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**Impact THDA:
The Economic Impact of THDA Activities
on the Tennessee Economy
2018**

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EXECUTIVE SUMMARY

With the help of economic multipliers, or the “ripple” effects, the housing programs administered by Tennessee Housing Development Agency (THDA) impact all industries in the economy, going far beyond the specific unit or the neighborhood in which THDA program money is spent¹. Program outcomes and expenditures create additional jobs, income, and spending in the state and local economies and add to state and local revenues, expanding beyond those individuals and families who are assisted in securing safe, sound, affordable homes.

In this study, we developed a comprehensive framework to estimate the economic impact of THDA activities. To this end, we reviewed THDA programs, including loans, grants, and tax credits to determine the scope and the monetary flows of each program’s activities. Affordable housing programs used in the analysis include a range of housing related support across the state, including: the Great Choice Loan Program; Housing Choice Vouchers (Section 8); the Low-Income Housing Tax Credit (LIHTC) Program, which provides federal tax credits to developers; the Community Investment Tax Credit (CITC) that provides state tax credits to banks who support affordable housing; various weatherization and repair programs; and a homelessness prevention program.

Economic Impact of THDA-Related Activities in 2018

The total economic impact described below is the sum of direct THDA spending, indirect business to business transactions in Tennessee’s economy and additional employee spending. This can be summarized in the following way.

Business Revenue

The total contribution of THDA-related activities to Tennessee’s economy was estimated at \$1.4 billion in 2018.

- Of this total, \$790 million was directly injected into the economy by THDA-related activities. Every \$100 of THDA-related activities generated an additional \$75 in business revenues.

¹ We used the IMPLAN input-output model to calculate these “ripple” effects.

Personal Income

THDA-related activities generated \$436 million in wages and salaries in 2018.

- Every \$100 of personal income produced an additional \$80 of wages and salaries in the local economy.

Employment / Job Creation

THDA-related activities created 9,074 jobs in 2018.

- Every 100 jobs created by THDA-related activities, primarily in the construction sector, generated 91 additional jobs throughout the local economy.

State and Local Taxes

The THDA-related activities accounted for \$43 million in state and local taxes in 2018.

I. Overview of the THDA Programs and Activities for the Calendar Year 2018

One of the primary ways THDA assists Tennesseans is by offering fixed-rate mortgage loans for low- and moderate-income homebuyers². In addition to helping homebuyers, THDA administers several other housing programs to help Tennessee families who are low- and moderate-income. An overview of the programs included in the economic impact analysis is provided in the [THDA Investments and Impacts: 2018](#), which also provide a comprehensive account of THDA's programs and activities during the calendar year. Furthermore, accompanying interactive maps make it possible to view THDA activities and economic impacts at different geographic levels such as county, congressional district and metropolitan statistical areas (MSAs). Detailed information about each program is also available at www.thda.org.

II. Economic Impact Results

We used the IMPLAN input-output model to calculate the ripple effects of THDA-related activities on the Tennessee economy. The IMPLAN model calculates total business revenues, personal incomes, and total employment. For each of these categories, the IMPLAN model provides the direct, the indirect, and the induced impacts. Direct impact is the dollar amount of the initial spending because of the THDA programs and grants. We also report the corresponding direct personal income and employment figures.

Indirect impact is the economic impact that is generated because of the subsequent rounds of business to business transactions in Tennessee's economy. For example, a grantee who receives a grant to repair a critical structural problem for an elderly homeowner buys materials from a supplier who would in turn purchase additional material, labor, etc. from other businesses. This spending will create additional rounds of spending in the local and regional economies.

² THDA homeownership programs generally serve first-time homebuyers (those who have not owned their principal residence within the last three years), but serve all eligible homebuyers who are buying in federally targeted areas and who are veterans.

Induced impact is the economic impact that is generated through employee spending in the economy. A portion of the direct and indirect program spending goes to individuals as wages and salaries. Then, these individuals spend these wages and salaries in the economy depending on their consumption patterns. Each round of spending creates ripple effects in the economy.

We provide the impact of THDA-related activities on business revenue, personal income, employment and state and local taxes.

- Business revenue is the total economic activity generated by THDA programs and grants spending in the economy.
- Personal income is the income that people in the economy receive because of the spending associated with THDA programs and grants.
- Employment is the number of jobs generated by THDA programs and grants spending in the economy.
- Estimated state and local taxes are derived from the IMPLAN model.

Construction of new homes and rehabilitation of existing homes through THDA-related activities increase employment both in the construction industry and the industries with forward and backward linkages to the construction. For every dollar spent in the economy through related activities, the business revenue and personal income increase by more than one dollar of direct spending because of the indirect and induced effects.

In this analysis, the social impacts that derive a financial gain for the family and the community are not considered in the economic impact calculation. For example, the health care costs avoided by a beneficiary of the Home Modifications and Ramps program and the resulting value of nursing home avoidance, increased independence and longevity are not found in these calculations. Even though reduced energy consumption has both individual and regional impacts, both environmentally and financially, the energy cost savings produced by weatherization are not considered in this analysis. Similarly, the prevention of a household moving into homelessness through the Emergency Solutions Grant has an economic impact that may not be easily quantifiable and is not captured here. Keeping this in mind, with these impacts not included, the

estimates presented here are just of direct investments, without looking at the public good by-product of these THDA efforts.

Results

The following table represents the direct, indirect, induced and total impact of THDA-related activities on the Tennessee economy in 2018. The impacts are provided for the employment, labor income and output (business revenue). For each of the economic impact categories, we present the direct, the indirect and the induced impacts, in addition to the total impact and the multiplier (when applicable).

As presented in Table 1, the economic impact of THDA programs and grants was quite substantial. For each of the economic impact categories, we present the direct, the indirect and the induced impacts, in addition to the total impact and the multiplier (when applicable).

Total multipliers³ are also listed in the table. These are calculated by dividing the total impact by the direct effect. In 2018, for every \$100 in direct industrial output created through THDA-related activities, an additional \$75 in business revenues were generated.

Table 1: The Economic Impact of THDA-Related Activities on Tennessee Economy, 2018 (Dollar figures in millions)

	Direct	Indirect	Induced	Total	Multiplier*
Business Revenue	\$790	\$310	\$279	\$1,379	1.75
Personal Income	\$242	\$106	\$89	\$436	1.80
Employment	4,762	2,404	1,908	9,074	1.91
State and Local Taxes**	NA	NA	NA	\$43	NA

*Multipliers are calculated by dividing total impact by direct impact

**State and Local taxes are estimated from the model.

³ Multipliers are explained in the methodology section of this report in more detail.

In 2018, THDA-related activities injected into the economy a total of \$789,995,214 in demand for regionally supplied construction, real estate services, and financial and other services inputs (reflected in the table as ‘Direct’ impact from business revenues). To provide that business revenue into the state’s economy, all of the affected firms provided 4,762 jobs (fulltime equivalent (FTE)) with a collective \$241,970,603 in wages and salaries. These were direct impacts of 2018 THDA-related activities.

Next, all of the firms with direct impacts required increased inputs of \$309,929,260 from the local economy, which further stimulated 2,404 jobs and \$105,614,706 in labor income.

