

Citizen Engagement, Governance and
Economic Opportunity
in the Digital Age

Bridging the Digital Divide

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What Does Internet Access Represent in Today's Society?

- A necessity
- Not just another commodity, but a “public good” that has positive spillover effects for the community
- Broadband, high-speed internet, as a utility
- Network effects – as more people use the internet in a community, the benefits grow (for public safety, e-government, education, civic engagement)
- ***Access to the internet is a human right – United Nations 2012***

Digital Citizenship

Ability to participate in society online – Mossberger, Tolbert & McNeal 2008

Requires regular access and effective use

- Regular access – home access rather than public access only
- Quality of access - broadband speeds that enable a range of uses, activities online, *mobile access limited for some uses, multiple devices to be “fully connected”*
- Skills for effective use
 - Technical competence – across devices, platforms, apps
 - Information literacy in online environment
 - Ability to search for, evaluate, apply information
 - Basic literacy, critical thinking, educational competencies
 - *Data literacy with evolution of open data*
 - *Knowledge about safe, secure, responsible use – social media and the Internet of Things*
 - *Content creation and communication skills*

Digital Citizenship as Economic Opportunity & Civic Engagement

Economic Opportunity

- Wages (panel study) (DiMaggio and Bonikowski 2008)
- For less-educated workers (Mossberger, Tolbert & McNeal 2008)
- “Human capital” enhancing activities such as education and health, economic activities such as banking, buying products (DiMaggio et al. 2001).

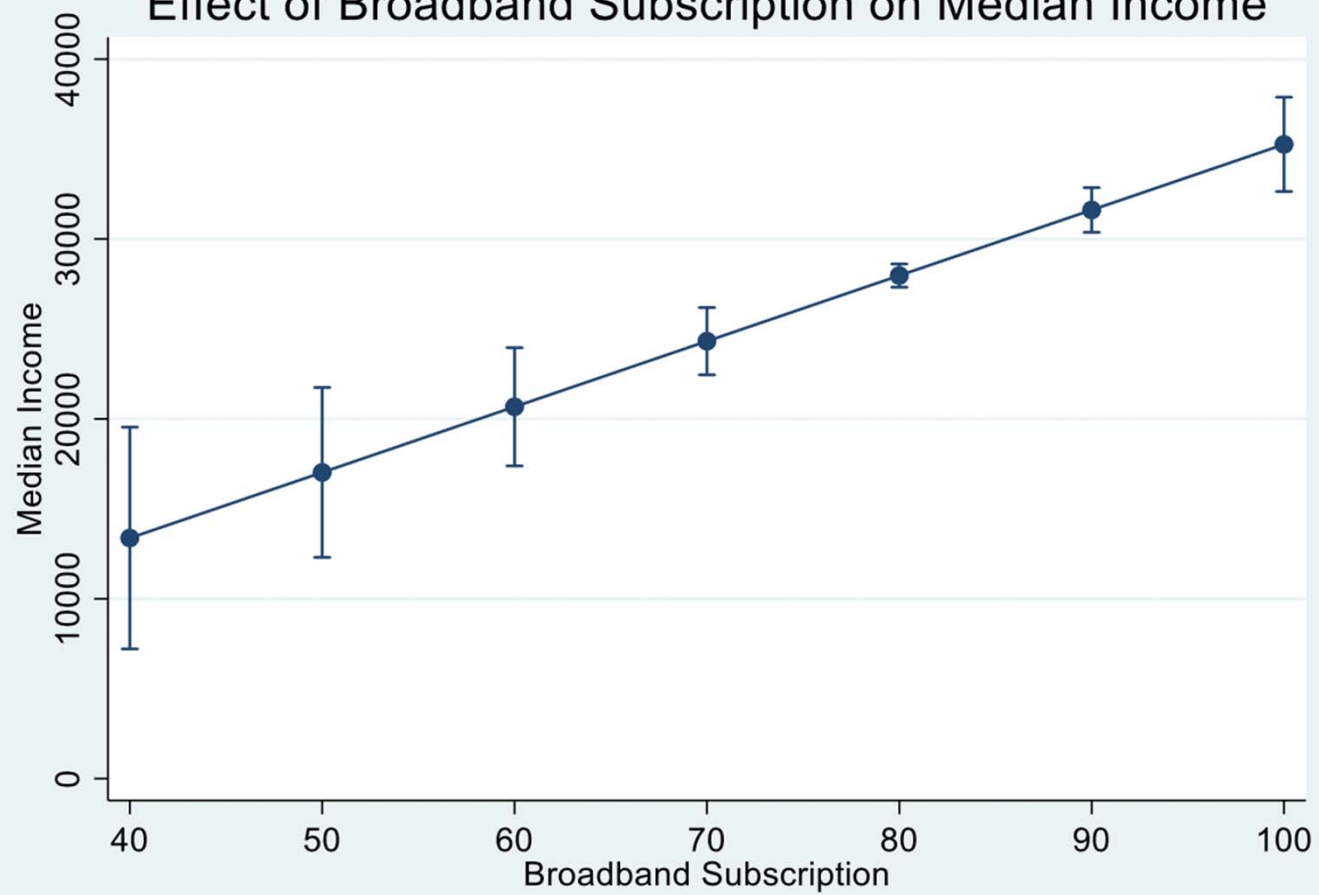
Democratic Participation & Rights

- Political participation, knowledge, interest & civic engagement (Mossberger, Tolbert and McNeal 2008; see Boulianne 2009 for a meta-analysis)
- E-government: matters for citizen trust and confidence in government (Tolbert & Mossberger 2006)
- Access to government services and information

