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## Home Mortgages and Residential Property Cash Sales in Allegheny County

■ *By Sabina Deitrick*

More residential real estate sales across the nation involved “all-cash” deals in recent years. The rise in all-cash house sales stems from a host of factors.

In the recent post-recession period, sales of distressed properties were a driving force in increases in all-cash home sales, as foreclosures escalated and housing abandonment increased. These distressed property transactions were often bought by investors, and investor residential real estate buyers are generally more likely to buy in all-cash deals. By contrast, most owner-occupant home buyers typically secure a mortgage.

More recently, there have been other forces increasing the number of all-cash residential property sales. Limited credit availability is a critical factor, as it affects the

origination of mortgages and makes it more difficult for many to access the credit needed to purchase a home. Limited inventories of home for sale have also become a factor in the increase in all-cash home sales, particularly in select markets. Nonetheless, across the nation, investors continue to make up a sizeable share of all-cash buyers. According to CoreLogic, a property and financial records firm, all-cash residential home sales reached nearly 40 percent of the U.S. residential sales market in 2012.

In areas of Pittsburgh and Allegheny County, all-cash homebuyers are typically investors and, often, absentee property owners. As the number of all-cash transactions rises in a community, it may indicate

■ ■ ■ *continued on page 2*

## How Many People Left Pittsburgh During the 1980s?

■ *By Christopher Briem*

Across Western Pennsylvania, current economic and demographic trends continue to be impacted by the region’s economic history and the rapid decline of manufacturing jobs that peaked more than three decades ago.

While employment trends rebounded, population losses extended through subsequent decades that generated continued impacts on employment and population. Presented here are new calculations of the total net population migration affecting Southwestern Pennsylvania over the course of the 1980s, and comparable estimates for other large metropolitan regions across the nation.

Dire economic conditions, prompted by the decline of heavy industry across Western Pennsylvania, precipitated not only a dramatic loss of jobs, but also significant population loss from the Pittsburgh region. Between 1980 and 1985, the number of manufacturing jobs across a 10-county region of Southwestern Pennsylvania declined by more than 44 percent, from more than 304,000 in 1979 to just less than 169,000 in 1986.

As a result, the unemployment rate in the Pittsburgh metropolitan statistical area (MSA) spiked to more than 18 percent in January 1983, well in excess of national unemployment rates that were also elevated to historic high levels during two national recessions that occurred between 1980 and 1982. Certain areas were hit even harder with Beaver County peaking at more than 28 percent unemployment, also in January 1983.

Economic conditions simultaneously inflated population migration out of Western Pennsylvania and depressed rates of migration into the area. The net loss of population due to migration was severe for the Pittsburgh MSA, which saw its total population decline by a larger number than any other metropolitan region over the course of the 1980s. This population loss occurred despite population gains generated by natural population change and the greater number of births over deaths that were occurring through the decade.

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## Home Mortgages and Residential Property Cash Sales in Allegheny County