When the workers in the direct and indirect sectors converted their paychecks into household spending, they induced \$278,982,346 in industrial output from industries that served these households, yielding 1,908 more jobs making \$88,822,808 in wages and salaries. Added together, THDA-related activities supported \$1.4 billion in area industrial output, \$436 million in labor income and 79,074 jobs.

The THDA-related activities also generated sizable tax revenues for state and local governments. The model estimated tax revenues due to THDA-related activities at \$43 million.

2018 Economic Impact by County, Congressional District and MSA

Every year, economic impact results are driven by the volume and scope of the THDA’s housing-related activities that change over time. The changes in the volume and scope of the administered activities during the year change the resulting additional economic activity and jobs created.

This analysis also calculates the economic impact of THDA-related activities at the county, Congressional District⁴ and Metropolitan Statistical Area (MSA) level, in addition to the statewide analysis. All THDA activities were separated by county, Congressional District and MSA, and these activities were used as inputs for the county and regional models that were created in IMPLAN. The results are the estimated impact

⁴ Congressional district boundaries for 2018 are based on the 113th session of the U.S. Congress. Economic impact calculations include an entire county’s data for all counties represented in the district, not just the portion of the county in the district. Some counties may be included in more than one congressional district, which means the state total cannot be determined by summing the district totals.

of THDA activities in those jurisdictions. The economic impact results by county, Congressional District and MSA are shown in the Appendix II.

In 2018, THDA-related economic impacts were highest in Davidson County across all categories. In Davidson County, THDA programs directly injected more than \$225 million into the economy. For every \$100 dollar of THDA-related business revenue, an additional \$61 of business revenue was created in the county. In the following table, the five counties with the highest economic impact (in terms of output, employment, and income) are listed. The rank order of five counties is same across impact types.

Compared to previous year, the top five counties stayed similar. Sumner County moved from third place for the highest employment impact down to 13th place, while Hamilton County moved to 4th place. Although Rutherford County kept its place in the top five, the total impact in 2018 was, in all three categories was lower than 2017.

Table 2: Five Counties with the Highest Total Economic Impact in All Categories, 2018

County	Total Employment Impact	Rank	Total Income Impact	Rank	Total Business Revenue Impact	Rank
Davidson	2,313	1	\$140,349,538	1	\$365,914,421	1
Shelby	1,110	2	\$60,822,109	2	\$165,816,311	2
Knox	1,051	3	\$50,083,283	3	\$153,863,288	3
Hamilton	706	4	\$33,988,196	4	\$96,351,707	4
Rutherford	295	5	\$14,197,372	5	\$55,764,661	5

The employment multiplier was highest in Williamson County, with every one employee with direct expenditures, another 1.12 jobs were created, followed by Sevier County where for every one employee another 1.07 jobs were created. Sevier County is of particular note. After the 2016 wildfires in the county, THDA supported a number of rebuilding activities in the county. The business revenue multiplier was highest in Knox County. For every \$100 of THDA-related economic activities, an additional \$75 of economic activity was generated.

In the Nashville MSA, THDA-related activities created nearly 4,000 jobs and generated nearly \$220 million in wages and salaries. Every \$100 of THDA-related activities generated an additional \$76 in business revenues in the MSA county economies.

III. Methodology

When THDA helps a low- or moderate-income borrower buy a home or provides some relief to a cost-burdened renter, this affects the life of that person and overall society in several ways.⁵ In addition to the benefits reaped by individuals and society, spending in the process of providing affordable housing generates business revenues, incomes and jobs in the communities.⁶

The Low-Income Housing Tax Credit program, for example, illustrates the broader impacts of affordable housing. One additional low-income housing unit built with the incentive created through the tax credit will house a low-income household. This is an important contribution to the well-being of that family who will be paying less for housing. This reduces the cost burden to renters and frees up funds for other necessities or discretionary items. The money a developer spends to build that additional rental unit will generate incomes and jobs for Tennesseans through rounds of spending. One dollar spent in the local and regional economies will support more than that one dollar, creating income for other people in the region. In the process, there will be some leakage. That is, some money will go to savings instead of being spent, some will go to taxes and fees, some will go to the vendors located outside the local economy, and so on. However, the portion staying in the local economy will continue to circulate and support additional rounds of spending until there is no more.

The sum of all these rounds of spending is represented by an “economic multiplier.” In economic impact models, multipliers measure the secondary effects of initial spending on local economies. Initial new spending in a local economy creates

⁵ For more information about health benefits of affordable housing see: Cohen, R. (2011). “The Impacts of Affordable Housing on Health: A Research Summary,” *Center for Housing Policy* and for more information about education benefits of affordable housing see: Brennan, M. (2011). “The Impacts of Affordable Housing on Education: A Research Summary,” *Center for Housing Policy*. See, also Newman, S. (2008). “Does Housing Matter for Poor Families? A Critical Summary of Research and Issues Still to be Resolved,” *Journal of Policy Analysis and Management*, vol. 27, no. 4, pp. 895-925.

⁶ To learn more about the economic impact of affordable housing, see, for example, Beyond Units: Economic Benefits of Federal Home Loan Bank (FHLB) of Atlanta’s Affordable Housing Program (2010). The Hendrickson Company in conjunction with The Shimberg Center for Housing Studies, University of Florida, on behalf of FHLB of Atlanta; The Metro Area Impact of Home Building in Shelby County, TN: Income, Jobs and Taxes Generated. (2010), National Association of Homebuilders; Wood, J. A. (2004), Economic Impact Of Affordable Housing: New Construction, Rehabilitation And Assistance Programs, Retrieved March 2010, from Utah Housing Coalition website: http://www.utahhousing.org/documents/Econ_impact_study05.pdf; and Assessing the Economic Benefits of Public Housing, Econsult Corporation, Retrieved March 2010, from The Council of Large Public Housing Authorities website: http://www.cpha.org/uploads/final_report_1.pdf

many rounds of re-spending within the region's economy and multipliers capture those rounds of spending.

During the construction of a new house or rehabilitation of an existing one, for example, the local economy benefits directly from the money spent on the production factors such as materials and labor. The builder/developer purchases cement, lumber, windows, doors and other construction related material from local suppliers. Indirect impact occurs when the suppliers spend money on additional materials and hire new workers to complete the orders from the builders/developers. Finally, the employees in construction companies and in the industries related to the construction sector spend a portion of their wages at the local grocery store or shopping mall, which demonstrates induced effects. Taken together, the indirect and induced impacts of housing construction on the local economy are often called "ripple" or "multiplier" effects.

Multipliers are estimated by dividing the total impact (the sum of direct, indirect and induced impacts) by the initial direct spending in the economy. The income multiplier, for example, represents a change in total income (employee compensation and proprietary income) for every dollar change in income in any given sector. The employment multiplier represents the total change in employment resulting from the change in employment in any given sector. An income multiplier of 1.90, for example means that for every \$1 of personal income generates an additional \$0.90 of wages and salaries in the local economy.

