

# TAKE-UP OF HOUSING PROGRAM BENEFITS

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# Overview

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- Take-Up Literature
- Foreclosures, Housing Distress, and Poverty
- Restoring Stability Ohio
- Descriptive Results
- Preliminary Analysis
- Future Work

# Benefit Take-Up

- Percentage of *eligible* beneficiaries who actually collect benefits
- Necessary step to impactful public programs
- Barriers:
  - ▣ Stigma
  - ▣ Transaction Costs
    - Application Process
  - ▣ Ignorance of Program

# Benefit Take-Up

## □ Examples:

- SCHIP: 61-75% (Wolfe & Scrivner 2005)
- TANF: 52% (Zedlewski 2002)
- SNAP (aka Food Stamps Program): 54 to 93% (USDA 2008)
- EITC: 75% (IRS 2009)

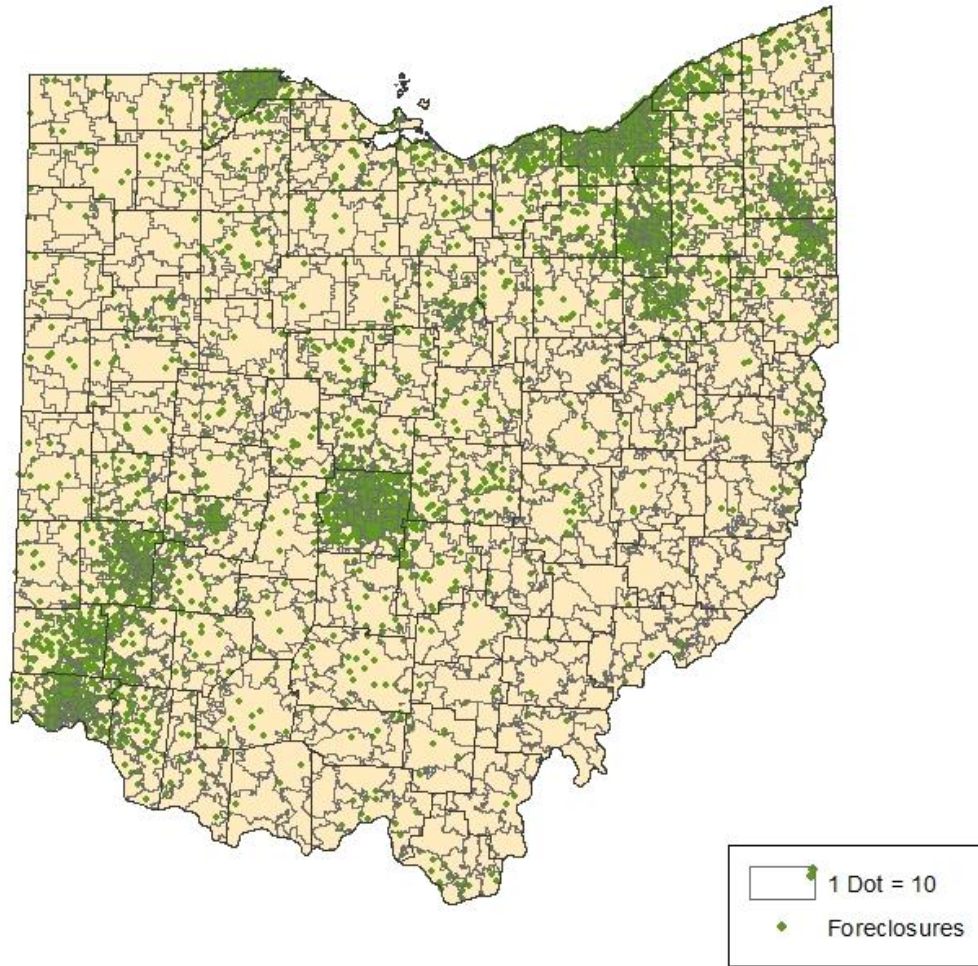
## □ Factors:

- Outreach
- Targeting
- Reducing Transaction Costs
- Eliminating Stigma
- Benefit Size

