



ECONOMIC IMPACT OF THE **Ohio Housing Trust Fund**

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SUMMARY

For more than 25 years, the Ohio Housing Trust Fund has helped 1.9 million low-income Ohioans access safe and affordable housing. In the process of improving Ohio's housing, the Trust Fund impacts Ohio's economy. Trust Fund dollars are often matched by federal or private resources, making it a particularly effective use of state funds.

This study examined the impact of the Ohio Housing Trust Fund, and its impact on Ohio's economy. Findings indicate for every dollar in Trust Fund spending in State Fiscal Year (SFY) 2017 and 2018, \$3.15 was contributed by other sources, such as private financing, Low-Income Housing Tax Credits, federal HOME dollars, and local government agencies.

As a result, **the cumulative economic impact on Ohio is \$320 million per year** in SFY 2017 and 2018. **This translates to \$7.70 for every dollar spent by the Trust Fund.** This represents an exceptional return on investment that helps create jobs and supports Ohio's working families. About a third of the funds generated from Trust Fund money – \$2.65 for every Trust Fund dollar spent – is retained by workers and proprietors as labor income. Overall, 2,537 jobs (full-time equivalent) were created or supported due to projects receiving Trust Fund awards. This translates to **610 jobs for every \$10 million in annual grants from the Trust Fund.**

Reductions to the Trust Fund can have serious impacts on housing, as well as the strength of Ohio's overall economy. Further, because the Trust Fund relies on fees collected from property transactions, it has less money available when the economy slows down, reducing the number of people its programs can serve when they are needed most and limiting its ability to create jobs when they are needed most.

BACKGROUND

In 1991 the General Assembly passed House Bill 339, which established the Ohio Housing Trust Fund. The Trust Fund provides funding to eligible organizations¹ to increase affordable housing opportunities, expand housing services, and improve housing conditions for low- and moderate-income Ohioans. At least half of all Trust Fund awards must be given to projects and programs outside certain high-population cities and counties², ensuring that the Trust Fund truly has a truly statewide impact.

The fund provides grants and loans for a wide range of housing and homelessness related activities³, including the development and preservation of affordable housing, supporting service provision agencies for those experiencing homelessness, providing access to resources for low-

¹ A broad range of organizations are eligible to apply for money from the Ohio Housing Trust Fund, including local governments, housing authorities, nonprofit organizations, private developers, and private lenders.

² Specifically, these are the 23 cities and counties that are "participating jurisdictions" in the HOME Investment Partnerships Program administered by the U.S. Department of Housing and Urban Development.

³ Housing Trust Funds are grants, loans, loan guarantees, and loan subsidies may be used for the following: (1) Acquiring, financing, constructing, leasing, rehabilitating, remodeling, improving, and equipping publicly or privately owned housing; (2) Providing matching money for federal funds received by the state or localities; (3) Providing to counties, townships, municipal corporations, and nonprofit organizations technical assistance, design and finance services and consultation, and payment of predevelopment and administrative costs related to any of the activities listed above; and (4) Providing supportive services related to housing and the homeless, including counseling. Funds can also be used for housing development, emergency home repair, handicapped accessibility modifications, predevelopment costs, rental assistance, housing counseling, rehabilitation, and new construction.

income households to complete home repairs, and connecting older adults with resources that allow them to age in place.

Initially, the budget for the Trust Fund was set by legislative action every two years. In the 1992-1993 biennial budget, \$5 million of the state's general revenue fund was allocated to the Trust Fund; this amount varied in the following years. Starting with the 2004-2005 biennial budget, the legislature established the Housing Trust Fund Fee, which created a permanent and dedicated revenue source for the Trust Fund.

The Trust Fund is overseen by an advisory committee appointed by the Governor. The committee currently consists of seven representatives from diverse constituencies. Members consist of one lender, one affordable housing developer, one representative from a housing and homelessness organization, two representatives from counties and other local governments, one real estate broker, and one county recorder by state law.

