

Danger Zones: When Earning More Can Mean Getting Less

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INTRODUCTION

Advocates for low-wage workers have long understood that the system of benefits and tax credits designed to support the working poor has idiosyncratic, often unpredictable, effects on the availability of total household resources. When earnings increase, benefits and tax credits are diminished. Many observers suspect that loss of benefits and tax credits contributes to the conditions that trap many low-wage working families in poverty, but little research has investigated this proposition. Individuals and organizations who work directly with low-wage workers have found their efforts to help workers secure better employment often thwarted by hidden penalties. Hidden penalties existent in Food Stamps and the Earned Income Tax Credit (EITC) were compounded in the 1990s when many states created new, stronger work support programs to augment welfare reform efforts.

This paper is one product of a broader research effort that seeks to understand the impact of these hidden penalties, which can be collectively considered as an implicit marginal effective tax rate on earnings. High marginal tax rates affecting high-income earners are often criticized for creating disincentives to higher productivity, yet many families in the bottom earnings quintile are subject to much higher marginal effective rates.

We endeavor to document the relationships among three support programs (Food Stamps, childcare subsidies, SCHIP health insurance) and two tax credits (EITC and Homestead Credit) and to trace the impact these relationships have on the total household resources available to working families in Wisconsin. Research tools include two computer models developed by non-profit organizations in Wisconsin, and a unique data set that provides detailed demographic and earnings information on the entire universe of Wisconsin families that filed tax returns or received program benefits in 2000.

We find that many families are vulnerable to the negative effects of high marginal tax rates through a range of earnings that can span \$20,000 or more. Throughout these “danger zones,” workers see little benefit from earning more. Total household resources remain nearly the same, or even decline, compared to resources available at lower earnings levels. Paradoxically, the more programs on which families rely, the more vulnerable they are to extended danger zones. Yet for many families, receipt of program benefits and tax credits is required to meet a basic needs budget. Preliminary findings presented in this paper suggest the following:

- Taking full advantage of available tax and benefits programs can significantly augment low-wage earnings;
- Full program participation can also result in significant income stagnation as earnings rise;
- In any given year, a sizeable number of Wisconsin households are in danger of seeing little or no benefit from increased work and earnings.

BACKGROUND

The findings in this paper arise from a broad research and policy advocacy endeavor called the Making Work *Work* Project, which has its roots in the demonstration experiment of the New Hope Project. The New Hope Project is a non-profit organization in Milwaukee, Wisconsin, with the mission of helping all low-income adults get out of poverty through work. During the 1990's, New Hope operated a controlled experiment testing the efficacy of using wage and benefit subsidies to achieve this mission. The offer made to New Hope participants involved wage and benefits subsidies intended to ensure that full-time, year-round work would always be sufficient to support a family. The merits of this design have been increasingly recognized in federal and state welfare and workforce development policy.¹

Because of external tax and benefit impacts, the New Hope model could not ensure that participants' increased work effort resulted in significant net income growth, despite a conscious effort to design the project's wage supplement to account for these externalities. New Hope suspects that this led to reduced work effort in the experimental group as compared to the control.

For those above the lowest wage levels, working more or earning more often has a very poor return. A raise may improve one's financial standing little. Higher taxes, larger co-payments, and reduced benefits often mean that over half of that raise is lost. More ominously, the raise could push the worker over a benefits "cliff" where a few additional dollars earned results in loss of hundreds or thousands of dollars in food aid, child care assistance, or health coverage.

The *marginal tax rate* (MTR) measures the amount of new income (earnings after taxes, tax credits, or benefits) available to a worker who earns one additional dollar. MTRs describe how much money a worker brings home after deducting the value of benefits lost and taxes paid. When the MTR exceeds 100%, workers lose more than they gain in new earnings.

MTR discussions have traditionally centered on higher income households, with a MTR even approaching fifty percent widely decried as confiscatory and counter to basic economic incentives. Yet MTRs well over fifty percent affect both the working poor and many with more middle class incomes.

¹ *New Hope for Families and Children: Five-Year Results of a Program to Reduce Poverty and Reform Welfare*, Aletha C. Huston, Cynthia Miller, Lashawn Richburg-Hayes, Greg J. Duncan, Carolyn A. Eldred, Thomas S. Weisner, Edward Lowe, Vonnie A. McLoyd, Daniella A. Crosby, Marika N. Ripke, Cindy Redcross (Manpower Demonstration Research Corporation, 2003). Additional information may be found at www.newhopeproject.org.

As part of its post-operations efforts to build on lessons learned, New Hope organized the Making Work *Work* Project, a broad coalition of advocacy, labor and employer organizations.² The Project has three general hypotheses:

1. Current tax and benefit policies combine to impose high MTRs on lower-income working families.
2. High MTRs hinder Wisconsin's economic growth by creating disincentives to earning more (discouraging skills building, greater labor force participation, etc.).
3. The labor force response to high MTRs curtails the ability of Wisconsin businesses to grow as robustly as would be otherwise be possible.

