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The Economic Impact of Affordable Housing Stock in Kent and Ottawa County, Michigan

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White Paper:

The Economic Impact of Affordable Housing Stock in Kent and Ottawa County, Michigan

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Executive Summary

- Based on 2015-2019 data, approximately 26% of households in Kent County and 21% in Ottawa County were considered to be low-income according to the income thresholds by household size adopted in this study.

- In Kent County, 46% of low-income households are renters and 24% have a mortgage. In Ottawa County, 31% of low-income households are renters and 30% have a mortgage.

- In Kent County, 77% of low-income renters and 70% of those with a mortgage are housing burdened, that is, spend more than 30% of their pre-tax income on housing expenditures. In Ottawa County, 74% of those renters and 73% of those with a mortgage are housing burdened.

- In Kent County, 35,832 low-income households are housing burdened. In Ottawa County, 11,317 low-income households are housing burdened.

- The average burden in Kent County is $5,974 per year per burdened household (in 2019 dollar value). In Ottawa County, the average is $6,726 per year.

- The total housing burden of low-income renters and mortgagers in Kent County is $214 million per year. In Ottawa County, it is $76 million per year.

- For every $1 million reduction in housing burden, low-income households would spend approximately $160,000 more on food, $110,000 more on health care, and $30,000 more on education. This spending, along with other additional spending, would result in $775,000 in new economic activity and support 9.4 jobs.

- If the entire housing burden was removed, Kent County would see $165.8 million in new economic activity, supporting over 2,000 jobs. Ottawa County would see $59 million in new economic activity, supporting over 700 jobs.

- Studies have shown that an eased household budget constraint reduces food insecurity and increases spending on health care, with evidence of improved short-term health. While the long-term impact on education is also likely, strong evidence exists mostly for families that become able to move to better neighborhoods.

Scope of Work

The Seidman College of Business at Grand Valley State University was retained by Housing Next to perform an economic impact study of affordable housing in the Grand Rapids area. The objectives of this study include:

A. Estimate the average and total housing burden for low-income households by each county.
B. Estimate the changes in different categories of expenditures (food, health care, etc.) due to reduced housing burden.
C. Estimate savings to public health care and food assistance programs due to reduced housing burden.
D. Estimate improvements to health outcomes due to potential increases in spending on health care and food consumption.
E. Analyze the significance of other potential changes in socio-economic conditions of low-income households due to reduced housing burden.

COVID-19 Disclaimer: This white paper does not factor in the economic or social impact of the COVID-19 pandemic.

Methodology

This study focuses on the economic impact of affordable housing on the local Grand Rapids region. The economic impact is the amount of economic activity generated within a defined region. This economic activity can include changes in spending patterns, savings to public health care and food assistance programs, and potential changes in socio-economic conditions of households and the local region. For this paper, the local region is defined as Kent and Ottawa County.

The economic analysis will be primarily based on data from United for ALICE (unitedforalice.org), the American Community Survey (www.census.gov), and the Bureau of Labor Statistics (bls.gov). Other data sources will be noted as needed.

United for ALICE is an organization focused on raising awareness on the challenges that ALICE (Asset Limited, Income Constrained, Employed) households face and seeking collaborative solutions. The organization assesses the cost of living in 21 states and provides a comprehensive look at the financial hardship across the nation.

As an example, Table 1 shows different measures and thresholds for family budgets in 2019. First, the Consumer Expenditure Survey (CES) provides the national average expenditure of a household with two earners and 1.5 children under the age of 18.[1] The

[1] https://www.bls.gov/cex/2019/CrossTabs/sizbyage/afour.PDF

federal poverty guideline is the threshold used by certain government programs to determine financial eligibility.[2] The ALICE Survival Budget is the minimum cost for a family of four (two adults, two children) to live and work in Kent or Ottawa county.[3] The ALICE Stability Budget provides a higher standard of living that allows stability to a household over time and includes a 10% savings category. The Economic Policy Institute (EPI) Family Budget (for two adults, two children) is the income a family needs for a modest but adequate standard of living in each county.[4]

Table 1: Budget comparison for a family of four

	Kent County	Ottawa County
Consumer Expenditure Survey (CES) 2019 (national average)	$83,353	$83,353
Federal Poverty Guideline (Michigan)	$25,750	$25,750
ALICE Survival Budget	$56,544	$56,016
Economic Policy Institute (EPI) Family Budget	$81,521	$79,872
ALICE Stability Budget	$109,128	$108,456

The ALICE, CES, and EPI budgets in Table 1 are broken down by categories of expenditure, although each budget is broken down following different criteria. For instance, these categories may include housing, health care, child care, food, etc. Table 2 shows this breakdown using the ALICE Survival Budget. In this study, we analyze the economic impact of the "housing burden" on three essential expenditure categories: food, health care, and education.[5]

[2] https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2019-poverty-guidelines
[3] https://www.unitedforalice.org/county-profiles/michigan
[4] https://www.epi.org/resources/budget/ (adjusted for 2019 dollars)
[5] ALICE budget does not itemize education, but our analysis will be based on expenditure patterns from the Consumer Expenditure Survey, which does have school related expenses "including recreational lesson fees, tuition, room and board, purchases of school books and equipment, and other educational expenses" (it does not include student loan payments).