Between 1991 and State Fiscal Year (SFY) 2018, the Trust Fund awarded \$838 million to address critical housing needs for seniors, veterans, individuals with disabilities, persons experiencing mental illness, and working families struggling to make ends meet. In total, 1.9 million Ohioans have been served by these programs. These funds have had an immense impact:

- **\$278 million** funded a number of homeless assistance programs that served **more than one million Ohioans**.
- **\$260 million** financed the construction and preservation of affordable rental housing for **more than 65,000 Ohioans**.
- **\$103 million** went toward home repair and accessibility programs that served **over 88,000 older adults and individuals with disabilities**.

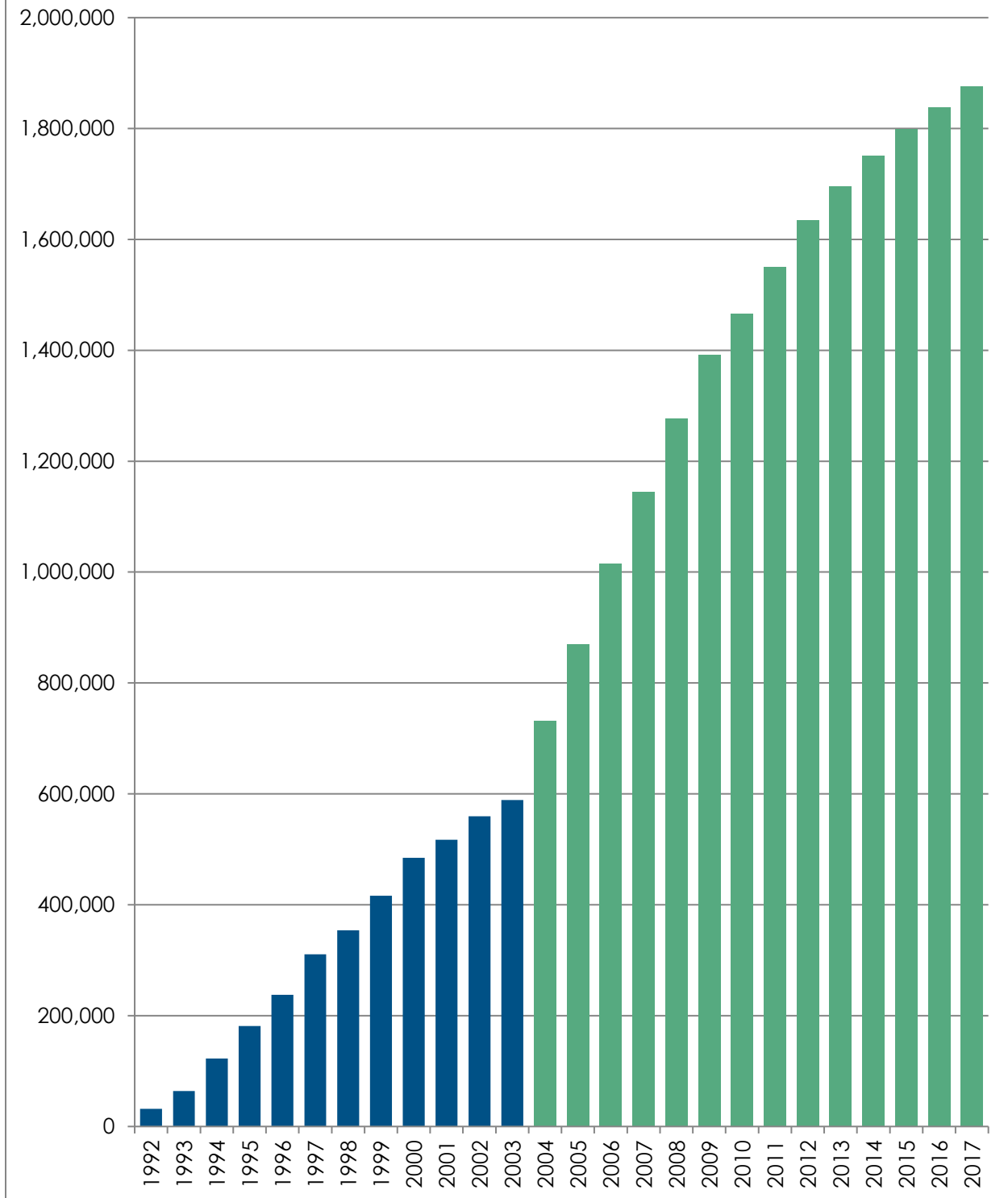
In SFY 2017 alone, tens of thousands of Ohioans were helped by Trust Fund programs, the vast majority of whom earn between 35 and 50 percent of area median income. In particular:

- **Over 20,000 households** were assisted by homeless shelters, homelessness prevention, and rapid rehousing.
- **Over 2,000 homes** owned by low-income seniors or disabled Ohioans are expected to be repaired using local grant funds.
- **Over 1,500 rental units** were constructed or rehabilitated.
- **Over 1,000 senior citizens** were connected with community and services to improve their quality of life and remain safely at in their own home.

Since SFY 2012, Trust Fund grants and loans have leveraged over \$90 million from the federal HOME Investment Partnership Program to fund state and local affordable housing initiatives. Many of the funded projects were used to build or rehabilitate affordable rental housing that also received federal Low-Income Housing Tax Credit allocations.

While the Trust Fund has succeeded in providing housing initiatives for low-income Ohioans, it has also had an immensely positive impact on Ohio's economy. The programs and projects receiving Trust Fund grants and loans help support the employment of thousands of Ohioans and add hundreds of millions of dollars to economic output every year.

**Exhibit 1: Ohioans Assisted by the Trust Fund,
Cumulative Total, SFY 1992-2017**



In Exhibit 1 above, years in which the Trust Fund relied on general appropriations are in blue (SFY 1992-2003), while years with the dedicated funding source are in green (SFY 2004-2017).

Exhibit 2: SFY 2018 Ohio Housing Trust Fund Program Expenditures⁴

Program	Description	Amount
Housing Development Assistance Programs	<p>Includes three gap financing programs for affordable housing projects:</p> <ul style="list-style-type: none"> • Housing Credit Gap Financing, which is competitively awarded and assists projects receiving 9% Low-Income Housing Credits; • Bond Gap Financing, which provide similar assistance for projects receiving 4% housing credits and multifamily bond financing; and • Housing Development Gap Financing, which funds the construction or rehabilitation of small multifamily housing developments not receiving Low-Income Housing Credits. 	\$13,000,000
Homeless Crisis Response Grant Program	Provides aid to public and private providers of services for persons experiencing homelessness for the operation of homeless shelters, rapid rehousing programs, and other social programs serving persons experiencing homelessness or at-risk of homelessness.	\$12,988,700
Supportive Housing Grant Program	Provides funding to support the operation of permanent supportive housing and transitional housing programs, as well as related services.	\$7,548,000
Housing Assistance Grant Program	Enables homeowners earning 50 percent of AMI or less to stay in their homes by providing emergency home repairs and renovations for older adults and persons with disabilities to improve the accessibility of their home.	\$5,500,000
Grants to Community Development Corporations	Provides resources for the Community Development Finance Fund and the Microenterprise Business Development Program, as well as limited funds for training, technical assistance, and capacity building.	\$2,250,000
Community Housing Impact and Preservation Program	Competitively awards grants to eligible communities interested in undertaking home repairs that serve low- and moderate-income persons.	\$1,400,000
Target of Opportunity Grant Programs	Provides a means to fund worthwhile projects and activities that do not fit within the structure of existing programs and to provide supplemental resources to resolve immediate and unforeseen needs. From SFY 2013 through SFY 2015, this category included grants to help finance the Capital Funding to End Homelessness Initiative (CFEHI).	\$997,500
TOTAL EXPENDITURES FOR SFY 2018		\$43,778,600

⁴ This chart does not include administrative expenses related to Trust Fund operations, which constitute less than five percent of total awards by law.

