



Economic Impact of Affordable Housing Development

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Executive Summary

The importance of the housing development industry to the national and local economy is widely acknowledged. The value of affordable housing development to the national or the Oregon economy, however, does not enjoy this level of understanding. This report analyzes the economic impact that is generated by affordable housing development on the Oregon economy.

The impact of nonprofit housing development has traditionally been described to private, philanthropic and public funders in terms of its social benefits to low-income households and communities, (1) stable communities, (2) the benefits to individuals' quality of life by occupying safe, decent, and affordable housing, and (3) the benefits to other programs of affordable housing. In addition, the efficiency of nonprofit developers has been generally measured by leveraging ratios and number of units produced. These measures were developed, in large part, because the data needed is readily available in most applications and development pro formas. However, these measures do not reflect many quantifiable economic outcomes.

Very little analysis has been done using traditional business measures of investment return or other economic measures of affordable housing development's impact. The analysis in this paper takes a conservative approach to applying some of these tools. For the purposes of this analysis, the substantial social benefits of affordable housing that are more commonly cited by advocates as the benefits of developing affordable housing are not included. Even with a conservative approach, the returns on state's \$94 million investment in nonprofit-based development are significant. A complete analysis of the overall impact of affordable housing should include these more qualitative measures.

Construction Phase Returns

Measure of Return	Annually	Since 1990
Jobs Supported	1,000	12,212
Wages Paid	\$31 million	\$393 million
State Income Tax	\$1.8 million	\$23 million
Leveraged Funding	\$34 million	\$408 million
State Funding Percent of Total Cost	20%	
Private and Federal Percent of Total Cost	80%	
Leverage Ratio	\$1 to \$4.33	

Occupancy Phase Returns

Measure of Return	
Internal Rate of Return (IRR) on State Investment	25.5%
Annual Rent Savings	\$24 million
Aggregate Rent Savings	\$1.06 billion
Jobs Supported by Rent Savings	833

Impact of On-going Savings to Residents

The savings to residents from paying lower than fair market rents is \$24 million a year and this savings is guaranteed for 44 more years. Since families are likely to spend this money locally, this represents a substantial boost to local economies. Based on likely spending patterns \$24 million will support 833 full-time jobs each year.

Oregon's Investment in Affordable Housing

Since 1990, the state of Oregon has contributed over \$94 million to help AOCDO member CDCs create 7,562 affordable housing units through its various programs. Oregon's investment in affordable housing has leveraged over \$408 million in funding from federal and private sources.¹ This means:

- ✓ State funding pays for 20% of the cost of development and CDCs find the other 80% from private and federal sources.
- ✓ For every \$1 the state invests, CDCs leverage \$4.33 from other sources

Rate of Return on State Investment

The \$24 million in savings represents a 25.5% annual return the state's aggregate investment of \$94 million. This annual savings for low-income Oregonians are guaranteed for the term of the projects. On average these developments have 44 years remaining in their commitment to affordability.

Over the remaining life of these existing investments residents of these homes can expect to save over \$1 billion.

State Income Taxes Paid

A significant amount of state income taxes are paid through the development process. As a result of the leveraging of other funds, within 2 years, the state recoups about 42% of its average annual investment in affordable housing in income taxes paid.

Conclusion

By almost any measure, affordable housing development offers a very good return on dollars invested. The pure economic impact of developing housing that is affordable to low-income Oregonians is substantial for the 1,833 full-time jobs it supports each year. It is immediate because construction begins almost immediately. It is on-going because of the 50 to 60 year commitments to affordability that developers and owners make.

¹ Analysis of Oregon Housing and Community Services Department information

Oregon Economic Impact of Affordable Housing Study

Introduction and Purpose of Study

Market rate housing development is widely recognized for its economic development impact, yet little is known about the economic impact of affordable housing. Community Development Corporations (CDCs) in Oregon have developed over \$500 million in housing and next to nothing is known about its impact besides the valuable shelter it provides. As the first phase of a strategy to demonstrate the economic benefits of affordable housing development, the Association of Oregon Community Development Organizations (AOCDO) has researched and adapted a model to analyze the economic impacts of affordable housing.

Housing Affordability

The Housing and Urban Development Department has found that “[f]amilies who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care.”² Therefore, the generally accepted standard of housing affordability in government programs and in private sector underwriting is that a household pay no more than 30 percent of its annual gross income on housing.³

Social Benefits Ignored

The impact of affordable housing developed by nonprofits has traditionally been described by the social benefits it provides to low-income households. Numerous authors have tried to define the social benefits of developing safe, decent and affordable housing to residents and the surrounding communities. Widely documented benefits of safe, decent and affordable housing include:

- Families and individuals are more financially stable;
- Families and individuals are less transient and more able to participate in the local economy and labor force; and
- Children are less likely to miss school and perform better on standardized test.

This report will ignore these benefits and focus on the quantifiable economic development impacts of developing housing that is affordable to low-income Oregonians.

² HUD: <http://www.hud.gov/offices/cpd/affordablehousing/index.cfm>

³ Department of Housing and Urban Development (HUD).

