



2021

# ECONOMIC CONTRIBUTIONS OF THE HOUSING INDUSTRY IN NORTHERN VIRGINIA



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**PREPARED BY**

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SCHAR SCHOOL OF POLICY AND GOVERNMENT  
GEORGE MASON UNIVERSITY



**IN COLLABORATION WITH**

THE NORTHERN VIRGINIA ASSOCIATION OF REALTORS®





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## THANK YOU

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# TABLE OF CONTENTS

## PAGE 01

*ACKNOWLEDGEMENT*

## PAGE 02

*EXECUTIVE SUMMARY + PARAMETERS*

## PAGE 03

*PARAMETERS (CONT.)*

## PAGE 04

*INTRODUCTION*

## PAGE 05

*WHY THE HOUSING SECTOR IS IMPORTANT*

## PAGE 06

*RESEARCH FINDINGS*

## PAGE 07

*TECHNICAL APPENDIX*

## PAGE 08

*DATA AND METHODS*

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# ACKNOWLEDGEMENT

The work reported here was made possible by the generous support of the Northern Virginia Association of REALTORS® (NVAR). This research is a part of on-going collaborative efforts between the Center for Regional Analysis and NVAR to provide industry professionals, business and civic leaders, and the public with analyses and market insights on housing market performance, the housing industry, and the role of housing in supporting regional economic growth and competitiveness.



## ABOUT THE CENTER OF REGIONAL ANALYSIS

The Center for Regional Analysis (CRA) at George Mason University was formed to provide economic and public policy research to project sponsors in the public, private, and non-profit sectors. Center staff has extensive experience in economic development planning, workforce development strategies, regional economic analysis, and research that focuses on transportation infrastructure, the economic and fiscal impacts of public and private investment, and housing markets. CRA hosts the Stephen S. Fuller Institute, which focuses its research and outreach efforts on the DC Metropolitan region. The Center is housed within the Schar School of Policy and Government with primary offices at GMU's Arlington, VA campus.

## ABOUT THE NORTHERN VIRGINIA ASSOCIATION OF REALTORS®

The Northern Virginia Association of Realtors (NVAR) is an organization that represents nearly 14,000 real estate professionals in the greater Washington, DC metro area who conduct approximately 27,000 real estate transactions with a sales volume over \$19B annually. NVAR strives to provide Northern Virginia Realtors with exceptional value, innovative tools, and impact the industry and marketplace.



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# EXECUTIVE SUMMARY

Northern Virginia's housing market gets more attention than any other sector of the economy, save for the federal government. From boardrooms to family dining tables, the state of the regional housing market is followed closely. For most households in Northern Virginia housing represents their largest outlay, and for most homeowners their greatest family investment. Even with this attention, however, few understand the breadth of the economic contributions the housing industry makes on regional economic activity and as a source of jobs.

In the following, we report the findings of a new analysis by the Center for Regional Analysis at George Mason University to understand and quantify the economic contributions of the residential real estate and related industries in Northern Virginia. The analysis focuses on 2021, during the COVID-19 pandemic. Even with the disruptions caused by the pandemic, the housing market in Northern Virginia remained remarkably resilient and provided an important under-pinning for the regional economy and its workers.

## KEY PARAMETERS & FINDINGS

The analysis covers two geographic areas within Northern Virginia. The first is the core market area served by the Northern Virginia Association of REALTORS®, which includes Alexandria, Arlington, Falls Church, Fairfax County, and the City of Fairfax. Due to economic and population growth over a multi-decade period, the effective housing market for the core area of Northern Virginia must include Loudoun County, Prince William County, and the cities of Manassas and Manassas Park. Therefore, we separately estimate the economic contributions of the housing industry on this wider area, which includes local markets served, in part, by the Dulles Association of REALTORS® and the Prince William Area Association REALTORS®.

The analyses are based on industry employment data from Chmura Economics' JobsEQ database, MarketStats by ShowingTime, and IMPLAN. The economic contributions of housing industry activity are estimated using the IMPLAN economic input-output model.

The housing industry represents broad, highly diversified sectors of the economy including new construction, repair and renovation of housing units, property management, retail, household services, and businesses that support housing market transactions from lenders to inspectors and professional REALTORS®. The Technical Appendix to this report provides detailed descriptions of our methodology used in these analyses.

In 2021, the residential real estate sector in NVAR's service area generated \$15 billion in local economic activity and supported over 87,000 jobs paying almost \$6 billion in labor earnings. Local government entities realized about \$288 million in revenue associated with this economic activity. This does not include the full value of property taxes paid on residential units. It does include sales and use taxes, property taxes, fees and other sources of government revenue associated with housing business activities.