# Foreclosures in Ohio

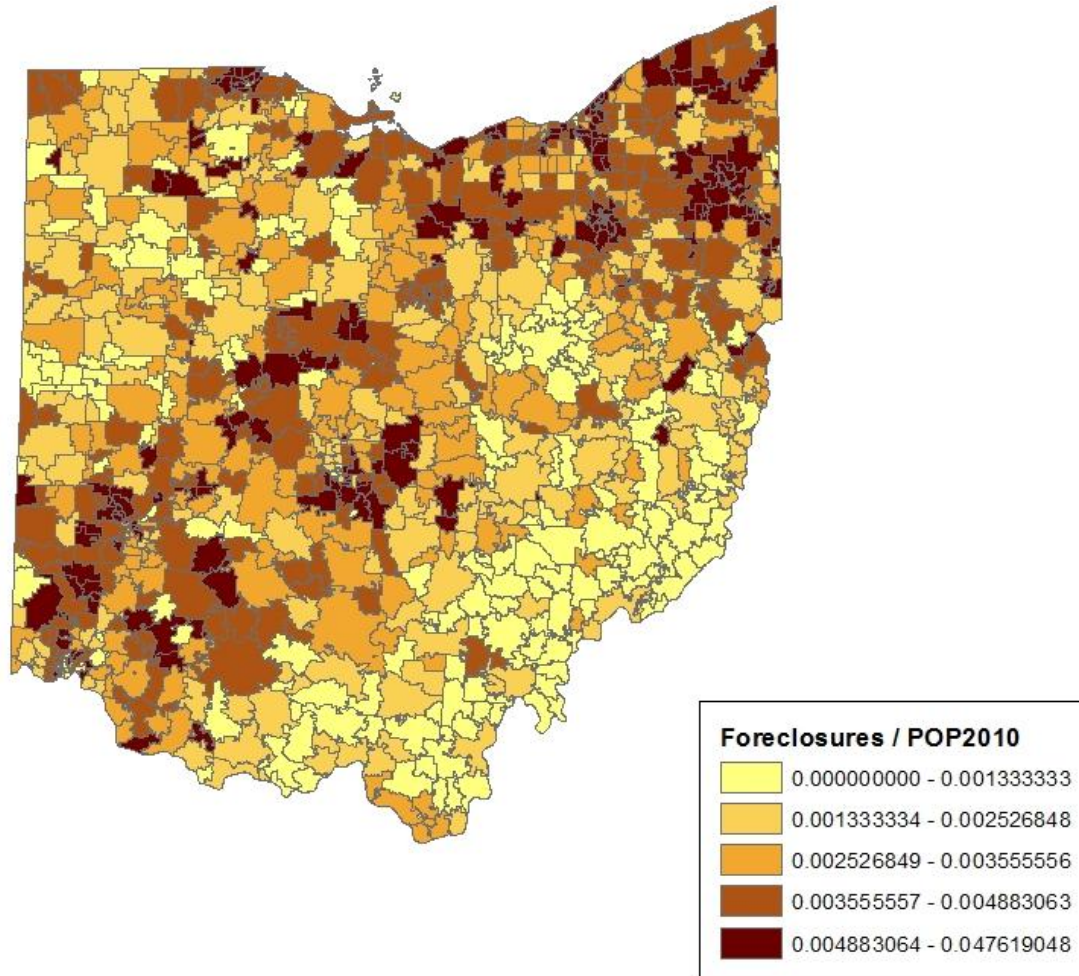
- Causes:
  - ▣ Growth of Subprime Mortgage Market
  - ▣ Predatory Lending
  - ▣ Bursting of the Housing Bubble
  - ▣ Growth in Unemployment
- Effects:
  - ▣ Drive Down Property Values
  - ▣ Increase Vacancy Rates
  - ▣ Damage to Creditworthiness
  - ▣ Family Upheaval