“Traditional” Measures of Effectiveness

In addition, the effectiveness of affordable housing has typically been described in terms that could be easily drawn from typical funding applications and development pro formas. These measures are typically:

- the amount of funds that are leveraged from the private sector or federal government and
- the number of units produced.

No developers of affordable housing have examined the economic outputs and calculable effect of the multipliers of their work.

Multifamily Housing Economic Impact

The model adapted by AOCDO for use in this report is based on a model developed by the National Association of Home Builders (NAHB). This model is widely respected and utilized in analyzing the economic impact of market rate housing development.

AOCDO's model is divided into three phases. Phase I (construction) examines the direct jobs supported by construction of new housing units. Phase II (construction ripple) examines the jobs supported when the workers paid in Phase I spend their income. Finally, Phase III (on-going savings) examines the marginal impact on the local economy when residents spend the savings received by paying rents that are lower than the Department of Housing and Urban Development's fair market rent.

Brief Description of the Model

This model defines an economy as a collection of industries and commodities. The industries and commodities that are most relevant to the housing development industry are selected from the detailed benchmark input-output tables produced by the U.S. Bureau of Economic Analysis. The NAHB selected 56 commodities and 77 industries out of the roughly 500 industries and commodities provided in the input-output files. By selecting only the key industries and commodities that are critical to development of housing is a conservative approach that ensures the model does not exaggerate the impact of housing development. The industries included in the AOCDO model corresponded to the industries selected by the NAHB Housing Policy Department and include both business-to-business and business-to-consumer transactions.

For purposes of this study, it is assumed that the vast majority of wages paid and businesses hired are based in Oregon and they spend their income in the Oregon economy. It is impossible to review the documentation for 12 years of housing development to determine the home and likely spending area for each individual contractor and hired worker on the development site. However, AOCDO did survey a cross-section of AOCDO members on their current hiring practices and readily available information about past hiring practices. In this survey, all of the developers hired contractors or professional services from businesses based in Oregon. Some investors did hire lawyers and accountants from outside Oregon, but this appears to only make up a very small proportion of the actual hiring. Given this information and the conservative nature of the AOCDO model, this assumption is reasonable and does not seriously impact the results. (For more information on the model see page 13)

Economic Impact of Affordable Housing Development

Phase I: Construction

The construction and development of multifamily housing generates income, wages, and local taxes through permits, utility connection and impact fees. These jobs include on-site and off-site construction work, retail and wholesale sales of housing components, transportation to the site, and the professional services required to build a home and deliver it to the final customer (such

as closing and lending officers). The estimated number of jobs supported through the construction of multifamily units is based on national standards from NAHB and the National Housing Conference (see Appendix A). The estimated cumulative local single-year impacts of building 7,562 multi-family units of housing include:

Phase I: Direct and Indirect Impact of Construction Activity

Local Wages and Salaries	Estimated State Income Taxes⁴	Oregon Jobs Supported	Local Government Fees and Taxes
\$198,025,740	\$11,680,518	5,445	Not Available

The types of jobs supported through the construction of housing are in the construction; wholesale and retail trade; Finance, Insurance, and Real Estate (FIRE); and Business and Professional Services industries. Workers in each of these industries are required to design and implement the creation of multifamily residential development.

Phase II: Construction Ripple

The wages earned by workers and profits earned by businesses during the construction period are spent on other local goods and services. This generates additional income for local people, which is spent on still more local goods and services, and so on. This continuing recycling of income back into the community is a multiplier effect (see Appendix B).

The estimated effect of spending income from the jobs supported from the construction of 7,562 affordable multifamily rental housing units include:

⁴ State income taxes are based on the Oregon Department of Revenue’s “effective tax rate” (actual taxes paid divided by adjusted gross income). In *Oregon Personal Income Tax Annual Statistics Tax Year 2000* the effective tax rate for Oregon is 5.9% of adjusted gross income (page 1).

Phase II: Induced Effect of Spending Income and Taxes from Phase I

Local Wages and Salaries	Estimated State Income Taxes	Oregon Jobs Supported	Local Government Fees and Taxes
\$195,552,413	11,537,592	6,767	Not Available

The U.S. Bureau of Labor Statistics produces a regional analysis of spending patterns by income levels called the Consumer Expenditure Survey (CES). According to CES, when workers become consumers and spend a portion of their wages in the local economy, they support additional jobs in 16 local industries. The Consumer Expenditure Survey provides detailed information on how much individuals with specific incomes spend in each of these 16 industries and on commodities. For example, households that earn \$30,000 annually spend on average \$4,642 of their income on food, which is 15 percent of their total spending. Through careful analysis of average spending patterns of workers paid in the construction phase, 6,767 additional jobs are supported through their spending. Examples of these industries supported are services, transportation, health care, and entertainment (See Appendix E).

Phase III: The Ongoing Impacts of Savings

There are ongoing, annual local impacts that result when any new homes are occupied, and as the occupants participate in the local economy year after year. There is an additional economic impact of living in affordable housing that is significant because of the money low-income residents save by living in below fair market rent (FMR) apartments.