METHODOLOGY

This analysis was conducted using IMPLAN economic impact software. IMPLAN utilizes an input-output model to generate estimated effects on employment, wages, and economic output of a particular type of spending, as well as the fiscal impacts on state and local governments. The input-output model in IMPLAN uses tables that detail the connections between hundreds of sectors of the economy to chart how money flows through the state. This approach is the gold standard for estimating economic effects, and IMPLAN is a recognized leader in developing data and software to conduct such analyses.

This approach can be detailed using the following example.⁵ Assume Ohio only has two industries: goods, measured in millions of widgets made per year, and services, measured in millions of tasks accomplished per year. Both industries are outputs, selling to customers, but also serve as inputs for the other industry; factories need accountants to operate, while restaurants need silverware to serve customers, for example. Suppose three units of goods are needed to produce one unit of services, and one-tenth of a unit of services is required to produce one unit of goods. Therefore, we can build an “input table” describing these relationships that would look like this:

Exhibit 3: Example Input Table

	Goods	Services
Goods	0	3
Services	0.1	0

Now suppose someone purchases 20 units of goods and five5 units of services. What would be the overall impact? Because the two industries rely on one another, there will be a multiplier effect that magnifies the initial expenditure. To produce 20 units of goods, two2 units of services must be supplied; to produce five5 units of services, 15 units of goods must be produced. In turn, these new outputs must also be supplied, and so on. Ultimately, if one repeats this process indefinitely, a final economic impact can be estimated.

Exhibit 4: Example of Iterative Input-Output Analysis

Round	Goods	Services
1	20	5
2	15	2
3	6	1.5
4	4.5	0.6
5	1.8	0.45
(and so on ...)		
Total	50	10

⁵ This narrative is adapted from “Input-Output Analysis and Related Methods,” written by Dr. Thayer Watkins, Department of Economics, San José State University (<http://www.sjsu.edu/faculty/watkins/inputoutput.htm>).

The initial purchase, therefore, creates an economic impact beyond the first round of spending. Because, ultimately, 50 units of goods are produced, goods have a multiplier of $50/20=2.5$. Similarly, services have a multiplier of $10/5=2$. Now that we know how many goods and services were produced by the input-output process, all that is required is to determine the economic value of each unit, as well as the number of people required to produce it and how much they are paid. These figures are then multiplied by total output to estimate the impacts on GDP, employment and income, respectively, which are reported in Exhibits 7 and 8. Changes in tax revenues are similarly calculated.

In reality, of course, there are hundreds of separate industries in the economy (to be specific, IMPLAN's model uses 536), so the input table includes hundreds of thousands of boxes, not just four. This makes the iterative process shown in Exhibit 4 impractical, even with modern computing capacity. The solution is to use matrix algebra to solve for the total output, making for a much quicker result.

To derive total output, the system of equations below must be solved for, where G is the total output of goods and S is the total output of services.

$$\begin{aligned} G &= 3S + 20 \\ S &= 0.1G + 5 \end{aligned}$$

It can be confirmed quickly that $G=50$ and $S=10$, the values from the iterative process, solve the system of equations. The numbers in these equations come from the input table (Exhibit 3) and the initial inputs. This can be written in matrix terms as shown on the first row below.

Determining the total outputs requires subtracting the input table matrix from an identity matrix, inverting the result and multiplying the inverted matrix by the initial inputs, as shown below:

$$\begin{aligned} & \left[\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} - \begin{bmatrix} 0 & 3 \\ 0.1 & 0 \end{bmatrix} \right]^{-1} * \begin{bmatrix} 20 \\ 5 \end{bmatrix} \\ &= \begin{bmatrix} 1 & -3 \\ -0.1 & 1 \end{bmatrix}^{-1} * \begin{bmatrix} 20 \\ 5 \end{bmatrix} \\ &= \begin{bmatrix} 10/7 & 30/7 \\ 1/7 & 10/7 \end{bmatrix} * \begin{bmatrix} 20 \\ 5 \end{bmatrix} \\ &= \begin{bmatrix} \frac{10}{7} * 20 + \frac{30}{7} * 5 \\ \frac{1}{7} * 20 + \frac{10}{7} * 5 \end{bmatrix} = \begin{bmatrix} 50 \\ 10 \end{bmatrix} \end{aligned}$$