Table 2: ALICE monthly survival budget for a family of four, with two children

	ALICE Monthly Survival Budget	
	Kent County	Ottawa County
Housing	$903	$874
Food	$925	$922
Heath Care	$569	$569
Transportation	$929	$929
Taxes	$448	$448
Other (including education)	$938	$936
Total	$4,712	$4,668

For this study, a household was considered to be low-income if the household's annual pre-tax income was less than the ALICE's Survival Budget.[6] A low-income household was considered to be **"housing burdened**" if spending on housing were higher than 30% of the household income, with the burden calculated as the difference between housing expenditures and 30% of income (see Table 3). In the case of renters, housing expenditures include rent, utilities, and fuels. For homeowners with a mortgage, housing expenditures include mortgage and other loan costs, taxes, insurance, condominium fees, utilities, and fuels. For this study, homeowners without a mortgage are not considered to be housing burdened regardless of housing expenditures or income.[7] To allow further analysis, for each county, the total housing burden was added up for different household groups categorized based on household size, income, and housing tenure (mortgager or renter). The estimation of the housing burden uses county and individual-level data from the U.S. Census Bureau's American Community Survey (ACS) 5-year (2015-2019).[8] All monetary values are adjusted for inflation to 2019 dollar values.

[6] For this study, the survival budget thresholds for different types of households (available at https://www.unitedforalice.org/household-budgets/michigan) were rounded to the nearest multiple of $5,000. The rounding was needed because ALICE's household categorization could not be replicated with the data available from the ACS, so more general categorizations of household type were used based on the size of households and on whether the head of the household was a senior person.

[7] We do not estimate the housing burden of owners who fully own their houses because the burden in that case is not due to market pricing (rent or mortgage payments), but mostly due to low income. In fact, the heads of the households in that situation are older (median age of 69), with 62% of them earning retirement or social security income.

[8] U.S. Census Bureau data was retrieved from IPUMS USA (https://usa.ipums.org/usa/) and IPUMS NHGIS (https://www.nhgis.org/).

Table 3: Income threshold for low-income categorization

Household type	Low-income threshold	Housing burden threshold (30% of income)
Single	$25,000	$7,500
Two persons	$35,000	$10,500
Two persons - senior head	$40,000	$12,000
Three persons	$45,000	$13,500
Four persons	$55,000	$16,500

The economic impact of a reduced housing burden is estimated using the Regional Input-Output Modeling System (RIMS II), which uses multipliers developed by the U.S. Department of Commerce's Bureau of Economic Analysis.[9] These multipliers provide a way to measure the complete economic impact that an initial change in demand has on the local economy. These secondary effects come in two forms:

Indirect Effects Increase in sales by businesses that are suppliers to restaurants, hotels, retail stores, etc.

Induced Effects: Increased economic activity by individuals in the area who received extra income due to the increase in direct spending.

The RIMS II multipliers report economic impact in three ways:

Gross Output Gross output is the total economic activity, including the sum of intermediate inputs and the value they add to the final good or service. The intermediate inputs are the resources used in the production of final goods and services. It should be noted that gross output can be overstated if the intermediate inputs are used multiple times in the production of other goods and services.

Earnings Earnings measures the increases in wages, salaries, and proprietors' income as a result of the initial change in demand. This can also be stated as the increase in household income for every $1 change in demand.

[9] Note that the BEA does not endorse any estimates or conclusions concerning the study presented here.

Employment Employment is the increase in jobs (full-time and part-time) for every $1 million change in demand. This measurement does not distinguish between a full-time or part-time employee. It also does not account for employees who moved from one job to another within the defined economic region. Thus, it does tend to overstate the number of jobs created.

Economic Effects

Demographics

Kent County is the fourth largest county in Michigan with a population of 656,955 and Ottawa County is the eighth largest county in Michigan with a population of 291,830 in 2019 (see Table 4).[10] While Michigan's population has not grown much in the past decade, both counties experienced significant positive growth, implying a growing need for housing in the region.

Table 4: Population and population growth rates

	Kent County	Ottawa County	Michigan
Population (ACS 2019)	656,955	291,830	9,986,857
Population growth 2010-2019	9.0%	10.6%	1.0%

Kent County had 241,746 households and Ottawa County had 102,610 households in 2019. Approximately 26% of the households in Kent County and 21% in Ottawa County have low-income based on the thresholds shown in Table 3. As mentioned earlier, these income tiers are based on the ALICE thresholds rounded to the nearest multiple of $5,000.[11] For this study, households are considered to be low-income if their income is approximately below the ALICE Survival Budget thresholds. Table 5 shows the share of low-income households in each county and each household group.[12] In the Table, notice that the low-income

[10] American Community Survey 2019 (www.census.gov/programs-surveys/acs)
[11] The actual ALICE thresholds are based on a slightly different categorization of household types and vary by county depending on local costs of living. For instance, for Kent County, the ALICE Survival Budget thresholds for 2019 were $24,720 for a single adult, $37,248 for two adults, $56,544 for a family of two adults and two children, and so on. The thresholds for Ottawa County are slightly different.
[12] https://www.unitedforalice.org/state-overview/michigan and American Community Survey 2019 (www.census.gov/programs-surveys/acs).

definition used in this study encompasses a larger share of the population than the poverty definition of the Census Bureau, which is similar to the federal poverty guidelines used for many government program eligibility.