# The Geography of Foreclosures in Ohio



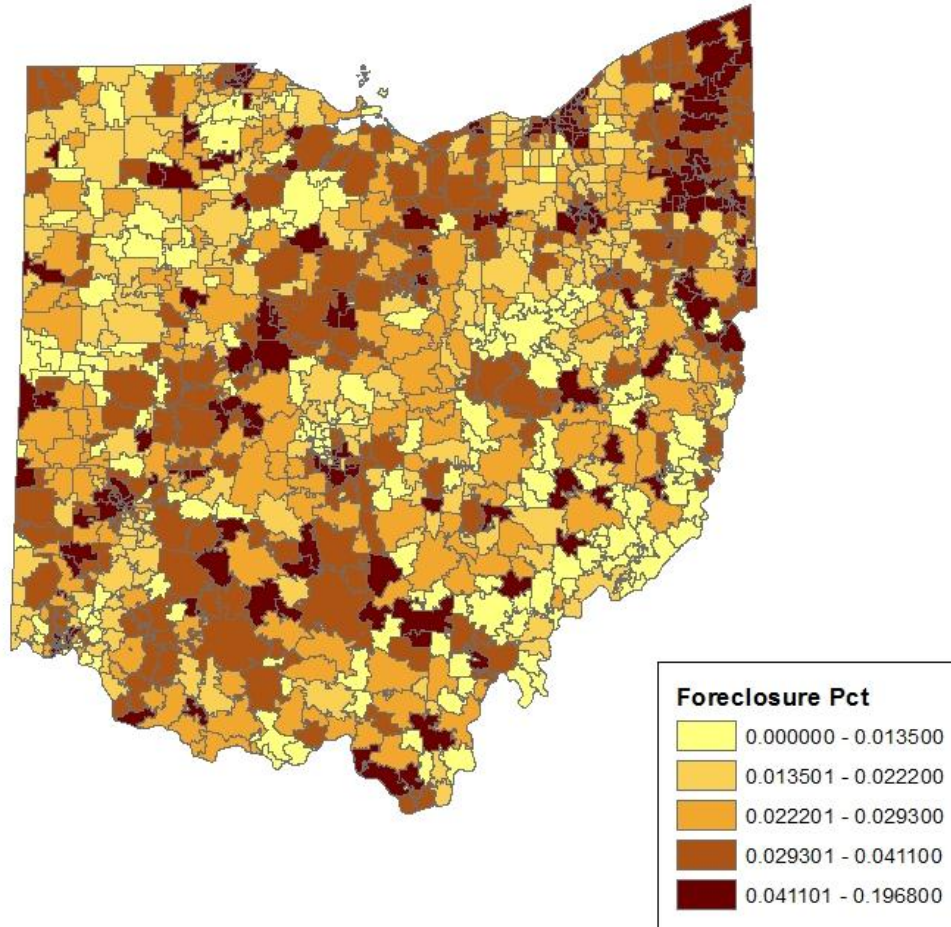
Source: First American Core Logic

# Foreclosures Per Capita



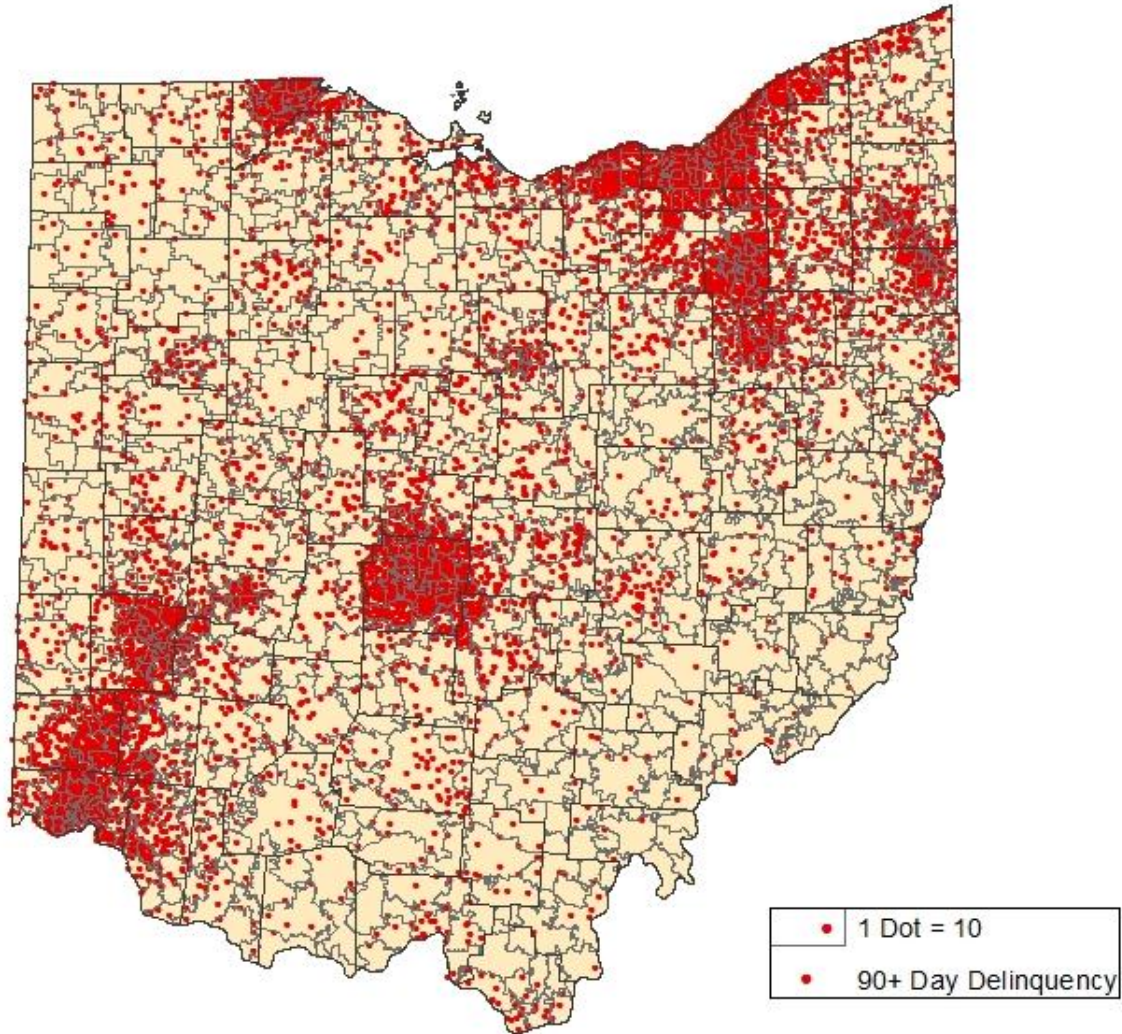