Because households typically support the local economy through consumer spending regardless of type of housing in which they reside, AOCDO included only the marginal impacts of affordable housing into this phase. Therefore, the model only describes the impacts of the increased purchasing power of low-income Oregonians by living in below fair market rent apartments. Therefore, not only are low-income families reaping the benefits of residing in permanent, quality, affordable housing, but also they are contributing to a diverse local economy through their additional spending power.

Residents of CDC owned or managed affordable housing pay, on average, \$267 less in rent per month than they would in a fair market rate apartment. This results in an estimated annual savings of \$24,199,301 for the 7,562 households living in these units.⁵ The saving estimate was based on rent information collected through the AOCDO annual survey of member organizations (see Appendix D).

The economic impact of the occupants was calculated similarly as in Phase II with a detailed analysis of the consumer expenditure survey (See Appendix C).

⁵ AOCDO Annual Survey of Member Organizations

Phase III: Ongoing, Annual Effect that Occurs When New Homes Are Occupied

Total Income	Local Wages and Salaries	Annual State Income Tax	Oregon Jobs Supported
\$24,199,301	\$23,565,543	1,390,367	833

The increased purchasing power from living in below market rent apartments supports 833 local jobs in diverse industries, similar to Phase II consumer spending. This analysis is based on CES spending patterns for low-income Oregonians. These jobs, in turn, pay income taxes to the local government and spend even more money on local goods and services, creating a multiplier effect. This recycling of spending occurs on an on-going basis and, therefore, this impact in contrast to the construction affects has an annual impact to on the local economy.

Oregon's Investment in Affordable Housing

Since 1990, the state of Oregon has contributed over \$94 million to CDCs. This investment has led to the creation of 7,562 affordable housing units located in almost every county in the state. Funding sources come through programs such as the housing trust fund, the Community Investment Fund, and the Oregon Affordable Housing Tax Credit Program (OAHTC) (Diagram A).⁶

Diagram A

Funding and Number of Units Developed: 1990-2002	
Funding Sources	HCS Data
Public Funding Streams:	
<i>I. State</i>	
Trust Fund	\$13,179,650
Oregon Affordable Housing Tax Credit Program	\$78,725,130
Community Incentive Fund	\$1,648,500
Alcohol and Drug Free Housing Fund	\$150,000
Migrant Million Fund	\$310,000
Weatherization Funds	\$373,117
<i>Total State</i>	<i>\$94,386,397</i>
<i>II. Federal</i>	
HOME	\$23,210,516
HELP	\$1,262,968
Low Income Housing Tax Credit Program (9% credits)	\$230,982,691
Low Income Housing Tax Credit Program (4% credits)	\$36,780,100
<i>Total Federal Sources</i>	<i>\$292,236,274</i>
Total Public Funding	\$384,141,055
Total Private Funding	\$116,558,528
Total Cost of Development: 1990-2002	\$503,181,200
Number of Multifamily Units	7,562

Leveraging Ratios

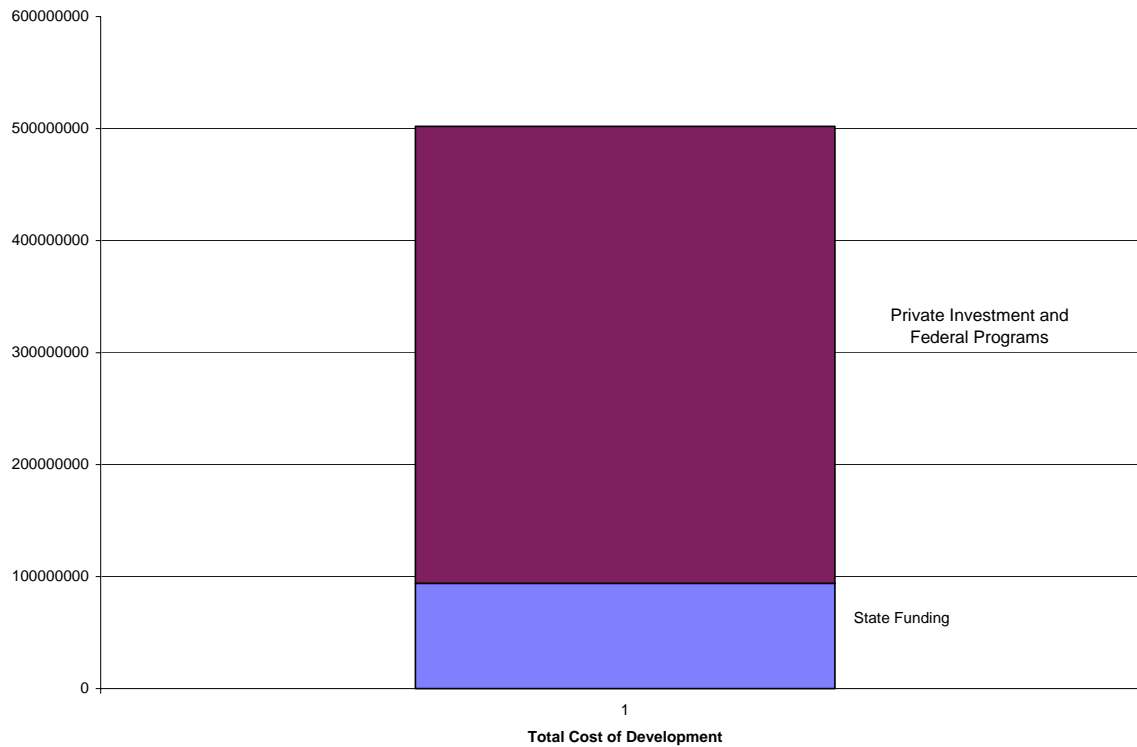
Oregon's investment in affordable housing and support to the AOCDO member organizations has leveraged over \$292 million in funding from federal programs and \$116 million from private sources.⁷ Therefore, the state has a 1:4 $\frac{1}{3}$ leveraging ratio in comparison to all other funding sources. This means that for every dollar the state invests in affordable housing, \$4.33 is generated from private sources and the federal government.