While this is an extremely elaborate process for such a simple economy, it becomes clear why this has utility for a system of hundreds of simultaneous equations. A software package can simply run these steps for any input table and initial inputs, rather than processing every round of economic transactions across every sector individually. Then, as noted previously, it can quickly translate the results from the total outputs into impacts on GDP, income, and employment, as well as fiscal effects.

Types of Economic Impact

Economic impacts derived from a given program or event can be divided into three categories. There are **direct effects**, those derived from the initial expenditures; **indirect effects**, which are generated through the purchase of intermediate products related to the initial expenditures; and **induced effects**, created by workers and suppliers who are able to purchase more goods and services because of additional earnings. Due to the structure of the input-output model, each of these can be reported separately.

EXPENDITURES

While Exhibit 2 provides a general overview of expenditures made by the Trust Fund, to compute the economic impact of the programs receiving Trust Fund allocations, those activities must be categorized into groups that align with economic sectors as defined in the North American Industrial Classification System (NAICS). Exhibit 5 provides the average spending on each type of activity during the past six state fiscal years. These figures will be used to generate the inputs to the economic impact modeling process.

Exhibit 5: Average Annual Ohio Housing Trust Fund Expenditures by Sector, SFY 2017 and SFY 2018

Activities	Amount
Capital and operating expenses for providers of housing and related supportive services and housing-related financial assistance programs	\$20,348,649
Acquisition, rehabilitation, remediation, repair, and weatherization of existing residential buildings	\$14,900,849
Project management, data collection and evaluation, planning, training, technical assistance, and other professional services	\$2,224,677
New residential construction and site preparation	\$1,269,146
Administrative expenditures and other costs	\$2,826,082
TOTAL AVERAGE ANNUAL EXPENDITURES	\$41,569,401

These figures reflect only a small slice of the broader picture. Trust Fund allocations do not exist in a vacuum; many allocations support projects funded primarily through other sources, as noted earlier, while other funds are leveraged from local and private sources to match Trust Fund grants. Altogether, for every dollar spent, \$3.15 comes from other sources to support the Trust Fund's mission. These figures are even higher for development activities, like new residential construction and site preparation (\$4.85). Taking these into account, the overall economic input derived from all projects and entities receiving Trust Fund dollars is summarized in Exhibit 6.⁶

⁶ The figures in Exhibit 6 are likely to be an undercount. The Community Housing Impact and Preservation Program, administered by the Ohio Development Services Agency, stopped counting federal funding as a source of matching funds in SFY 2017. Therefore, figures are not directly comparable with those in the prior edition of this report.

**Exhibit 6: Average Expenditures by Projects Receiving Trust Fund Grants, SFY 2017
and SFY 2018**

Activities	Amount
Capital and operating expenses for providers of housing and related supportive services and housing-related financial assistance programs	\$70,958,961
Acquisition, rehabilitation, remediation, repair, and weatherization of existing residential buildings	\$68,518,886
Project management, data collection and evaluation, planning, training, technical assistance, and other professional services	\$17,589,334
New residential construction and site preparation	\$7,429,048
Administrative expenditures and other costs	\$8,073,283
TOTAL AVERAGE ANNUAL EXPENDITURES	\$172,569,512

RESULTS

Statewide

Exhibit 7 shows the economic impact estimates generated by IMPLAN for the \$41.6 million in average annual Trust Fund allocations across SFY 2017 and SFY 2018. During this period, The Trust Fund supported 585 jobs (full-time equivalent, FTE) statewide. These workers generate \$25.0 million in labor income and produce \$73.6 million in output for the state every year, meaning that **every dollar spent on the Trust Fund creates \$1.77 in economic activity**.