Table 5: Low-income households based on household size

	Kent County	Ottawa County
Total households	241,746	102,610
Share of low-income households	26%	21%
Share of low-income households in each group:		
Single person, under $25,000 in income	39%	37%
Two persons, under $35,000 in income	16%	12%
Two persons with a senior head, under $40,000 in income	25%	24%
Three persons, under $45,000 in income	21%	11%
Four persons, under $55,000 in income	20%	19%
Five or more persons, under $65,000 in income	34%	22%
Share of households below the Census Bureau poverty threshold	11%	8%

The housing tenure of low-income households is summarized in Table 6. In Kent County, the largest group is renters (46%), while in Ottawa County it is owners without debt (37%). The homeownership rates of low-income households are 52% and 67% in Kent County and Ottawa County respectively.

Table 6: Housing tenure for low-income households

	Kent County	Ottawa County
Renter	46%	31%
Mortgager	24%	30%
Owner (clear of debt)	28%	37%
No cash rent	2%	2%

Housing Burden

As mentioned earlier, a renter or mortgager household is considered housing burdened if housing expenditures are higher than 30% of income. For such households, the burden (*B*) is calculated as the difference between housing expenditures and 30% of income, that is:

$$B = (\text{housing expenditure}) - 0.30 \times (\text{household income})$$

To allow further analysis, for each county, the total housing burden is added up for the different groups of low-income households categorized based on housing tenure and household size.

Table 7 summarizes the share of low-income households who are housing burdened in each county by type of housing tenure. About half of low-income households are housing burdened, but that share is much higher (at or above 70%) among renters and mortgagers. Note that owners without a mortgage represent about 30% of the population of low-income households and are not considered housing burdened regardless of their housing costs and income for the purpose of this study.

Table 7: Share of low-income households who are housing burdened

	Kent County	Ottawa County
Renters	77%	74%
Mortgagers	70%	73%
All low-income households (including owners without a mortgage and no-cash renters)	52%	45%

In the Appendix of this report, Table A1 provides the characteristics of housing burdened households. In comparison to non-burdened low-income households, they are less likely to be married and to earn retirement or social security income, but more likely to have children, to work, to be in school, to have an income under the poverty threshold, to receive government assistance, and to be non-White.

Next, Table 8 summarizes the average burden for low-income households who are housing burdened in each group. The average burden varies from about $4,000 to $11,000 per year depending on the type of household, housing tenure, and county. In Kent County, the overall average is $5,974 per burdened household. In Ottawa County, the average is $6,726.

Table 8: Average burden of housing burdened low-income households by household size

	Kent County			Ottawa County		
	Renters	Mortgagers	All Households	Renters	Mortgagers	All Households
Single	$5,547	$7,157	$5,946	$6,367	$8,529	$7,021
Two persons	$5,823	$7,456	$6,147	$5,228	$10,951	$6,786
Two persons-senior head	$4,387	$7,674	$6,570	$5,265	$6,889	$6,551
Three persons	$5,073	$7,667	$5,680	$6,027	$4,948	$5,506
Four persons	$6,835	$6,395	$6,691	$10,001	$5,612	$8,235
More than four-person	$5,557	$4,295	$5,087	$3,697	$4,294	$4,057
Overall average burden	$5,647	$6,796	$5,974	$6,443	$7,153	$6,726

Table 9 shows that single-person households represent the most common type of housing burdened low-income households, with a share of approximately 40%. However, families include a larger number of people, so the share of persons living alone in the housing burdened population is much smaller, around 17% only. Compared to other housing burdened households, single-person households are significantly older, with a median age of 63. In fact, 57% of people in this group earn retirement or social security income – see Table A2 in the Appendix for a comparison of their characteristics relative to larger size households.

Table 9: Number of housing burdened low-income households by household size

	Kent County			Ottawa County		
	Renters	Mortgagers	All Households	Renters	Mortgagers	All Households
Single	10,841	3,575	14,416	3,068	1,330	4,398
Two persons	5,077	1,254	6,330	1,587	594	2,181
Two persons-senior head	687	1,360	2,047	211	807	1,018
Three persons	3,667	1,120	4,787	458	427	886
Four persons	2,851	1,387	4,238	1,058	712	1,770
More than four-person	2,520	1,494	4,014	423	641	1,064
Total	25,643	10,189	35,832	6,806	4,511	11,317

The total housing burden is then added up using the formula:

$$Bt_s = Ba_s \times Ht_s$$

where Bt_s is the total burden for household size *s*, Ba_s is the average burden for housing burdened households in group *s* (shown in Table 8), and Ht_s is the number of housing burdened households in group *s* (provided in Table 9). Table 10 presents the total burden calculated using this formula.[13] Because these estimates are based on survey data from 2015-2019, they should be taken with caution.