The size of multipliers depends on the propensity of businesses and households to purchase goods and services from within the region versus from outside sources. Imports⁷ are leakages from the local economy as income is sent outside rather than recirculating within the region's economy. The region will have a larger multiplier if it has large and diversified economies producing a variety of goods and services because households and business can find most of the goods and services they need locally. The size of the region also impacts the size of the multiplier. In a large geographic region, transportation costs are high enough to prevent imports so businesses and consumers will

⁷ Import, as used here, does not necessarily mean purchasing goods and services from another country. For the purpose of economic impact modelling, any purchase from outside the "region" defined in the IMPLAN Model is considered as import.

spend more locally. A region that serves as a central hub for the surrounding regions will also have higher multipliers than more isolated counties.

The size of the multiplier also depends on the nature of the economic sectors under consideration. Those are the factors such as whether the available industries in the region use labor intensive or capital intensive techniques in the production of industry output and each sector's propensity to buy goods and services from within the region. Rehabilitation/remodeling activities, for example, are more labor intensive than new construction and relies more on locally available labor force than capital, which is mostly imported from neighboring regions. Therefore rehabilitation activities will have larger induced impacts.

Another factor that will impact the size of the multiplier is whether the sector specific multipliers are reported or an average multiplier is reported. When a single multiplier is reported for a region for all the spending in different sectors, it represents an average value across many sectors. It is possible that a small county in which a large portion of initial spending is made on an industry with a high multiplier can have a larger aggregate spending multiplier than another larger county in which the additional initial spending is disbursed across different sectors with varying multiplier values. In this case, the small county with a relatively low industrial base might have a larger multiplier than the large county. For example, in 2018, the Low-Income Housing Tax Credit (LIHTC) contributes to the economy through the construction sector, which has a very high employment multiplier. When the total economic impact of THDA activities in the county is calculated, the employment multiplier is higher than other counties with a relatively larger and more diversified industry base in which THDA administered several different programs with varying multiplier values.

IV. Conclusion

THDA programs provide significant investments in each of the 95 counties of Tennessee. THDA's affordable housing programs to help low- and moderate-income individuals and families are in different forms ranging from the single family mortgage loan program to Low Income Housing Tax Credits to create new or renovate existing multifamily housing units and also rental subsidies. Additionally, THDA helps Tennesseans live in safe, sound affordable housing conditions by reducing the housing-related expenses such as energy. In this economic impact analysis, we included all available programs during the year.

THDA's programs are not only helping to fill the housing needs and gaps in communities across the state; the construction, real estate and programmatic investments provide true investments that multiply their benefit throughout the local, regional and state economies. The total contribution of THDA-related activities to Tennessee's economy was estimated at \$1.4 billion in 2018. For every \$100 spent by THDA and the grantees, an additional \$75 in business revenues was generated in Tennessee economy. State and local governments also benefit financially from THDA-related activities. Sales taxes on building materials, income taxes on construction workers and several fees collected before and during construction all increase the tax revenue. The THDA-related activities accounted for \$43 million in state and local taxes in 2018.

APPENDIX I

ASSUMPTIONS

THDA programs vary in nature from increasing the affordable housing stock by creating new rental and ownership units, to renovating the existing units, to helping individuals become first time homeowners, and to helping households pay an affordable rent. When entering the spending from each THDA program into our economic impact model, we made expenditure and sector assumptions appropriate to the nature of the program. Some activities receive funding from multiple THDA programs. For example, a developer that receive Low Income Housing Tax Credits (LIHTC) to create or preserve affordable rental housing for low income Tennesseans might also borrow funds from a financial institution that receive Community Investment Tax Credits (CITC). The total development costs of a development are considered in calculating the economic impact of LIHTC investment, rather than costs by program. This prevents the double counting of these investments.

This section explains the assumptions made for each 2018 program in calculation of economic impacts.⁸

Single Family Mortgage Loan Program

THDA mortgages can be used to purchase a new or an existing home. Modeling the single family mortgage loan program in IMPLAN depends on whether THDA borrowers purchased a new or an existing home.

The construction and sale of new homes make a direct contribution to the regional economy, based on the cost of the construction. Therefore, we input the construction cost of building those new homes into the model. The cost of land acquisition is removed from the final price of the house because land costs are not part of the construction spending, and it does not create a multiplier effect like construction spending. For IMPLAN, the purchase of land for building a new home is an asset exchange. There will not be a net change in the economy. To determine the average value of land in home prices for single-family homes, we used the home sales price data, which THDA annually compiles from the Comptroller's Office. According to these data, for the homes sold in

⁸ For more information about description of THDA Programs administered during 2018, please see [Investments and Impacts](#)

Tennessee, the land value, on average, was estimated at about 18 percent⁹ of the sales price.

Like the purchase of land for new home construction, the purchase of an existing home does not create a multiplier effect either because the transaction does not represent a new production.¹⁰ However, the fees and commissions paid in the home purchase process are included in the impact analysis. We looked at the mortgages funded through THDA to find out the fees and commission paid by an average THDA borrower as related to the purchase price. Based on these data, we distribute the fees, commissions and expenditures among financial sector, real estate sector and state and local government (some of the fees and all of the property taxes paid at the closing are paid to government). This is done for all mortgages whether it is for a new or an existing home purchase.

Individuals and families who purchased a home through the THDA Single Family Mortgage Loan Program are almost exclusively new homeowners, but they may not be new to the region. They will not bring new spending to the region that was not there before. Therefore, to conservatively estimate the impact of the program, we cannot add their spending as new homeowners to the local economy. However, homeowners' spending patterns are different than renters' spending. To address the changing spending pattern, we subtracted the new homeowners' spending when they were renters and added to the sectors they would spend as homeowners. Bureau of Labor Statistics (BLS) surveys individuals to determine their spending habits and those are published regularly as Consumer Expenditure Survey (CES). The aggregate tables provide spending patterns of renter and homeowners (with and without mortgage payments). To determine the change in the spending pattern of THDA borrowers after they became new homeowners, we used these consumer expenditure surveys. We determined the sectors in which homeowners and renters spend their income, excluding the housing related expenditures from both groups. For the income, we used the average income of the THDA borrowers in all homeownership programs.

⁹ This was a statewide average and did not vary by county.

¹⁰ It might lead to the construction of new homes in subsequent rounds if those people who sold their homes to THDA borrowers purchase a new home, but we did not make any assumption to quantify this.

Keep My Tennessee Home Program (Tennessee's Hardest Hit Fund and Attorney General Medical Disability Hardship Program)

This program provides forgivable loans to homeowners to help pay their mortgages. We assumed that homeowners spend money for consumption goods and services that they would otherwise use for paying their mortgages. The Keep My Tennessee Home program pays arrears if the borrower has any, and makes the monthly payments on behalf of the homeowner for up to a total of \$40,000. The money paid for arrears cannot be considered as money homeowners otherwise would spend for consumption. However, in the absence of a good measure of the actual amount of funds disbursed for arrears versus funds used to make monthly mortgage payments, we assumed all funds used in the year were new injections to the economy.¹¹

Low Income Housing Tax Credit (LIHTC) and Multifamily Bond Authority

In the LIHTC program, developers leverage additional funds to complete the projects. We assume that in the absence of the tax credit allocation, the property would not be built. Therefore, to calculate the economic impact of constructing multifamily housing units with LIHTC, we used the total cost of construction rather than the tax credit allocations developers receive.