Time series models of broadband subscriptions predicting median income—largest counties 2007-2017

	(1) Median Income
Broadband(t-1)	364.7396* (74.0239)
Population(t-1)	-0.0002 (0.0001)
Black(t-1)	-7.4946 (12.6931)
Native American(t-1)	-82.4870 (46.0859)
Asian(t-1)	421.2919* (49.8571)
Hispanic(t-1)	-53.3285* (15.6973)
College(t-1)	109.9958 (110.1193)
High School(t-1)	10.7989 (23.2391)
Time	-9.4565 (147.6926)
Constant	-4546.4340 (5903.7548)
Observations	3211

Effect of Broadband Subscription on Median Income



What is Citizen Engagement?

- Citizen engagement means many different things . . .



- How does your office engage with citizens?
- What are the ways that you do this online?
- Ways you think you would like to do this online in the future?



Governments Connect Online with Citizens in Many Ways

Service Delivery

- Portals that make it easy to search for services, even if you don't know the right department
- Information on hours, contacts, types of services
- Email or online queries for questions
- Online forms
- Online transactions to pay fees, taxes

Open Government

- Feedback on services through online comment forms, social media, email
- Participation on policy issues – online town hall meetings, participation platforms, social media
- Notices about face-to-face public meetings
- Information on officials, programs, policies, budgets
- Open data
- Online performance data, dashboards

Making Government More Efficient & Effective

- Government agencies can improve their administration when citizens connect with them online
- Routine transactions or information dissemination
 - less labor-intensive, resulting in cost savings (though upfront costs)
 - Staff can focus on problem-solving or more complex cases
 - Quicker decisions or service delivery
- Easier to capture data on services, transactions
 - Data use for transparency, accountability (performance measures)
 - For analyzing trends, planning

E-govt. in my county has . . .	Strongly disagree	Disagree	Agree	Strongly agree
Resulted in saving financial resources	2.8	21.1	65.1	11
Increased govt. transparency & accountability	3.5	10.4	67.6	18.6
Increased collaboration with other levels of govt.	3.5	16.7	67.8	12
Enhanced the county's ability to oversee, manage, hire contractors	5.4	39.9	47.6	7
Increased the interactions between citizens and county govt.	3.4	14.7	60.8	21

Source: Manoharan 2013, survey of county government CIOs, IT departments

Citizen Relationships with Government

- Trust and confidence in government in decline since 1960s, with some fluctuation
- Consequences – Declining voter turnout? Government legitimacy (compliance with laws) and stability?
- Many factors may account for this – reasons you can think of?
- At least in part dissatisfaction with outcomes and processes
- Has inspired different reforms in public administration
 - How is it that digital government might influence citizen attitudes toward government, including trust & confidence?

The Effects of E-Government & Citizen Trust & Confidence in Government (Tolbert & Mossberger 2006)

- E-government proposed as a solution for declining trust & confidence in government (OECD, UN)
- 2 types of trust relevant for e-government (from Thomas 1998) –
 - Process-based trust – result of interactions with government
 - Institutional-based trust – expectations that institutions will do what is right



How E-Government might influence . . .

Process-Based Trust

- Responsive - improved communication and interaction (convenience)
- Accessible - 24/7, disability access & foreign language translation

Institution-Based Trust

- Transparent – posting of data (open data), policies, laws, budgets, meeting schedules, minutes, contact info, searchable info
- Responsible – privacy and security of personal info (fair and ethical)

Both Process & Institutional-Based Trust

- Efficient and Effective – improved service delivery, cutting-edge practices
- Participatory – online participation through town hall meetings, platforms, social media, comments/complaint forms, tools for ranking of ideas

May increase institution-based trust even without interactions or participation – public image

[Bond Rating](#)[Fiscal Strength Maintenance](#)[Glossary](#)[Links](#)[Property Tax Bill](#)[Services Provided With
Revenue](#)[Sources of Revenue](#)[Finance](#) > [Open Government](#)

Open Government






Maricopa County's Open Government initiative was created to provide our citizens and the public with improved access to financial and budgetary data to foster citizen engagement, collaboration, and public participation.

It is a strategic priority of Maricopa County to simplify access to this data. This site was created to provide the public with information about Maricopa County in a user-friendly website that provides a central location to find information about how the County operates and bring additional accountability for the use of both tax and non-tax revenues.

In addition, Maricopa County's Open Government was created in harmony with the Open Government Initiative and [Arizona Revised Statute \(A.R.S.\) Section 41-725](#).