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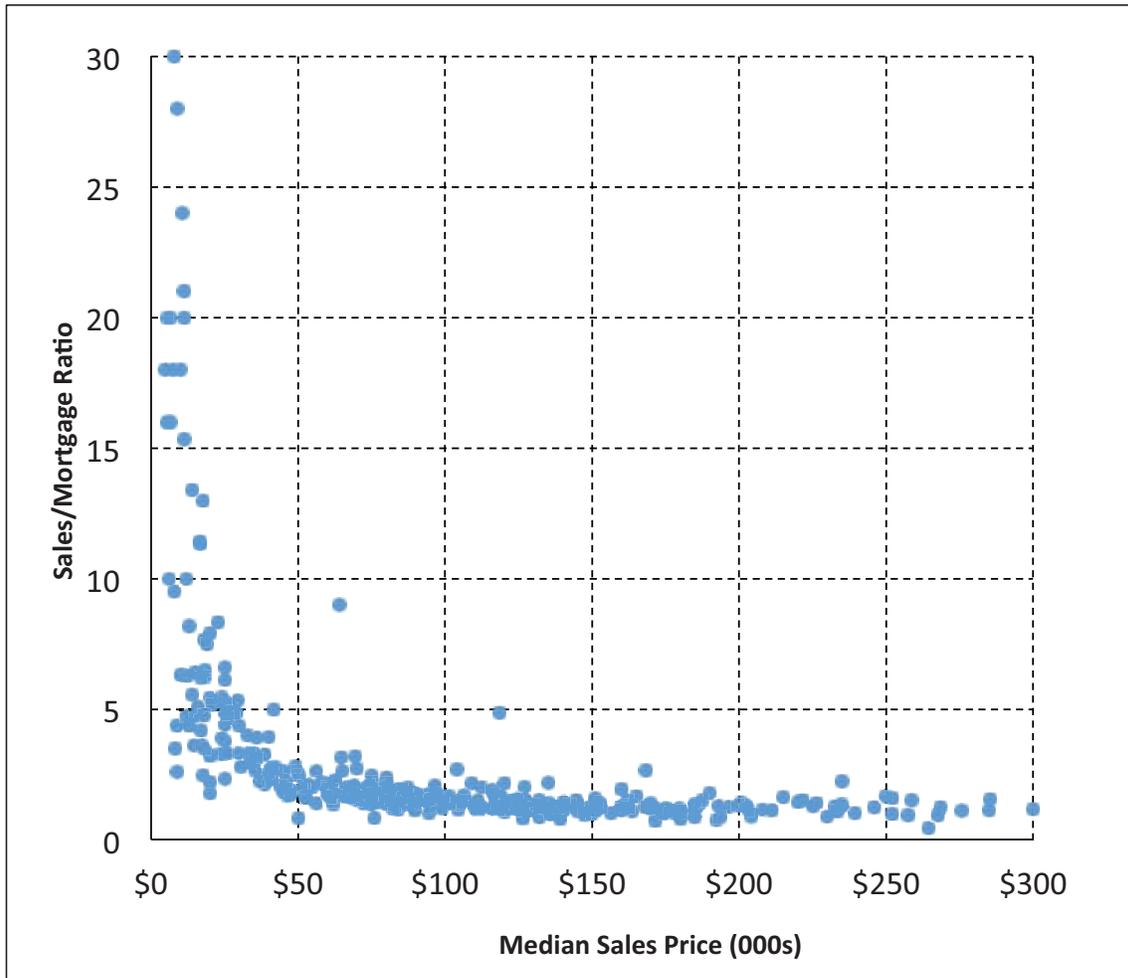
distress in the housing market. The growth in investor buyers, coupled with a decline in buyers obtaining mortgages, is a sign of disinvestment in the area's housing market, with supply outstripping demand for owner-occupied units. This can result in a cycle of increased abandonment and vacancy of residential properties, and without a turnaround or intervention, eventually, a collapse of the residential housing market.

Using residential property sales data from Allegheny County and mortgage data from the Home Mortgage Disclosure Act (HMDA), UCSUR has compared estimates of residential property sales to mortgage originations in 2012 to gauge local housing markets. HMDA data are collected from lending institutions, which must report their public loan data, including loan applications, mortgage originations, home loans purchases, home improvement loans, and refinancings. For loan applications that did not result in an origination, data are also reported for loans denials, withdrawals, or otherwise not completed.

Most home buyers obtain mortgages, which are then recorded in HMDA data on mortgage originations. While some home buyers do not obtain a mortgage, using cash or non-mortgage sources of capital to buy their house, these non-mortgage transactions are more commonly made by investors.

The use of HMDA data, coupled with real estate sales, allows a further understanding of community and neighborhood housing markets and sub-markets. For this analysis, we use a measure of market stability/volatility from the work of Alan Mallach of the Center for Community Progress.

**Figure 1. Sales/Mortgage Ratio and Median Sales Prices, Allegheny County Residential Real Estate Transactions, by Census Tract, 2012**



\*Sales/Mortgage Ratio = Number of residential real estate sales/Number of mortgage originations, by U.S. Census tract.

Source: Federal Financial Institutions Examination County, Home Mortgage Disclosure Act data, 2012, and Pittsburgh Neighborhood and Community Information System; author's calculation.

We compare the number of residential property sales in census tracts to the number of mortgage originations in the tract. When the house sales/mortgage origination ratio is close to 1, owner-occupant home buyers are the norm in the neighborhood. In many neighborhoods with large numbers of multi-family dwellings, the expected number will exceed one and generally be larger than in areas with almost exclusively single family dwellings, but the larger the ratio climbs, in general, the more investors are buying in the residential market and the fewer home-owners are entering into the market.