Moreover, high MTRs for lower-income workers are antithetical to American principles of justice and equal opportunity.³

MODELING MARGINAL TAX RATES

The high MTRs faced by low-wage workers emerged as a target of policy reform in the aftermath of welfare reform. Transformations in welfare policy in the 1990s included the implementation of new kinds of support programs and tax credits designed to support the stated policy goal of moving workers toward self-sufficiency through work. These changes in welfare policy, combined with the imposition of strong restrictions on eligibility and receipt of cash assistance, resulted in thousands of families moving off welfare, putting a spotlight on the difficult circumstances that continued to thwart their movement up the ladder toward self-sufficiency.

The Institute for Wisconsin's Future developed the FIRST model (*Family Income Resource Simulation Tool*) in an attempt to understand and illustrate these difficulties.⁴ The model has three components, which are tailored to the specific family characteristics defined by the user: a basic needs budget; a detail of program supports and tax credits available at any given hourly wage level; a policy change module that compares the family's experience of current policy with proposed reforms. Data used to calculate these aspects of a family's move toward self-sufficiency are state- and county-specific.

² The Making Work *Work* Project is a collaboration with the following organizations: Competitive Wisconsin (a consortium of business, labor, farm and education leaders concerned with Wisconsin's economic development), Institute for Wisconsin's Future (a statewide policy research and community education center located in Milwaukee that works to increase citizen involvement in decision making on key state policies), Metropolitan Milwaukee Association of Commerce (a chamber representing more than 2,500 businesses in the four-county Milwaukee metropolitan area), Public Policy Forum (a Milwaukee non-partisan public policy research organization and good government watchdog), Wisconsin Council on Children and Families (a statewide social change organization working to improve the delivery of health and human services in Wisconsin), and Wisconsin State AFL-CIO (the statewide coordinating council for all AFL-CIO unions in Wisconsin).

³ In 2000, the comparative MTR for high-income workers was 54%, composed of the following: 39.6% (federal income tax), 6.75% (Wisconsin income tax), and 7.65% (Social Security and Medicaid taxes).

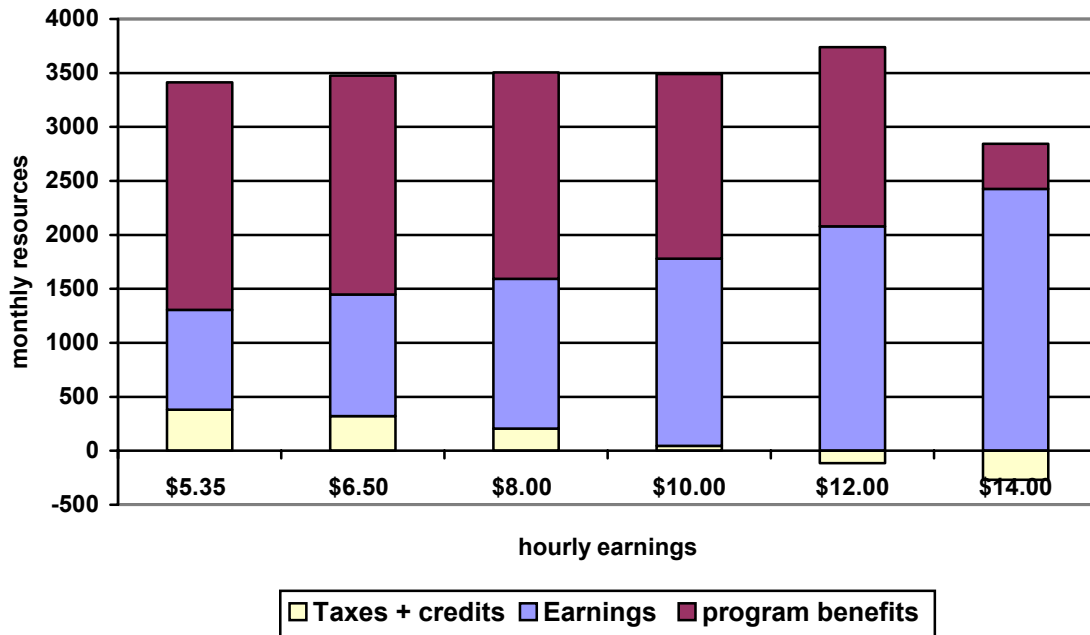
⁴ More information on the FIRST model, including detailed descriptions of source data and assumptions, is available at <http://www.wisconsinsfuture.org/First%20Model/first.htm>

The FIRST model can identify any family’s total possible household resources at any given wage level, and compare those resources to the amount needed to maintain a very basic standard of living. The model maps the consequences of the interaction of benefits programs and tax credits, illustrating the broad contours of a problem experienced by many New Hope participants: often, earning more does not mean doing better. This is especially true for families that receive the full complement of support programs and tax credits for which they are eligible.

Tax credits and benefits programs are absolutely crucial to meeting the basic needs budget, but the more a family avails itself of these resources, the more vulnerable it will be to high MTRs.

Figure 1 illustrates the effects of high MTRs on the total household resources of a single parent with two children. Large incremental gains in earnings result in little change in total income (defined as earnings + [tax liability - tax credits] + subsidies). Even if this worker doubles her hourly wage rate, she has little additional disposable income. At most wage levels, total household resources are just enough to sustain the basic needs budget itemized in the model, which for this family totals \$3406/month.