Information Available

The following information is available through our Open Government site:

-  Demographic and organizational structure of the County
-  Electronic versions of County contracts in a searchable database
-  Links to useful County, State, and National resources
-  Summary financial and budgetary data
-  Taxes and fees paid by residents

OPENGOV



**County General Fund
Revenues**

1	\$869	\$4,262	\$2,167
2	\$816	\$1,144	\$3,162
3	\$8,416	\$2,815	\$1,729
4	\$12,516	\$2,471	\$329
5	\$6,286	\$16,461	\$7,281
6	\$21,153	\$6,723	\$1,941
7	\$1,816	\$4,244	\$951
8	\$8,416	\$4,195	\$129

**County General Fund
Revenues and
Expenditures**



Findings: Digital Government Matters for Citizens

- Survey respondents who had used
 - Federal websites were more likely to see government as transparent, effective, accessible and responsive
 - State or local websites were more likely to see government as accessible and responsive
 - Local government websites only – higher levels of trust and confidence in government (2-stage models)

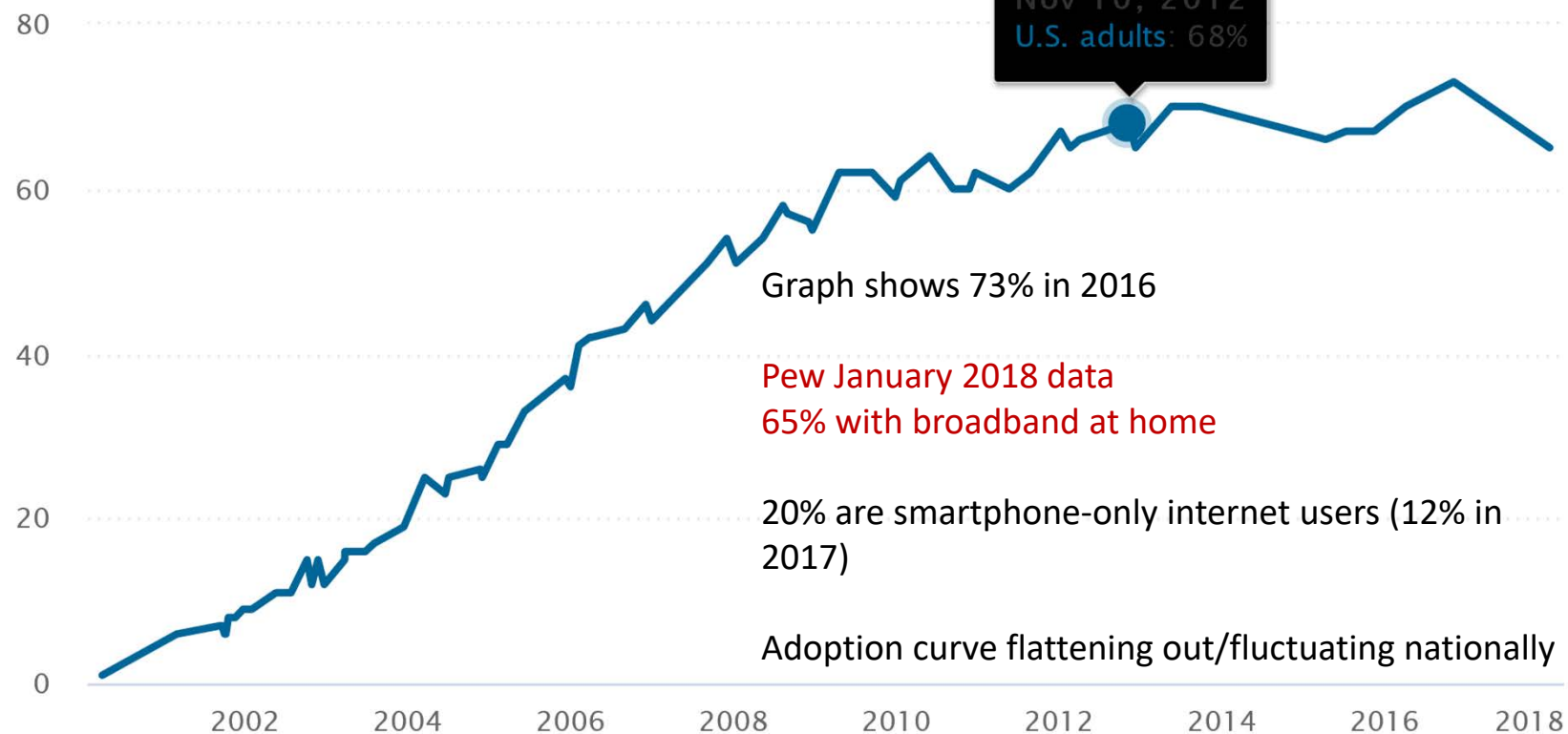
But not all citizens are online . . .

30 years after the invention of the world wide web

20+ years after the Federal government defined a 'digital divide' between the haves and have nots (Falling Through the Net, NTIA 1995)

9 years after the 2010 National Broadband Plan

% of U.S. adults who are home broadband users



Smartphones and the Less-Connected

- Personal and continuous access, but smaller screen and keyboard limit uses for filling out forms, reading text not formatted for mobile
- Data caps limit use; smartphone-only internet users often lose connectivity because of unpaid bills (Pew – Smith & Page 2015)
- Focus groups in Chicago – doing homework on phone, cobbling together multiple forms of access
- Chicago survey 2013 – 20% of residents use internet at library, 40% of smartphone-only residents do (Mossberger, Tolbert and Anderson 2015)
- Mobile-only internet users young, African-American, Latino, low-income, less-educated (Pew Research Center 2018; Mossberger, Tolbert and Anderson 2017)
- Those who have both home broadband and mobile are fully-connected, able to enjoy advantages of each

Mobile as a Bridge of Sorts . . .

