

Michigan's Earned Income Tax Credit

and the Rural Economy

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Executive Summary

As part of her budget, Governor Whitmer has proposed doubling the state's Earned Income Tax Credit (EITC). Staff from the MSU Center for Economic Analysis and the MSU Product Center conducted an analysis of the possible economic impact of this policy on the state's rural counties. The tax data was estimated using figures from Internal Revenue Service (IRS).

If the expanded EITC is funded through new revenue sources with no negative impact on Michigan residents' disposable income, the total economic impact on the state is estimated to be \$95.2 million. This includes an increase in the EITC from \$23.6 million to \$47.3 million plus multiplier impact of an additional \$48 million. If the EITC expansion is funded by reducing government expenditures or higher taxes by the amount of the expanded EITC, the economic impact on the state is \$15.7 million. The direct impact is estimated to be \$6.9 million with a multiplier impact of \$8.8 million. The third alternative of shifting tax burden from low income filers submitting state EITC, to other taxpayers, will result in a redistribution of tax burdens, but no material economic impact. Impact estimates in this brief were generated using IMPLAN Pro 3.1 for Michigan using 2016 tax returns – the most recent year available. IMPLAN is a highly recognized standard economic model for impact simulations.

As a percentage of the population, residents of rural counties are more likely to benefit from an expanded EITC than residents of urban counties. This is particularly true of counties in the northern Lower Peninsula. We estimate that about 334,898 Michigan rural residents are directly impacted by Michigan's EITC. A county-by-county breakdown of the EITC is found in the appendix.

Introduction and Background

The federal Earned Income Tax Credit (EITC) was enacted in 1975 to provide tax relief for low to moderately low-income individuals, couples and families who have work-related sources of income. It is a refundable credit against taxes on income earned, indicating that under certain circumstances, the EITC credit can exceed the household tax liabilities, resulting in a net contribution to household income. Twenty-nine states (plus the District of Columbia) have adopted state-wide versions of the federal EITC. Most of these states, including Michigan, set state EITC requirements to match federal requirements and extend the federal refundability of the tax credit. Additionally, most states base their EITCs on the federal EITC, allowing tax filers to claim from their state taxes a percent of the federal EITC. That percentage ranges from three percent (Montana) to up to 125 percent (South Carolina) of the federal EITC claim. The Michigan EITC can only be claimed by filing an annual income tax return. While the Michigan Department of Treasury recommends all taxpayers that file federal taxes file a state income tax return, Michigan taxpayers are not required to file a state return if total annual earnings are below the state's exemption allowance. Hence, some eligible state credits may go unclaimed.

As Michigan's rural households tend to trail urban household incomes (Mack 2018), the benefits of EITC credits are largely expected to be skewed toward rural areas. According to latest Census numbers, rural households tend to be older with lower median household incomes (\$43,239 versus \$55,679 in metro areas), less likely to possess a college degree and more likely to experience periods of unemployment. However, labor force participation in rural areas tends to be significantly lower than in urban areas. As such, the per capita number of tax returns eligible for EITC may be lower.

As part of the executive budget proposal, Governor Whitmer has proposed to raise the state EITC from six percent of the federal EITC to 12 percent. In this technical report, we compare the prevalence of the federal and state EITC on rural Michigan counties, assess the significance in terms of gross economic activity from household expenditures the tax credits create, and assess the distribution of EITC benefits by county.

Data and Methods

We use the ratio of EITC to total reported income and number of tax returns with EITC against total number of federal tax returns. The IRS 2016 County-level Survey of Income provides the basis of our estimates – reporting the total number of federal tax returns by county, total reported income, the counts of returns with EITC claims and the total federal EITC claimed. EITC eligibility is used as the basis for estimating the state credit awards at the county level using the current and proposed legislative limits. This risks overstating the counts and amounts of state EITCs by county arising from two sources. First, completion of a federal tax filing does not mandate the completion and filing of a state return. However, not filing a state return when one is not required and when one has a federal EITC would result in lost refundable credits. We perceive that tax filers will seek to avoid this outcome. Second, claiming EITC on a federal form, does not necessarily mandate that the filer claim the state EITC. We suspect that omitting the state claim would only occur in error, and that filers will seek to minimize their tax liability or maximize their return. While using the federal EITC as a basis for estimating county state credits may result in overestimates, we anticipate this bias will be minimal, and likely consistent across counties, such that variations across counties will not be impacted by overestimates.