⁶ Oregon Housing and Community Services Department

⁷ Analysis of Oregon Housing and Community Services Department information

DIAGRAM B⁸

Sources of Funding



Rate of Return on State Investment

In total, affordable rental multifamily housing development through AOCDO member organizations has generated on a one-time basis:

- ✓ \$393,578,153 in local wages and salaries,
- ✓ 12,212 in local jobs.

As of 2002, affordable rental multifamily housing development through AOCDO member organizations has generated on an ongoing basis:

- ✓ \$24,199,301 in local wages and salaries,
- ✓ 833 jobs.

In aggregate, Oregon's internal rate of return (IRR) in its investment in affordable housing is 25.5%.

⁸ Analysis of Oregon Housing and Community Services Department information

Total Rent Savings

As noted earlier, the current rent levels in the 7,562 units developed by CDCs save approximately \$24,266,500 per year for low-income Oregonians. Developers have committed to keeping this housing affordable for an average of another 44 years. By multiplying the annual savings of creating 7,562 units by the projects’ terms of commitment to affordability, the current state investment will generate \$1.06 billion in savings for low-income Oregonians. This calculation assumes that the difference between FMR and the level of rent current residents pay remains the same. It also ignores the savings generated over the last 12 years because the data is not available to calculate the differential.

State’s Internal Rate of Return

A standard business measure of the value of an investment is Internal Rate of Return (IRR). IRR is a means of estimating the return on an investment that yields periodic income payments. Since the data is not available to calculate the annual savings for year’s prior to 2002, we cannot accurately assess the IRR for the entire investment of state funding that began in 1990.

While we cannot estimate the return up to 2002 with the data available, one can estimate the IRR from 2002 to the end of the commitment to affordability. In this calculation then:

- rent savings is treated as the stream of periodic payments created by the investment of \$94 million.
- assume that the state invests its \$94 million in 2002.
- Internal rate of return on Oregon’s investment under these assumptions is 25.5%.

Averages

Typically, then, affordable housing in Oregon has the following impacts:

	State Investment	Leveraged Funding	Jobs Supported	Wages Paid	State Income Taxes Paid
100 units	1,248,167	5,405,909	161	5,204,683	307,076
500 units	6,240,836	27,029,543	807	26,023,417	1,535,382
750 units	9,361,253	40,544,314	1,211	39,035,125	2,303,072
1000 units	12,481,671	54,059,085	1,615	52,046,833	3,070,763

Model Development

Existing Model Research

AOCDO began this project by researching the existing state of economic impact analysis for both housing development, in general, and development of housing that is affordable to low-income households in particular. After significant work, it is clear that there is only periodic research and analysis on these topics. There is, however, one model that is considered the most comprehensive and is considered an improvement on most previous models. This model was developed by the National Association of Home Builders (NAHB) and described in “Local Impact of Homebuilding in Average City, USA.”

In researching current state of housing economic impact analysis AOCDO pursued several strategies. First, AOCDO contacted state, federal, and local government sources of research and analysis. Contacts included the US Department of Housing and Urban Development’s Office of Policy Development and Research, US Bureau of Economic Analysis, US Census Bureau, and the Department of Commerce. None of these sources had economic impact models that are specific to low income housing development. For general impact data these organizations use the NAHB model and add question specific analysis depending on the focus of the study.

Several state economic development authorities and legislative offices where also contacted. These states included Oregon, Washington, California, Michigan, Massachusetts, Indiana, North Carolina and New Jersey. None of these sources had economic impact models that are specific to low income housing development.

National, state and local trade associations where also contacted. These contacts where among the most profitable and resulted in gaining access to two unpublished analyses by college professors as Washington State University and Harvard University.

Ultimately, this work did not produce one ideal model to use but instead directed AOCDO to the highly regarded NAHB model and to methodologies for adapting it to specific circumstances. The model has been the basis of analysis by the Congressional Budget Office, National Housing Conference, National Low Income Housing Coalition and others.