Activity Online	Internet Users with Home Broadband	All Mobile Internet Users	Mobile-Only Internet Users
Get government info online	77%	74%	44%
Find property tax info online	44%	44%	31%

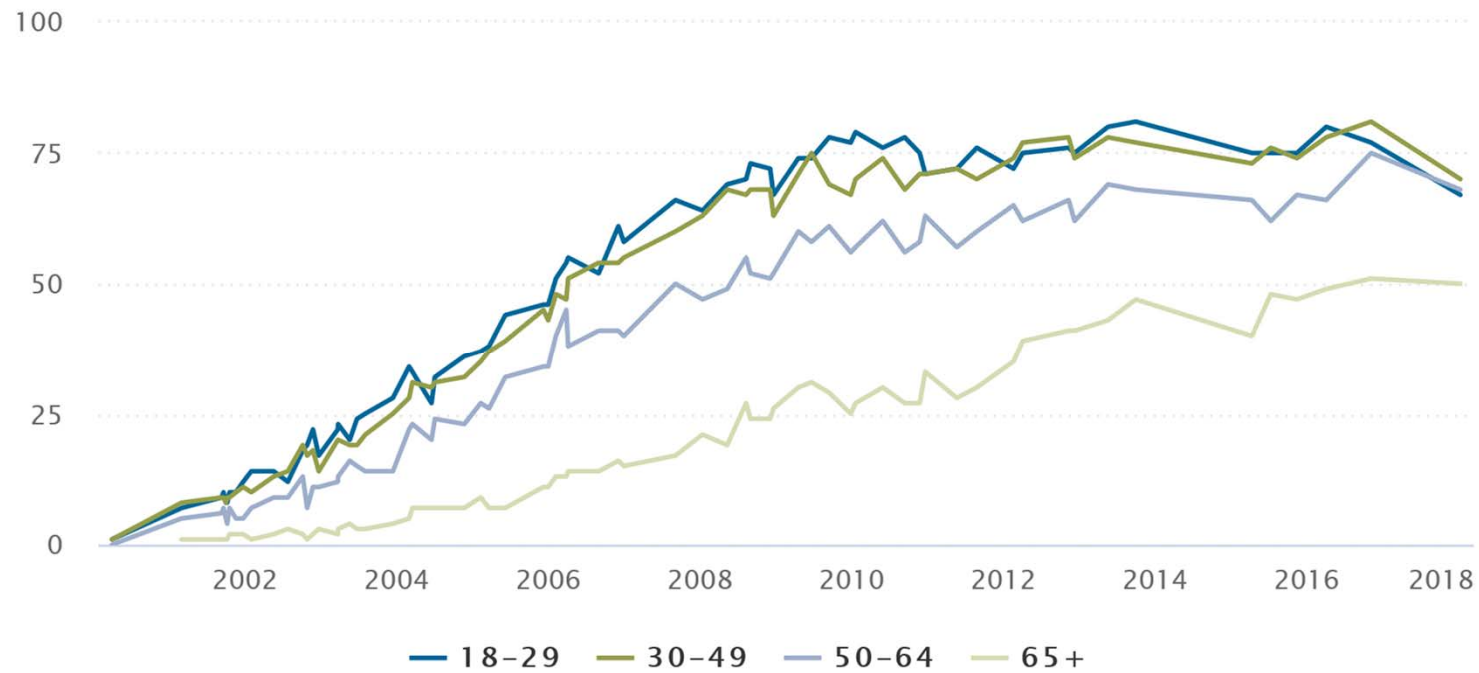
Source: Mossberger, Tolbert & Anderson 2017, Chicago Citywide Survey 2013

- Mobile-only users overall do fewer economic and civic activities online than those with home broadband, *but* . . .
- African American and Latino mobile-only users do more of these activities online than non-Hispanic white mobile-only users (Mossberger, Tolbert and Anderson 2017)

Broadband at Home 2018		Smartphone Dependent 2018	
Total	65%	Total	20%
18-29	67%	18-29	28%
65+	50%	65+	10%
White	72%	White	14%
Black	52%	Black	24%
Hispanic	47%	Hispanic	35%
Income -30k	45%	Income -30k	31%
Less than HS	24%	Less than HS	39%
Suburban	70%	Suburban	17%
Urban	67%	Urban	22%
Rural	58%	Rural	17%

Pew Research Center, Internet/Broadband Fact Sheet
<http://www.pewinternet.org/fact-sheet/internet-broadband/>

% of U.S. adults who are home broadband users, by age



Pew January 2018 – 50% home broadband for 65+
% with home broadband dropping for other age groups

Differences Across Counties and Cities

- Douglas County, CO – 95% with home broadband (2013-2017 averages, American Community Survey, census)
- Apache County, AZ – 39% (2013-2017 ACS)
- Sunnyvale, CA – 91% (2013-2017 ACS)
- Flint, MI – 55% (2013-2017 ACS)