Table 10: Total housing burden value based on household size

	Kent County			Ottawa County		
	Renters	Mortgagers	All Households	Renters	Mortgagers	All Households
Single	$60,128,827	$25,586,297	$85,715,125	$19,533,366	$11,340,669	$30,874,034
Two persons	$29,562,507	$9,346,238	$38,908,745	$8,297,168	$6,500,770	$14,797,938
Two persons-senior head	$3,013,995	$10,436,911	$13,450,906	$1,113,242	$5,558,300	$6,671,542
Three persons	$18,603,137	$8,587,170	$27,190,307	$2,763,174	$2,114,202	$4,877,376
Four persons	$19,485,295	$8,870,040	$28,355,335	$10,582,037	$3,996,546	$14,578,584
More than four-person	$14,006,241	$6,416,649	$20,422,891	$1,564,409	$2,753,180	$4,317,588
Total housing burden	$144,800,002	$69,243,306	$214,043,308	$43,853,396	$32,263,667	$76,117,063

The total housing burden per year was approximately $214 million in Kent County and $76 million in Ottawa County (in 2019 dollar values) – see Table 10. In Kent County, households with children (under 18 years old) bore 40% of the total housing burden. In Ottawa County, this share was 33%.[14]

[13] Multiplying the values in Tables 8 by the values in Table 9 results in values that are slightly different than the ones in Table 10 due to rounding.

[14] Single person households bore 40% of the total amount of the housing burden in Kent County. This share was 41% in Ottawa County.

The Economic Effect of Affordable Housing

Household consumption is a function of disposable income. How consumption varies with income can be measured by the household's marginal propensity to consume (MPC), which is the change in consumption due to a $1 change in income:

$$MPC = \frac{change\ in\ consumption}{change\ in\ income}$$

In other words, the MPC indicates how many cents of an additional dollar of disposable income is spent rather than saved. For instance, in the Midwest region, the average MPC of households can be estimated to be about 0.50,[15] which indicates that a $0.50 increase in expenditures is associated with a $1 increase in income. The MPC of low-income households is generally higher than that of higher-income households since they are less likely to save additional income.

To estimate how housing burdened households would spend additional disposable income coming from a reduction in housing burden, the following assumptions are used:

- a housing burdened household is under-consuming, so any additional disposable income will be fully spent (thus, the overall MPC equals 1);[16]
- the additional disposable income will not be spent on shelter, that is, households will not pay additional rent, mortgage, or homeownership costs.

Table 11 provides MPC estimates for major expenditure categories based on the assumptions above. For comparison, it also provides the Average Propensity to Consume (APC), which is simply the average share of each category in the current expenditure.[17]

[15] Based on data from the Bureau of Labor Statistics' Consumer Expenditure Survey 2019. Expenditure patterns for the Midwest region is available at https://www.bls.gov/cex/tables.htm. For the estimation method of the MPC, see the Technical Note in the Appendix.

[16] In practice, the MPC might be lower because some households will save a portion of the new income and those who are currently spending more than they earn may reduce the amount that they are tapping from other sources of funds, like savings, loans, or help from relatives. However, economic studies have shown that low-income households have very high MPCs so we will consider our estimates as the upper bound in the discussion of economic impacts.

[17] Data for the estimation of the average MPCs and APCs by expenditure categories was taken from the 2019 Consumer Expenditure Survey, produced by the Bureau of Labor Statistics (BLS, 2020). For details on the estimation of the average MPCs and APCs, see the Technical Note in the Appendix.

Table 11: Marginal Propensity to Consume (MPC) and Average Propensity to Consume (APC) in 2018-2019

	Housing burdened low-income renter or mortgager		Non-low income households	
Category	MPC	APC	MPC	APC
Food	0.16	0.31	0.03	0.11
Health care	0.11	0.11	0.01	0.07
Education	0.03	0.01	0.02	0.02
Non-shelter housing	0.10	0.17	0.01	0.06
Transportation (essential)	0.09	0.09	0.01	0.05
Non-essential expenses	0.51	0.31	0.22	0.32
Shelter*	NA	NA	0.09	0.19

** For housing burdened low-income households, additional income is assumed to be spent on non-shelter expenses, with the shares by categories following the patterns of an average low-income household.*
Non-shelter housing includes utilities, fuel, services, household operation, supplies, and furnishing and equipment.
Transportation (essential) includes fuels, maintenance, repair, and transit expenses, but does not include vehicle purchase, insurance, and rental costs.