The second section assesses how low-income households spend and how these expenditures traverses the larger economy to generate secondary, or multiplier, effects. Household multiplier effects are compared to state and local government multiplier effects to generate a balanced budget multiplier assessment for the state. The implications are that if the state did not generate this "tax expenditure" through the EITC, government expenditures would be greater through direct government expenditures from tax revenues.¹ This assumption is in sharp contrast to republican arguments against expansion of the state EITC, who favor reducing tax burdens on businesses and households in general. The assumption of a one-to-one substitution of government expenditures for household expenditures through the tax credit is a simplifying assumption. Rather than reduce government expenditures by one dollar for every dollar-credit issued, the state would likely alter contributions to or expenditures from other budget items – at least in the short run.

The primary data source used for estimating EITC filings and credit values is the federal Survey of Income data provided by the IRS for Michigan counties. In this dataset, the total count of returns, and count of returns with EITC, as well as total reported income and value of EITC are collected by county. The extent of household reliance on EITC is calculated by county as the ratio of filings with EITC to total number of tax returns, in one measure, and the ratio of EITC to total reported income in another. In both measures, higher values are regarded as having a higher prevalence of state EITC. To make ratios comparable, these ratios were normalized to state overall averages by dividing by the corresponding state value. That is having a ratio greater than one indicates a higher prevalence relative to the state, while values lower than one indicate the opposite.

Household benefits from the EITC by county is measured as the county sum of EITC credits. By assumption, we assert that households that receive credits enhance their disposable income (income after tax) to pursue necessary and discretionary expenditures. Such expenditures are captured in the Bureau of Labor Statistics' Consumer Expenditure Survey, where expenditure breakouts are tracked by quintile groups. Federal tax code for eligibility for the federal EITC corresponds with taxpayers largely made up in the lowest 30 percent income groups, or within the 40 percent quintile. Creating a representative expenditure profile required combining the 20th and 40th household income quintiles, which was accomplished using a weighted average of the two expenditure profiles, weighted by the share of households in each quintile (also reported in the Consumer Expenditure Survey). We assert that household expenditures from the tax savings or rebates largely reflect ongoing expenditures. However, studies show that EITC recipients often use federal tax refunds to pay off existing debts and bills, or to make needed purchases of durable goods like motor vehicles (Smeeding, Phillips et al. 2000). Despite this, such expenditures would be necessary in the absence of the EITC credit, and the credit largely facilitates further household expenditures that would otherwise be crowded out by bills.

Hence, expenditures equivalent to the tax savings or refunds afforded through the state credit are used as the basis for estimating how household expenditures circulate and re-circulate throughout the state economy. The state credits are estimated as six and 12 percent of the federal EITC amounts, for the baseline and proposed projection, respectively. Household expenditures are modeled using the IMPLAN Pro 3.1 economic simulation software. The resulting, modeled macroeconomic simulation generates a gross impact assessment of household expenditures from the state EITC. A net impact simulation requires netting out how the government would have used those funds if not transferred to households via the

¹ Tax expenditures are revenue decreasing deviations from the standard legislative tax base.

EITC. An equal value is subtracted from state and local government expenditures to generate the net impact. The resulting net impact estimates correspond with the economic balance budget multiplier theory (Baumol and Peston 1955, Shiller 2010), which largely asserts that an equal redistribution of earnings from the private sector to the public sector will result in a marginal bump in economic activity under restrictive assumptions.