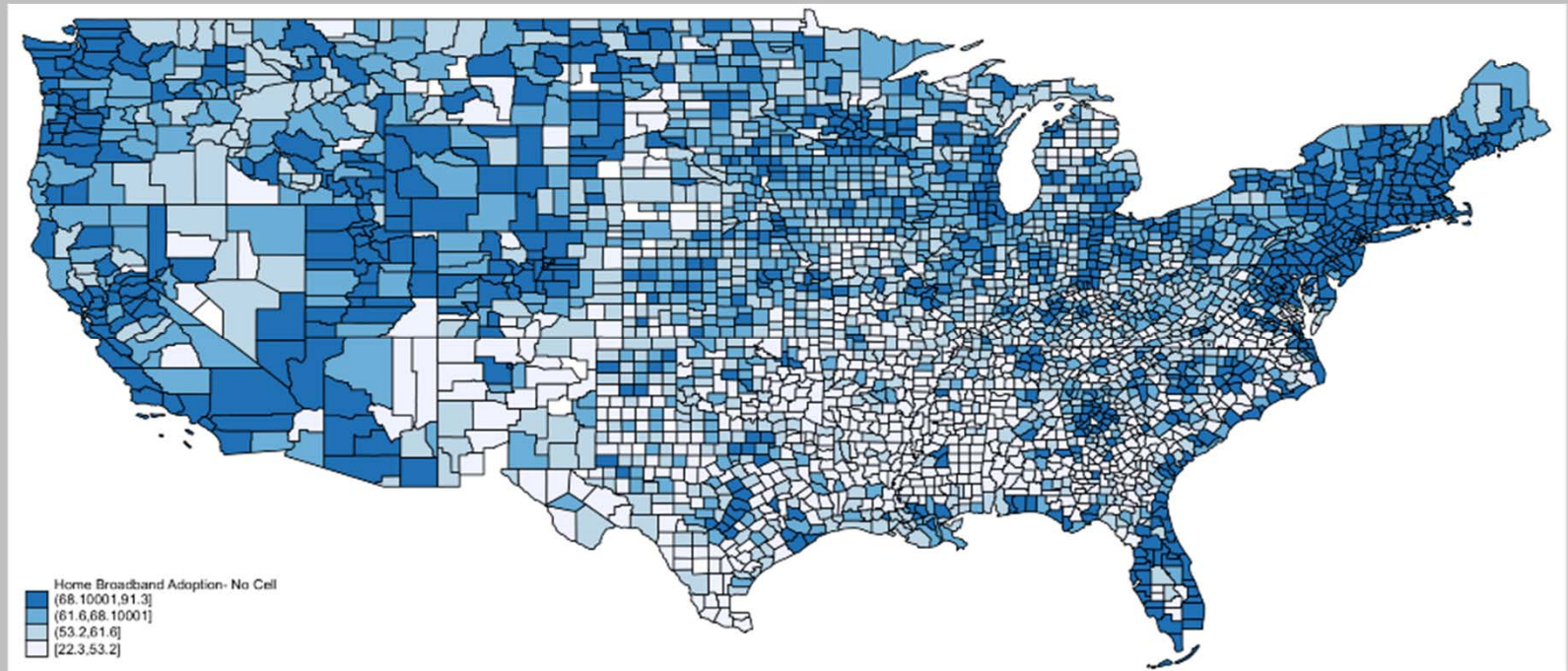
American Community Survey began tracking computer & internet use for communities 65,000+ in 2013

Shows wide differences across communities

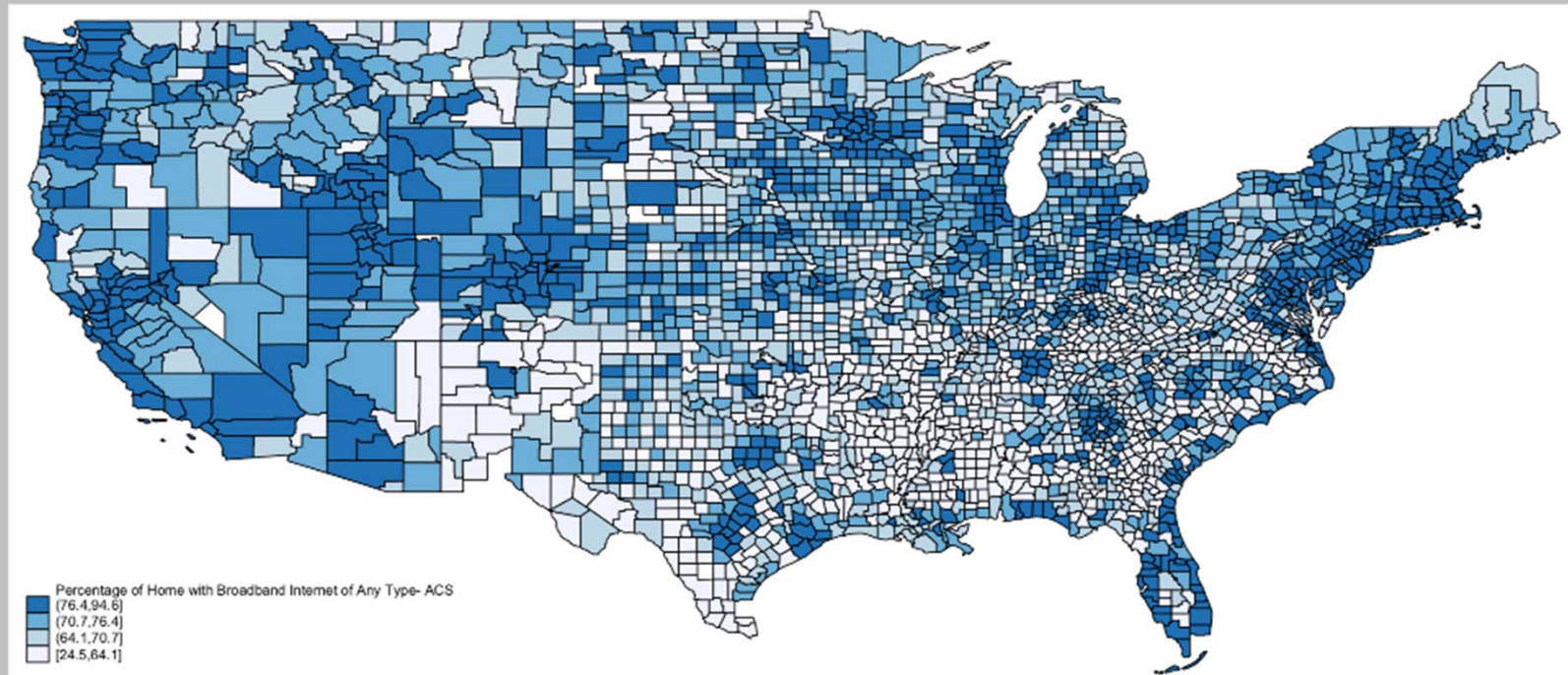
2017 data now available for all census tracts, since December 2018, so we have data on most counties for the first time