Source: First American Core Logic

# Foreclosures as Percentage of All Mortgages



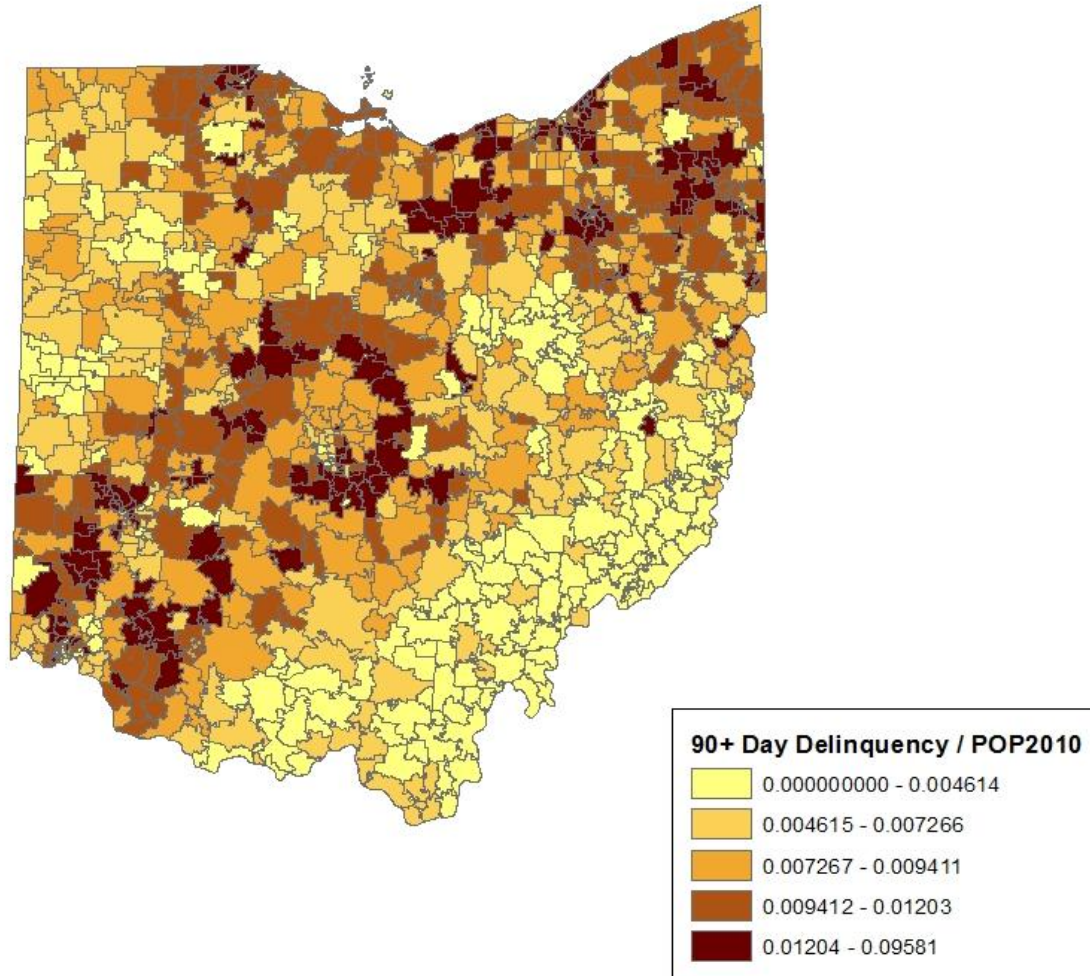
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# Delinquent Mortgages