Findings

Distribution of Michigan State EITC

We look at Michigan's rural counties to measure the distribution of state-level EITC by rural county. Two scenarios are modeled. The first is based on current levels of state EITC, which is based on six percent of federal EITCs. The second scenario is based on a doubling of Michigan EITC to 12 percent of federal EITC. Because individual calculations of state EITC are derived from federal filings, the difference between the two scenarios is quite predictable, as a doubling of the baseline values at six percent.

The first task is to select counties to be included as rural. As no one definition of rural exists, the selection of what counties to include in this rural comparison may be somewhat subjective. The federal government uses two dominate definitions of rural, though federal and state agencies also apply variants specific to

their causes. Our definition for Michigan counties is largely heuristic, based on overall population density of the rather than county, the presence or absence of a primary urban cluster. Accordingly, Figure 1 shows the included counties in this analysis as those counties without shading, and shaded counties are excluded from the analysis.² We estimate the total value of state EITCs by county, as baseline estimates at six percent of federal EITC and as proposed under 12 percent. A breakdown of the EITC by individual county is found in the appendix.

The final task is to estimate the extent to which household expenditures give rise to gross and net statewide economic



Figure 1: Counties Considered "Rural" *Shaded counties are excluded from analysis*

² Isabella, Grand Traverse and Kalamazoo Counties were included in the analysis at the request of Byrum & Fisk Advocacy Communications.

activity. A net positive impact will indicate that low income household expenditures from the additional disposable income afforded the EITC is more impactful than that of state and local government expenditures in terms of driving secondary impacts in the state economy.

Under the current rate of six percent, total rural allocation of the Michigan EITC is \$24.3 million. This would double under the proposed change. Using population estimates for these rural counties of 2.2 million, this translate to about \$11.11 in credits under the six percent rate, or \$22.22 under the proposed 12 percent rate. This further relates to about \$135.70 per rural Michigan income tax filing with an EITC under the current rate and \$271.40 under the proposed rate.

Table 1 shows the statewide net impact of EITC on the economy as realized through increased purchases of households for goods and services from disposable income. The expenditure profiles represent low-income households and thereby low rates of savings and high marginal propensities to spend from household income. These expenditure profiles are used with the IMPLAN simulation software to estimate the gross impact of the current and proposed state EITC and reported in Table 1. To be sure, the estimates in Table 1 do not account for lost state and local expenditures from reductions in income tax revenues.

The baseline, or current tax credits afforded low income rural county residents through the state EITC, amounts to \$24,299,280. Under Governor Whitmer's proposal, this would increase to \$48,598,560, or double the baseline. Once accounting for how Michigan's low-income households spend in the local economy and how those expenditures are re-circulated throughout the state economy, the total value of economic rural household transactions from EITCs is some \$47.6 million. Under Governor Whitmer's proposal, that would rise to about \$95.2 million. This added economic activity is also associated with additional jobs, income from those jobs and contributions to the annual gross state product (Value Added), as shown in Table 1. Currently, the gross EITC effect on rural counties supports some 341 Michigan jobs – mostly in rural counties. This would likely increase to 683 jobs under the proposed EITC increase.

| Impact Type | Employment | Labor Income | Value Added | Output | | | |
|--|------------|--------------|--------------|--------------|--|--|--|
| Direct Effect | 171 | \$6,966,929 | \$12,515,368 | \$23,629,547 | | | |
| Indirect Effect | 60 | \$3,201,291 | \$5,306,960 | \$9,764,050 | | | |
| Induced Effect | 110 | \$5,275,946 | \$8,643,792 | \$14,217,650 | | | |
| Total Effect | 341 | \$15,444,166 | \$26,466,120 | \$47,611,247 | | | |
| Proposed Simulation: Twelve percent Federal EITC | | | | | | | |
| Impact Type | Employment | Labor Income | Value Added | Output | | | |
| Direct Effect | 342 | \$13,933,859 | \$25,030,736 | \$47,259,095 | | | |
| Indirect Effect | 121 | \$6,402,583 | \$10,613,919 | \$19,528,099 | | | |
| Induced Effect | 220 | \$10,551,892 | \$17,287,584 | \$28,435,300 | | | |
| Total Effect | 683 | \$30,888,333 | \$52,932,240 | \$95,222,494 | | | |