In Table 11, the MPCs of housing burdened low-income households show that, if the additional disposable income is fully spent on non-shelter expenses, about 16% of the new spending will go towards food, 11% towards health care, and 3% towards education. Table 11 also shows the corresponding APCs of housing burdened low-income households, which are their current patterns of non-shelter expenditures. For instance, 31% was spent on food, 11% on health care, and 1% on education.[18]

For higher-income households, their MPCs in Table 11 add up to 0.40, indicating that they spend $0.40 of each additional $1 of disposable income. Their APCs add up to 0.82, indicating they save 18% of their current after-tax income.[19]

As mentioned earlier, the primary focus of this study is on how a reduced housing burden will impact spending on food, health care, and education.[20] However, a reduced burden for the low-income households is at least partially offset by the reduction in disposable income received by other locals (taxpayers, landlords, home sellers, and/or housing market intermediates, depending on the policies employed to reduce the burden). Nonetheless, the fact that the MPCs tend to be higher for low-income households means that there is a potentially positive economic impact of a housing burden reduction even if it causes income redistribution in the region.

[18] For low-income households, the APCs are usually higher than the MPCs for very essential living expenses (food and non-shelter housing expenses, which include utilities and household goods and services). This pattern indicates that the share of expenditures on less essential and non-essential expenses tend to increase with income.
[19] The MPCs of higher income households tend to be lower than the APCs as the saving rate increases with income.
[20] Transporation and other spending is included to show the overall economic effect

For instance, a $1 less in disposable income would reduce the higher income group spending on food by $0.03, but if that $1 were used to assist the housing burdened low-income group, it would increase food consumption of that group by $0.16. Therefore, a $1 redistribution could lead to a +$0.13 net change in food consumption in the region. Table 12 summarizes the net impact of income redistribution on those three essential expenditure categories.

Table 12: Net effect of income redistribution

Category	Net MPC
Food	+0.13
Health care	+0.10
Education	+0.01
Other spending	+0.36

Using the MPCs in Table 11, for every $1M reduction in housing burden, we estimate low-income households spend $160,000 more on food, $110,000 more on health care, $30,000 more in education, and $700,000 more on other goods and services.[21] This increase in spending has broader economic benefits as well. Using the net MPCs in Table 12 and RIMS multipliers, we can estimate the net economic impact of the housing burden on the local economy, that is, under the assumption that each $1 of housing burden on low-income households represents a $1 income to other households in the region. Table 13 shows the increased spending by low-income households and the potential impact on local economic output, earnings, and jobs caused by a $1M reduction in housing burden.[22]

[21] Other goods and services includes non-shelter housing. It is assumed the majority of this is retail spending, thus it was discounted by 50% to reflect retail margins (only 50% remains local). The multiplier is the average of four different retail categories.

[22] Grand Rapids MSA multipliers were used (the MSA includes mostly Kent County and Ottawa County economies). The multipliers for each expenditure category shown in the Table are the averages of several subcategories. The use of net MPCs to estimate local economic impact assumes that (1) spendings are local, (2) funds needed to reduce the housing burden would come from higher income households residing in the region (e.g., through local taxes), and (3) savings are invested elsewhere. While each assumption does not fully hold in practice, assumption (2) decreases the size of the net local impact of the housing burden, helping to offset the increased net impact due to assumptions (1) and (3).

Table 13: Economic benefit per $1M reduction in housing burden

Category	Increase in spending by low-income households	Net economic output	Net increase in earnings	Net increase in jobs
Food	$160,000	$223,500	$67,600	2.7
Health care	$110,000	$171,500	$62,100	1.5
Education	$30,000	$16,900	$5,900	0.2
Other spending	$700,000	$363,000	$102,800	5.0
Total	$1,000,000	$774,900	$238,400	9.4

If the Kent County total housing burden of $214M (see Table 10) was removed, we estimate low-income households will spend $34.3M more on food, $23.5M more on health care, $6.4M more on education, and $150M more on other goods and services.[23] The net economic benefit would be $165.8M in economic output, $51M in higher labor earnings, and approximately 2,000 additional jobs. Table 14 presents this information. It should be noted that this is a maximum benefit as it assumes the entire burden is removed and low-income households spend 100% of the additional income. It also ignores other possible indirect effects on the local economy, for instance, changes in housing prices and the long-run productivity gains or losses, which depend on which policies are used to remove the burden (estimating the scale of such effects goes beyond the scope of this study).

Table 14: Economic benefits if the Kent County housing burden was removed

Category	Increase in spending by low-income households	Net economic output	Net increase in earnings	Net increase in jobs
Food	$34.3M	$47.8M	$14.4M	573
Health care	$23.5M	$36.7M	$13.3M	319
Education	$6.4M	$3.6M	$1.3M	45
Other spending	$149.8M	$77.7M	$22.0M	1076
Total	$214M	$165.8M	$51.0M	2013

[23] Other goods and services includes non-shelter housing. It is assumed the majority of this is retail spending, thus it was discounted by 50% to reflect retail margins (only 50% remains local). The multiplier is the average of four different retail categories.

In Ottawa County, the total housing burden for low-income households is estimated at $76M (see Table 10). Using the same methodology as above, Table 15 shows the estimates for the increase in spending and economic benefits associated with the housing burden. As stated earlier, this should be considered as the maximum short-term benefit to the regional economy, given the assumptions used and the limitations of the study.