Our Broadband Data portal at ASU has historical data since 2000 for larger counties (estimated with earlier Census data from Current Population survey) – 2000-2012 not available anywhere else

Broadband subscriptions any type excluding cell (2017) American Community Survey



Broadband subscriptions any type including cell only (2017)



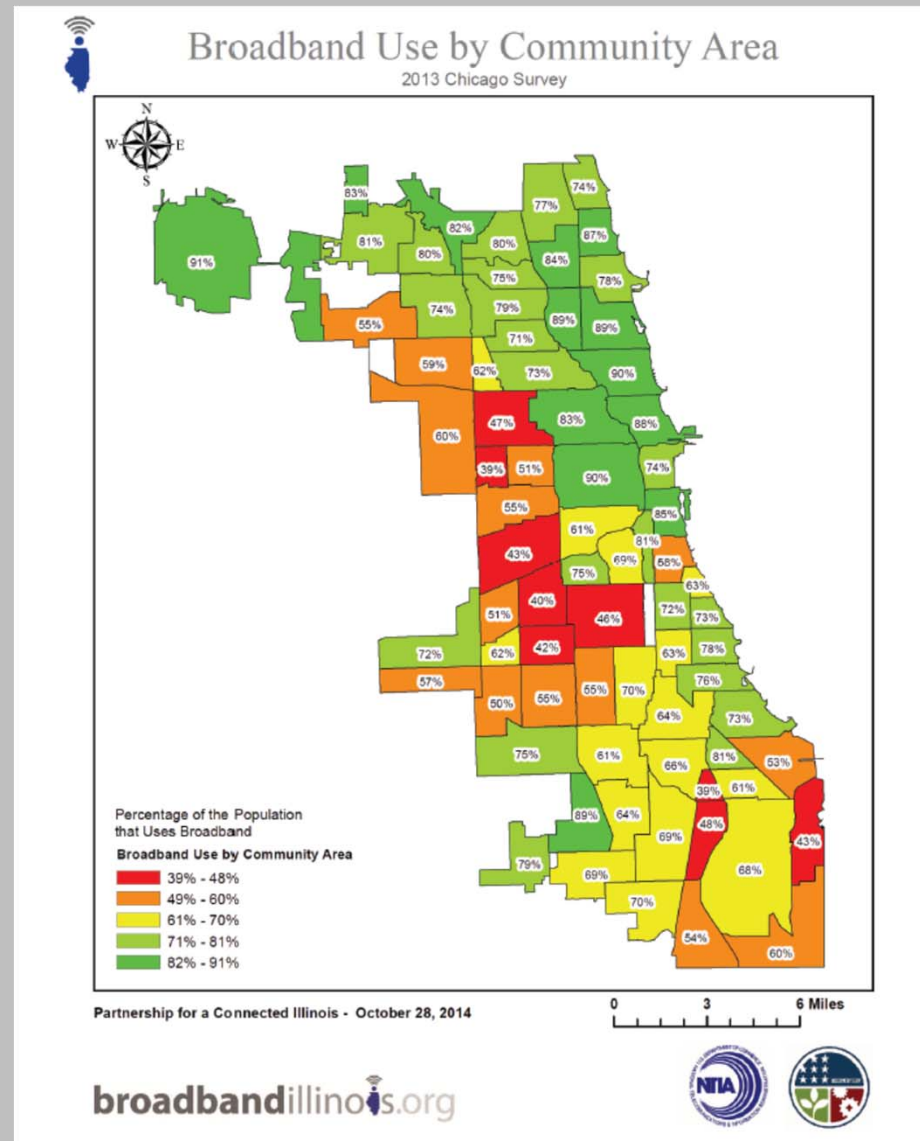
Activity – Tracking Data on Your County

- Look up your county in the Iowa-ASU Broadband Data Portal
- <https://policyinformatics.asu.edu/broadband-data-portal/dataaccess/countydata>
 - Is it listed? Some smaller counties had data suppressed by Census until the 5-year estimates for 2013-2017 released in December 2018
 - Does it have data back to 2000? Some larger counties had big enough samples in the Census Current Population Survey to estimate broadband subscriptions back to 2000
 - Numbers for 2000? How do they compare to 2016?
- <https://www.census.gov/quickfacts/fact/table/US/PST045217>
 - Look up estimates for your county in 2017 in FactFinder
 - Are the numbers what you expected, given what you know about your county?
 - How do they compare with others sitting around you?