Table 1: Gross State Economic Impacts of State EITC (Assuming no decline in government spending or offsetting tax increase.)

| · · · · · · · · · · · · · · · · · · · | | | | | | |
|---|---------------------------------------|--|---|--|--|--|
| Impact Type | Employment | Labor Income | Value Added | Output | | |
| Direct Effect | -47 | (\$7,092,032) | (\$4,319,506) | \$3,438,957 | | |
| Indirect Effect | 43 | \$2,230,970 | \$3,772,272 | \$6,983,103 | | |
| Induced Effect | -17 | (\$580,584) | (\$1,318,929) | (\$2,572,264) | | |
| Total Effect | -21 | (\$5,441,646) | (\$1,866,164) | \$7,849,796 | | |
| Proposed Simulation: Twelve percent Federal EITC | | | | | | |
| | | | | | | |
| Impact Type | Employment | Labor Income | Value Added | Output | | |
| Impact Type Direct Effect | Employment -94 | Labor Income (\$14,184,064) | Value Added (\$8,639,012) | Output \$6,877,914 | | |
| Impact Type Direct Effect Indirect Effect | Employment -94 85 | Labor Income (\$14,184,064) \$4,461,940 | Value Added (\$8,639,012) \$7,544,544 | Output \$6,877,914 \$13,966,205 | | |
| Impact Type Direct Effect Indirect Effect Induced Effect | Employment -94 85 -33 | Labor Income (\$14,184,064) \$4,461,940 (\$1,161,169) | Value Added (\$8,639,012) \$7,544,544 (\$2,637,858) | Output \$6,877,914 \$13,966,205 (\$5,144,528) | | |
| Impact Type Direct Effect Indirect Effect Induced Effect Total Effect | Employment -94 85 -33 -42 | Labor Income (\$14,184,064) \$4,461,940 (\$1,161,169) (\$10,883,293) | Value Added (\$8,639,012) \$7,544,544 (\$2,637,858) (\$3,732,327) | Output \$6,877,914 \$13,966,205 (\$5,144,528) \$15,699,591 | | |

Baseline Simulation: Six percent Federal EITC

Table 2: Net State Economic Impacts of State EITC

Table 1 omits consideration of how the state EITC impacts public expenditures from income tax. In this, when a rebate is issued, or tax revenues are reduced by the state EITC, state and local government expenditures must ultimately absorb the lost revenues. Cutbacks in public expenditures can only be deferred by not reducing public expenditures in response to revenue losses. Ultimately, however, public expenditures must be adjusted to reflect long-term revenues. In Table 2, we assert the loss in public revenues are realized immediately, in proportion with recognition of the revenue loss. The results indicate that net effects are for a positive direct change in economic transactions, but a reduction in employment, labor income and contributions to gross state product. This is because the types of expenditures low-income households generate tend to contribute less to employment and income effects than state and local government expenditures do. Secondary transactions (indirect and induced effects) are mostly positive, reducing the net negative direct effects. Regardless under both the baseline, or current EITC rates, and the proposed rates, the EITC provides a mixed economic outcome that largely reflects minor aggregate-level impacts on the state economy. Possibly more important is the positive redistributive effects the EITC has on low-income households overall.

Next, we map the extent of benefits received from the EITC, based on federal tax filing statistics. On the left-hand side of Figure 2, the ratio of returns with an EITC credit is calculated and normalized by dividing the county ratio by the state ratio. The resulting ratio centers on one, where a score higher than one indicates a higher rate of EITC filings than the state average, and therefore higher dependence on the state EITC. On the right-hand side of Figure 2, the metric is based on the dollar value of the EITC credit relative to total county income. Like before, each county's ratio is normalized to the state ratio, and values greater than one indicate the county has a higher share of EITC to total income.