Figure 1: Resources of Single-Parent, Two-Child Family



The FIRST model illustrates the impact of high MTRs but does not provide the tools necessary to evaluate them systematically. In pursuit of these tools, the authors developed another spreadsheet model that calculates the MTR at each annual income increment of \$500 from \$0 to \$60,000 for different family configurations and program participation combinations. The model measures not only the impact of additional earnings on each individual program but also the consequences of program interactions. Changes in

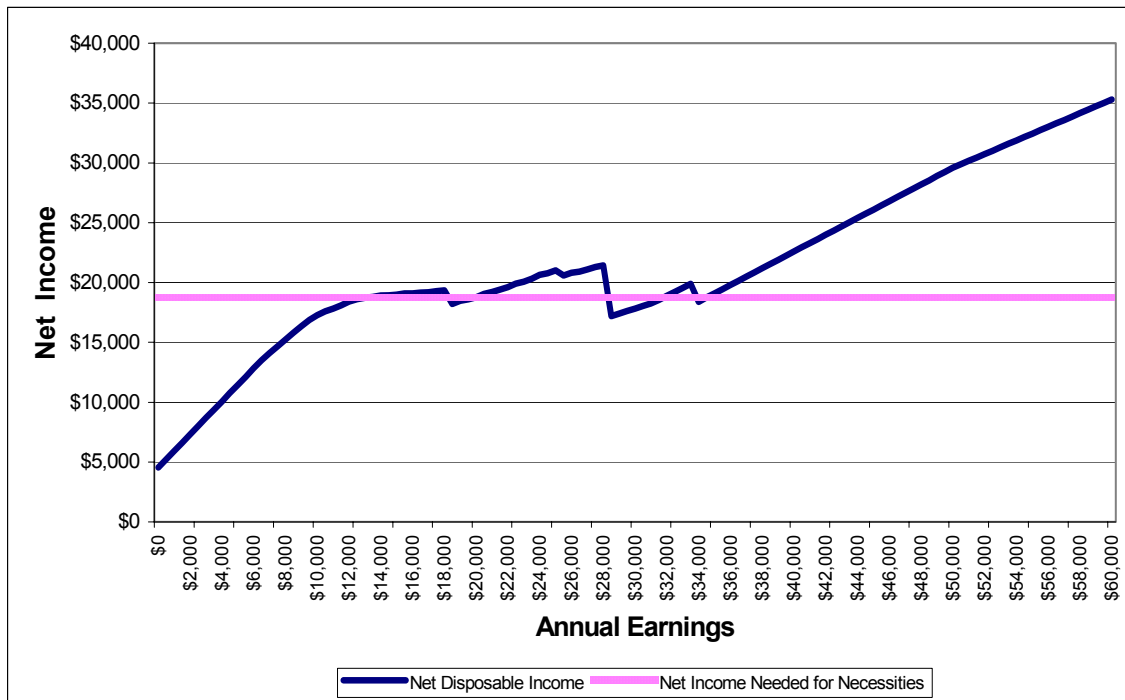
income do not translate directly into equivalent changes in program benefits or tax liability because program rules include often very complicated considerations of income and expenses. For example, receipt of subsidized child care accelerates ineligibility for programs (such as BadgerCare) that include an earnings-offset tied to child care costs incurred. Appendix A summarizes the parameters used in developing the model.

Recognizing that an exclusive focus on MTRs is inappropriate, New Hope incorporated an adequacy standard similar to the FIRST model’s into its model.⁵ While the MTR approach helps to illuminate the difficulties faced by low-wage workers, it can suggest policy solutions that contradict the overall goal of mitigating these difficulties. From a theoretical perspective, eliminating all public assistance benefits would resolve the marginal tax rate problem but would put thousands of families in jeopardy and have deleterious effects on the state economy. The adequacy standard focuses attention on the need for a balanced approach.

According to the New Hope model’s adequacy standard, a single parent with two children participating in available programs could support her household at a minimally adequate level with a full-time, year-round hourly wage of \$6.20. This finding is consistent with the profile of a similar family in the FIRST model.

High MTRs undermine gains in net disposable income, as shown in Figure 2.

Figure 2: Impact on Net Disposable Income of Single-Parent, Two-child Family



⁵ The methodology is also consistent with recent work of the Center on Public Policy Priorities (*Making It: What it really takes to live in Texas*, 2001), the Economic Policy Institute (*Hardships in America: The Real Story of Working Families*, 2001), and the Education Fund of the Wisconsin Women’s Network (*The Self-Sufficiency Standard for Wisconsin*, 2000).

As earnings rise in Figure 2, true income often changes little. The worker in this example is doing just as well at \$13,000 a year as at \$33,000 a year. For her, work does not continue to pay. Rather, as long as her earned income ranges from \$13,000-\$33,000, her family experiences a **danger zone**.

We define danger zones as income ranges where increased income results in little increase in total household resources, as a result of both *cliff* and *stagnation* effects.

Families experience *cliffs* when an additional dollar of income results in a net loss of resources. Cliffs occur when small increases in income render families ineligible for some programs or tax credits, or result in imposition of a large co-payment responsibility.

In Wisconsin, there are four cliffs associated with the programs under study here (each of which may be seen in the chart above as a downward shift in the net disposable income line):

Food Stamps eligibility ends when gross income exceeds 130% of the federal poverty level, which usually has a cliff effect because benefits are otherwise set according to a net income formula.