There is a lag time between the allocation of the Low Income Housing Tax Credit and the start-up of the housing developments. Therefore, to determine the impact of 2018 activities, we cannot use the 2018 LIHTC allocations.

In terms of our model, the important stage is when the developer starts the new construction or rehabilitation, as the money is then injected into the economy. Using the available data, it is established that developers mostly act on their LIHTC commitments in the second year after they receive their tax credit commitment. Based on this prior knowledge and after reviewing the data on the annual tax credit allocations, we used LIHTC allocations of 2016 and 2017 for the LIHTC spending in calendar year 2018. We used an 80-20 percent division, which means that, of the total LIHTC spending in

¹¹ Even if the fact that THDA pays the arrears for these borrowers does not impact the current consumption, it will impact the household's consumption level in the future considering that the debt needs to be paid at some point. Therefore, including it with the monthly mortgage payments is not too much of an overestimation.

calendar year 2018, 80 percent comes from the 2016 THDA tax credit allocations and 20 percent from the 2017 THDA tax credit allocations.

We have detailed cost data such as the land value, the site work, the architectural and engineering fees, and the financing fee expenses for the rental developments built with the LIHTC allocations. The rest of the spending related to building multifamily units is distributed into the appropriate sectors in IMPLAN.

Multifamily bond authority deals can apply for LIHTC and their impact is calculated the same as LIHTC deals. We assume, similar to the LIHTC developments, that without the multifamily bonds these properties would not be built. For the Multifamily Tax Exempt Bond Authority, the developers have one year for the rehabilitation and the acquisition projects to complete the project and place in service, while for the new construction projects, they have two years. Therefore, we used the 2017 allocations for the multifamily tax exempt bond authority developments.

Section 8 Rental Assistance

Both the tenant-based housing choice vouchers and project-based rental assistance help renters pay affordable rent. The rent savings is treated as an increase in disposable income. We assumed that renters spend the money for the consumption of goods and services that they would otherwise use for paying rent. Money is distributed among the sectors based on household spending patterns in the IMPLAN model.

The economic impact of the rental assistance programs presented here is a conservative figure, including only an estimate of the household spending impacts related to the rental assistance benefits. To determine the impact the rental subsidy has on household spending, the annual difference between the income available after paying gross rent without a rental subsidy and the income available after paying gross rent with a rental subsidy was estimated for THDA's rental assistance populations. The gross rent that would be paid by THDA rental assistance participants if they did not receive a rental subsidy was estimated by using the most recent Bureau of Labor Statistics U.S. Consumer Expenditure Survey for shelter and select utilities. This percent was applied to the average gross income of rental assistance participants in 2018.

The gross rent with rental subsidy was calculated by using the average statewide total tenant payment after subsidy for the two programs. The estimated difference was then multiplied by the number of participants in the programs during 2018. This method of calculating rent saving through the rental assistance program is similar to the 2011 City of Norfolk HCV Economic Impact study.¹²

Community Investment Tax Credit (CITC)

The investment amount for each project is used as input for the economic impact model. This is assuming that the loans would not be made in the absence of CITC. The CITC projects could take multiple years to complete. However, in our modeling, we did not address this possibility. The activities for CITC projects include new construction and rehabilitation of rental and ownership units and the acquisition of buildings for rehabilitation. New construction and rehabilitation spending are distributed into the appropriate sectors of the economy in the model.

Tennessee's Housing Trust Fund

THDA's Housing Trust Fund grants require matching funds from the grantees. Those matching funds can come from different sources. The assumption is made that without THDA involvement, those funds would not be available to complete those projects. Therefore, for any grant that requires matching funds to complete the project, the total cost of the project is used as the input for IMPLAN instead of the amount of grant received from Housing Trust Fund. The Emergency Repair Program, the Home Modifications and Ramps Program, and Habitat Tennessee grants are spent in the same year they are awarded, while the Challenge Grant, Competitive Grant and Rebuild and Recovery Program recipients have multiple years to spend the awarded grants. To address the multi-year grants, we used the amount of money allocated in the year for these grants as input for economic impact model.

National Housing Trust Fund (NHTF)

THDA has decided to use all available program funds from the 2018 allocation (less funds allowed for administrative expenses) for the production, preservation,

¹² City of Norfolk Economic Impacts of the NRHA Housing Choice Voucher Program. (2011), Retrieved on March 2015 from Norfolk Redevelopment and Housing Authority website: <http://www.nrha.us/sites/default/files/Study-2-HCV.pdf>

rehabilitation, and operation of affordable rental housing. The investment amount for each project is used as input for the economic impact model.

The Emergency Solutions Grant (ESG) Program

The HUD funds given to THDA for this program are distributed into the appropriate sectors in the economic impact model.

The Foreclosure Prevention Program

Money allocated to the counseling agencies is distributed to the appropriate sectors in economic impact model. The counseling agencies also receive administrative funds. This amount is also included as a different category in the economic impact model.

Homebuyer Education Initiative

The money paid to area agencies by THDA on behalf of homebuyers who received homebuyer education and then a THDA loan is distributed into the appropriate sectors in the economic impact model. THDA also spends money for training those educators and provides textbooks used in trainings. This spending is also distributed into the model accordingly.

The Weatherization Assistance Program (WAP)

The WAP provides grants for repairs, renovations and retrofits based on a home's energy consumption, technical assistance, and information tools to states for their energy programs. The total allocated amount was included in the model as rectification spending in the construction sector. The subsequent energy savings that produce additional funds for a household's spending on other necessities is not included in the calculation. The LIHEAP Weatherization Program provides weatherization and energy-related minor home repairs.

The Low Income Home Energy Assistance Program (LIHEAP)

The LIHEAP provides assistance to the families by paying their energy bill. The calculations are based on the assumption that the energy assistance helps them heat and cool their homes while freeing their energy budget to spend on other necessities like food, rent, education, health and so on. Therefore, we distributed the assistance amount provided into the sectors related to those consumption goods and services.

APPENDIX II
ECONOMIC IMPACT RESULTS
2018

Business Revenue¹³

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Anderson	\$1,917,920	\$583,489	\$235,931	\$2,737,340	28	1.43	18
Bedford	\$1,055,297	\$228,308	\$112,087	\$1,395,693	36	1.32	57
Benton	\$181,267	\$44,784	\$19,226	\$245,277	82	1.35	42
Bledsoe	\$91,786	\$14,854	\$6,675	\$113,315	89	1.23	81
Blount	\$17,423,697	\$3,730,979	\$3,378,848	\$24,533,524	12	1.41	22
Bradley	\$17,776,042	\$4,617,246	\$3,268,560	\$25,661,848	10	1.44	15
Campbell	\$1,023,106	\$231,879	\$148,073	\$1,403,057	35	1.37	32
Cannon	\$438,903	\$51,500	\$14,547	\$504,950	65	1.15	93
Carroll	\$684,110	\$156,830	\$74,753	\$915,692	50	1.34	48
Carter	\$1,285,211	\$316,864	\$138,727	\$1,740,802	30	1.35	39
Cheatham	\$1,121,632	\$146,411	\$46,524	\$1,314,566	37	1.17	92
Chester	\$243,597	\$61,776	\$24,347	\$329,720	76	1.35	41
Claiborne	\$588,596	\$113,301	\$56,789	\$758,686	54	1.29	68
Clay	\$150,186	\$28,786	\$12,241	\$191,213	85	1.27	73
Cocke	\$1,058,137	\$273,976	\$80,942	\$1,413,054	34	1.34	51
Coffee	\$2,988,163	\$822,404	\$432,791	\$4,243,358	19	1.42	20
Crockett	\$203,530	\$53,382	\$21,383	\$278,294	80	1.37	33
Cumberland	\$827,554	\$209,756	\$109,476	\$1,146,787	40	1.39	28
Davidson	\$226,909,819	\$78,762,992	\$60,241,609	\$365,914,421	1	1.61	4
Decatur	\$125,426	\$28,266	\$16,369	\$170,062	87	1.36	37
DeKalb	\$794,039	\$134,200	\$59,015	\$987,254	48	1.24	79
Dickson	\$948,228	\$209,469	\$102,910	\$1,260,607	38	1.33	53
Dyer	\$1,102,568	\$240,548	\$209,149	\$1,552,265	32	1.41	23