Differences within cities and counties are important – Comparing by county or city is not enough to target need

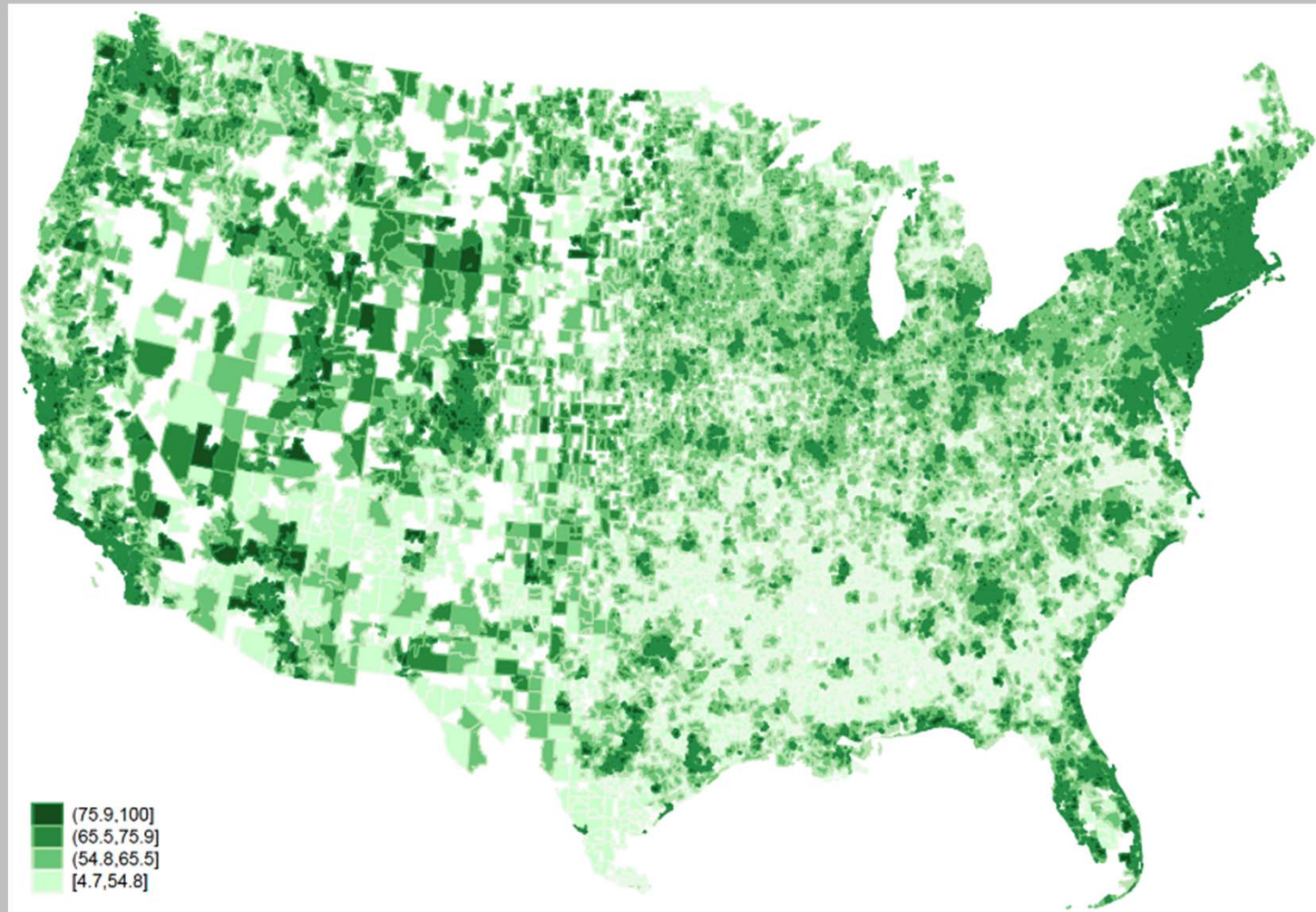
American Community Survey just released census tract data for the nation in December 2018

Before this, our Chicago neighborhood data was unique



2013 – Chicago Survey
O'Hare – 91%
West Garfield Park – 39%

Broadband subscription (2017) zip codes



Barriers for Internet Use: Availability

- Broadband availability affects rural communities, though sometimes low-income urban neighborhoods have slow and poor service with little competition
- Reliability may be an issue even where there is some access.

Federal initiatives have supported broadband infrastructure in recent years – the broadband stimulus programs in the Obama administration went primarily to rural infrastructure projects, with some public computer and training programs.

Currently rural infrastructure projects include broadband.

USDA Launches New Program to Create High-Speed Internet e-Connectivity in Rural America

WASHINGTON, Dec. 13, 2018 – Agriculture Secretary Sonny Perdue today announced that the United States Department of Agriculture (USDA) is offering up to \$600 million in loans and grants to help build broadband infrastructure in rural America.

Press Release
Release No. 0271.18

Contact: USDA Press



Availability Not Enough

- Needs differ across groups, but most common barriers over years include affordability, access, skill (including information literacy as well as internet skills)
- Only about 11% never use the internet at all
- These individuals are more likely to say they aren't interested (32%), don't have confidence or skills (34%), or to be older, or can't afford it (19%) (Pew – Anderson, Perrin and Jiang 2018)
- Affordability as a reason for no internet use at all has declined in the past 5 years (NTIA data central), along with increased mobile-only internet use
- Yet, these may be new or less-connected internet users who
 - lack skills and have a hard time finding information online
 - lose access at times

Bridging Divides

- With information on broadband in your county
 - An understanding of who tends to be offline or less-connected
 - Knowledge of your own community
-
- What should your office (and the county more generally) do to make your information and services accessible to everyone?
 - What would be your strategy?
 - Website, mobile, outreach or programs in the community?