While a pattern emerges across the two maps in Figure 2, it is not entirely clear if both the counts and values measure the same degree of dependence. Using the data underlying Figure 2, we calculate the correlation between normalized count ratios (left hand side) and normalized share values to assess the overall association, finding a correlation of 0.96. A value of one would indicate an exact match, while our findings suggest about a 96 percent overall match between the two measures of EITC dependence.



Figure 2: County Dependence on Federal Earned Income Tax Credit (EITC) 2016 Statistics of Income (IRS)

Finally, to assess the scope of the EITC to rural populations, we estimate the total number of returns with EITC filings. Figure 3 shows the counts of total returns and the counts of federal returns with EITCs. Overall, about 17 percent of Michigan federal income tax returns have an EITC. For rural counties, this is moderately higher at 17.5 percent, or 179,090 of 1,024,050 rural tax returns. As the average number of exemptions largely reflects the number of individuals impacted, the Michigan average of 1.87 exemptions per filing suggests that the state EITC directly impacts about 334,898 Michigan residents. It is conceivable that the number of exemptions of EITC beneficiaries is higher than average, hence, this estimate posits a lower bound.



Figure 3: Number of Filers Impacted by the State EITC

Figures 2 and 3 show an expanded EITC would particularly impact the residents of rural counties in Northern Michigan, especially the northern Lower Peninsula.

Conclusions

This study analyzed the impact of the Governor's proposed doubling of the state's EITC on rural counties. If this expansion is not offset with reduced government spending or higher taxes, the economic impact is estimated to be \$95.2 million. If the EITC expansion is offset by a reduction in state government spending. The economic impact is reduced to \$15.7 million.

Rural counties typically benefit more from the EITC than urban counties. This is due to the fact that incomes in rural counties are generally lower than in urban counties. In Michigan, residents of counties in the northern Lower Peninsula would particularly benefit from an expanded EITC. A breakdown by county is found in the appendix.

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Appendix: Earned Income Tax Credits by Rural County