¹³ THDA spending in the programs administered in each county during the year that led to these impacts can be found at [THDA Investments and Impacts: 2018](#) and [Investments and Impacts: Interactive Map](#)

Business Revenue¹³

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Fayette	\$769,693	\$186,122	\$53,212	\$1,009,028	46	1.31	61
Fentress	\$2,368,006	\$703,181	\$343,581	\$3,414,768	23	1.44	17
Franklin	\$432,842	\$101,884	\$53,936	\$588,662	61	1.36	35
Gibson	\$854,738	\$222,765	\$115,447	\$1,192,949	39	1.40	25
Giles	\$720,302	\$166,420	\$103,598	\$990,319	47	1.37	31
Grainger	\$306,069	\$75,035	\$21,164	\$402,268	72	1.31	60
Greene	\$843,633	\$180,529	\$107,302	\$1,131,463	41	1.34	47
Grundy	\$665,051	\$163,838	\$46,878	\$875,767	52	1.32	58
Hamblen	\$1,996,374	\$642,871	\$275,670	\$2,914,915	26	1.46	12
Hamilton	\$58,772,954	\$19,887,846	\$17,690,907	\$96,351,707	4	1.64	3
Hancock	\$1,566,880	\$266,305	\$54,013	\$1,887,198	29	1.20	88
Hardeman	\$196,092	\$37,566	\$20,161	\$253,819	81	1.29	66
Hardin	\$266,554	\$66,632	\$37,127	\$370,312	75	1.39	27
Hawkins	\$3,229,852	\$658,560	\$217,957	\$4,106,369	20	1.27	74
Haywood	\$568,782	\$115,024	\$51,773	\$735,579	57	1.29	67
Henderson	\$362,124	\$75,874	\$42,415	\$480,413	67	1.33	56
Henry	\$513,054	\$153,977	\$81,231	\$748,262	55	1.46	13
Hickman	\$371,996	\$72,336	\$21,831	\$466,163	68	1.25	78
Houston	\$55,714	\$7,690	\$3,814	\$67,218	94	1.21	87
Humphreys	\$148,357	\$32,413	\$16,349	\$197,119	84	1.33	54
Jackson	\$547,894	\$127,732	\$33,761	\$709,387	58	1.29	65
Jefferson	\$2,988,297	\$683,704	\$293,228	\$3,965,229	21	1.33	55
Johnson	\$219,934	\$36,506	\$24,971	\$281,411	79	1.28	70
Knox	\$88,173,459	\$34,761,862	\$30,927,968	\$153,863,288	3	1.75	1
Lake	\$376,694	\$43,531	\$11,745	\$431,970	69	1.15	94

Business Revenue¹³

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Lauderdale	\$1,104,102	\$288,545	\$92,041	\$1,484,688	33	1.34	44
Lawrence	\$304,536	\$67,325	\$43,832	\$415,693	71	1.37	34
Lewis	\$144,260	\$28,609	\$15,099	\$187,969	86	1.30	62
Lincoln	\$493,890	\$105,719	\$50,131	\$649,741	59	1.32	59
Loudon	\$606,170	\$139,521	\$64,033	\$809,723	53	1.34	50
Macon	\$1,271,636	\$323,306	\$114,417	\$1,709,359	31	1.34	46
Madison	\$16,249,200	\$4,706,172	\$3,827,309	\$24,782,681	11	1.53	6
Marion	\$757,178	\$207,163	\$88,618	\$1,052,958	44	1.39	26
Marshall	\$940,736	\$123,888	\$50,152	\$1,114,776	42	1.19	90
Maury	\$25,685,044	\$6,177,963	\$4,604,252	\$36,467,259	6	1.42	21
McMinn	\$617,452	\$183,201	\$104,702	\$905,355	51	1.47	11
McNairy	\$329,564	\$52,710	\$41,454	\$423,728	70	1.29	69
Meigs	\$65,797	\$12,833	\$4,700	\$83,331	93	1.27	75
Monroe	\$4,899,020	\$1,165,911	\$539,511	\$6,604,441	17	1.35	43
Montgomery	\$20,105,350	\$6,060,586	\$4,162,756	\$30,328,691	7	1.51	9
Moore	\$174,557	\$12,763	\$11,160	\$198,480	83	1.14	95
Morgan	\$233,685	\$38,326	\$17,018	\$289,030	78	1.24	80
Obion	\$338,645	\$80,898	\$62,083	\$481,626	66	1.42	19
Overton	\$315,265	\$48,165	\$25,391	\$388,821	73	1.23	82
Perry	\$70,657	\$9,419	\$6,252	\$86,328	92	1.22	85
Pickett	\$44,939	\$9,152	\$4,131	\$58,223	95	1.30	64
Polk	\$118,663	\$27,061	\$8,329	\$154,053	88	1.30	63
Putnam	\$2,310,926	\$651,495	\$370,481	\$3,332,903	24	1.44	16
Rhea	\$385,694	\$94,025	\$35,114	\$514,833	64	1.33	52
Roane	\$413,420	\$97,252	\$50,934	\$561,606	62	1.36	36

