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Investigating Locational Affordability: Housing Costs, Vehicle Ownership Costs, and Foreclosures (14-0471)

Transportation Research Board

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Locational Affordability

- Concept that recognizes linkage between housing and transport
- Costs for both are inextricably entwined
- Sustainability and resilience
 - Economic
 - Social / Equity

What does 'Affordable' Mean?

- In housing, we have percent-of-income
 - Alternatives include the residual income approach
 - See J.D. Hulchanski, 1995. The concept of housing affordability: Six contemporary uses of the Housing expenditure-to-income ratio. *Housing Studies*.
- What about for transportation?
 - What is the threshold for unaffordability? 15%? 20%?
 - Broader equity-based approaches

Testing the Definitions

- Foreclosure as unaffordability indicator
 - Housing costs unsustainable
 - Lack of economic resiliency
- Community- and city-level impacts
 - Demands for social services
 - Declining tax base and revenue
- Link with car ownership?
 - See Santiago, Galster, et al, 2013. Foreclosing on the American dream? The financial consequences of low-income homeownership. *Housing Policy Debate*

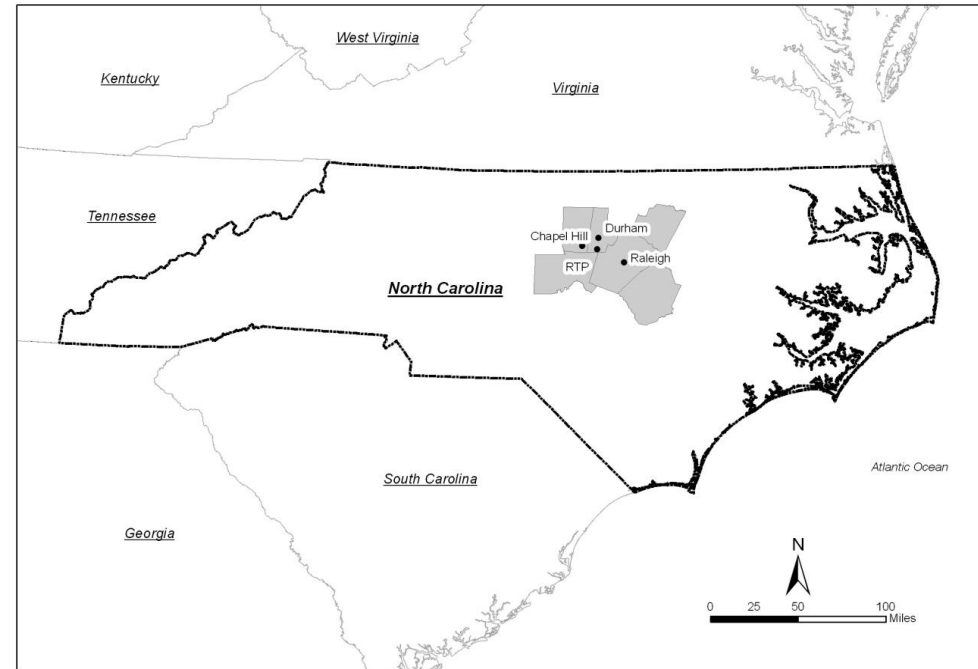


Credit: www.therealdeal.com

Is There a Relationship Between High Vehicle Costs and Foreclosures?

Study Area

- Research Triangle Region of North Carolina
 - 6 counties
 - Neighborhood level/ Census tract
- Polycentric
 - 4 major employment centers
- Autodependent
 - Very low mode split
 - Local and regional bus transit



Is There a Relationship Between High Vehicle Costs and Foreclosures?

Quantitative Analysis: Dependent Variable

- Estimated foreclosure rate 2007/08
- Generated by model
 - Change in housing prices from their peak
 - % of mortgages that are 'high-cost loans'
 - County unemployment rate in June 2008
 - Adjusted for investor loans
- In study area: 0% to 11.1% with a mean of 2.78%

THURSDAY, DECEMBER 26, 2013

HUD.GOV
U.S. Department of Housing and Urban Development
Secretary Shaun Donovan

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DATA SETS

Neighborhood Stabilization Program Data

HUD's Neighborhood Stabilization Program (www.hud.gov/nsp) provides emergency assistance to state and local governments to acquire and redevelop foreclosed properties that might otherwise become sources of abandonment and blight within their communities. The Neighborhood Stabilization Program (NSP) provides grants to every state, certain local communities, and other organizations to purchase foreclosed or abandoned homes and to rehabilitate, resell, or redevelop these homes in order to stabilize neighborhoods and stem the decline of house values of neighboring homes. The program is authorized under Title III of the Housing and Economic Recovery Act of 2008.

There have been three rounds of funding for NSP. The Housing and Economic Recovery Act of 2008 provided a first round of formula funding to States and units of general local government, and is referred to herein as NSP1. The American Recovery and Reinvestment Act provided a second round of funds in 2009 awarded by competition, and is referred to herein as NSP2. The third round of funding, NSP3, was provided in 2010 as part of the Dodd-Frank Wall Street Reform Act and was allocated by formula.

NSP1

The NSP1 allocation was done via a two-step formula that first made statewide allocations and then local allocations.