| | All Returns | | EITC Filings | | Ratio EITC Amount to | EITC Ratio Relative to |
|----------------|----------------|--------------|----------------|---------|----------------------|------------------------|
| County | No. of returns | Total Income | No. of returns | Amount | Total Income | Michigan |
| Michigan | 4718510 | 290747050 | 804380 | 1967737 | 0.0068 | 1.0000 |
| Alcona | 4880 | 208081 | 760 | 1605 | 0.0077 | 1.1397 |
| Alger | 4070 | 196241 | 580 | 1176 | 0.0060 | 0.8855 |
| Alpena | 14080 | 652433 | 2570 | 5368 | 0.0082 | 1.2157 |
| Antrim | 11680 | 668748 | 1970 | 4367 | 0.0065 | 0.9649 |
| Arenac | 7200 | 310314 | 1340 | 2904 | 0.0094 | 1.3827 |
| Baraga | 3460 | 149741 | 670 | 1533 | 0.0102 | 1.5127 |
| Bay | 52920 | 2569309 | 9040 | 19652 | 0.0076 | 1.1302 |
| Benzie | 9170 | 466202 | 1530 | 3158 | 0.0068 | 1.0009 |
| Berrien | 72730 | 4128045 | 14260 | 37173 | 0.0090 | 1.3306 |
| Branch | 18900 | 875674 | 3780 | 8865 | 0.0101 | 1.4958 |
| Cass | 23370 | 1374228 | 4110 | 9690 | 0.0071 | 1.0419 |
| Charlevoix | 13720 | 853251 | 2140 | 4552 | 0.0053 | 0.7883 |
| Cheboygan | 12720 | 586532 | 2610 | 5806 | 0.0099 | 1.4626 |
| Chippewa | 15760 | 675898 | 3070 | 6914 | 0.0102 | 1.5115 |
| Clare | 12970 | 518990 | 2910 | 6895 | 0.0133 | 1.9630 |
| Crawford | 6220 | 259090 | 1240 | 2839 | 0.0110 | 1.6191 |
| Delta | 17580 | 864786 | 2990 | 6107 | 0.0071 | 1.0434 |
| Dickinson | 12870 | 671820 | 2080 | 4197 | 0.0062 | 0.9231 |
| Eaton | 54040 | 3005235 | 7500 | 16874 | 0.0056 | 0.8296 |
| Emmet | 17920 | 1269350 | 2560 | 5310 | 0.0042 | 0.6181 |
| Gladwin | 11200 | 505434 | 2010 | 4383 | 0.0087 | 1.2813 |
| Gogebic | 6690 | 300574 | 1250 | 2641 | 0.0088 | 1.2983 |
| Grand Traverse | 48800 | 3055412 | 6550 | 13183 | 0.0043 | 0.6375 |
| Gratiot | 16910 | 801668 | 3300 | 7802 | 0.0097 | 1.4380 |
| Hillsdale | 19750 | 901577 | 3820 | 8875 | 0.0098 | 1.4545 |
| Huron | 16360 | 799808 | 2460 | 5209 | 0.0065 | 0.9623 |
| losco | 12050 | 494385 | 2300 | 5065 | 0.0102 | 1.5138 |
| Iron | 5540 | 235920 | 980 | 2015 | 0.0085 | 1.2620 |
| Isabella | 26460 | 1372730 | 4390 | 9062 | 0.0066 | 0.9754 |
| Kalamazoo | 120640 | 7905156 | 19000 | 44075 | 0.0056 | 0.8238 |
| Kalkaska | 8250 | 349836 | 1770 | 4216 | 0.0121 | 1.7807 |
| Keweenaw | 1040 | 52012 | 140 | 258 | 0.0050 | 0.7329 |
| Lake | 4610 | 177608 | 1140 | 2561 | 0.0144 | 2.1306 |
| Leelanau | 12030 | 920428 | 1230 | 2420 | 0.0026 | 0.3885 |
| Lenawee | 45390 | 2309917 | 7500 | 17186 | 0.0074 | 1.0993 |
| Luce | 2560 | 108428 | 470 | 1041 | 0.0096 | 1.4186 |
| Mackinac | 5990 | 270524 | 1020 | 1892 | 0.0070 | 1.0334 |
| Manistee | 11620 | 532368 | 2010 | 4439 | 0.0083 | 1.2320 |
| Mason | 14170 | 685512 | 2600 | 5733 | 0.0084 | 1.2357 |
| Mecosta | 17100 | 814668 | 3050 | 6859 | 0.0084 | 1.2440 |
| Menominee | 11150 | 551527 | 1860 | 3841 | 0.0070 | 1.0290 |
| Missaukee | 6590 | 275259 | 1290 | 2982 | 0.0108 | 1.6007 |
| Montcalm | 27690 | 1211539 | 5720 | 13430 | 0.0111 | 1.6379 |
| Montmorency | 4390 | 177949 | 840 | 1748 | 0.0098 | 1.4514 |
| Newaygo | 21520 | 1008476 | 4210 | 9779 | 0.0097 | 1.4328 |
| Oceana | 12130 | 559955 | 2410 | 5959 | 0.0106 | 1.5724 |
| Ogemaw | 9340 | 364524 | 2040 | 4694 | 0.0129 | 1.9027 |
| Untonagon | 2760 | 115175 | 460 | 762 | 0.0066 | 0.9776 |
| Usceola | 10050 | 420723 | 2080 | 4934 | 0.0117 | 1.7328 |
| Uscoda | 3540 | 137690 | 740 | 1590 | 0.0115 | 1.7063 |
| Utsego | 12420 | 603183 | 2300 | 5148 | 0.0085 | 1.2611 |
| Presque Isle | 6430 | 282107 | 960 | 2109 | 0.0075 | 1.1046 |
| Roscommon | 11270 | 474185 | 2140 | 4589 | 0.0097 | 1.4299 |
| Sanilac | 19010 | 840630 | 3500 | 8217 | 0.0098 | 1.4443 |
| Schoolcraft | 3920 | 181353 | 670 | 1432 | 0.0079 | 1.1667 |
| St. Joseph | 28140 | 1347855 | 5240 | 11760 | 0.0087 | 1.2892 |
| i uscola | 24980 | 1125042 | 4600 | 10478 | 0.0093 | 1.3761 |
| Wextord | 15300 | 671909 | 3330 | 7636 | 0.0114 | 1.6792 |