Table 15: Economic benefits if the Ottawa County housing burden was removed

Category	Increase in spending by low-income households	Net economic output	Net increase in earnings	Net increase in jobs
Food	$12.2M	$17.0M	$5.1M	204
Health care	$8.4M	$13.1M	$4.7M	113
Education	$2.3M	$1.3M	$0.5M	16
Other spending	$53.2M	$27.6M	$7.8 M	383
Total	$76.1M	$59.0M	$18.1M	716

The policies used to reduce the housing burden are beyond the scope of this paper, however, if construction funds are provided via grants or other public policy, the economic impact in the regional economy can be estimated using RIMS multipliers. Similar estimations have been reported in numerous other economic impact studies for other regions in the U.S.

A 2011 report titled "Economic Impact of Minnesota Housing's Investments" found that the $261 million invested in housing construction and rehabilitation resulted in $238 million in indirect and induced economic output and supported a total of 3,745 jobs.[24]

The Utah Housing Coalition's 2012 report titled "Economic Impact of Affordable Housing Programs in Utah – 2012" estimated that the $190.3 million invested in affordable housing construction in 2011 generated $143.3 million in direct, indirect, and induced earnings and supported 4,230 jobs.[25]

[24] The $261 million was the average amount spent per year on construction and rehabilitation between 2007 and 2010. Adjusted for 2019 dollars, this figure climbs to $310 million with indirect and induced output of $282 million (using 2008 and the https://www.bls.gov/data/inflation_calculator.htm). The full report can be found at https://www.mnhousing.gov/idc/groups/administration/documents/webcontent/mhfa_011776.pdf

[25] The $190.3 million was spent in 2011. Adjusted for 2019 dollars, this figure becomes $216 million with direct, indirect and induced earnings of $163 million (https://www.bls.gov/data/inflation_calculator.htm). The full report can be found at https://www.utahhousing.org/uploads/2/6/4/4/26444747/economic_impact_study_uhc.pdf

As the last example, a 2017 report commissioned by the Urban Land Conservancy titled "Economic Impact of Affordable Housing in TODs in Metro Denver" found the $200 million spent on construction and rehabilitation of affordable housing generated $219.6 million in economic activity, increased household earnings by $125.9 million, and supported 5,336 jobs.[26]

While it is beyond the scope of this study to figure out the amount of additional construction needed to reduce the housing burden in the region, using Grand Rapids MSA multipliers, for every $1 million spent on construction, we estimate a $1.5 million increase in local economic output, a $0.5 million increase in household earnings, and support for 10 jobs.[27] Table 16 outlines these impact figures.[28]

Table 16: Estimated economic impact for every $1M spent on new construction

Construction spending	$1.0M
Economic output	$1.65M
Earnings	$0.5M
Jobs	10

[26] Adjusted to 2019 dollars, the $200 million in spending increases to $208 million, with $229 million in economic activity and $131 million in household earnings (https://www.bls.gov/data/inflation_calculator.htm). The full report can be found at https://www.coloradofuturescsu.org/wp-content/uploads/2020/04/affordable-housing-impact-TOD.pdf

[27] This assumes 85% of the $1M is new spending and Grand Rapids MSA multipliers were used. These impact figures occur only during the construction time period.

[28] It is beyond the scope of this work to estimate the amount of new construction needed to make housing more affordable to low-income households.

Effect on Household Health and Education

In 2015-2019,[29] 10% of the households in Kent County and 6% in Ottawa County received SNAP benefits. According to Feeding America West Michigan, 11% of Kent County and 9% of Ottawa County were food insecure in 2019, that is, they have limited access to adequate food.[30] A 2014 survey from West Michigan food banks found that 58% of the households surveyed had to choose between paying for food and paying their rent or mortgage at least once in the past 12-months.[31]

A 2010 study in *The Journal of Nutrition* reported an association between food insecurity and diet-sensitive diseases (hypertension, diabetes, etc.).[32] A 2009 report by Children's Healthwatch also documented a link between food insecurity and children's health and development.[33]

Although there are no studies that can accurately predict how a reduced housing burden will change reliance on food assistance programs, we do know that it can ease a household's budget constraints, which studies have shown to reduce food insecurity. Below is an excerpt of a commentary from the Urban Institute on the Family Options Study (published in the *Cityscape* journal):[34]

> "This landmark research shows that, when financial pressures created by housing costs are alleviated, the cycle of tradeoffs between paying for basic needs like housing and food can be disrupted, resulting in multiple improvements in individual and communal well-being… Those interested in improving the ability of families to afford an adequate healthy diet must consider how the lack of affordable housing options is undermining their existing efforts to reduce hardship and improve outcomes for vulnerable families."