BadgerCare premiums are imposed at the rate of 3% of net income beginning at 150% of poverty (net income will vary depending on other expenses, such as child care costs).

Wisconsin Shares eligibility is lost when income exceeds 200% of poverty.

BadgerCare eligibility is lost when net income exceeds 200% of poverty, which is a higher income than that applicable to Wisconsin Shares because of deductions included in the net income calculation.

Stagnation may be seen in the relatively flat slope of the middle portion of the net disposable income line of Figure 2. Programs with higher phase-out rates, such as Food Stamps and the Earned Income Tax Credit, reduce the impact of increased earnings. The MTRs associated with programs that have smaller phase-out and co-payment rates – as well as positive tax liabilities -- compound the stagnation effects experienced by families enrolled in Food Stamps and receiving the EITC.

Each program under consideration has a phase-out rate through which benefits decline as household income rises:

Food Stamps benefits are reduced by 30% of any increase in net income, but there is also a 20% earned income disregard, so the basic phase-out rate is 24%. But because of the factors included in the calculation of net income, the *de facto* phase-out rate can be higher by ten percentage points or more, depending on a household's individual circumstances.

The **EITC** is phased in at very low incomes, is constant for a range of income, then begins phasing out at \$12,690 (in 2000) for families with children. The phase-out rate varies by number of children. The federal phase-out rate is about 16% for families with one child and about 21% for families with two or more children. Because the Wisconsin EITC is a percentage of the federal that also varies by family size, the combined phase-out rate can be as high as 30%.

The **Homestead Credit** phases out at a rate of approximately 7% at incomes above \$8,000.

Wisconsin Shares participants are required to make a co-payment to the child care provider. The amount of the co-payment varies by family size, income, number of children in care, and type of care used and cannot exceed 12% of a family's income. But the actual co-payment is based on a schedule in which each row represents a 5% increment in income as a percent of the federal poverty level. This means that the rate of increase is not continuous, and the effective phase-out rate at any point can range from 0% to over 50%.

BadgerCare premiums, when assessed, increase by 3% of net income.

The combined cliff and stagnation effects expose a large number of households to potential danger zones.

ASSESSING INCIDENCE OF HIGH MARGINAL TAX RATES

Program Participation Rates

The computer models described above illustrate the interaction among programs from a theoretical perspective, but they provide little information about how – and how many – families actually experience these problems. Calculating the magnitude of the problem is limited by a number of factors. We know little about which program combinations are typical among working families. We have limited data on factors associated with non-financial eligibility, such as access to health insurance through the workplace or the decision to use formal childcare. Finally, vulnerability to danger zones depends on movement across a wage scale. Existing computer models can show what happens to a family when earned income increases, but we have little information on how quickly Wisconsin families move up or down the income ladder.

Administrative program data indicate significant participation in each program, as shown in Table 1.

Table 1: Participation in Working Family Support Programs and Tax Credits, 2000

Program	Enrollment
Food Stamps <i>Households receiving benefits</i>	129,758 ⁶
EITC <i>Households receiving credit</i>	185,499 ⁷
Homestead Credit <i>Households receiving credit</i>	203,700 ⁸
Wisconsin Shares (subsidized child care) <i>Families with children enrolled</i>	36,623 ⁹
BadgerCare (SCHIP)	<i>not avail.</i> ¹⁰

While these data suggest a significant number of families could be subject to high MTRs, they do not point to a more definitive calculation of the impact of the problem. Utilization of multiple programs and tax credits increases a family's vulnerability to higher MTRs, yet the extent to which families combine these resources can only be theorized with existing data.

Differences in program eligibility criteria and take-up rates render such theorizing inherently problematic. Broadly speaking, the EITC and the Food Stamps program serve many families with children that have incomes at or slightly above the poverty line. But because there are significant differences in program design, researchers know better than to assume that all families that receive the EITC also receive Food Stamps (or vice versa). Food Stamps recipients include older adults and single persons with disabilities, most of who do not have a child qualifying them for the EITC. Conversely, eligibility for the EITC extends to families with incomes that exceed the maximum allowed for Food Stamps.

A full assessment of the impact of high MTRs also requires more specific income data than has previously been available. Families enrolled in multiple programs are more vulnerable to stagnation effects, but families enrolled in even one program with a cliff effect can be subject to painful consequences if their earned income increases. Families enrolled in programs with cliff effects – Food Stamps, BadgerCare, Wisconsin Shares – are subject to cliffs whether or not they are also enrolled in any other program or receive

⁶ *Wisconsin Works and Related Programs Data: Food Stamp Data*, Wisconsin Department of Workforce Development, www.dwd.state.wi.us/dws/rsdata/fsdata.htm.

⁷ *Wisconsin Earned Income Tax Credit: Summary for 2001*, Wisconsin Department of Revenue (December 2002).

⁸ *Homestead Tax Credit*, Informational Paper #24, Wisconsin Legislative Fiscal Bureau (January 2003).

⁹ Data provided to coalition by Wisconsin Department of Workforce Development. Figure does not include all families deemed to be program participants, such as families eligible to receive benefits who did not have a child enrolled in an approved program.