AOCDO developed a model based on the National Association of Home Builders model to estimate the economic impact of the construction and occupation of affordable housing in Oregon. The model captures not only the direct economic benefit in constructing multi-family housing units, but also the substantial indirect benefits that results as housing workers spend money and new homes become occupied. The final model can be easily updated with new data as it becomes available.

Model Methodology

The model is based on a National Association Home Builders (NAHB) study, “The Local Impact of Home Building in Average City, USA”. The NAHB Housing Policy Department developed this model to estimate the local economic impact of building a home within the boundaries of a particular local market area. Although initially designed for a typical metropolitan area using national averages, its assumptions and data can be adapted to a specific economy by replacing key housing market variables. NAHB’s model was not specifically developed to support nonprofit developers, but it does provide a useful framework based on conservative assumptions regarding residential single-family and multi-family development. This model has been widely cited by the National Housing Conference, the National Low Income Housing Coalition, and other well-known groups.

AOCDO adapted this model to account for the economic impact of affordable rental housing for the state of Oregon. The AOCDO adaptation maintains the NAHB impact calculations for construction activities of housing because these averages are standardized within the housing industry in the United States. However, the multiplier effect as a result of the occupancy of homes was adapted to account for the specific spending patterns of low-income households and the benefits of housing that is affordable to low-income Oregonians, not market rate housing.

This study analyzes only affordable housing developed by existing “voting” members of AOCDO. A voting member can be any nonprofit Community Development Organization in Oregon that meets the conditions set out in the by-laws. To date, these organizations have developed approximately 7,500 units of affordable rental housing in Oregon.

The data needed to localize the model is only available consistently on a statewide basis. Therefore, unless otherwise noted local impacts are calculated for Oregon’s economy.

The model is divided into three phases. Phase I and II are one-time effects that occur as the result of construction activity. Phase III is the ongoing, annual effect that includes the amount of savings residents can accrue by living in below market rate apartments.

Phase I: Construction

According to NAHB, the construction of 1,000 multifamily units generally creates 1,030 full-time jobs in construction and construction-related industries; \$33.5 million in wages; and \$17.8 million in combined federal, state, and local tax revenues and fees for the average city in the United States. In addition, the National Housing Conference states, “With regard to multifamily housing, current estimates indicate that for every 10,000 multifamily units that are constructed, approximately 10,000 jobs are created.”⁹ Keeping these figures in mind, AOCDO estimated the number of jobs that are supported through the construction of an average multifamily project for Oregon. The model was then localized to Oregon’s particular situation by applying specific wage rates to the relevant trades and industries. The study was also adjusted to account for

⁹ National Housing Conference: http://www.nhc.org/comm_and_pubs.htm

Oregon's unique tax structure. The Oregon average wages by job and industry was determined using information from the Oregon Bureau of Labor.

Phase II: The Construction Ripple

Local employees who earn income in Phase I will spend a portion of this income. Some of the spending will elude the local economy, but most of it will be captured within the state economy. A portion of money used to buy a new car, for example, will become wages for a local auto dealer and generate income for a salesperson who likely lives in the state, as well as local workers who provide cleaning, maintenance, and other services to the dealership. Consumers are likely to purchase many services locally, as well as pay taxes and fees to local governments. AOCDO assumes these salaries will be captured within the state economy.

In essence, the income and taxes generated in Phase I become the input for additional economic impacts in Phase II. This analysis begins by calculating how much of the added income households spend on each of the local commodities and industries. This required detailed analysis of the data from the Consumer Expenditure Survey (CES), compiled by the U.S. Bureau of Labor Statistics. CES provides data on how typical families at various income levels spend their earnings in 16 different local industries. The model then translates the estimated local spending into local wages and salaries, jobs, and taxes. In other words, the model converts the local income earned in Phase I into local spending by those housing industry workers, which then generates additional local income. Oregon's CES data is aggregated under the west region and is broken down by wage and salary ranges.

Phase III: The Ongoing Impacts of Savings

Like Phase II, Phase III involves computing the sum of successive ripples, or multiplier effects, in economic activity. However, unlike Phase II, the first ripple is generated when a household spends its income on goods and services in the local economy. Total consumer spending would capture a net economic impact of this phase. However, AOCDO adapted the model to include only the savings generated by living in below fair market rent units. While this does not capture the total economic impact by the households occupying the new homes, it focuses on the marginal savings captured by paying lower rents in nonprofit developed and operated housing. AOCDO chose this method to focus on the specific marginal impact of residents who pay lower rents. This assumes that savings to tenants benefit the local economy, as opposed to payment of market rate rents, which benefit landlords, lenders, and shareholders who may be out of the area.

Phase III then estimates the amount of savings these households spend on local industries and commodities. This is done with CES data and is similar to the procedure described under Phase II.

Sources for this study include AOCDO's annual survey of members; the Oregon Housing and Community Services Department; Oregon Bureau of Labor; the National Association of Home Builders; the Census Bureau (specifically, census data from 1990 and 2000); the U.S. Bureau of

Labor Statistics (specifically, the Consumer Expenditure Survey); the Department of Housing and Urban Development; and the National Housing Conference.