# KEY PARAMETERS & FINDINGS (CONT.)

In performing this analysis, we clearly see a difference in the traditional core markets of Northern Virginia and the next ring of suburban communities. There is as much new construction activity in the combined areas of Prince William County, including Manassas and Manassas Park, and Loudoun County as there is in the core market areas combined. These additional construction activities substantially boost our estimates of total regional economic activity when we look at all of Northern Virginia. For this expanded market area, the housing industry in 2021 boosted regional economic activity by \$24.3 billion, increased area labor income by \$9.1 billion and supported 140,000 jobs. Local governments across Northern Virginia shared almost \$500 million in revenue related to this economic activity.

2021 was a dynamic year for the regional housing market. Housing demand remained strong despite rising prices due to market imbalances, pandemic related supply chain disruptions, and shifting spending priorities for households. It is important, however, to recognize that the housing industry is much more than just construction and facilitating housing transactions. It is a large and important sector of our regional economy that provides jobs and business opportunities through strong markets and when the overall economy experiences setbacks. Just like the federal government, Northern Virginia's housing industry underpins our economy and homeownership remains a key opportunity for families to build lasting intergenerational wealth.

Based on this research and a similar study performed by CRA for the Virginia Association of REALTORS® in 2021, the housing industry in Northern Virginia contributes about one-half of gross state product (value added) attributable to the housing industry in the Commonwealth of Virginia.

**TABLE ES1**  
**ECONOMIC IMPACTS OF NORTHERN VIRGINIA'S**  
**RESIDENTIAL REAL ESTATE INDUSTRY (2021)**

Description	Impact	
	NVAR Area*	NOVA**
Output (transactions)	\$ 15,097,389,000	\$ 23,931,115,000
Value Added (gross regional product)	\$ 9,455,108,000	\$ 14,516,750,000
Labor Income (salaries, wages, benefits)	\$ 5,994,868,000	\$ 9,129,260,000
Jobs	87,131	140,043
Local Taxes	\$ 288,161,000	\$ 497,725,000

\* City of Alexandria, Arlington County, Fairfax County, City of Fairfax, City of Falls Church

\*\* NVAR area plus Loudoun County, Prince William County, City of Manassas, City of Manassas Park

Sources: GMU Center for Regional Analysis, Chmura Economics, IBIS World, industry sources, IMPLAN.





# INTRODUCTION

Casual and business oriented conversations about the economy of Northern Virginia almost always include discussions of the local housing market. Owing to long-term demand trends, the housing market in Northern Virginia is among the most expensive in the nation. The housing industry, including professional activities related to the buying and selling of owner-occupied residential real estate, is a key component of regional economic growth and development in Northern Virginia. Previous studies conducted by the Center for Regional Analysis at George Mason University has shown that residential real estate is one of the largest industries in the Commonwealth of Virginia[1]&[2] and have documented just how important the residential real estate industry is to the Commonwealth of Virginia. In this study, we examine the economic contributions of housing industry activities in Northern Virginia and the service area of the Northern Virginia Association of REALTORS®, the leading real estate organization in the region representing more than 13,000 real estate professionals. As some elements of the regional economy were battered by business disruptions caused by the COVID-19 pandemic, residential real estate became a steadying influence sustaining regional jobs and seeing new levels of investments as homeowners focused their attention on property upgrades.

[1] Addressing the Impact of Housing for Virginia's Economy. November 2017. A Report for Virginia's Housing Policy Advisory Council.

[2] Virginia Real Estate: Economic Impact Analysis, 2017 and 2021, prepared by the Virginia REALTORS® and George Mason University Center for Regional Analysis.

**NORTHERN VIRGINIA'S HOUSING INDUSTRY EMERGED  
AS A STEADY INFLUENCE SUSTAINING JOBS AND  
CREATING NEW ECONOMIC OPPORTUNITIES DURING  
THE COVID-19 PANDEMIC.**

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# WHY THE HOUSING SECTOR IS IMPORTANT

Increasingly, civic and business leaders understand that a vibrant market for owner-occupied housing is critical for attracting and retaining talented workers in any region. Economic development in the 21st Century, responding to innovation, industry trends and new attitudes among younger workers, is about access to workers. As Harvard economist Ed Glaeser once wrote: “no homes, no people, no jobs.”[3] But beyond the role of housing in attracting and retaining talent, business activities related to the creation and maintenance of housing and facilitating the transactions for housing generates economic activity that supports tens of thousands jobs across a wide range of industry sectors in our regional economy. This does not include the benefits of homeownership, which remains the most viable approach for most households to build familial and intergenerational wealth.

