage ranges."⁴⁹ "BLS [has] determined that although the data was collected by ranges, the mean and median hourly wage could be calculated accurately to the nearest ten cents."⁵⁰
3. Vermont Economic Census Profile: The national Economic Census is the primary source of detailed facts about the economy. Data is collected from surveys every five years for 900 out of 1,000 of the industries in the Standard Industry Classification system. The last survey was mailed to 3.5 million establishments in December, 1992. The survey includes data on the number of establishments and employees, payroll, and various measures of output.
4. Assets and Expenditures Survey (1992): The report is prepared in conjunction with the Census of Wholesale Trade by the Bureau of the Census. The report is based on information collected from a probability sample of merchants used to produce monthly national estimates of wholesale sales. We used data provided at our request from unpublished tables. Some of the data estimates provided have undergone only limited analytical review and may not meet Bureau publication standards due to high sampling variability or a high rate of imputation for missing data. Fortunately, the data of particular interest to us was not noted as suspect.
5. "Wasting America's Future" (Children's Defense Fund): This book contains a wealth of information including original and previously published research on the economic impacts of childhood poverty. Many of the researchers commissioned by CDF or cited in the book analyzed data from the Panel Study of Income Dynamics, an ongoing federally supported survey of families.

⁴⁸ Several hundred others had income from other sources including Social Security, stocks and bonds, and private or military pensions. These individuals were excluded from our sample.

⁴⁹ DET, Occupational Employment and Wage Survey 1993 - 1995, p. 1.

⁵⁰ *ibid.*, p. 65.

6. “People, Payments and Programs in Fiscal Year 1996” (VT Dept. of Social Welfare): The report profiles the DSW and includes summary data for all of the Department’s major programs. In some instances, it was necessary to contact DSW staff for more current or detailed information.
7. Vermont Tax Statistics (VT Dept. of Taxes): This annual report contains, among other things, summary data on personal income tax returns.

Methodology for Sales Tax Calculation

As we discussed on page 4, we developed a model to estimate sales tax revenues from the \$99 million in new after tax income. We assumed the distribution of new expenditures would be similar to current spending patterns. Using the Consumer Expenditure Survey (CES), we calculated the percentage of disposable income spent on various categories by a family of four with two wage earners and annual income of \$34,907. We then multiplied the category percentages times the total after tax amount of \$99 million to estimate the aggregate amount spent in each category. We then determined which categories (or portions thereof) were subject to Vermont sales and excise taxes and the tax rate for each. By multiplying the tax rate times the applicable amount of new expenditures, we arrived at the estimated tax revenue for each category.

Table 11

Estimated Household Distribution of New Income and Resulting Sales and Excise Tax Revenues					
Category	% of Budget ⁵¹	New Expenditures	Tax rate	Apply to:	Est. Tax Revenue
Transportation ⁵²	21.1%	\$20,932,623	5.0% \$0.16	purchases gasoline	\$981,824 total
Housing	18.4%	18,243,289	---	none	0
Food ⁵³	16.4%	16,306,134	7.0%	meals out	376,672
Utilities ⁵⁴	7.1%	7,074,050	4.5%	telephone	92,316
Apparel	6.0%	5,936,830	5.0%	all	296,841
Health care	5.9%	5,817,436	---	none	0
Entertainment	5.5%	5,495,075	5.0%	all	274,754
HH furnishings	3.8%	3,754,918	5.0%	all	187,746
HH supplies	1.6%	1,620,763	5.0%	all	81,038
HH services	1.6%	1,564,052	---	none	0
Personal care products	1.1%	1,080,509	5.0%	all	54,025
Alcohol	0.9%	871,571	5.0%	all	43,579
Miscellaneous ⁵⁵	10.5%	10,437,955	\$0.44	cig. only	243,413
Totals	100%	\$99,135,205			\$2,632,208

⁵¹ Percentages derived from CES 1992 - 93 for a family of four with after-tax income of \$32,266 (Table 37, pp. 146 - 149).

⁵² On average, 46% of transportation expenditures for this group are spent on purchases and 18% for fuel. We assumed \$1.20 / gallon of gasoline. The remainder is spent on nontaxable items such as finance charges, insurance, fees, etc.

⁵³ On average, 33% of total food expenditures for this group are outside the home.

⁵⁴ On average, 29% of utility expenditures for this group are for telephone services.

⁵⁵ Includes life insurance, education, and tobacco. On average, 10.6% of miscellaneous expenditures for this group are for tobacco. We assumed \$2.00 / pack.