Appendix: Earned Income Tax Credits by Rural County

| | Country | Rural Pop. wght | State EITC 6% | | State EITC 12% | |
|----------------|------------|-----------------|---------------|--------------------|----------------------------|--------------------|
| County | County | by Political | EITC Crodit | EITC | EITC Cradit | EITC |
| County | Population | Category | Encoreat | Credit/capita | Effe credit | Credit/capita |
| Michigan | 9933445 | | \$118,064,220 | \$11.89 | \$236,128,440 | \$23.77 |
| Alcona | 10383 | 0.00665 | \$96,300 | \$9.27 | \$192,600 | \$18.55 |
| Alger | 9115 | 0.00583 | \$70,560 | \$7.74 | \$141,120 | \$15.48 |
| Alpena | 28657 | 0.01834 | \$322,080 | \$11.24 | \$644,160 | \$22.48 |
| Antrim | 23066 | 0.01476 | \$262,020 | \$11.36 | \$524,040 | \$22.72 |
| Arenac | 15127 | 0.00968 | \$174,240 | \$11.52 | \$348,480 | \$23.04 |
| Baraga | 8536 | 0.00546 | \$91,980 | \$10.78 | \$183,960 | \$21.55 |
| Bay | 104481 | 0.38047 | \$1,179,120 | \$11.29 | \$2,358,240 | \$22.57 |
| Benzie | 1/524 | 1.00000 | \$189,480 | \$10.81 | \$378,960 | \$21.63 |
| Berrien | 154157 | 0.09866 | \$2,230,380 | \$14.47 | \$4,460,760 | \$28.94 |
| Case | 45457 | 0.02781 | \$551,900 | \$12.24 \$11.2E | \$1,005,600 | \$24.46 \$22.71 |
| Charlovoiv | 31209 | 0.03277 | \$361,400 | \$11.55 | \$1,102,800 | \$22.71 |
| Cheboygan | 20122 | 0.01072 | \$273,120 | \$10.40 | \$540,240 | \$20.91 |
| Chinnewa | 37696 | 0.01020 | \$414 840 | \$11.00 | \$829 680 | \$22.01 |
| Clare | 30406 | 0.02415 | \$413 700 | \$13.61 | \$827,400 | \$27.21 |
| Crawford | 13739 | 0.00879 | \$170.340 | \$12.40 | \$340.680 | \$24.80 |
| Delta | 36225 | 0.02318 | \$366,420 | \$10.12 | \$732.840 | \$20.23 |
| Dickinson | 25515 | 0.01633 | \$251,820 | \$9.87 | \$503,640 | \$19.74 |
| Eaton | 108847 | 0.39637 | \$1,012,440 | \$9.30 | \$2,024,880 | \$18.60 |
| Emmet | 32916 | 0.02107 | \$318,600 | \$9.68 | \$637,200 | \$19.36 |
| Gladwin | 25144 | 0.01609 | \$262,980 | \$10.46 | \$525,960 | \$20.92 |
| Gogebic | 15349 | 0.05589 | \$158,460 | \$10.32 | \$316,920 | \$20.65 |
| Grand Traverse | 91914 | 0.05882 | \$790,980 | \$8.61 | \$1,581,960 | \$17.21 |
| Gratiot | 40932 | 0.02620 | \$468,120 | \$11.44 | \$936,240 | \$22.87 |
| Hillsdale | 45767 | 0.02929 | \$532,500 | \$11.64 | \$1,065,000 | \$23.27 |
| Huron | 31451 | 0.02013 | \$312,540 | \$9.94 | \$625,080 | \$19.87 |