Conclusions

The impact of developing affordable multifamily housing goes beyond the valuable social benefits of providing shelter. In fact, the pure economic impact of developing housing that is affordable to low-income Oregonians is substantial, immediate and continuous. AOCDO's model captures the direct economic benefit in constructing multi-family housing units, as well as the substantial indirect benefits that result from consumer spending, as housing industry workers spend money and new homes become occupied. The model describes the economic impact of affordable housing specifically for Oregon by utilizing data from local sources, such as the Oregon Department of Housing and Community Services, Bureau of Labor, and Department of Revenue. AOCDO demonstrates that relatively small sums of grant funds generate large economic returns in jobs, income and revenue to state government.

The disparity between housing costs and household income continues to widen. Oregon is the most hungry state in the nation and cost of housing is cited frequently as one of the major Oregon cannot afford to disinvest in affordable housing. As fewer affordable multifamily units are available in Oregon, more low-income households will become rent burdened and vulnerable to relying on other sources of public assistance.

Author Biographies

John Blatt, Executive Director, AOCDO, has over 12 years of experience in affordable housing and community-based development. Prior to joining AOCDO in 2000, Mr. Blatt was the Director of Field Operations for The Enterprise Foundation, a national nonprofit organization focused on housing and community development. In his position at Enterprise, he over saw the work of more than 100 staff in 16 offices across the country. Before his employment with Enterprise, Mr. Blatt was the Assistant Director of the Oregon Housing and Community Services Department in Salem, Oregon. Mr. Blatt holds a degree in Economics and History from Willamette University.

Molly Rogers, M.P.A., received her Masters of Public Administration at Columbia University, with a concentration in advanced policy techniques and community economic development. While in graduate school, Ms. Rogers was a National Congress for Community Economic Development (NCCED) intern and did an analysis of local homeless issues for the Community Action Organization of Washington County. After graduate school, she was employed as an Analyst for the New York City Department of Homeless Services, working on housing placement and retention of formally homeless adults. With a background in advocacy, policy analysis, and evaluation, Ms. Rogers has recently accepted a position with the City of Portland Bureau of Housing and Community Development researching and analyzing housing models for the homeless.

APPENDIX A

Phase I: Direct and Indirect Impact of Construction Activity

Impact of Building 7,492 Multi-Family Units in Oregon			
A. Local Income and Job by Industry			
Industry	Local Wages and Salaries	Wages and Salaries per Full-time job	Number of local jobs supported
Construction	\$164,732,574	\$38,218	4,310
Manufacturing	\$0	\$45,863	0
Transportation	\$0	\$33,328	0
Utilities	\$0	\$70,802	0
Communications	\$0	\$52,255	0
Wholesale and Retail Trade	\$17,075,752	\$25,090	681
FIRE	\$2,959,313	\$39,134	76
Personal Services	\$0	\$18,730	0
Business and Professional Services	\$13,258,101	\$35,065	378
Eating and drinking places	\$0	\$11,999	0
Automobile Repair and Service	\$0	\$25,327	0
Entertainment Services	\$0	\$20,396	0
Health, Educ. and Social Services	\$0	\$30,241	0
Local Government	\$0	\$31,655	0
TOTAL	\$198,025,740	\$35,834	5,445
B. Local Government General Revenue by Type			
TAXES			
Business Property Taxes	X		
Residential Property Taxes			
Specific Excise Taxes	X		
Income Taxes		11,683,519	
License Tax			
Other Taxes	X		
USER FEES & CHARGES			
Residential Permit/Impact Fees	X		
Utilities & Other Govt. Enterprises	X		
Hospital	X		
Transportation Charges	X		
Education Charges	X		
Other Fees and Charges	X		
TOTAL FEES & CHARGES			
TOTAL GENERAL REVENUE		\$37,205,040*	

* Based on national averages from NAHB model.

APPENDIX B

Phase II: Induced Effect of Spending and Tax Revenue from Phase I

Construction Ripple			
A. Local Income and Job by Industry			
Industry	Local Income	Wages and Salaries per Full-time job	Number of local jobs supported
Construction	\$2,065,390	\$38,218	54
Manufacturing	\$4,867,953	\$45,863	106
Transportation	\$2,414,245	\$33,328	72
Utilities	\$13,759,144	\$70,802	194
Communications	\$4,681,094	\$52,255	90
Wholesale and Retail Trade	\$49,240,904	\$25,090	1,963
FIRE	\$57,943,463	\$39,134	1,481
Personal Services	\$7,746,436	\$18,730	414
Business and Professional Services	\$4,486,636	\$35,065	128
Eating and drinking places	\$10,337,098	\$11,999	861
Automobile Repair and Service	\$4,079,956	\$25,327	161
Entertainment Services	\$9,473,217	\$20,396	464
Health, Educ. and Social Services	\$12,282,655	\$30,241	406
Local Government	\$6,784,662	\$31,655	214
Other	\$5,389,560	\$34,150	158
TOTAL	\$195,552,413	\$28,899	6,767
B. Local Government General Revenue by Type			
TAXES			
Business Property Taxes	X		
Residential Property Taxes			
Specific Excise Taxes	X		
Income Taxes		11,537,592	
License Tax			
Other Taxes	X		
USER FEES & CHARGES			
Residential Permit/Impact Fees			
Utilities & Other Govt. Enterprises	X		
Hospital	X		
Transportation Charges	X		
Education Charges	X		
Other Fees and Charges	X		
TOTAL FEES & CHARGES			
TOTAL GENERAL REVENUE		\$10,435,560*	

* Based on national averages from NAHB model.