Exhibit 7: Annual Direct, Indirect, and Induced Effects of Trust Fund Grants (\$41.6 million), SFY 2017 and 2018 Average

	Jobs (FTE)	Income	Output
Direct Effect	336	\$13.7 million	\$37.3 million
Indirect Effect	118	\$5.6 million	\$18.1 million
Induced Effect	132	\$5.6 million	\$18.2 million
Total Effect	585	\$25.0 million	\$73.6 million

Note: Totals may not add due to rounding.

Exhibit 8 uses the \$172.6 million in average annual projects and activities that are supported by the existence of the Trust Fund. As noted earlier, this implies that **every dollar from Trust Fund grants attracts an average of \$3.15 from other sources**. While it cannot be claimed none of this investment would materialize without the Trust Fund, many federal grants require matching funds from local sources; a substantial number of grants are awarded from the Trust Fund for this purpose.

Combined, projects receiving Trust Fund allocations created \$320 million in economic activity annually; every dollar of investment yields \$1.86 in return statewide. **In total, 2,537 jobs (FTE) generating \$110 million in labor income were created or sustained because of the Trust Fund and the projects it helps make possible.**

Exhibit 8: Annual Direct, Indirect, and Induced Effects of Trust Fund Projects (\$172.6 million), SFY 2017 and 2018 Average

	Jobs (FTE)	Income	Output
Direct Effect	1,448	\$61.0 million	\$162.1 million
Indirect Effect	510	\$24.3 million	\$78.0 million
Induced Effect	580	\$24.9 million	\$80.1 million
Total Effect	2,537	\$110.2 million	\$320.2 million

Note: Totals may not add due to rounding.

In total, the economic impacts generated from the Trust Fund are immense. **Ohio’s economy sees \$7.70 in output for every dollar of Trust Fund allocations. Of that, \$2.65 is income for working people and employers. Every \$10 million in annual grants from the Trust Fund creates or sustains 610 full-time jobs statewide.** This makes the Trust Fund cost-effective as a job retention program.

Additionally, as these impacts make their way through the economy, a portion of those benefits make their way to the coffers of the state government through taxes and other sources of revenue. In total, economic activity generated by Trust Fund projects generates \$5.7 million, most of which is collected through sales taxes. This means that, **for every dollar that goes into the Trust Fund, 14 cents come back to state government.** These impacts are detailed in Exhibit 9.

**Exhibit 9: State Government Revenues Attributable to Trust Fund Projects,
SFY 2017 and 2018 Average**

Type	Revenue
Sales Taxes	\$3,363,103
Personal Income Taxes	\$1,448,080
Other Taxes and Fees on Production and Imports	\$331,459
Social Insurance Contributions	\$275,611
Other Personal Taxes and Fees	\$221,670
Corporate Taxes	\$27,573
Total Revenues	\$5,667,496

Similarly, these impacts can be estimated for local governments as well. This includes counties, cities, villages, school districts, and other special authorities. Another \$4.6 million in revenue is generated for local governments by Trust Fund projects. For every dollar that goes into the Trust Fund, 11 cents are collected by Ohio localities. In total, then, **a full quarter of the money allocated annually through the Trust Fund (\$10.2 million) is recaptured by Ohio state and local governments as a result of projects receiving Trust Fund dollars.** These impacts are detailed in Exhibit 10.

**Exhibit 10: Local Government Revenues Attributable to Trust Fund Projects,
SFY 2017 and 2018 Average**

Type	Revenue
Property Taxes	\$2,772,843
Personal Income Taxes	\$857,514
Sales Taxes	\$400,554
Other Personal Taxes and Fees	\$280,966
Other Taxes and Fees on Production and Imports	\$162,128
Corporate Taxes	\$88,154
Total Revenues	\$4,562,159

Local

Additionally, impact estimates were generated for the 14 counties that had a direct impact from Trust Fund projects of \$4 million or more in SFY 2017 and 2018 (see Exhibit 11). These include projects that only affected a single county; multi-county or statewide grants were excluded from the analysis.