TOPIC AREAS

- 50th Percentile Rent Estimates
- American Housing Survey
- Annual Adjustment Factors
- Assisted Housing: National and Local
- CNIH
- Consolidated Planning
- Data Set Reference Guide
- Fair Market Rents
- Geospatial Data Resources
- Government Sponsored Enterprise Data
- Housing Affordability Data System
- Income Limits
- Uniform Relocation Act Income Limits
- Infographics
- Low-income Housing Tax Credit

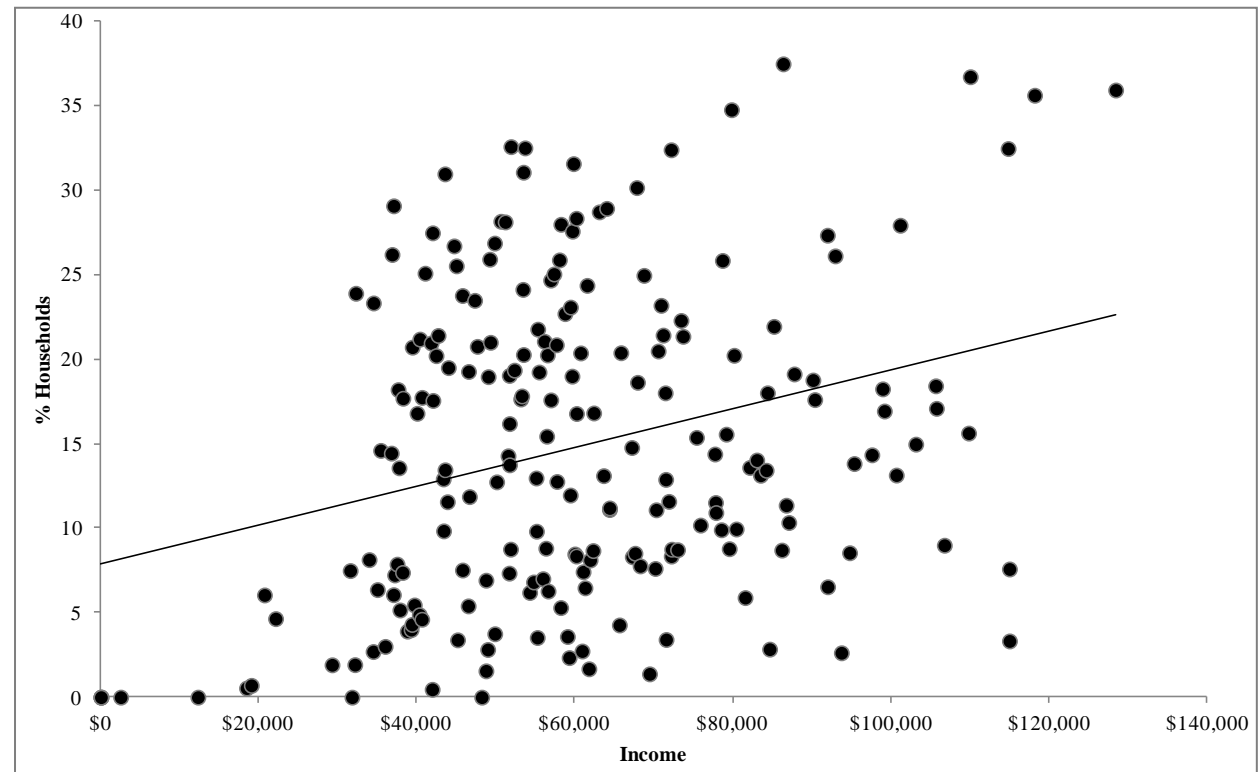
Is There a Relationship Between High Vehicle Costs and Foreclosures?

Quantitative Analysis: Independent Variables

- US Census 2000
- Tract Median Income for Homeowners (\$100s)
- Percent Owner-Occupied Households:
Owner-occupied hsg units / Total occupied hsg units
- Percent High Housing Cost Households:
Hsg units occupied by homeowners with mortgages expending $\geq 30\%$ of income on housing / Total occupied hsg units
- Percent High Vehicle Cost Households:
Owner-occupied hsg units with 3 or more vehicles / Total occupied hsg units

Vehicle Costs and Income

- High Vehicle Costs vs Tract Median Income
 - Weak, positive
 - R^2 : 0.0806
 - Pearson: .248



Regression Results

- Adj R-square: 0.666
- N = 204
- Log-linear regression
- Signs as expected
- All variables highly significant

Model 2: All Variables Adj. R²: 0.666 F-stat: 102.005 p = .000

Variable	Coefficient	Std. Error	Std. Coeff.	t-Statistic	Sig.
Constant	-2.002	.139		-14.406	.000
Income	-.004	.000	-.817	-18.739	.000
% Own Occ Hsg Units	-.014	.004	-.337	-3.054	.003
% High Hsg Costs	.065	.013	.290	4.797	.000
% High Vehicle Costs	.032	.009	.303	3.401	.001

Interpreting Results

- If Foreclosure Rate = 5%
 - \$100 increase in income > reduces foreclosure rate to 4.98%
 - \$100 decrease in income > increases foreclosure rate to 5.02%
 - 1% increase in HHs with mortgages expending 30% or more of income on housing > increases foreclosure rate to 5.34%
 - 1% increase of home-owning HHs with 3 or more vehicles > increases foreclosure rate to 5.16%

Notes on the Interpretation

- Aggregate analysis; Census tract is unit of observation
- High vehicle ownership may be proxy for other household budget patterns
- Outcome variable + affordability thresholds



Credit: www.cameronburke.com

Conclusions

- Income an important factor in foreclosures
- Increased shares of households with high housing costs associated with increase in foreclosure rates
- Increased shares of households with high vehicle costs associated with increase in foreclosure rates
- Supports concept of locational affordability



Graphic: GROWashington Arstook

Thank you!

Questions?

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Percent High Vehicle Costs (quintiles)