The analysis presented here is termed an economic contributions analysis since it examines an industry that is present in the economy.[4] An economic contribution analysis estimates how dollars spent in a subject sector of the economy flows through the study area. For purposes of this analysis, the housing industry is defined as including:

- **SERVICES ASSOCIATED WITH THE BUYING, SELLING, LEASING, AND MANAGEMENT OF RESIDENTIAL PROPERTIES;**
- **RESIDENTIAL PROPERTY CONSTRUCTION, REPAIR, AND REMODELING;**
- **SERVICES TO THESE STRUCTURES, SUCH AS PROPERTY MAINTENANCE AND IMPROVEMENTS;**
- **RETAIL TRADE FOCUSED ON HOUSEHOLD FIXTURES AND FURNISHINGS.**

Our analysis does not examine economic activities related to industrial, commercial, or institutional properties in this analysis, even if they are integrated into residential properties, such as mixed-use developments combining housing and retail properties. This analysis also does not include the economic value of public sector housing providers, except where construction, remodeling or repair activities occur. Finally, this analysis does not quantify the value of the existing housing stock.

[3] Glaeser, E. (2006, page 2). The economic impact of restricting housing supply. Rappaport Institute for Greater Boston Policy Briefs, PB-2006-3. Kennedy School of Government, Harvard University.

[4] The common term “economic impact” is used when a new industry moves to an area.



# RESEARCH FINDINGS

In 2021, Northern Virginia's housing industry contributed \$23.9 billion in economic activity to the regional economy (see Figure 2). The Technical Appendix at the end of this report provides details of the data and methods used in this analysis. This level of economic activity increased gross regional product by \$14.5 billion, supported over 140,000 jobs, and increased labor income by \$9.1 billion. To put this into context, the jobs related directly and indirectly to the housing industry represent almost 10% of total regional employment, making this one of the largest industries in our region. Total regional revenues enjoyed by local taxing jurisdictions was just under \$500 million. Focusing on NVAR's service area, the residential real estate market created \$15 billion in economic activity and increased gross area product by \$9.5 billion resulting in more than 87,000 jobs that paid almost \$6 billion in salaries, wages, and benefits. The local jurisdictions served by NVAR enjoyed \$288 million in revenue associated with business activities in residential real estate.

Our analysis showed an interesting market dynamic in that the "outer" jurisdictions saw a higher levels of economic activity on a per-capita basis. This appears to be due to the relevant impact of new housing construction.

Northern Virginia's housing industry is important economically, culturally, and strategically. With a growing emphasis on the importance of adding to the region's stock of workforce housing to be able to compete for an increasingly mobile labor force, we expect the economic contributions of the housing industry to grow, even with market activity challenges due to current economic conditions. Just as importantly, the residential real estate sector of our economy proved to be remarkably resilient during the COVID-19 pandemic. No other sector of the regional economy adapted as quickly and broadly as the housing industry, particularly that component of the housing industry focused on the selling and buying of owner-occupied housing units. In the space of weeks, REALTORS®, brokers, title agents, lenders, and financial intermediaries deployed and adopted technology solutions and new business practices that kept the housing market active and directly supporting jobs and economic opportunity.

**FIGURE 2**  
**ECONOMIC CONTRIBUTIONS OF NORTHERN VIRGINIA'S REAL ESTATE INDUSTRY (2021)**

Description	Impact	
	NVAR Area*	NOVA**
Output (transactions)	\$ 15,097,389,000	\$ 23,931,115,000
Value Added (gross regional product)	\$ 9,455,108,000	\$ 14,516,750,000
Labor Income (salaries, wages, benefits)	\$ 5,994,868,000	\$ 9,129,260,000
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\* \* City of Alexandria, Arlington County, Fairfax County, City of Fairfax, City of Falls Church

\*\* NVAR area plus Loudoun County, Prince William County, City of Manassas, City of Manassas Park

Sources: GMU Center for Regional Analysis, Chmura Economics, IBIS World, industry sources, IMPLAN.

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# TECHNICAL APPENDIX

## DATA AND METHODS

To assess the economic contributions of the residential real estate industry in Northern Virginia, we use an input-output analysis reflecting interindustry transaction trends, jobs supported by those transactions, and then local spending associated with employee earnings for 2021. This is a comprehensive approach that incorporates a wide range of economic sectors that are impacted by the housing industry. Some elements, such as construction of single- or multifamily homes, are obvious. Other sectors include services that are less visible but are critical to the residential real estate industry, such as attorneys who work in residential real estate transactions, loan officers who review mortgage applications, maintenance services for apartment buildings, and a range of other industries.[5] We are also including the development and management of rental properties.