Combined, these counties received **\$21 million from the Trust Fund**, or just over half the funds available. These projects were **matched by \$105 million from other sources**, a 5-to-1 leverage ratio. Leverage was typically highest where the Trust Fund provided gap financing through OHFA's Housing Development Assistance Programs for one or more Low-Income Housing Tax Credit projects.

Exhibit 12 shows the overall economic impact of these awards and their leveraged funds by the county in which the award was granted. In heavily populated counties, the overwhelming majority of the effects are retained by the county and its residents and firms, but in more rural areas, where specialized labor and contractors are often brought in from further afield, the impacts are more diffuse.

Exhibit 11: Top Counties Receiving OHTF Awards and Leveraged Funds, SFY 2017 and 2018 Average

County	Awards	Leverage	Total	Ratio
Cuyahoga	\$7,133,350	\$30,440,056	\$37,573,406	4.27
Franklin	\$3,076,886	\$24,812,570	\$27,889,456	8.06
Montgomery	\$3,356,776	\$13,133,348	\$16,490,124	3.91
Portage	\$898,121	\$8,696,550	\$9,594,671	9.68
Hamilton	\$1,471,325	\$4,495,855	\$5,967,180	3.06
Pike	\$329,550	\$4,037,327	\$4,366,877	12.25
Lawrence	\$400,000	\$3,861,421	\$4,261,421	9.65
Lucas	\$1,071,150	\$3,124,120	\$4,195,270	2.92
Scioto	\$607,900	\$3,357,948	\$3,965,848	5.52
Belmont	\$730,550	\$2,159,634	\$2,890,184	2.96
Summit	\$906,900	\$1,531,637	\$2,438,537	1.69
Jefferson	\$330,000	\$2,044,632	\$2,374,632	6.20
Guernsey	\$500,000	\$1,726,652	\$2,226,652	3.45
Crawford	\$538,500	\$1,590,668	\$2,129,168	2.95

Exhibit 12: Annual Effects of Trust Fund Projects by County, SFY 2017 and 2018 Average

County	Jobs (FTE)	Income	Output	Tax Revenue
Cuyahoga	465	\$21.7 million	\$63.0 million	\$1,941,928
Franklin	389	\$16.7 million	\$48.2 million	\$1,633,541
Montgomery	232	\$10.1 million	\$29.2 million	\$989,414
Portage	127	\$5.7 million	\$15.7 million	\$542,797
Hamilton	89	\$3.4 million	\$10.2 million	\$324,314
Pike	53	\$2.6 million	\$7.7 million	\$273,403
Lawrence	52	\$2.6 million	\$7.5 million	\$266,614
Lucas	61	\$2.5 million	\$7.1 million	\$236,648
Scioto	49	\$2.4 million	\$6.9 million	\$242,331
Belmont	36	\$1.7 million	\$5.0 million	\$177,118
Summit	36	\$1.5 million	\$4.4 million	\$143,081
Jefferson	29	\$1.4 million	\$4.1 million	\$147,613
Guernsey	27	\$1.3 million	\$3.9 million	\$138,251
Crawford	26	\$1.3 million	\$3.7 million	\$131,874

Note: Totals may not add due to rounding. "Tax revenue" includes all taxes generated at the state and local levels.

CONCLUSION

Overall, the Ohio Housing Trust Fund is not only a needed source of financial support for programs that ensure low-income Ohioans have the dignity of a safe and affordable place to live, but also a facilitator of economic activity that creates over 2,500 jobs annually, \$320 million in economic output, and more than \$10 million in tax revenues for state and local governments across the state. Every dollar allocated from the Trust Fund attracts \$3.15 in other resources for the projects and programs it funds, making it an extremely cost-effective funding source. Finally, these effects are experienced in both urban and rural communities; more than half of Trust Fund grants must be awarded to projects and programs outside the state's urban cores, ensuring that benefits are widely spread. The Trust Fund has a clear, positive, and multi-dimensional impact on the state of Ohio.