Business Revenue¹³

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Robertson	\$3,608,819	\$584,678	\$221,462	\$4,414,959	18	1.22	84
Rutherford	\$39,823,445	\$8,061,223	\$7,879,994	\$55,764,661	5	1.40	24
Scott	\$583,734	\$111,484	\$49,159	\$744,377	56	1.28	71
Sequatchie	\$2,276,855	\$612,098	\$197,181	\$3,086,134	25	1.36	38
Sevier	\$9,765,680	\$3,306,251	\$1,740,346	\$14,812,277	15	1.52	7
Shelby	\$98,379,603	\$35,771,904	\$31,664,805	\$165,816,311	2	1.69	2
Smith	\$865,051	\$120,137	\$50,004	\$1,035,192	45	1.20	89
Stewart	\$84,572	\$22,056	\$6,566	\$113,194	90	1.34	49
Sullivan	\$6,192,495	\$1,773,812	\$991,298	\$8,957,605	16	1.45	14
Sumner	\$20,200,147	\$3,344,966	\$3,613,790	\$27,158,904	8	1.34	45
Tipton	\$2,171,945	\$375,557	\$219,462	\$2,766,965	27	1.27	72
Trousdale	\$744,535	\$136,596	\$54,227	\$935,358	49	1.26	76
Unicoi	\$284,438	\$79,386	\$21,415	\$385,240	74	1.35	40
Union	\$275,129	\$33,565	\$15,311	\$324,005	77	1.18	91
Van Buren	\$89,448	\$14,142	\$4,364	\$107,953	91	1.21	86
Warren	\$2,474,304	\$634,415	\$319,578	\$3,428,297	22	1.39	29
Washington	\$13,463,998	\$3,930,244	\$2,996,816	\$20,391,058	14	1.51	8
Wayne	\$855,028	\$156,616	\$62,490	\$1,074,134	43	1.26	77
Weakley	\$465,829	\$114,969	\$63,268	\$644,066	60	1.38	30
White	\$456,499	\$74,483	\$29,075	\$560,057	63	1.23	83
Williamson	\$13,811,628	\$3,787,887	\$3,770,195	\$21,369,710	13	1.55	5
Wilson	\$18,334,256	\$5,226,143	\$3,349,948	\$26,910,347	9	1.47	10
State	\$789,995,214	\$309,929,260	\$278,982,346	\$1,378,906,819		1.75	

Business Revenue¹³

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Congressional District 1	\$46,754,596	\$14,876,001	\$9,943,062	\$71,573,659	9	1.53	7
Congressional District 2	\$114,394,085	\$42,969,330	\$39,555,608	\$196,919,023	3	1.72	1
Congressional District 3	\$86,584,763	\$28,069,269	\$21,933,542	\$136,587,575	5	1.58	5
Congressional District 4	\$92,372,233	\$22,004,671	\$16,270,967	\$130,647,871	6	1.41	8
Congressional District 5	\$227,978,385	\$80,408,050	\$62,869,385	\$371,255,820	1	1.63	4
Congressional District 6	\$57,159,335	\$14,174,211	\$9,131,381	\$80,464,927	8	1.41	9
Congressional District 7	\$66,961,099	\$20,762,990	\$16,080,814	\$103,804,904	7	1.55	6
Congressional District 8	\$126,268,907	\$48,026,892	\$40,804,557	\$215,100,356	2	1.70	2
Congressional District 9	\$98,379,603	\$35,771,904	\$31,664,805	\$165,816,311	4	1.69	3
Chattanooga, MSA	\$61,734,441	\$21,305,883	\$18,869,816	\$101,910,139	4	1.65	4
Clarksville, MSA	\$20,105,350	\$6,060,586	\$4,162,756	\$30,328,691	5	1.51	6
Cleveland, MSA	\$17,960,785	\$4,657,305	\$3,345,740	\$25,963,830	6	1.45	8
Jackson, MSA	\$16,613,343	\$4,945,248	\$3,892,227	\$25,450,819	7	1.53	5
Johnson City, MSA	\$15,247,049	\$4,371,369	\$3,280,908	\$22,899,325	8	1.50	7
Kingsport-Bristol, MSA	\$9,955,396	\$2,676,169	\$1,598,603	\$14,230,168	9	1.43	10
Knoxville, MSA	\$113,098,520	\$43,084,808	\$36,996,469	\$193,179,797	2	1.71	3
Memphis, MSA	\$102,050,582	\$38,781,159	\$33,939,778	\$174,771,518	3	1.71	2
Morristown, MSA	\$5,211,116	\$1,492,022	\$764,980	\$7,468,117	10	1.43	9
Nashville, MSA	\$365,172,145	\$138,527,755	\$140,584,572	\$644,284,472	1	1.76	1

Personal Income

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Anderson	\$451,679	\$185,703	\$65,206	\$702,588	21	1.56	21
Bedford	\$172,174	\$53,036	\$26,809	\$252,019	35	1.46	47
Benton	\$36,578	\$9,150	\$4,558	\$50,286	81	1.37	68
Bledsoe	\$19,871	\$2,615	\$1,182	\$23,668	89	1.19	94
Blount	\$5,184,290	\$1,274,374	\$982,894	\$7,441,558	10	1.44	52
Bradley	\$4,292,124	\$1,433,908	\$1,011,496	\$6,737,528	13	1.57	17
Campbell	\$235,648	\$62,044	\$35,191	\$332,884	31	1.41	60
Cannon	\$30,227	\$12,020	\$3,166	\$45,414	85	1.50	33
Carroll	\$110,642	\$37,273	\$18,128	\$166,043	46	1.50	35
Carter	\$241,258	\$70,309	\$32,567	\$344,134	30	1.43	54
Cheatham	\$90,382	\$30,736	\$11,861	\$132,980	59	1.47	44
Chester	\$50,785	\$12,512	\$6,111	\$69,408	73	1.37	72
Claiborne	\$92,905	\$26,891	\$14,353	\$134,149	58	1.44	51
Clay	\$22,783	\$5,137	\$2,476	\$30,395	87	1.33	78
Cocke	\$121,941	\$58,844	\$18,429	\$199,215	43	1.63	7
Coffee	\$637,107	\$242,649	\$118,394	\$998,150	18	1.57	18
Crockett	\$44,851	\$13,790	\$6,386	\$65,027	74	1.45	50
Cumberland	\$149,052	\$52,394	\$26,562	\$228,008	38	1.53	27
Davidson	\$87,270,562	\$30,702,018	\$22,376,958	\$140,349,538	1	1.61	11
Decatur	\$36,998	\$6,804	\$4,212	\$48,014	83	1.30	83
DeKalb	\$93,984	\$31,112	\$14,287	\$139,383	53	1.48	41
Dickson	\$127,903	\$51,036	\$26,985	\$205,924	41	1.61	10
Dyer	\$331,536	\$69,693	\$58,310	\$459,539	29	1.39	64
Fayette	\$97,894	\$38,788	\$12,714	\$149,396	49	1.53	30
Fentress	\$482,989	\$168,618	\$85,063	\$736,670	20	1.53	31