Website Considerations

- Does your website make it easy for users to find what they need from the homepage even if they don't know the department they want?
- Listing topics/services rather than departments
- Search functions
- ADA Accessibility
- Foreign language translation (depending on your community)
- Reading level of content
- Working with the library or other community partners to find whether users have difficulty finding the information they need

Digital Inclusion Program: Chicago's Smart Communities

2010-2012

City of Chicago Grant, Chicago LISC as coordinator of 5 community-based lead agencies

- FamilyNet Centers (digital training, job search, financial literacy)
- Civic 2.0 – training for block clubs, community groups
- Tech Organizers – outreach
- Business Resource Networks
- Several youth programs including YouMedia
- Community Portals
- Ads on buses with photos of residents, benefits of being online
- Some discounted Internet 2nd year



Smart Communities
CHICAGO DIGITAL EXCELLENCE INITIATIVE

Tracking Community-Level Change

(Mossberger, Tolbert & Anderson 2015)

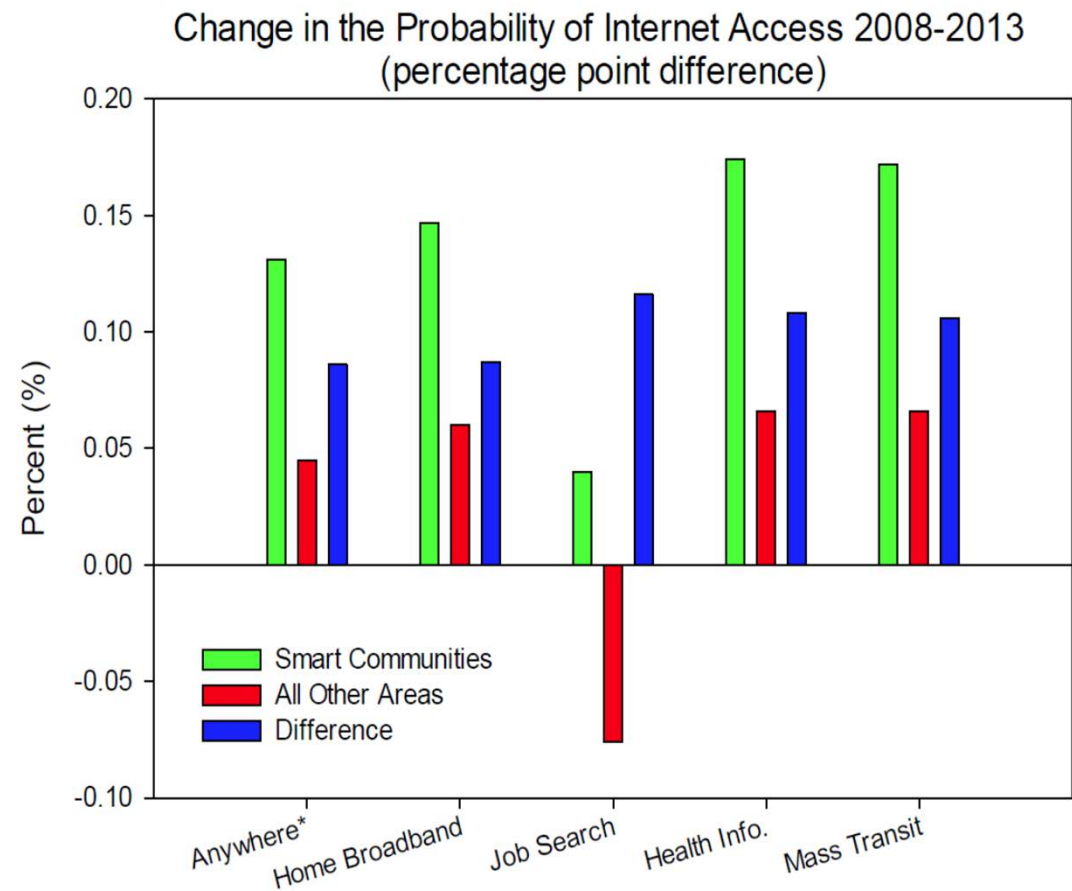
- A new approach for evaluating digital inclusion – creating a critical mass of activities and a neighborhood culture of digital excellence
- Comparing 9 Smart Communities to other Chicago neighborhoods, controlling for demographic change
- Multilevel models, Chicago 2008, 2011, 2013 citywide surveys
- 2008-2011 – Mid-intervention, Smart Communities had higher levels of internet use in any location, but no other statistically significant differences
- By 2013, significant and substantively large differences in several areas, including home broadband and activities online

Results

Using multilevel models,
Controlling for demographic change

the Smart Communities
had statistically significant
increases that were 9-12
percentage points higher
than similarly-situated
neighborhoods for these
outcomes

(other activities online not significantly
different)



Initiatives in Your Community?

- Are there examples of programs in the county that promote internet access and use?
- What are they?
- Who runs them? Funds them?
- Does the County play any role in this?

Conclusions: Promoting Digital Citizenship

Attention to usability, convenience, transparency, opportunities to interact with county – whether complaints, requests, or contributing opinions

“Government cares about people like me”

Can improve services, cut costs, help for data collection and analysis

Knowing the state of the digital divide in your community

Working with libraries, community groups and others to fill gaps

Benefits for county include economic development and greater access to information – building skills and capacities for the community





Broadband subscriptions any type including cell only (2017)