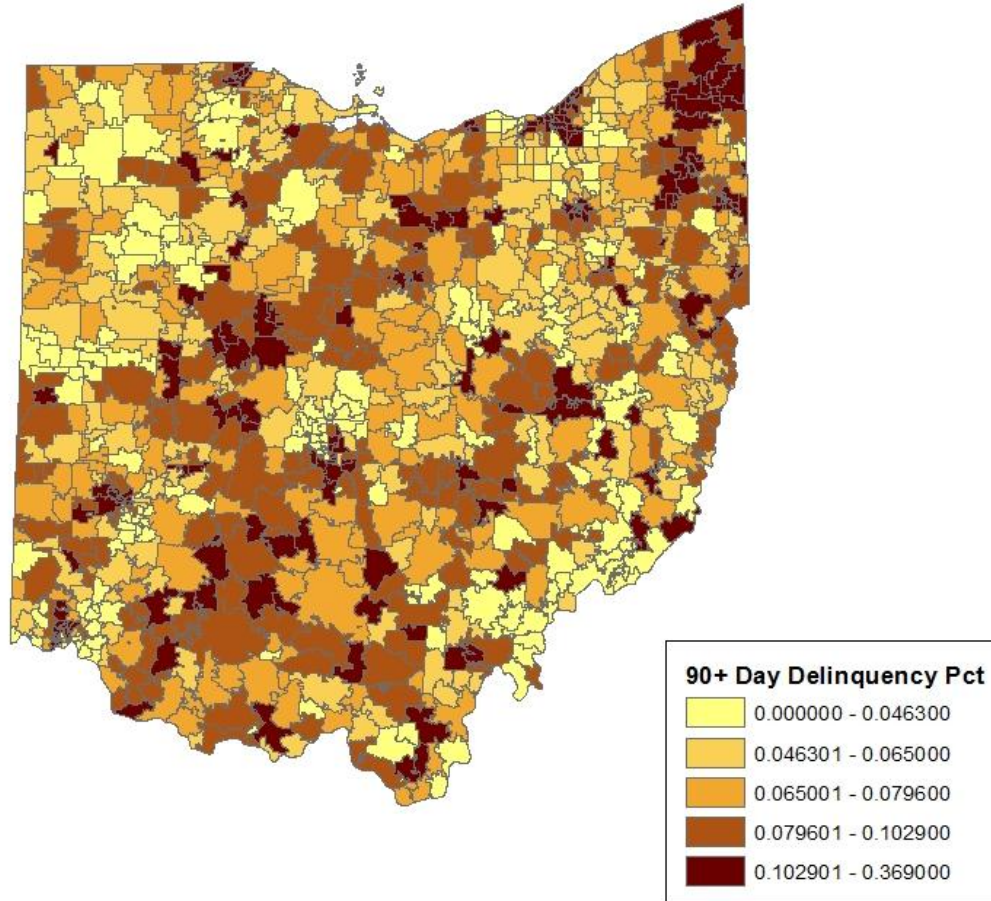
Source: First American Core Logic

# Delinquencies Per Capita



Source: First American Core Logic

# Delinquencies as Percentage of All Mortgages



Source: First American Core Logic

# Restoring Stability Ohio

- Federal-state partnership
  - ▣ Hardest Hit Fund
- Launched September 27, 2010
- \$570 million for Ohio
- Estimated 53,000 recipients
- Up to \$25,000 in assistance: Zero interest, forgivable loan
  - ▣ Rescue Payments
  - ▣ Partial Mortgage Payments
  - ▣ Modification Assistance with Principal Reduction
  - ▣ Short Refinance
  - ▣ Transition Assistance

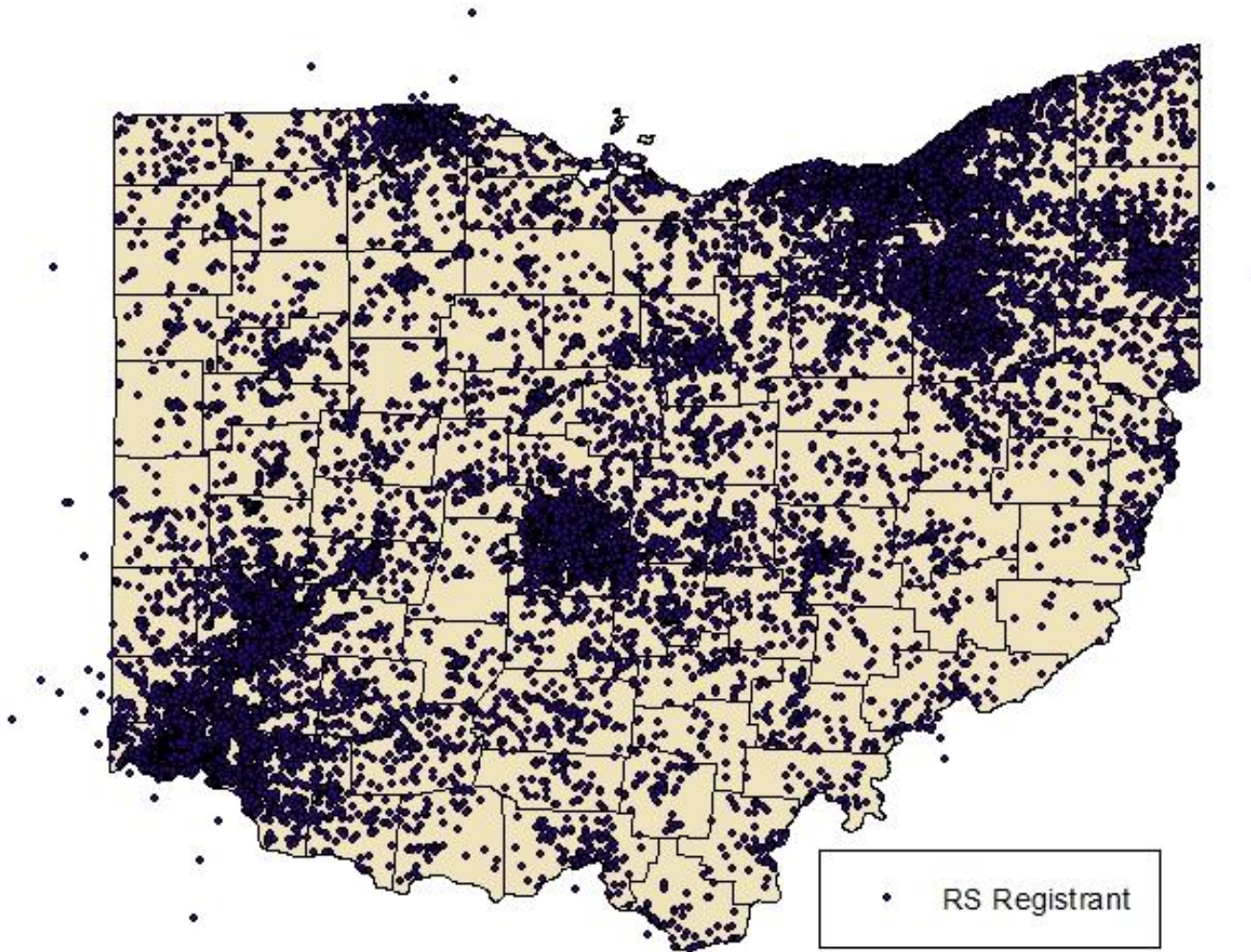
# Restoring Stability and Take Up

- Eligibility:
  - Income – 115% AMI
  - Loan Amount – FHA limit
  - Liquid Assets – Less than 6 months of mortgage payments
  - Sustainability – Six months
- Application Process:
  - Intake – Online, Telephone
  - Verification – Housing Counseling Agencies
  - Underwriting – OHFA
  - Servicer Approval
- Marketing:
  - TV, Radio, Billboards, Print, Online
  - Unemployment mailings
- Benefit Size