For this analysis, some tracts were eliminated, including those with predominately public housing units, green ways, and park space, and those with incomplete data.

In 2012 for census tracts with complete data, there were 17,352 residential property sales and 10,859 mortgage originations in Allegheny County, representing a sales/mortgage origination ratio of 1.6, meaning there were 1.6 residential real estate sales in Allegheny County in 2012 for every mortgage origination, as reported in the HMDA data. Put another way, at least 63 percent of Allegheny County residential real estate sales in 2012 were to owner-occupant home buyers.

This gives what might be considered a baseline for the county. Areas registering ratios significantly higher than the county baseline are in neighborhood housing submarkets that are weak or growing weaker.

The data show that in Allegheny County, there are dozens of areas that have few or virtually no new owner occupant residents. Fifty-four census tracts in the county had five or fewer mortgage originations in 2012, including 10 with no new mortgage activity. There were, however, 1,070 residential property sales in those tracts in the same year, presumably all or nearly all to investors. Not surprisingly, areas with little to no new mortgage activity are poor and distressed.

We next compared the sales/mortgage origination ratio to the median sales price

**Table 1. Allegheny County Residential Property Sales\* Indicators by Census tracts, 2012**

Median sales price	No. of tracts	Sales/mortgage ratio**
\$ 4,000 - 19,999	55	16.5
20,000 - 39,999	40	5.0
40,000 - 59,999	30	2.3
60,000 - 99,999	88	1.8
100,000 - 149,999	76	1.4
150,000 - 299,999	78	1.3

\*Data only include tracts with median sales price < \$300,000.

\*\*Sales/Mortgage Ratio = Number of residential real estate sales/Number of mortgage originations, by U.S. Census tract.

Source: Federal Financial Institutions Examination County, Home Mortgage Disclosure Act data, 2012, and Pittsburgh Neighborhood and Community Information System; author's calculation

of residential real estate in 2012, by census tracts, eliminating areas with a median greater than \$300,000, presumably stable housing sub-markets (see Figure 1). The results are dramatic. In all tracts with a ratio greater than 4.0, the median sales price of housing in 2012 was below \$40,000 (see Figure 1).

Examining this group even further, we find that investor-dominated real estate sub-markets are concentrated in the poorer neighborhoods of the city of Pittsburgh and the river communities along the Mon and Ohio Rivers. In the areas where the median sales price for housing in 2012 was less than \$20,000, the sales/mortgage origination ratio was in double digits, meaning nearly all real estate transactions involved investors (see Table 1).

Moving from this group, the ratio flattens quickly. In areas with median sales prices between \$40,000 and \$59,999, owner-occupant home buyers still represented close to half the buying market in 2012. In these areas, this indicator can be used to monitor these markets closely to gauge that

they are not turning more into investor-dominated locations.

Owner-occupant buyers dominated in the successive sales ranges, including moderate sub-markets with median sales between \$60,000 and \$99,999.

The sales/mortgage origination indicator gives a quick view of market dynamics that readily brings to light the distress endemic in many communities and points to the need for heightened awareness of the severity of market conditions in these communities. The indicator also suggests stability in many low-moderate and mid-market neighborhoods and communities, while the variability in this index points to the need for better understanding of the forces affecting housing submarkets in Allegheny County.

## How Many People Left Pittsburgh During the 1980s?

■ ■ ■ continued from page 1

Researchers at the University of Wisconsin and the University of North Carolina, Glenn Fuguitt and Calvin Beale, have compiled a national database of migration patterns between 1980 and 1990 for all counties in the U.S. They generated their data using a residual method of estimating migration, based on U.S. Census population counts at the beginning and end of each decade and intercensal birth and death records available for individual counties. The population counted at the beginning of the decade is aged forward over time, subtracting out deaths and adding in births, to generate an “expected population” at the end of the decade. The observed population counted in the Census at the end of the decade is then subtracted from the expected population to estimate the number of net migrants. This method allows for the estimation of total net migration over the decade and estimates of net migration by age group.

Using the data produced by Fuguitt and Beale and distributed via the Applied Population at the University of Wisconsin-Madison, estimates of net population migration for Southwestern Pennsylvania are compiled here. Over the course of the 1980s, total net migration for the 10 counties of Southwestern Pennsylvania is estimated to be a population loss of 227,039, or approximately 8 percent of the region’s population in 1980. All counties in the region suffered net migration losses over the decade with Beaver and Lawrence counties experiencing the largest losses proportional to their population (see Table 1).