| losco | 25271 | 0.01617 | \$303,900 | \$12.03 | \$607,800 | \$24.05 |
| Iron | 11182 | 0.00716 | \$120,900 | \$10.81 | \$241,800 | \$21.62 |
| Isabella | 71133 | 0.21413 | \$543,720 | \$7.64 \$10.12 | \$1,087,440 \$5,280,000 | \$15.29 |
| Kalkaska | 17300 | 0.78387 | \$2,044,300 | \$10.15 | \$5,285,000 | \$20.20 |
| Keweenaw | 2139 | 0.01107 | \$15,480 | \$7.24 | \$30,960 | \$14.47 |
| Lake | 11861 | 0.00759 | \$153,660 | \$12.96 | \$307 320 | \$25.91 |
| Leelanau | 21493 | 0.07827 | \$145,200 | \$6.76 | \$290,400 | \$13.51 |
| Lenawee | 98510 | 0.06305 | \$1,031,160 | \$10.47 | \$2,062,320 | \$20.94 |
| Luce | 6341 | 0.00406 | \$62,460 | \$9.85 | \$124,920 | \$19.70 |
| Mackinac | 10694 | 0.00684 | \$113,520 | \$10.62 | \$227,040 | \$21.23 |
| Manistee | 24438 | 0.08899 | \$266,340 | \$10.90 | \$532,680 | \$21.80 |
| Mason | 28846 | 0.01846 | \$343,980 | \$11.92 | \$687,960 | \$23.85 |
| Mecosta | 43172 | 0.02763 | \$411,540 | \$9.53 | \$823,080 | \$19.07 |
| Menominee | 23221 | 0.01486 | \$230,460 | \$9.92 | \$460,920 | \$19.85 |
| Missaukee | 15032 | 0.00962 | \$178,920 | \$11.90 | \$357,840 | \$23.81 |
| Montcalm | 62963 | 0.04030 | \$805,800 | \$12.80 | \$1,611,600 | \$25.60 |
| Montmorency | 9206 | 0.00589 | \$104,880 | \$11.39 | \$209,760 | \$22.79 |
| Newaygo | 47788 | 0.03058 | \$586,740 | \$12.28 | \$1,173,480 | \$24.56 |
| Oceana | 20281 | 0.01082 | \$357,540 | \$13.00 \$13.47 | \$715,080 | \$27.21 |
| Ontonagon | 5931 | 0.01338 | \$45 720 | \$7.71 | \$91.440 | \$15.42 |
| Osceola | 23171 | 0.01483 | \$296.040 | \$12.78 | \$592.080 | \$25.55 |
| Oscoda | 8262 | 0.00529 | \$95,400 | \$11.55 | \$190,800 | \$23.09 |
| Otsego | 24385 | 0.01561 | \$308,880 | \$12.67 | \$617,760 | \$25.33 |
| Presque Isle | 12725 | 0.00814 | \$126,540 | \$9.94 | \$253,080 | \$19.89 |
| Roscommon | 23847 | 0.01526 | \$275,340 | \$11.55 | \$550,680 | \$23.09 |
| Sanilac | 41392 | 0.02649 | \$493,020 | \$11.91 | \$986,040 | \$23.82 |
| Schoolcraft | 7990 | 0.00511 | \$85,920 | \$10.75 | \$171,840 | \$21.51 |
| St. Joseph | 60832 | 0.03893 | \$705,600 | \$11.60 | \$1,411,200 | \$23.20 |
| Tuscola | 53235 | 0.03407 | \$628,680 | \$11.81 | \$1,257,360 | \$23.62 |
| Wexford | 33090 | 0.02118 | \$458,160 | \$13.85 | Ş916,320 | \$27.69 |

Appendix: Earned Income Tax Credits by Rural County