APPENDIX C

Phase III: Ongoing, Annual Effect that Occurs as New Homes are Occupied

Ongoing Ripple			
A. Local Income and Job by Industry			
Industry	Local Income	Wages and Salaries per Full-time job	Number of local jobs supported
Construction	\$216,689	\$38,218	6
Manufacturing	\$749,481	\$45,863	0
Transportation	\$351,829	\$33,328	11
Utilities	\$1,735,844	\$70,802	25
Communications	\$554,538	\$52,255	11
Wholesale and Retail Trade	\$6,416,799	\$25,090	256
FIRE	\$6,418,352	\$39,134	164
Personal Services	\$1,045,390	\$18,730	56
Business and Professional Services	\$549,102	\$35,065	16
Eating and drinking places	\$1,321,106	\$11,999	110
Automobile Repair and Service	\$550,655	\$25,327	22
Entertainment Services	\$1,238,003	\$20,396	61
Health, Educ. and Social Services	\$1,762,251	\$30,241	58
Local Government	\$633,758	\$31,655	20
Other	\$655,505	\$34,150	19
TOTAL	\$24,199,301	\$29,064	833
B. Local Government General Revenue by Type			
TAXES			
Business Property Taxes	X		
Residential Property Taxes	X		
Specific Excise Taxes	X		
Income Taxes		1,427,759	
License Tax	X		
Other Taxes	X		
USER FEES & CHARGES			
Residential Permit/Impact Fees			
Utilities & Other Govt. Enterprises	X		
Hospital	X		
Transportation Charges	X		
Education Charges	X		
Other Fees and Charges	X		
TOTAL FEES & CHARGES			
TOTAL GENERAL REVENUE		\$20,644,260*	

* Based on national averages from NAHB model.

APPENDIX D

AOCDO Member Rent Level Survey Results

	#of units	Monthly savings	Annual savings	Monthly Avg. savings per unit	Average % of income to FMR
Benton	137	\$57,413.85	\$688,966.20	\$419.08	57%
Clatsop	22	\$5,897.00	\$70,764.00	\$268.05	50%
Deschutes	94	\$34,781.00	\$417,372.00	\$370.01	56%
Douglas	144	\$37,685.00	\$452,220.00	\$261.70	55%
Jackson	113	\$39,324.00	\$471,888.00	\$348.00	55%
Lane	515	\$133,482.00	\$1,601,784.00	\$259.19	48%
Lincoln	89	\$15,055.00	\$180,660.00	\$169.16	42%
Linn	262	\$88,429.00	\$1,061,148.00	\$337.51	59%
Marion	65	\$12,807.45	\$153,689.40	\$197.04	42%
Multnomah	4156	\$1,076,183.36	\$12,914,200.32	\$258.95	46%
Wasco	112	\$21,399.00	\$256,788.00	\$191.06	45%
TOTALS:	5709	\$1,522,456.66	\$18,269,479.92	\$266.68	46%

APPENDIX E

Consumer Expenditure Survey By Industry and Wage Range

	Total	<5,000	\$5K- \$10K	10-15	15-20	20-30	30-40	40-50	50-60	60-70
Construction	519	333	132	297	242	279	396	378	483	1244
Furniture	472	249	129	284	222	269	369	334	431	1130
Floor coverings	47	84	3	13	20	10	27	44	52	114
	1.17%	1.68%	0.74%	1.35%	0.89%	0.90%	1.08%	0.82%	0.93%	1.47%
Manufacturing	1494	604	488	553	684	965	890	1398	2386	2989
Household textiles	131	50	33	76	98	133	68	122	142	251
Major appliances	206	85	90	119	123	107	147	179	219	455
Small appliances, miscellaneous housewares	122	69	56	45	71	105	74	113	129	245
Miscellaneous household equipment	913	362	270	276	335	513	546	903	1729	1767
Manufacturing Gifts	122	38	39	37	57	107	55	81	167	271
	3.37%	3.05%	2.73%	2.51%	2.52%	3.10%	2.42%	3.05%	4.58%	3.53%
Transportation	619	298	312	344	298	453	445	465	685	1317
Public transportation	519	271	272	290	267	290	397	409	597	1108
Transportation Gifts	100	27	40	54	31	163	48	56	88	209
	1.39%	1.51%	1.75%	1.56%	1.10%	1.45%	1.21%	1.01%	1.32%	1.56%
Utilities	2660	1317	1328	1729	2081	2235	2585	2850	3283	3981
Utilities, fuels, and public services	1357	694	733	1007	1126	1151	1294	1433	1607	1981
Gasoline and motor oil	1303	623	595	722	955	1084	1291	1417	1676	2000
	5.99%	6.65%	7.43%	7.85%	7.66%	7.17%	7.02%	6.21%	6.30%	4.70%
Communications	849	495	516	585	666	714	886	929	1000	1188
	1.91%	2.50%	2.89%	2.66%	2.45%	2.29%	2.41%	2.02%	1.92%	1.40%
Wholesale and Retail Trade	10468	4417	4502	5493	7868	8262	9214	11521	10917	18696
Food	3298	1653	1906	2210	2861	2941	3063	3581	3693	4778
Alcoholic beverages	457	282	247	289	268	302	280	417	549	875
Housekeeping supplies	544	270	246	313	382	406	497	570	687	889
Apparel and services	2130	1017	933	895	1507	1698	1881	2009	2164	4054
Vehicle purchases (net outlay)	3553	849	943	1595	2547	2580	3148	4507	3239	7111
Gifts and services	430	321	217	162	284	274	303	394	510	885
Housekeeping supplies Gifts	56	25	10	29	19	61	42	43	75	104