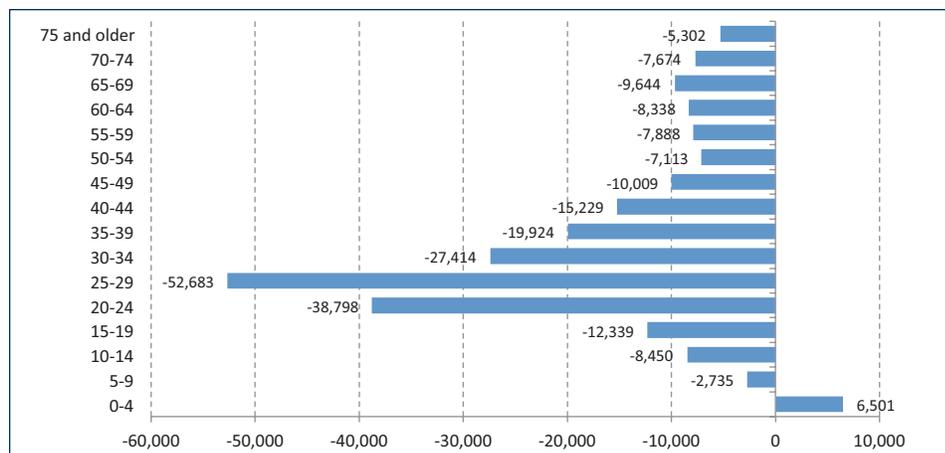
The loss of population from Southwestern Pennsylvania due to migration through the decade was age selective. Younger working-age population cohorts were far more likely to move out of the region, while older age cohorts were more likely to remain. Figure 1 breaks down the total net migration by age group for Southwestern Pennsylvania between 1980 and 1990. More than half of Southwestern Pennsylvania’s net migration throughout the decade, a total of 118,095, is

### Table 1. Net Population Migration Between 1980 and 1990 by County, Southwestern Pennsylvania

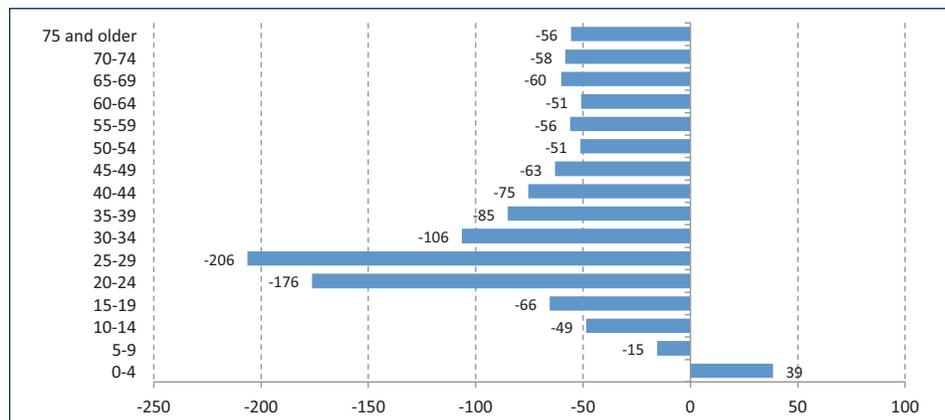
	Net Migration Between 1980 and 1990	Population in 1980	Net Migration Rate*
<b>Allegheny</b>	<b>-123,440</b>	<b>1,433,748</b>	<b>-86</b>
<b>Armstrong</b>	<b>-5,162</b>	<b>76,725</b>	<b>-67</b>
<b>Beaver</b>	<b>-21,769</b>	<b>204,674</b>	<b>-106</b>
<b>Butler</b>	<b>-2,941</b>	<b>152,100</b>	<b>-19</b>
<b>Fayette</b>	<b>-14,345</b>	<b>156,114</b>	<b>-92</b>
<b>Greene</b>	<b>-1,750</b>	<b>40,252</b>	<b>-43</b>
<b>Indiana</b>	<b>-5,656</b>	<b>93,954</b>	<b>-60</b>
<b>Lawrence</b>	<b>-11,958</b>	<b>105,846</b>	<b>-113</b>
<b>Washington</b>	<b>-13,395</b>	<b>213,576</b>	<b>-63</b>
<b>Westmoreland</b>	<b>-26,623</b>	<b>389,115</b>	<b>-68</b>

\* NMR calculated here as net migration per 1,000 population in 1980.