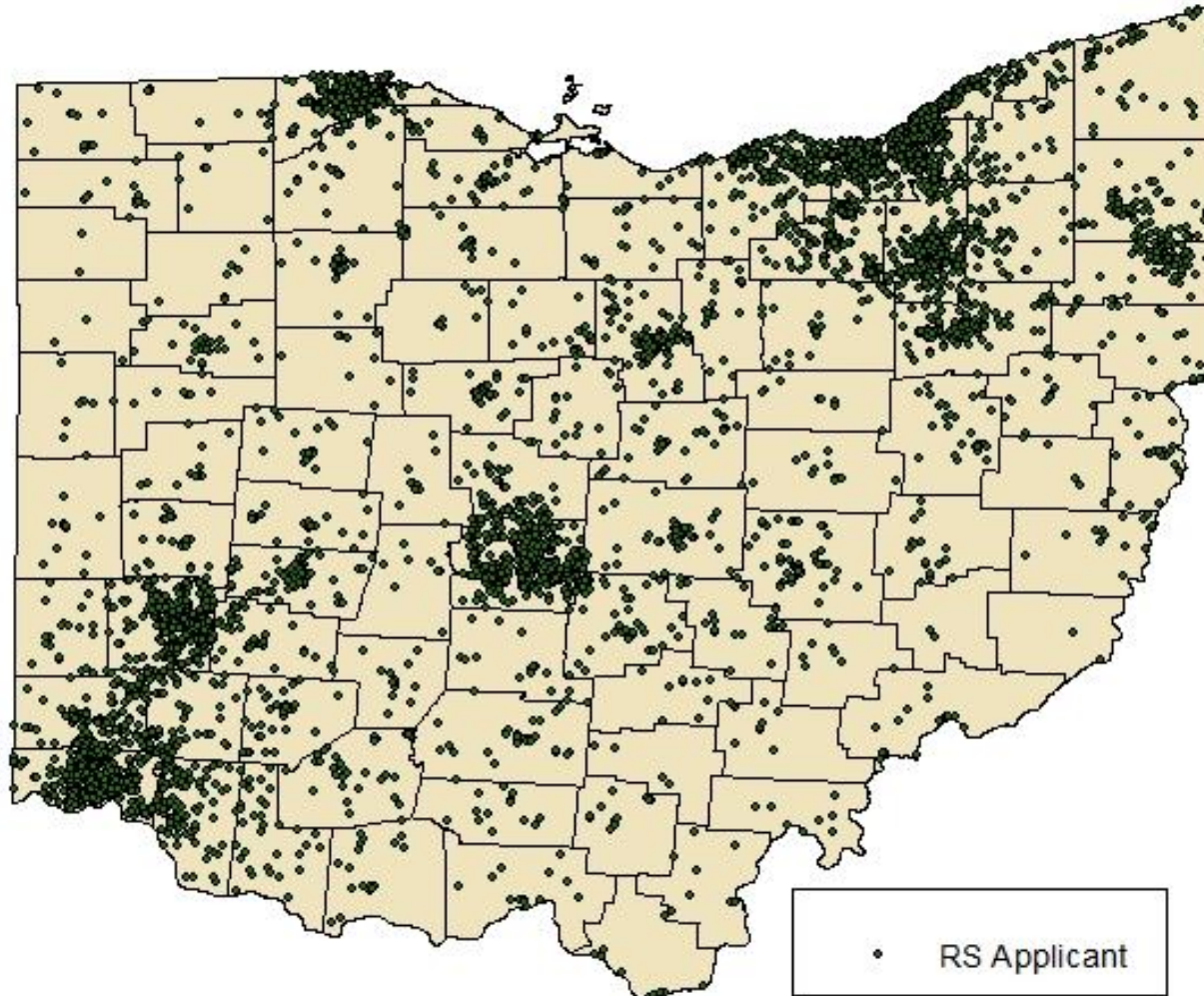
# Research Questions

- Did marketing saturation affect registration rates?
- Did local access to counseling agencies affect application completion rates?
- What other factors impacted registration/completion rates?