¹⁰ Unduplicated annual counts of households receiving program benefits not available.

any tax credits. But while every family enrolled is technically vulnerable to a cliff effect, in reality only families with incomes that are at the upper end of eligibility limits (or approaching the threshold for requiring co-payments) are in imminent danger. To date, data on program participation have not been specific enough to identify how many families are approaching the thresholds associated with cliffs.

The Making Work *Work* coalition organized to effect policy change, but our efforts to prioritize specific reforms have been hampered by the limitations of existing data. In an effort to provide a more fundamental grounding for our policy agenda, we sought a comprehensive data set. In 2003, we succeeded in acquiring a series of administrative files from the State of Wisconsin that provide information on the complete universe of families in Wisconsin. For the majority of families that were enrolled in benefits programs, program participation data is linked with tax file data. The files, which taken together represent a complete and completely unique portrait of working families, are described in more detail in Appendix B. Data in these files describe program and tax participation for 2000. Based on this data, we have the opportunity to describe the subset of families who were vulnerable to high MTRs at a point-in-time. This snapshot approach likely underestimates the full extent of the problem, and does not permit us to document the extent to which families move in and out of, or repeatedly cycle through, danger zones. We expect to acquire similar data for subsequent years, enabling more complex analyses in the future.

Organizing Program Participation Data

The goal of organizing the data was to create a roster representing all Wisconsin households in 2000 with information about the factors determining MTRs: income, marital status, number of dependents, and participation in the following five programs: EITC, Homestead Credit, Food Stamps, Wisconsin Shares (child care), and BadgerCare (SCHIP).

We chose to use the tax filing unit as the household whenever possible. This includes single persons without dependents, single parents, and married couples (both with and without dependents). The files obtained from the State of Wisconsin had matched program participation data to the Social Security Numbers of tax filers. We needed to take the unmatched program participants (a minority of the cases) and match their participation to a tax filing household if possible, which we did by identifying household members from the individual program files. For those individuals remaining unmatched, we used the case configurations observed in the program files to establish additional household records.

Because we also had access to matched earnings data from the unemployment insurance files and because the MTR issue relates to the impact of additional earnings, we used those wage reports to construct household income whenever possible. When not available, we used the adjusted gross income from the income tax files. For households not appearing in the tax records, we calculated income based on information in the

program files and the unemployment insurance records and used program file information to estimate marital status and number of dependents.

The data were collected by government agencies for the purpose of administering, and reporting on, specific tax and benefits programs, with all the richness and complexity implied. For a small subset of households, inconsistency in definitions of income and household across programs posed considerable challenges to constructing a useful data set. We have summarized the more significant data problems and provisional solutions in Appendix C.

Data Analysis

We constructed a master file with a total of 2,769,493 households. Of these, 84% are from the tax files for Social Security Numbers that did not appear in the program files (including child support), with non-filing program participants matched to those files whenever possible.

The principal household types are illustrated in Table 2.

Table 2: Universe of Families in Matched Data Set, 2000

# of dependents	single	married (joint)	head-of-household
0	48%	20%	1%
1	2%	7%	4%
2	0%	9%	2%
3	0%	4%	1%

Of the 2,769,493 total households, 2,009,112 have incomes below \$45,000 a year, and 454,197 of those households have at least one dependent. It is within this group that program participation may create high MTRs.

The principal household types within this group are shown in Table 3.

Table 3: Universe of Families with Dependents and Incomes Under \$45,000 in Matched Data Set, 2000

# of dependents	single	married (joint)	head-of-household
1	5%	22%	14%
2	1%	29%	7%
3	0%	12%	2%
4	0%	4%	1%

This is larger than the number of Wisconsin households reported in the 2000 Census, as shown in Table 4.

Table 4: Wisconsin Households, 2000 Census

Number in Household	Family Households	Non-family Households
1	0*	557,799
2	611,323	108,467
3	304,404	15,756
4	285,281	6,031
5 or more	194,029	3,241
Total	1,395,037	691,267
TOTAL HOUSEHOLDS	2,086,304	

Our household count exceeded the census count for a number of reasons. First, we chose to base our definition of household on tax filing status. As a result, some distortions were built into the calculation. Additionally, residents of another state who had income in Wisconsin would be counted in our household tally.

Moreover, we made a conscious decision to count some households twice, in an effort to capture every situation in which MTRs affected a family. In some cases, a single instance of program participation – such as receipt of subsidized child care – might have had a MTR impact in or more households. If a participating parent were living with her own parents early in the year and later moved out on her own, she might be reflected as two households in our analysis. In other cases, families that reside in one apartment are treated as a single household in some program eligibility calculations and as two households for other programs. In these situations, we treated each as a separate household and evaluated the MTRs to which each was vulnerable.

Table 5: Program and Tax Credit Enrollment Totals in Making Work *Work* Master File¹¹

Program	Total Cases	Households Affected by Participation
BadgerCare	63,568	82,876
Wisconsin Shares	44,394	54,305
Food Stamps	129,808	146,600
EITC	188,699	188,699
Homestead Credit	202,886	202,886

* Family households, by definition, must be larger than 1.

¹¹ The number of cases in our data differs from those reported by the administrative data, principally because of differences in definition of a case.

Program participation among the households in our master file was extensive. In some cases, program participation numbers exceeded those reported in the administrative data, in part because of differences in the time period measured and in part because of methodological decisions discussed above.