[29] American Community Survey 2019 (www.census.gov/programs-surveys/acs).
[30] https://map.feedingamerica.org/
[31] https://www.feedwm.org/wp-content/uploads/2014/08/West-Michigan-and-the-Upper-Peninsula-Hunger-in-America-2014.pdf
[32] Seligman, H. K., Laraia, B. A., & Kushel, M. B. (2010). Food insecurity is associated with chronic disease among low-income NHANES participants. *The Journal of Nutrition*, *140*(2), 304–310. https://doi.org/10.3945/jn.109.112573
[33] https://childrenshealthwatch.org/even-very-low-levels-of-food-insecurity-found-to-harm-childrens-health/
[34] https://www.huduser.gov/portal/periodicals/cityscpe/vol19num3/article12.html

Key findings from the Kent County and Ottawa County Needs Assessment report are shown in Table 17 (for all income groups).[35] In Kent County, for those with household income under $20,000, 13% were uninsured and 16% had no care due to cost. For those with income between $20,000 and $35,000, 20% were uninsured and 12% had no care due to cost (Ottawa County did not provide the same data breakdown).

Table 17: Key findings from Kent County and Ottawa County Needs Assessment report

	Kent County	Ottawa County
Uninsured (age 18-64)	11%	8%
No personal care provider (PCP)	13%	12%
No care due to cost	9%	9%

Again, while there is no economic study estimating the impact of a reduced housing burden on health care outcomes, research does show a relationship between housing costs and health care spending. A 2007 study from the Center from Housing Policy found families paying 30% or less of their income for housing were able to dedicate more than twice as much of their income to health care services as compared to families paying 50% or more of their income for housing.[36] Thus, a reduced housing burden could lower the shares of people without health care access shown in Table 17. A 2015 report by the Center for Housing Policy summarizes the impact of affordable housing:[37]

> "Access to affordable housing, therefore, can enable families to spend more on food and health care, which can improve health outcomes. Researchers have found that children in low-income families that receive housing subsidies are more likely to have access to an adequate amount of nutritious food and to meet "well-child" criteria—including the absence of developmental concerns, maintenance of a healthy weight, and classification as being in good or excellent health—than children in similar families on the waiting list for housing assistance.[38]"

Similarly, Meltzer and Schwartz (2015) find that households with higher rent payments reported worse health conditions and are more likely to have postponed medical services

[35] The 2020 Needs Assessment reports for Kent County and Ottawa County are available respectively at https://accesskent.com/Health/CHNA/ and https://www.miottawa.org/Health/OCHD/data.htm#CHNA
[36] Lubell, J., Crain, R., & Cohen, R. (2007). *Framing the Issues - the Positive Impacts of Affordable Housing on Health*.
[37] Maqbool, N., Viveiros, J. & Ault, M. (2015). *The Impacts of Affordable Housing on Health: A Research Summary*. https://www.researchgate.net/publication/339366232_The_Impacts_of_Affordable_Housing_on_Health_A_Research_Summary
[38] March, E.L., de Cuba, S.T., Gayman, A., Cook, J., Frank, D.A., Meyers, A., Flacks, J., Sandel, M., & Morton. S. (2009). *Rx for Hunger: Affordable Housing*. Boston, MA: Children's HealthWatch and Medical-Legal Partnership.

for financial reasons in New York City, taking into account income and other individual and neighborhood characteristics.[39]

Regarding the effects on health outcomes, a study of the 2008 Medicaid expansion in Oregon[40] showed no immediate impact of the increased health care use on physical health, but it did find lower rates of depression and greater rates of diabetes detection and management, which should translate to better long term health.

Overall, studies on the impact of housing affordability on education are limited in scope. For instance, Newman and Holupka (2014) find that higher housing cost burden reduces spending on child enrichment among low-income households, using 2004-2009 data.[41] In terms of education outcomes, several studies suggest that frequent mobility due to housing burden can be detrimental to children's education, although clear evidence is lacking. On the other hand, there is strong evidence that significant education improvement is observed when families are helped to move to better neighborhoods. However, that requires specific assistance policies that go beyond a simple reduction in housing burden. Therefore, the long-term impact on education depends on the policies adopted to ease the burden (analyzing the alternative policies goes beyond the scope of this study).[42]

Summary

In this study, we estimate the housing burden of low-income households in order to evaluate the economic impact of the burden on the region. A low-income renter or mortgager was considered to be housing burdened if more than 30% of pre-tax household income was spent on housing costs. The amount of the burden is calculated as the difference between housing expenditures and 30% of income.

To estimate the economic impact of a housing burden reduction, we assume the following patterns of spending in the region:

a) housing burdened low-income households would spend 100% of additional disposable income on non-shelter expenditures;
b) non-low-income households spend about 40% of a change in disposable income, with the remaining income being saved.