### Figure 1. Estimated Net Population Migration Between 1980 and 1990 by Age Group, Southwestern Pennsylvania



### Figure 2. Estimated Net Migration Rate (NMR) Between 1980 and 1990 by Age Group, Southwestern Pennsylvania



Notes:

-NMR calculated here as net migration per 1,000 population in 1980.

-Southwestern Pennsylvania defined here as the 10 counties of Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington, and Westmoreland.

accounted for by the population between the ages of 20 and 34 in 1980.

Also computed here is the net migration rate (NMR) for the total population and for the population by age group over the same decade. The NMR is defined here as the net migration throughout the decade per 1,000 population in 1980. Figure 2 shows the NMR by age group for Southwestern Pennsylvania between 1980 and 1990. The peak NMR of 209 for the population between the ages of 25 and 29 in 1980 means that migration alone caused that age cohort to decline by more than 20 percent throughout the course of a single decade.

In addition to county-level data, comparable migration estimates for MSA are compiled to compare them to the Pittsburgh experience. Geographic definitions of MSAs have changed multiple times since the 1980s. For benchmarking, the MSA definitions in use between 1983 and 1991 were used to generate estimates of migration for the 20 largest MSAs or Combined Metropolitan Statistical Areas (CMSAs) as of 1980.

The loss of population between the ages of 20 and 29 was far steeper in Pittsburgh than for all other large metropolitan area in the nation. Estimated net migration and the NMR for the population between 20 and 29 in each of the 20 largest metropolitan areas in 1980 are shown in Table 2. Only seven of the 20 largest metropolitan areas experienced negative net migration for the 20-29 year old cohort during the 1980s, and only the Detroit region exceeded Pittsburgh's population loss in this cohort.

While the "Rust Belt" regions of Cleveland, Detroit, and Pittsburgh experienced the largest losses of 20 year olds over the 1980s, migration rates varied significantly between the three regions. The NMR for the population age 20-29 in Pittsburgh (-190) was far greater than that of Cleveland (-129), and more than double that of Detroit (-94). Also compiled here are comparable NMRs for smaller MSAs near Pittsburgh. With the exception of the Erie MSA, the smaller MSAs near Pittsburgh experienced even larger proportional losses of their younger working-age population. The estimated NMR

**Table 2. Net Migration of the Population Age 20-29 Between 1980 and 1990**

**20 Largest MSA/CMSAs ranked by NMR**

MSA/CMSA	Population 20-29		NMR
	Net Migration	Total	
Pittsburgh	-74,852	393,205	-190
Cleveland	-62,981	486,422	-129
Detroit	-80,213	851,418	-094
St. Louis	-29,447	415,197	-70
Cincinnati	-6,208	294,172	-21
Philadelphia	-6,577	991,827	-6
Chicago	-4,611	1,378,302	-3
New York	172,685	2,756,850	+62
Baltimore	26,828	387,475	+69
Boston	80,850	644,784	+125
Denver	35,703	271,951	+131
Minneapolis	59,289	383,507	+154
Houston	125,560	526,855	+238
Washington	101,465	387,902	+261
Seattle	97,549	345,019	+282
San Francisco	256,297	854,705	+299
Atlanta	159,522	370,982	+429
Los Angeles	864,742	1,929,568	+448
Dallas	245,468	500,786	+490
San Diego	207,048	312,136	+663

**Selected MSAs near Pittsburgh**

Altoona, Pa.	-5,536	22,599	-244
Canton, Ohio	-15,414	70,095	-219
Erie, Pa.	-7,264	50,227	-144
Johnstown, Pa.	-13,365	43,842	-304
Steubenville-Weirton, Ohio/W.Va.	-9,505	27,070	-351
Wheeling, W.Va.	-10,155	29,700	-341
Youngstown, Ohio	-23,661	89,501	-264

Notes:

-NMR calculated here as net migration per 1,000 population in 1980.