The total number of families that participated in one or more programs and tax credits is very large, but the extent to which beneficiaries of one program were also enrolled in another varied tremendously as shown in Table 6. A minority of the families that received the Homestead Credit, for example, also received other benefits. Only 27% were enrolled in any of the other programs with which we are concerned. This finding is consistent with our expectations, because many Homestead Credit beneficiaries are elderly and do not have minor dependents in the home. On the other hand, over 90% of the families that received childcare subsidies through Wisconsin Shares also received benefits through one of the other programs or tax credits.

Table 6: Families Enrolled in Only One Program or Tax Credit

Program	Families Who Received ONLY This Benefit	% of Total Enrolled in This Benefit
BadgerCare	16,151	19%
Wisconsin Shares	3,690	7%
Food Stamps	50,030	34%
EITC	94,250	50%
Homestead Credit	148,980	73%

Incidence of High Marginal Tax Rates – One Family Type

Most of our analysis to date has involved determining when high MTRs occur, constructing the roster of households, and examining the patterns of program participation. But we have also looked at the specific incidence of high MTRs for one family type: single parents with two children.

We counted the following as fitting in this category: heads of households, single tax filers claiming dependents, and single parents identified through program records. In all cases, the number of dependents is two and household income is less than \$45,000. The total number of households in this subset is 59,134.

We measured the incidence of the four cliff effects by looking at the \$1,000 income range around the point at which the MTR model shows the cliff occurring. The number of families vulnerable to each cliff is shown in Table 7.

Table 7: Single Parent, Two Child Families Vulnerable to Cliffs

Program	Income Trigger for Cliff	Number of Families Vulnerable
Food Stamps	\$18,000	506
BadgerCare Premium (with Wisconsin Shares)	\$26,500	268
BadgerCare Premium (without Wisconsin Shares)	\$25,000	
Wisconsin Shares	\$28,000	70
BadgerCare Eligibility	\$33,500	24
Total		868

Over the course of 2000, only 868 families faced MTRs higher than 100% if they increased their earned income. The number of families whose economic stability was endangered by the structure of state and federal programs is somewhat lower than one might expect. Current data do not provide the basis for an adequate explanation, but several factors should be kept in mind when evaluating the totals. First, the number of families subject solely to cliffs should be low because cliffs only pertain to families with incomes at the margins of eligibility. Advocates and researchers are already aware of the declining marginal returns to maintaining program participation when income approaches the upper limit. Food Stamps participation drops off sharply at the upper levels, because benefits phase-out to very low levels. Many families find it impractical to maintain the sequence of appointments and verification required to continue receiving benefits. Similarly, administrative data shows that utilization of Wisconsin Shares and BadgerCare is lower for families with higher incomes. BadgerCare reciprocity is less likely for families in the higher income tier for multiple reasons. On the one hand, families with higher incomes are more likely to have access to health insurance through their employer, a circumstance that renders them ineligible for BadgerCare. On the other hand, advocates have suggested that the imposition of premiums for families with incomes above 150% of the federal poverty levels acts as a deterrent.

Furthermore, because we currently have only one year of data, we have access only to a snapshot. This cannot provide a comprehensive picture of all families that experience the effects of high MTRs.

Subsequent work could deepen this analysis along two dimensions. First, additional research should expand on our understanding of which families are truly vulnerable to cliff effects by developing a more sophisticated measurement for vulnerability. The families identified in Table 7 had incomes within \$1,000 of the threshold at which the cliff occurred. This method of measurement does not capture the group of families just above the threshold, who may have already hit the cliff. Nor do we have enough data to predict how many families with incomes more than \$1,000 distant from the threshold are likely to cross that line in the course of a year.

Second, more analysis is required to evaluate the effects of the cliffs on household resources, by calculating the additional increase in earnings required to make the family whole.

We measured the incidence of income stagnation by looking at the income ranges over which increases in earned income do not result in a sizeable increase in total household resources. We created three categories of MTRs: extremely high (80% to 100%, meaning the household realizes less than 20% of each additional dollar earned); very high (67% to 80%); and high (55% to 67%). The 55% floor corresponds to the highest MTR experienced by higher-income households.

These families' vulnerability to stagnation effects is displayed in Table 8.

Table 8: Single Parent, Two Child Families Vulnerable to Stagnation Effects

Program Combination	Income Range for Stagnation	Marginal Tax Rate	Number of Families Vulnerable
EITC, Childcare, Food Stamps	\$12,000-\$18,000	Extremely high	2,176
EITC, Childcare, Food Stamps	\$18,000-\$28,000	Very high	2,426
EITC, Homestead, Food Stamps	\$13,000-\$18,000	Very high	303
EITC, Food Stamps	\$13,000-\$18,000	High	928
Food Stamps, Childcare	\$12,000-\$18,000	High	275
EITC, Childcare	\$12,500-\$28,000	High	1,820
EITC	\$28,000-\$30,500	High	1,635
Total			9,562

For almost 10,000 families, or more than one of out seven households with this configuration, increases in earned income provided relatively meager increases in total household resources in the year 2000. For these families, one dollar of additional earnings resulted in, at most, \$.45 in additional household resources. For more than one-fifth of these families, increases in earned income were subject to MTRs of over 80%. Moreover, for most families represented in Table 8, high MTRs apply to substantial income ranges. The 1,635 families that received only the EITC in 2000 were subject to MTRs above 55%, but only for a range of \$2,500. The rest of these families endured high MTRs – and sometimes extremely high MTRs – for income ranges of \$5,000 - \$15,000.