[39] Meltzer, R. & Schwartz, A. (2016) Housing Affordability and Health: Evidence From New York City, *Housing Policy Debate* 26:1, 80-104, DOI: 10.1080/10511482.2015.1020321.
[40] Baicker, K., Taubman, T., Allen, H., Bernstein, M., Gruber, J., Newhouse, J.P., Schneider, E., Wright, B., Zaslavsky, A., Finkelstein, A., & the Oregon Health Study Group (2013). *The Oregon Experiment – Effects of Medicaid on Clinical Outcomes*, New England Journal of Medicine 368(18): 1713-1722.
[41] Newman, S.J. and Holupka, C.S. (2014) Housing affordability and investments in children, *Journal of Housing Economics* 24, 89-100, https://doi.org/10.1016/j.jhe.2013.11.006.
[42] Mueller, E.J., Tighe, J.R. (2007) Making the Case for Affordable Housing: Connecting Housing with Health and Education Outcomes. *Journal of Planning Literature* 21(4):371-385.

Under these assumptions, a reduction in housing burden would still have a positive net effect on the local economy in the short run as total spending would increase even if the reduction in burden was funded through taxes on non-low-income households or if it causes an income loss to local landlords and other housing market participants.

Based on these patterns of spending (detailed in Table 11), we estimate households will spend $300,000 more on food, health care, and education for every $1 million reduction in housing burden. This additional spending, along with other spending, will generate $775,000 in net economic output, increase household earnings by $238,000, and support 9.4 jobs (detailed in Table 13).

If the entire housing burden was removed, low-income households in Kent County would spend an additional $64 million on food, health care, and education. This additional spending together with other spending would generate $166 million in net economic output, $51 million in earnings, and support more than 2,000 jobs (detailed in Table 14).

In Ottawa County, if the entire burden was removed, low-income households would spend $23 million more on food, health care, and education. This spending, along with other spending, would result in $59 million in net economic output, $18 million in household earnings, and support 716 jobs (detailed in Table 15). It is important to note that these impact figures assume the entire housing burden is removed and that households spend 100% of the increase in disposable income. It also ignores other possible indirect effects on the local economy, including changes in housing prices and long-term productivity (estimating such effects goes beyond the scope of this study as they depend on the policies used to reduce the burden).

Affordable housing initiatives typically include funding for new construction or redevelopment. Using regional multipliers, we can estimate that for every $1 million spent on construction, there would be a $1.5 million increase in local economic output, a $0.5 million increase in labor earnings, and support for 10 jobs (detailed in Table 16).

Last, the impact of affordable housing goes well beyond economic output and jobs. Affordable housing impacts the nutrition, health, and education of households. A reduced housing burden eases budget constraints, which studies have shown to reduce food insecurity and increase the amount they spend on health care services. Increased health care use has been shown to help mental health and diabetes detection and management. Housing affordability may also help families to move to better neighborhoods, where their children are more likely to succeed in their school education.

Appendix

Table A1: Characteristics of housing burdened low-income households*

	Kent County		Ottawa County	
	Housing burdened households	Not-burdened households	Housing burdened households	Not-burdened households
Married	21%	37%	33%	45%
With children	41%	36%	38%	33%
Female head	64%	55%	61%	58%
Non-white (including all Hispanics)	33%	22%	13%	8%
In labor force	57%	41%	50%	35%
In school	11%	4%	11%	5%
With retirement or social security income	33%	47%	42%	55%
Below poverty line	45%	28%	36%	23%
Without health coverage	9%	8%	5%	2%
Receiving food stamp	33%	21%	21%	10%
Receiving welfare payments	6%	4%	3%	2%

** Based on the characteristics of the head of the household. This comparison includes only low-income households.*

Table A2: Distinguishing characteristics of single-person housing burdened households*

	Kent County		Ottawa County	
	Single person	Larger households	Single person	Larger households
Median age	61	37	66	41
Earning retirement or social security income	54%	20%	68%	26%

** Based on the characteristics of the head of the household. This comparison includes only housing burdened households.*

Technical Note: Estimation of Marginal Propensity to Consume (MPC) and Average Propensity to Consume in Table 11

To estimate the MPCs, we use household data from the Consumer Expenditure Survey (2018-2019) produced by the Bureau of Labor Statistics. Our estimation includes only households who were surveyed during four consecutive quarters, allowing them to add up their expenditures over a 12-month period.

The MPCs are estimated using regression analysis, controlling for household characteristics (family size, presence of children, marital status, race, ethnicity, sex, age, and education level of the head of the household). The sample includes urban households in the entire U.S.

For housing burdened low-income households, the data sample is restricted to renters and mortgagers. The definitions of low-income and housing burden used are the same as for the estimation of housing burden (see Table 3 for household size and income thresholds). The MPCs were estimated assuming that any additional disposable income would be spent on non-shelter expenses. This may not be true if households save part of the additional disposable income or use it to reduce their debts or the amount of assistance received from others.

For non-low-income households, the data sample includes everyone who has an income at or above the low-income thresholds. Their MPCs were estimated assuming they may save part of the additional disposable income.

The Average Propensities to Consume (APCs) are calculated with data from the same samples used to estimate the MPCs. The APC of each category is simply the share of that category in the total average expenditure.

In the case of housing burdened low-income households, both the MPCs and the APCs are for non-shelter expenditures as we assume that a reduction in housing burden would not increase spending on housing, that is, households will not choose to move to more expensive (better) housing.