-Metropolitan Statistical Areas/Combined Metropolitan Statistical Areas defined by definitions in use between 1983 and 1991.

of 351 for the Steubenville-Weirton MSA was calculated to be the single worst NMR for population age 20-29 among all metropolitan areas in the United States.

The consequences of such concentrated population losses among the younger working-age population extended long past the end of the 1980s. Younger workers leaving the Pittsburgh region took with them their families, and in many cases their future families, further extending the demographic

impacts of deindustrialization in Pittsburgh in the succeeding decades.

Data used for this analysis was compiled from: R. Winkler, K.M. Johnson, C. Cheng, J. Beaudoin, P.R. Voss, and K.J. Curtis. *Age-Specific Net Migration Estimates for U.S. Counties, 1950-2010*. Applied Population Laboratory, University of Wisconsin-Madison, 2013. Web. [May 15, 2014] < <http://www.netmigration.wisc.edu/> >.

# UCSUR Announces New Property Survey Tool

■ *By Sabina Deitrick and Robert Gradeck*

Understanding neighborhood conditions is a central focus of the work of the Urban and Regional Analysis program at UCSUR. In partnership with GTECH Strategies, we have recently unveiled a new Property Survey Toolkit, available for use to collect data on property conditions in Southwestern Pennsylvania. The Toolkit consists of standardized land and building survey instruments, training materials, quality control procedures, and software that can be used to efficiently and accurately collect real-time information using mobile devices.

Neighborhood-based organizations often collect data about different aspects of their community's built environment through direct observation. These efforts are usually designed, managed and implemented by staff and volunteers at individual community organizations. All too often, these efforts suffer from several common shortcomings, which limit the usefulness and reliability of the information collected. These limitations include: a lack of standardization across communities, excessive subjectivity in the design of the survey instrument, unreliable data stemming from a lack of training and quality control procedures, inefficient collection methods, and inadequate data sharing.

Despite these limitations, observational data collection is invaluable in understanding and assessing a neighborhood's conditions. Locally-collected information has been successfully used to achieve positive outcomes in many communities, including neighborhood planning, referrals to home repair programs and other service providers, and targeted code enforcement. If collected consistently over time, the survey can also be a tool to document neighborhood change, and be used to plan and implement land banks and other larger scale initiatives in the region.

Our efforts to design a standardized property survey began by talking to members of Pittsburgh-area organizations that have recently collected property information. We built on their existing survey instruments by

*A group of Google Pittsburgh volunteers work with Operation Better Block staff and volunteers to collect data on properties in Homewood (June 2014).*



**Land Use - select all that apply**

- Residential
- Commercial
  - Retail
  - Non-retail
- Industrial
- Institutional
- Other
- Unable to observe

At least 3 different uses shown in this pic, including 1 mixed use building

*Image from the building survey training materials provide visual guidance in how to accurately categorize property conditions.*

aligning them with existing standards found in the International Property Maintenance Code and Americans for Disabilities Act. We then asked our partners in the Urban Institute's National Neighborhood Indicators Partnership (NNIP) to review our draft survey. We received great advice from organizations such as Data Driven Detroit, which recently led the most extensive property data collection effort ever conducted in Detroit surveying all of the city's 377,000 parcels. Our final step in the review and comment process involved contacting many local stakeholders from government and community development organizations.

Once the survey instruments were designed, UCSUR and GTECH developed training materials for the building and vacant land surveys, and published the survey to the LocalData platform. This spring and summer, the surveys and training materials are being pilot-tested in two different communities. GTECH Strategies is collecting data on all vacant property in the North Side of Pittsburgh to support community planning and engagement efforts of the Buhl

Foundation. Operation Better Block (OBB) is collecting data on all 5,000 parcels in the Homewood neighborhood to inform neighborhood planning and organizing efforts that will take place this fall.

Initial feedback and results from these two efforts are very promising. The survey design makes it very easy to accurately categorize property conditions, the training materials provide clear guidance to data collectors, and the use of mobile technologies dramatically speeds the data collection process and eliminates the potential for transcription error. Additional organizations are now interested in using the survey instrument and financially supporting the LocalData software maintenance costs. We look forward to working with our partners at GTECH Strategies to create additional survey instruments, and we will work with OBB to use the data they are collecting this summer.