CONCLUSION

These findings suggest that the one of the main goals of welfare reform – making work (continue to) pay – remains elusive for a core group of families for whom high MTRs remain a barrier to getting ahead.

But they also point to the fundamental paradox of enrollment in these programs. On the one hand, program participation is essential to families' ability to maintain a basic standard of living and attachment to the labor force. Based on our calculation of a basic needs budget, many families with children require the support provided by programs and tax credits in order to make ends meet.

On the other hand, families that are enrolled in the full array of support programs available are more vulnerable to the negative effects created by their interaction. Phase-out rates that seem sensible when programs are considered individually create a huge burden for working families who experience them cumulatively. For families that are fully enrolled, finding the way out of unstable household economy is akin to a Sisyphean task: moving up the income ladder results in minimal lightening of the load. And sometimes a small raise actually make it more difficult to make ends meet. Because these points can be difficult to predict, we suspect that the negative effects on families are compounded by the fact that this circumstance is so unexpected.

“Making work pay,” a hallmark objective of welfare reform, created new problems for families with earned income up to and exceeding 200% of the federal poverty level. This finding may be disappointing to many observers and advocates, who expect that families with a worker earning as much as \$10 an hour have attained considerable success. Families in the pool we evaluated in this paper remain in the danger zone until their incomes exceed \$33,000, or over \$15 an hour.

Many families do manage to make ends meet without ever enrolling in these support programs. For some families, this task may be more onerous than for others. However much some families may have access to informal networks and family support that help to bridge the gap between earned income and household needs, it is undeniable that families with insufficient income to meet the basic needs budget also lack the array of choices available to other families, including for example the decision to choose licensed institutional child care.

Making full use of this exciting data requires fleshing out these findings more fully. To date, we have identified vulnerable families from only one specific family configuration. We intend to aggregate the total number of vulnerable families from the master file.

Future research must extend in at least two directions. First, a more sophisticated ability to model and predict changes in household income over time is needed to identify families that are likely to enter a danger zone. Our calculation used \$.25/hour wage increments (annualized) and assumed that workers move steadily up the wage scale. We understand that this is a primitive and unrealistic model of earnings gains. A more

nuanced approach would allow us to predict the likelihood that a worker with earnings thousands of dollars outside of a danger zone would actually move into that zone and at what cost. We know that some workers can effectively jump across cliffs when their earnings gain is significant enough to offset some or all lost benefits. With the static data we have, we cannot yet develop such a predictive model. Analysis of subsequent years of data may enable work in this vein.

A second body of research is needed to identify and evaluate the impacts to families and economies of high MTRs. How do workers cope with the resource extremes created by cliff effects? To what extent does loss of benefits compromise child and family well-being? Do high MTRs have an effect on workers' abilities to maintain labor force attachment and their long-term movement up the wage scale? And to what extent are high MTRs hampering economic growth, by undermining the incentives to develop new skills and get better, more challenging, more productive jobs?

Answers to these questions will provide crucial indicators of the real success of welfare reform. In the past decade, thousands of families have moved off of cash assistance and into the ranks of the working poor. As long as those families have access to full-time employment and a full array of programs and tax credits, work might pay. But the barriers to advancement are apparent. Moving these families toward reasonable self-sufficiency requires a more holistic set of strategies to address the complex vulnerabilities to which they are exposed.

APPENDIX A

Parameters of New Hope MTR Calculation Model

Programs included:

Federal

Social Security and Medicare taxes
Income tax (including dependent care & child tax credits)
Earned Income Tax Credit
Food Stamps

State (Wisconsin)

Income tax (including school property tax, working family, & married couple credits)
Earned Income Tax Credit
Property tax circuit breaker (Homestead Credit)
Subsidized child care (Wisconsin Shares)
Free or subsidized health insurance (Medicaid, Healthy Start, & BadgerCare)

Assumptions:

All income is from earnings.

For married couples, both work, and one spouse makes 2/3 of earnings.

Rent set at HUD fair market rents, constant at all incomes.

If child care utilized, 1) eligible families use Wisconsin Shares subsidies for licensed care in Milwaukee County and make required co-payment, 2) non-eligible families pay 50% of maximum reimbursable rate for licensed family care in Milwaukee County; 3) care used 50 weeks per year.

If free or subsidized health insurance not available, household pays one-third of group coverage premium; total premium equal to Milwaukee County average for small employers.

Households do not include elderly or pregnant persons.

APPENDIX B

Description of Source Data Files

The Institute for Research on Poverty (IRP), on behalf of the Wisconsin Department of Workforce Development, extracted information on the Medical Assistance, BadgerCare, Wisconsin Shares, Food Stamps, and W-2 programs into separate files. Each file contains the CARES case number, which roughly corresponds to a household, and individual CARES Personal Identification Numbers (PINs), representing individuals within a household. (The CARES case number and CARES PINs were all masked by replacement with unrelated numbers.) There is PIN-level eligibility and benefits receipt information for each program other than W-2, for which the data is organized on a monthly basis. IRP constructed an individual demographics and program participation file using the information from the individual program files; this file contains a single character field for each of the public benefits programs that indicates participation during 2000. IRP also merged child support payment and receipt information into this file.