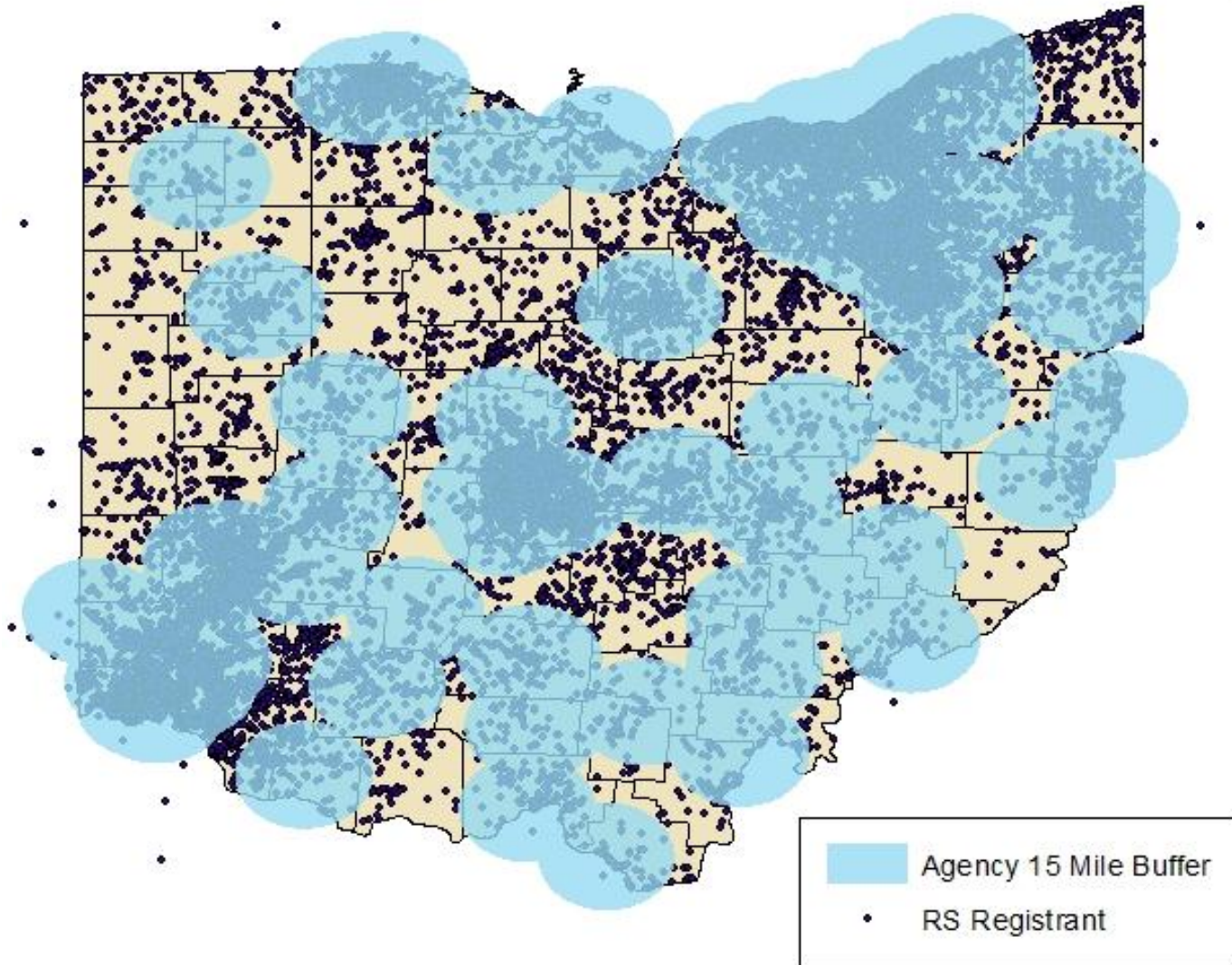
# Restoring Stability Registrants



# Restoring Stability Applicants



# Counseling Agency Locations



# Descriptive Statistics – OH ZIPs

| Variable                             | Mean      | Std. Dev. | Minimum | Maximum |
|--------------------------------------|-----------|-----------|---------|---------|
| Population                           | 11,478.55 | 12,794.13 | 0       | 67,299  |
| Population Density (per Square Mile) | 955.64    | 1,705.27  | 0       | 15,936  |
| Unemployment Rate (%)                | 9.69      | 1.50      | 6.5     | 15.6    |
| Pct Non-White (%)                    | 11.10     | 18.23     | 0       | 98.3    |
| Pct Owner-Occupied (%)               | 73.40     | 15.24     | 0       | 94.7    |
| Median Income (\$)                   | 41,497.30 | 12,303.74 | 0       | 123,980 |
| Poverty Rate (%)                     | 10.47     | 8.61      | 0       | 68.4    |
| 90+ Delinquency (# of Loans)         | 116.11    | 152.98    | 0       | 1,024   |
| Delinquency Pct (%)                  | 7.87      | 4.45      | 0       | 37.1    |
| Foreclosures (#)                     | 45.85     | 64.45     | 0       | 411     |
| Foreclosure Pct (%)                  | 2.97      | 2.27      | 0       | 20.0    |
| RS Registrants (#)                   | 33.26     | 44.47     | 0       | 276     |
| RS Applicants (#)                    | 5.64      | 8.53      | 0       | 56      |