Personal Income

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Franklin	\$85,524	\$23,115	\$13,251	\$121,891	62	1.43	55
Gibson	\$183,418	\$57,619	\$30,194	\$271,232	32	1.48	42
Giles	\$160,358	\$42,682	\$25,419	\$228,459	37	1.42	56
Grainger	\$58,111	\$15,751	\$4,531	\$78,392	70	1.35	76
Greene	\$172,177	\$46,174	\$28,392	\$246,743	36	1.43	53
Grundy	\$87,799	\$40,009	\$10,164	\$137,972	55	1.57	16
Hamblen	\$387,181	\$161,271	\$75,075	\$623,528	25	1.61	9
Hamilton	\$20,897,366	\$7,445,436	\$5,645,395	\$33,988,196	4	1.63	8
Hancock	\$111,152	\$57,059	\$8,823	\$177,033	45	1.59	14
Hardeman	\$49,099	\$7,493	\$4,951	\$61,543	77	1.25	90
Hardin	\$68,809	\$14,993	\$9,661	\$93,463	68	1.36	74
Hawkins	\$386,140	\$169,499	\$48,802	\$604,440	27	1.57	19
Haywood	\$92,531	\$32,123	\$11,887	\$136,540	56	1.48	43
Henderson	\$71,067	\$19,178	\$10,423	\$100,669	66	1.42	59
Henry	\$129,238	\$41,984	\$22,720	\$193,943	44	1.50	36
Hickman	\$45,374	\$12,684	\$4,252	\$62,310	76	1.37	69
Houston	\$9,336	\$1,354	\$787	\$11,477	95	1.23	91
Humphreys	\$33,672	\$8,753	\$3,348	\$45,774	84	1.36	73
Jackson	\$76,030	\$25,804	\$8,620	\$110,453	63	1.45	49
Jefferson	\$424,684	\$157,846	\$67,843	\$650,373	23	1.53	26
Johnson	\$58,025	\$7,603	\$5,221	\$70,849	72	1.22	92
Knox	\$28,140,591	\$12,250,787	\$9,691,905	\$50,083,283	3	1.78	1
Lake	\$34,717	\$11,188	\$2,227	\$48,132	82	1.39	63
Lauderdale	\$173,997	\$64,885	\$19,583	\$258,465	34	1.49	40
Lawrence	\$71,303	\$16,331	\$10,636	\$98,271	67	1.38	67

Personal Income

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Lewis	\$33,067	\$5,248	\$3,236	\$41,550	86	1.26	88
Lincoln	\$99,628	\$26,753	\$12,221	\$138,602	54	1.39	62
Loudon	\$108,621	\$35,335	\$15,624	\$159,580	47	1.47	45
Macon	\$148,818	\$83,962	\$26,072	\$258,851	33	1.74	2
Madison	\$5,669,222	\$1,505,047	\$1,151,492	\$8,325,761	8	1.47	46
Marion	\$134,385	\$53,614	\$19,893	\$207,892	40	1.55	24
Marshall	\$102,787	\$29,740	\$11,411	\$143,938	52	1.40	61
Maury	\$5,931,567	\$1,930,274	\$1,338,703	\$9,200,544	6	1.55	23
McMinn	\$140,061	\$43,660	\$25,659	\$209,380	39	1.49	38
McNairy	\$84,307	\$12,893	\$9,751	\$106,951	64	1.27	85
Meigs	\$13,981	\$2,827	\$891	\$17,700	93	1.27	87
Monroe	\$820,919	\$337,337	\$119,428	\$1,277,684	17	1.56	20
Montgomery	\$5,656,537	\$1,736,726	\$1,103,283	\$8,496,546	7	1.50	34
Moore	\$49,234	\$4,108	\$2,620	\$55,963	79	1.14	95
Morgan	\$42,741	\$8,618	\$4,350	\$55,709	80	1.30	82
Obion	\$92,310	\$23,020	\$15,925	\$131,255	61	1.42	57
Overton	\$45,216	\$11,564	\$5,603	\$62,383	75	1.38	66
Perry	\$14,250	\$2,183	\$1,440	\$17,873	92	1.25	89
Pickett	\$10,679	\$1,903	\$950	\$13,532	94	1.27	86
Polk	\$22,205	\$5,304	\$1,737	\$29,246	88	1.32	79
Putnam	\$596,332	\$203,607	\$111,849	\$911,788	19	1.53	28
Rhea	\$77,940	\$20,330	\$8,408	\$106,678	65	1.37	71
Roane	\$103,773	\$30,168	\$13,202	\$147,144	50	1.42	58
Robertson	\$374,388	\$149,803	\$57,238	\$581,428	28	1.55	22
Rutherford	\$9,298,524	\$2,560,651	\$2,338,196	\$14,197,372	5	1.53	29

Personal Income

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Scott	\$108,695	\$26,736	\$11,668	\$147,098	51	1.35	75
Sequatchie	\$418,087	\$150,954	\$41,863	\$610,903	26	1.46	48
Sevier	\$1,992,274	\$962,633	\$459,754	\$3,414,660	15	1.71	3
Shelby	\$36,882,080	\$13,495,897	\$10,444,131	\$60,822,109	2	1.65	6
Smith	\$88,145	\$32,112	\$11,896	\$132,154	60	1.50	37
Stewart	\$17,040	\$4,444	\$1,433	\$22,918	90	1.34	77
Sullivan	\$1,325,936	\$528,547	\$276,690	\$2,131,173	16	1.61	12
Sumner	\$5,534,398	\$1,127,909	\$982,162	\$7,644,469	9	1.38	65
Tipton	\$482,373	\$100,577	\$45,866	\$628,816	24	1.30	81
Trousdale	\$89,925	\$47,902	\$15,144	\$152,972	48	1.70	4
Unicoi	\$61,824	\$14,474	\$4,685	\$80,983	69	1.31	80
Union	\$50,270	\$7,242	\$3,220	\$60,732	78	1.21	93
Van Buren	\$15,446	\$3,544	\$843	\$19,834	91	1.28	84
Warren	\$441,373	\$172,705	\$83,554	\$697,632	22	1.58	15
Washington	\$3,465,079	\$1,237,481	\$856,692	\$5,559,252	14	1.60	13
Wayne	\$149,329	\$39,508	\$15,781	\$204,618	42	1.37	70
Weakley	\$89,193	\$30,535	\$16,302	\$136,030	57	1.53	32
White	\$47,963	\$16,298	\$7,011	\$71,271	71	1.49	39
Williamson	\$4,318,187	\$1,541,971	\$1,450,377	\$7,310,534	11	1.69	5
Wilson	\$4,436,493	\$1,508,547	\$899,998	\$6,845,038	12	1.54	25
State	\$241,970,603	\$105,614,706	\$88,822,808	\$436,408,117		1.80	
Congressional District 1	\$10,223,994	\$4,276,922	\$2,717,178	\$17,218,094	9	1.68	3
Congressional District 2	\$35,042,861	\$14,651,010	\$12,050,563	\$61,744,435	3	1.76	1

Personal Income

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Congressional District 3	\$26,466,328	\$9,743,698	\$6,575,172	\$42,785,198	5	1.62	7
Congressional District 4	\$19,984,453	\$6,552,423	\$4,599,934	\$31,136,809	6	1.56	9
Congressional District 5	\$84,837,212	\$30,848,052	\$23,111,162	\$138,796,426	1	1.64	6
Congressional District 6	\$11,553,653	\$4,244,710	\$2,457,058	\$18,255,421	8	1.58	8
Congressional District 7	\$18,717,360	\$6,950,028	\$5,143,731	\$30,811,119	7	1.65	5
Congressional District 8	\$43,147,146	\$16,879,794	\$12,912,078	\$72,939,018	2	1.69	2
Congressional District 9	\$36,882,080	\$13,495,897	\$10,444,131	\$60,822,109	4	1.65	4
Chattanooga, MSA	\$21,481,945	\$7,801,210	\$5,946,559	\$35,229,714	4	1.64	4
Clarksville, MSA	\$5,656,537	\$1,736,726	\$1,103,283	\$8,496,546	5	1.50	9
Cleveland, MSA	\$4,258,554	\$1,437,598	\$1,027,453	\$6,723,605	7	1.58	8
Jackson, MSA	\$5,411,067	\$1,547,471	\$1,166,391	\$8,124,928	6	1.50	10
Johnson City, MSA	\$3,674,303	\$1,287,706	\$904,619	\$5,866,628	8	1.60	7
Kingsport-Bristol, MSA	\$2,041,359	\$789,125	\$434,846	\$3,265,330	9	1.60	6
Knoxville, MSA	\$34,857,662	\$14,780,668	\$11,253,818	\$60,892,148	3	1.75	2
Memphis, MSA	\$36,625,992	\$14,225,587	\$11,004,074	\$61,855,654	2	1.69	3
Morristown, MSA	\$914,560	\$367,280	\$197,994	\$1,479,833	10	1.62	5
Nashville, MSA	\$119,471,742	\$50,298,905	\$49,163,572	\$218,934,219	1	1.83	1