IRP provided the individual demographics and program participation file to the Department of Revenue (DOR). DOR created a master list of Social Security Numbers (SSNs) present in the IRP file and 2000 state tax file, then assigned a randomized unique identifier in place of each SSN. DOR replaced the SSNs in the individual demographics and program participation file with the unique identifiers and returned that file to IRP.

DOR merged the individual demographics and program participation file with the tax file to create four combined data files, one for each of the following SSN matches: SSN in both CARES and the tax file, SSN in the DOR file only, SSN on more than one tax return (whether or not in CARES), and SSN in CARES only. The unique identifiers are sequential according to these groupings.

The four combined data files also contain the total wages from the UI file for both the primary and secondary (spouse, if married filing jointly) SSN in each record. DOR also assembled a separate UI wage data file corresponding to each of the four combined data files. These wage data files contain the unique identifier and the wages reported for that unique identifier for each employer at each location for each quarter. In other words, a person employed at a single job at a single location for the full year has four records in the wage data file. Each record also has a record number linking it to a DOR-generated employer file, which is composed of a record for each employer by location by quarter. The linking record number is a randomized sequential identifier created by DOR.

APPENDIX C

Data Configuration Problems and Assumptions

Dependents vs. Children

For most purposes, we have had to assume that the number of children in a household is equal to the number of dependent exemptions claimed, because the tax files we received do not show the number of children. Status as a dependent is determined according to a notoriously complicated five-prong test. Many types of persons other than children may qualify as a dependent, such as an unrelated adult residing in the same household or an elderly relative living independently or in a care facility for whom support is being provided.

Use of the number of dependents may result in an inaccurate categorization of family types; *e.g.*, in the analysis of single parents with two children, we may have included some households in which one or both of the dependents was not a child. The most likely effect will be a misidentification of the income range in which a particular MTR will occur. Given the data available, this is unavoidable.

Tax Filers Also Able To Be Claimed As Dependents

The tax files that serve as the core data set have a record for each tax return filed. Some tax filers also qualify as dependents on another return. A common example is a child who earned enough income to trigger a filing requirement but who is not providing over half of his own support. A field in the tax files indicates whether the filer is able to be claimed as a dependent. Approximately 11% of the tax records were of this type.

We chose to include these filers as separate entities in our analysis for several reasons. Most importantly, although we know that the filer is able to be claimed as a dependent, we have no way of identifying that other return (or, in other words, household). Excluding these records could have resulted in failure to consider program participation with a high MTR impact. There was a program file match for these filers in 3,539 BadgerCare cases, 659 Wisconsin Shares cases, and 4,342 Food Stamps cases. (In general, these filers were not eligible for the EITC or the Homestead Credit.) Also, many of those who can be claimed as a dependent would nonetheless qualify as an independent household as generally conceptualized, and their program participation may in fact be as an independent case. For those that are in fact minor children or otherwise are not an actual household, their inclusion does not in most cases affect our analysis, because the records will not show up when the data are screened for program participation.

Non-Resident Tax Filers

Almost 5% of those filing tax returns used the non-resident form. This may mean that some non-Wisconsin households were included in our analysis. We believe any resulting overcount is insignificant. If the household was truly non-resident, the record will not show any program participation. In a few thousand cases, a non-resident filer does have a match in a program file. This is likely due to residence in the state during the calendar year sufficient to qualify for a benefits program but not meeting the definition of a resident for tax purposes. It is appropriate to include these cases in our analysis, because they would have been affected by any high MTRs for their period of residency.

Use Of Wages as Reported to Unemployment Insurance

In most cases, we determined income by using the wages reported to Wisconsin unemployment insurance. This could be a distortion of actual household income in several ways. Wisconsin residents in border areas may have significant out-of-state earnings that will not be reflected in that data. Some persons work for employers who do not participate in the unemployment insurance program and are not required to report earnings. Some indeterminate number of employers fail to make some or all of the required reports. These problems notwithstanding, we felt that the unemployment insurance data provided the best approximation of income from work, which is the primary concern in a MTR analysis.

Another issue is that program eligibility and benefits determination is often affected by the income of persons other than the household head(s), which is what is generally reflected in the unemployment insurance wage reports as contained in the data files we received from the state. This is the principal reason that we also considered income as reported for program persons when determining household income for program participants not associated with a tax filing unit.

Unknown Family Types

Some of the data configuration problems outlined above could bias our results as overcounts. An undercount bias exists because of the exclusion of households whose configuration could not be determined. Tax returns with the filing status “married filing separately” were not included in the analysis of single parents with two children, although some likely met this definition of household. There are 4,504 married filing separately returns claiming dependents, and others may be household heads with children that are claimed by the other parent for tax purposes.

Another group consists of 18,138 households receiving Food Stamps and/or BadgerCare whose family type cannot be determined from the available data. We assume that there is a normal distribution of family configurations among this group, but we did not include any of them in our analysis of the single parent, two children example.