Sources: US Census Bureau 2010; First American Core Logic

# RS Participant Characteristics

|                             |   | <b>Registrants</b><br>(n=38,704) | <b>Applicants</b><br>(n=5,761) | <b>Funded</b><br>(n=2,162) | <b>Ohio</b><br>(n=11,536,504) |
|-----------------------------|---|----------------------------------|--------------------------------|----------------------------|-------------------------------|
|                             |   | %                                | %                              | %                          | %                             |
| Race                        | White   | 65.9                             | 66.5                           | 68.8                       | 82.7                          |
|                             | Black   | 19.7                             | 26.1                           | 24.2                       | 12.2                          |
|                             | Other   | 2.6                              | 2.7                            | 2.8                        | 5.1                           |
| Education                   | Below High School                                   | 5                                | 5.4                            | 4.2                        | 16.6                          |
|                             | High School   | 49.5                             | 53.3                           | 53.2                       | 30.8                          |
|                             | Two-Year College                                    | 18.9                             | 20.2                           | 21.3                       | 43.7                          |
|                             | Bachelors Degree or Above                           | 17.4                             | 18.9                           | 19.8                       | 8.8                           |
| Unemployed                  | Yes   | 54.6                             | 59.4                           | 64.9                       | 9.1                           |
|                             | No  | 45.4                             | 38.4                           | 33.5                       | 90.9                          |
| Current on Mortgage         | Yes   | 31.7                             | 29.1                           | 36.6                       |                               |
|                             | No  | 67.6                             | 68.7                           | 61.8                       |                               |
| Received Foreclosure Notice | Yes   | 28                               | 26                             | 19.9                       |                               |
|                             | No  | 62.8                             | 71.8                           | 78.5                       |                               |
| Primary Hardship            | Death of Spouse or Divorce                          | 4.3                              | 3                              | 1.9                        |                               |
|                             | Disability, Illness, or Significant Medical Expense | 9.4                              | 7.7                            | 5.7                        |                               |
|                             | No Hardship   | 1.4                              | 0                              | 0                          |                               |
|                             | Not Reported  | 9.1                              | 2.2                            | 1.6                        |                               |
|                             | Other Loss or Reduction in Income                   | 26.7                             | 22.1                           | 17.5                       |                               |
|                             | Unemployment  | 65                               | 65                             | 73.4                       |                               |
|                             |   |                                  |                                |                            |                               |

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|                             |   |                                  |                                |                            |                               |

# Participant Characteristics

|                        | Registrants | Applicants | Funded    | Ohio          |
|------------------------|-------------|------------|-----------|---------------|
| Average Age            | 45.9        | 47.4       | 46.8      | 38.8 (Median) |
| Average HH Income      | \$34,499    | \$30,281   | \$29,597  | \$45,467      |
| Average Purchase Price | \$110,941   | \$103,879  | \$103,380 | \$134,500     |

# OLS Regression Analysis – Rate of Registrants

| Predictor                        | Coefficient | Std. Error |
|----------------------------------|-------------|------------|
| Population Density               | -0.002      | .000**     |
| Agency Located in County         | 4.100       | 1.567**    |
| Median Age                       | -0.007      | 0.155      |
| Pct. Non-White                   | 0.239       | 0.053**    |
| Pct. Poverty                     | -0.398      | 0.180*     |
| Pct. Delinquent Mortgages        | -82.750     | 36.560*    |
| Pct. Foreclosure Filings         | -258.933    | 68.111**   |
| Unemployment Rate                | 1.736       | 0.4459**   |
| Log Median Home Price            | -1.491      | 1.005      |
| Log Median Income                | -23.890     | 4.723**    |
| Billboard Advertising in County  | -0.798      | 0.214**    |
| Radio Advertising in County      | 0.648       | 1.422      |
| Television Advertising in County | 9.157       | 1.914**    |
| Intercept                        | 293.990     | 51.119**   |

DV = Registrants per  
100 Delinquencies

$R^2 = .226$

\*\* =  $P < .01$

\* =  $P < .05$

# OLS Regression Analysis – Rate of Application Completion

| Predictor                    | Coefficient | Std. Error |
|------------------------------|-------------|------------|
| Population Density           | .000        | .000       |
| Median Sale Price            | .000        | .000       |
| Agency in County             | .008        | .011       |
| Median Age                   | -.001       | .001       |
| Pct. Non-White               | .001        | .000*      |
| Pct. Poverty                 | -.001       | .001       |
| Median Income                | .000        | .000       |
| Percent Delinquent Mortgages | .471        | .268       |
| Percent Foreclosure Filings  | -.994       | .514       |
| Unemployment                 | .005        | .003       |
| Number of Registrants        | .000        | .000       |
| Intercept                    | .165        | .069*      |

DV = Complete Applications per Registrant

$R^2 = .059$

\* =  $P < .05$

# Conclusion

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- Take-Up Should be Considered in Evaluating and Designing Public Assistance Programs like Restoring Stability Ohio
- Some Preliminary Evidence
  - ▣ Marketing Effectiveness
  - ▣ Characteristics of Places with Higher Take-Up Rates

# Future Directions

- Short Term
  - ▣ Individual-Level Spatial-Temporal Modeling
  - ▣ Email Survey/Telephone Follow-Up
    - Difficulty of the Application Process
    - Responsiveness of Counseling Agencies
- Longer Term
  - ▣ Outcomes

# Citations

- Plueger, D. (2009), “Earned Income Tax Credit Participation Rate for Tax Year 2005,” IRS Research Bulletin 2009, Available: <http://www.irs.gov/pub/irs-soi/09resconeitcpart.pdf>
- US Department of Agriculture (2008), “Reaching Those in Need: State Food Stamp Participation Rates in 2006”, Available: [www.mathematica-mpr.com/publications/PDFs/FNS06rates.pdf](http://www.mathematica-mpr.com/publications/PDFs/FNS06rates.pdf)
- Wolfe, B. and Scrivner, S. (2005), “The Devil May Be in the Details: How the Characteristics of SCHIP Programs Affect Take-Up,” *Journal of Policy Analysis and Management*, Vol. 24(3)
- Zedlewski, S (2002), “Left Behind or Staying Away? Eligible Parents Who Remain Off TANF,” *New Federalism: National Survey of America’s Families*, Urban Institute, No. B-51