*For further information on the property survey tool, contact Bob Gradeck at [rmg44@pitt.edu](mailto:rmg44@pitt.edu).*

# Pittsburgh Neighborhood and Community Information Systems (PNCIS) Users Conference 2014

■ By Sabina Deitrick

The Pittsburgh Neighborhood and Community Information Systems (PNCIS) Users' Conference was held Friday, June 6 at the University Club on the University of Pittsburgh campus. This marks the fifth annual gathering of PNCIS users, discussing data applications and neighborhood data developments.

Over 120 people attended the afternoon event. PNCIS is a project in the Urban and Regional Analysis program at UCSUR. Paul Kaboth, vice president and community development officer of the Federal Reserve Bank of Cleveland, and Presley Gillespie, president of Neighborhood Allies gave introductory remarks. Both the Federal Reserve Bank of Cleveland and Neighborhood Allies are partners in the Users' Conference.

Seema D. Iyer, associate director and research assistant professor of the Jacob France Institute, Merrick School of Business, at the University of Baltimore was the conference's featured speaker and discussed the development and applications of the Baltimore Neighborhood Indicators Alliance (BNIA). BNIA is a neighborhood information system, dedicated to providing the indicators, information, and data analysis that generates policy and planning outcomes to strengthen Baltimore's neighborhoods. Along with PNCIS, BNIA is a partner in the National Neighborhood Indicators Partnership, located at the Urban Institute in Washington, D.C.

Iyer discussed the many community-based data applications that make up Baltimore's Vital Signs—a set of reliable data and indicators to assess neighborhood conditions and monitor the impacts of neighborhood revitalization efforts and activities through a common measurement system. Now in its 12th edition, Vital Signs and the work of BNIA is designed to measure and maximize the collective impacts of

neighborhood revitalization and quality of life improvement efforts.

As in Pittsburgh, Baltimore is a city that faced decades-long population decline, but realized turnarounds in a number of neighborhoods after 2000. BJIA and Vital Signs have become part of the dialog of neighborhood action and community engagement across the city of Baltimore.

Iyer drilled down into the community indicators to present compelling analysis of transit and average commute times for residents of neighborhoods in Baltimore. Baltimore's poorest neighborhoods are the least accessible by current transit routes and options. Pulling together a number of indicators, BJIA data highlight the differences found between Baltimore's growing and declining neighborhoods. Community resilience and community engagement become the means to use BNIA's indicators and vital signs in efforts for neighborhood improvement.

During our normal mid-afternoon break, with a lively poster display and open discussion period at the PNCIS Users' Conference, participants also began to organize our first "Un-conference" session, giving conference goers a chance to propose and lead small-group discussions

From organizing dozens of suggestions, PNCIS Users' created 13 Un-conference themes over two sessions. Un-conference topics include those focused on organizing and output measures of data use, including Data Partnerships, Data Quality and Availability, Data Visualization, Data Collection, Regional Data Information, and Data for Planning. Other Un-conference sessions delved into important areas of concern for community participants—Community Empowerment, Gentrification, Arts and Culture; Social Empowerment and Engagement, Children and Youth, and Transit



*Seema Iyer presents the Baltimore Neighborhood Indicators Alliance analysis of Baltimore neighborhoods.*



*Un-conference participants discuss community indicators.*

The conversations will be continuing. Over the summer and fall, the Urban and Regional Analysis program at UCSUR will unveil a project similar to BNIA's community indicators, the Southwestern Pennsylvania Community Profiles, developed with support from the Allegheny County Department of Human Services. Un-conference participants began the discussion of how indicators will be translated by community users into action. They will be joined by many others, tying data analysis to community improvement and quality of life issues throughout our region.

*Conference highlights and a transcript of the event are available at [www.ucsur.pitt.edu/pncis\\_conf.php](http://www.ucsur.pitt.edu/pncis_conf.php)*



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- Migration Trends in the Pittsburgh Region: Update* (12/11)
- City of Pittsburgh Neighborhood Profiles—American Community Survey, 5-Year Estimates, 2005-2009* (6/11)
- Incorporating Mt. Oliver Borough's Data in the PNCIS: Project Summary and Lessons Learned* (7/11)
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- City of Pittsburgh Neighborhood Profiles—Census 2010 Summary File 1 (SF1) Data* (7/11)
- Allegheny County Health in Black and White, Volume Two, Black Papers on African American Health* (8/11)
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