County	Employment						
	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Anderson	10	4	2	16	27	1.63	37
Bedford	4	2	1	7	40	1.68	24
Benton	2	0	0	2	77	1.38	73
Bledsoe	1	0	0	1	91	1.14	94
Blount	84	36	25	145	11	1.73	19
Bradley	72	48	23	143	12	1.98	3
Campbell	5	2	1	8	34	1.57	45
Cannon	1	1	0	2	79	1.64	34
Carroll	3	2	1	6	48	1.62	38
Carter	7	3	1	11	31	1.61	41
Cheatham	3	1	0	4	55	1.62	40
Chester	2	1	0	3	68	1.40	68
Claiborne	3	1	0	5	51	1.50	53
Clay	1	0	0	1	87	1.33	80
Cocke	5	3	1	9	33	1.59	42
Coffee	15	7	3	25	20	1.73	17
Crockett	1	0	0	2	79	1.50	53
Cumberland	4	2	1	7	39	1.63	36
Davidson	1,318	612	383	2,313	1	1.75	13
Decatur	1	0	0	1	84	1.30	84
DeKalb	2	1	0	4	59	1.68	25
Dickson	3	2	1	6	46	1.74	16
Dyer	8	2	2	12	30	1.55	48
Fayette	4	2	0	6	43	1.49	57
Fentress	21	7	2	30	18	1.45	63

Employment

County	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Franklin	3	1	0	4	59	1.48	58
Gibson	5	2	1	7	37	1.64	30
Giles	4	2	1	6	44	1.67	27
Grainger	2	1	0	2	74	1.50	56
Greene	5	2	1	7	38	1.48	59
Grundy	4	2	0	6	47	1.57	44
Hamblen	11	5	2	19	25	1.65	28
Hamilton	424	159	124	706	4	1.67	26
Hancock	9	4	0	13	29	1.42	66
Hardeman	1	0	0	2	81	1.31	83
Hardin	2	1	0	3	66	1.35	78
Hawkins	14	8	2	23	21	1.71	20
Haywood	3	1	0	4	56	1.52	50
Henderson	2	1	0	3	68	1.47	60
Henry	3	1	1	5	49	1.58	43
Hickman	2	1	0	3	71	1.44	64
Houston	1	0	0	1	91	1.14	94
Humphreys	1	0	0	1	84	1.30	84
Jackson	2	2	0	4	53	1.91	5
Jefferson	12	7	2	22	23	1.74	14
Johnson	2	0	0	2	75	1.28	88
Knox	550	283	219	1,051	3	1.91	4
Lake	2	1	0	3	72	1.32	82
Lauderdale	5	2	1	8	35	1.64	32
Lawrence	2	1	0	3	66	1.41	67

County	Employment						
	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Lewis	1	0	0	2	82	1.33	79
Lincoln	3	1	0	4	56	1.52	50
Loudon	3	1	1	4	53	1.52	52
Macon	5	3	1	9	32	1.81	8
Madison	102	42	30	174	8	1.70	22
Marion	4	2	1	7	41	1.74	15
Marshall	3	1	0	5	51	1.55	47
Mauy	123	62	36	222	7	1.80	9
McMinn	4	2	1	6	42	1.63	35
McNairy	3	1	0	4	63	1.30	86
Meigs	1	0	0	1	90	1.29	87
Monroe	21	12	4	37	17	1.73	18
Montgomery	181	49	30	260	6	1.44	65
Moore	1	0	0	1	84	1.18	93
Morgan	1	0	0	1	83	1.40	68
Obion	2	1	1	4	62	1.50	53
Overton	2	0	0	2	77	1.38	73
Perry	1	0	0	1	94	1.20	91
Pickett	1	0	0	1	89	1.25	89
Polk	1	0	0	1	88	1.38	73
Putnam	13	7	3	22	22	1.77	12
Rhea	2	1	0	3	64	1.45	62
Roane	2	1	0	3	64	1.39	72
Robertson	9	5	2	15	28	1.69	23
Rutherford	164	74	56	295	5	1.80	10

County	Employment						
	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Scott	5	1	0	6	44	1.33	80
Sequatchie	21	6	1	28	19	1.36	77
Sevier	41	32	13	86	15	2.07	2
Shelby	619	272	218	1,110	2	1.79	11
Smith	2	1	0	4	59	1.54	49
Stewart	1	0	0	1	94	1.20	91
Sullivan	27	16	7	51	16	1.86	6
Sumner	88	30	25	142	13	1.62	39
Tipton	12	4	2	17	26	1.46	61
Trousdale	3	1	0	5	50	1.70	21
Unicoi	2	1	0	3	68	1.40	68
Union	2	0	0	2	75	1.21	90
Van Buren	1	0	0	1	93	1.40	68
Warren	12	6	2	20	24	1.65	29
Washington	95	38	23	155	10	1.64	33
Wayne	6	2	1	8	36	1.36	76
Weakley	3	1	1	4	56	1.64	31
White	2	1	0	3	72	1.56	46
Williamson	50	32	24	106	14	2.12	1
Wilson	85	48	25	159	9	1.86	7
State	4,762	2,404	1,908	9,074		1.91	
Congressional District 1	270	139	75	484	8	1.79	5
Congressional District 2	704	355	280	1,339	3	1.90	1

County	Employment						
	Direct	Indirect	Induced	Total Impact	Rank	Multiplier	Rank
Congressional District 3	548	230	152	930	5	1.70	9
Congressional District 4	402	211	118	730	6	1.82	3
Congressional District 5	1,321	629	404	2,354	1	1.78	6
Congressional District 6	250	128	67	445	9	1.78	8
Congressional District 7	356	168	111	635	7	1.78	7
Congressional District 8	786	368	288	1,442	2	1.83	2
Congressional District 9	619	272	218	1,110	4	1.79	4
Chattanooga, MSA	447	170	133	749	4	1.68	8
Clarksville, MSA	181	49	30	260	5	1.44	10
Cleveland, MSA	74	48	24	145	8	1.97	2
Jackson, MSA	105	44	30	179	6	1.70	7
Johnson City, MSA	107	43	25	175	7	1.63	9
Kingsport-Bristol, MSA	42	26	12	79	9	1.91	3
Knoxville, MSA	707	346	260	1,314	2	1.86	4
Memphis, MSA	647	295	235	1,177	3	1.82	5
Morristown, MSA	26	13	6	45	10	1.75	6
Nashville, MSA	1,960	1,059	915	3,934	1	2.01	1

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