[5] There are two important economic elements that are not included in this analysis. In national product tables, which show estimates of all U.S. economic activity, there is an accounting entry for the "Imputed Value of Homeownership." If a household owns a home outright, there is a recurring economic value to their home that is not captured by business transactions. The Imputed Value of Homeownership estimates the cost to the household if they were paying rent to themselves and this value is included in Gross Domestic Product. Since there is no actual transaction, this value is not included in this analysis. Also excluded is the economic value of Freddie Mac, even though that government enterprise is headquartered in Northern Virginia it was not possible to show how many employees at Freddie Mac are dedicated to serving loans for homes in the study area.

## TECHNICAL TERMS

**Construction:** Single-family housing, multifamily housing, manufactured and mobile homes, as well as home renovation and repair.

**Finance:** Banks, other lending institutions (real estate), mortgage brokers.

**Insurance:** Property insurance carriers and brokers, title insurance.

**Transport:** Household moving services.

**Agencies:** Non-profit housing agencies and related groups, including Realtor® associations.

**Real Estate:** Brokers, property managers, inspectors, appraisers, lawyers, and title companies.

**Retail Trade:** Household furnishings, building materials, home centers (DIY only), appliances

**Services:** Household services including design services, security systems, pest control, janitorial services, landscaping, waste collection, furniture and appliance repair, homeowners' associations, household domestic staff.



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## DATA AND METHODS (CONT.)

Sources of data used in this analysis include the Bureau of Labor Statistics, Bureau of Economic Analysis, IBIS World industry market database, and Chmura Economics. Contribution analyses estimate the direct, indirect, and induced effects of the subject industry. Direct effects are the economic consequences resulting from the spending by the housing industry itself. For example, a housing developer hires professional services providers (architects, engineers, others) and trades contractors to build residential units. Indirect effects capture the business-to-business purchases representing the residential construction supply chain including the purchase of materials and leasing heavy equipment such as backhoes and earthmovers. The firm that leases out heavy equipment buys the equipment, hires employees, purchases parts to keep the equipment operating, and hires professional services providers to support their business operations. These professional services providers, like accountants, temporary employment agencies and such, rent office space, hire employees purchase office supplies, and hires their own services providers, and so on. At each stage of spending, the economic input-output model adjusts the spending to only count business activities within the study area. For example, purchased fuel to run construction equipment is not refined in Northern Virginia, so little of that spending supports local economic activity – except for delivery and sellers. Induced effects capture the economic value of the spending of labor earnings by employees of all the direct and indirect businesses for goods and services in Northern Virginia. Even when adjusting for spending that leaves the study area, the sum of the direct, indirect, and induced effects is typically greater than the direct spending, which is the “multiplier effect.”

The analysis presented here is based on the IMPLAN economic input-output model, which is widely used in professional and academic research. The IMPLAN model provides estimates of total output (value of transactions), value added (gross regional product), labor income (salaries, wages, and benefits), and jobs (headcount).

The model also estimates revenue to local taxing jurisdictions including sales and use taxes, fees for licenses and permits, and other sources of government revenue resulting from the economic activity. Local taxes, for this purpose, does not fully include property taxes based on the market value of the existing housing stock, except that supported by industry transactions.

The analysis presented in this report includes an important adjustment. When examining the simultaneous impacts of multiple industries, input-output modeling is susceptible to double counting. The employees and owners of a home builder are themselves consumers of housing and the many services that support residential real estate that is captured as Induced Effects. Therefore, we adjust the Induced Effects to avoid double counting industry employee spending. The approach taken in making these adjustments is conservative, meaning that our estimates of the total economic contributions of the housing industry in Northern Virginia are likely understated.

The methodology employed in this analysis follows our approach used in our 2021 report of the impacts of the housing industry in the Commonwealth of Virginia prepared for the Virginia Association of REALTORS®. That report includes a technical appendix detailing key methods and assumptions and can be found on the CRA or VAR websites.[6]

The Northern Virginia Association of REALTORS’ primary service area includes the City of Alexandria, Arlington County, Fairfax County, City of Fairfax, and the City of Falls Church. However, in understanding how the housing industry contributes to regional economic activity, it is important to consider the wider market of Northern Virginia including NVAR’s area plus Loudoun County, Prince William County, and the cities of Manassas and Manassas Park. The analysis presented below includes analyses at both levels of geography.

[6] [www.cra.gmu.edu](http://www.cra.gmu.edu) <https://virginiarealtors.org>