	23.59%	22.31%	25.18%	24.94%	28.95%	26.52%	25.02%	25.11%	20.97%	22.08%
FIRE	13119	4496	4124	5558	6197	8264	11048	14162	16589	26605
Maintenance, repairs, insurance, other expenses	957	368	417	657	603	880	739	725	1067	1801
Mortgage interest and charges	3457	566	443	648	844	1388	2799	3875	4803	8350
Rented dwellings	2793	2959	2499	3053	3050	3221	3440	3604	2479	1773
Vehicle finance charges	330	74	65	89	148	239	337	409	507	582
Vehicle insurance	831	272	290	441	561	714	828	919	1091	1327
Personal insurance and pensions	4751	257	410	670	991	1822	2905	4630	6642	12772
	29.56%	22.71%	23.07%	25.23%	22.80%	26.52%	30.00%	30.87%	31.86%	31.42%
Personal Services	1929	854	828	1067	1512	1346	1443	1911	2077	3741
Household operations	867	247	197	355	727	465	422	784	841	2148
Personal care products and services	607	330	329	341	440	461	568	636	682	1011
Reading	179	74	76	103	111	133	153	176	224	327
Tobacco products and smoking supplies	247	187	210	242	211	252	256	293	302	227
Personal care products and services gifts	25	16	14	24	19	31	43	18	24	22
Reading Gifts	4	0	2	2	4	4	1	4	4	6
	4.35%	4.31%	4.63%	4.84%	5.56%	4.32%	3.92%	4.17%	3.99%	4.42%
Business and Professional Services	1378	1101	583	476	615	707	846	1121	1474	3295
Other lodging	569	705	288	216	255	270	276	341	510	1456
Other housing	141	66	72	49	63	97	91	121	136	331
Vehicle rental, leases, licenses, other charges	668	330	223	211	297	340	479	659	828	1508
	3.11%	5.56%	3.26%	2.16%	2.26%	2.27%	2.30%	2.44%	2.83%	3.89%
Eating and drinking places	2335	1128	899	971	1406	1701	1939	2347	2837	4393
	5.26%	5.70%	5.03%	4.41%	5.17%	5.46%	5.27%	5.12%	5.45%	5.19%
Automobile Repair and Service	833	353	353	635	557	709	760	891	931	1359
	1.88%	1.78%	1.97%	2.88%	2.05%	2.28%	2.06%	1.94%	1.79%	1.60%
Entertainment Services	2351	1454	850	1167	1137	1594	1772	2327	2841	4688
Entertainment	2222	1358	809	1114	1070	1514	1699	2202	2697	4402
Entertainment Gifts	129	96	41	53	67	80	73	125	144	286
	5.30%	7.34%	4.75%	5.30%	4.18%	5.12%	4.81%	5.07%	5.46%	5.54%
Health, Educ. and Social Services	2885	2003	1934	2113	2403	2269	2269	2888	3060	4629
Health care	2008	822	1202	1652	1955	1772	1798	2043	2362	2805
Education	696	1125	705	351	433	403	369	738	552	1322
Health Care Gifts	37	21	3	44	15	18	45	10	22	86

Education Gifts	144	35	24	66	c/ 62	76	57	97	124	416
	6.50%	10.12%	10.82%	9.59%	8.84%	7.28%	6.16%	6.29%	5.88%	5.47%
Local Government	1792	428	543	561	686	816	1315	1488	2188	4430
Property taxes	932	359	343	471	560	587	811	808	1055	1932
State and local income taxes	716	38	181	57	55	173	384	544	947	2148
Other taxes	144	31	19	33	71	56	120	136	186	350
	4.04%	2.16%	3.04%	2.55%	2.52%	2.62%	3.57%	3.24%	4.20%	5.23%
Other	1145	516	486	478	823	844	1017	1206	1320	2129
Miscellaneous	1030	375	371	416	744	769	904	1114	1195	1948
All other gifts	115	141	115	62	79	75	113	92	125	181
	2.58%	2.61%	2.72%	2.17%	3.03%	2.71%	2.76%	2.63%	2.54%	2.51%