BIKE-SHARING AND THE UNBANKED

A study of the unbanked population in Chicago and best practices for their inclusion in bike-sharing

Michael Carney, Land Use Planning, College of Urban Planning and Public Affairs, University of Illinois at Chicago, Advisor: Martin Jaffe, Summer semester 2012

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Abstract

Public bike-sharing—the shared use of a fleet of public bicycles—is an innovative transportation mode that is rapidly being adopted in cities worldwide. Bike-sharing is a flexible and affordable complement to public transportation that has the potential to enhance connectivity within cities and mitigate congestion and carbon emissions by way of modal shift of its users. However, an intrinsic characteristic of most programs' business models is the requirement to use a credit or debit card, which allows for efficient billing of its users and serves as collateral for the use of a bike. This automatically prohibits the contingent of a city's population that holds no bank account, the unbanked. The purpose of this study is to propose methods for extending access to bike-sharing to the unbanked population of Chicago.

This study reviews the evolution of bike-sharing, explains the mechanics of a modern program, compares and contrasts the characteristics of existing programs, and analyzes data on the unbanked population at the national level. To determine best practices of unbanked inclusion in the field of bike-sharing, I conducted interviews with 15 industry experts, public officials, and transportation planners across the United States and Canada. Based on my analysis of the unbanked population and my review of best practices, I present recommendations that can be applied in Chicago.

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1. Introduction

As more of the world's population is moving into urbanized areas, planners are increasingly turning to sustainable transportation strategies in an effort to mitigate the congestion and pollution effects of increased automobile traffic. Recent developments in bike-sharing technology have enabled it to be a viable transportation strategy at an unprecedented scale. Early successes in Europe have sparked interest around the globe as cities in North America, Asia, South America, and Australia clamor to plan systems of their own. As of May 2012, an estimated 184 bike-sharing programs were operating in approximately 204 cities and 36 countries around the world.

Bike-sharing has many benefits for residents of the cities that have implemented a program. It is a relatively affordable mode of transportation with base annual membership rates costing about the same as a monthly transit pass in most cities. Its flexibility and low capital costs for installation allow systems to reach neighborhoods that are poorly served by transit. However, an intrinsic characteristic of the typical bike-sharing business model requires that users have a credit or debit card. This allows operators to easily bill its members and recoup expenses for lost or damaged bikes, but this inherently excludes residents who do not have bank accounts, the unbanked. With recent estimates putting the national unbanked figure at 7.7% and that of Chicago's at 12.7%, this is a significant proportion of the population that is currently unable to participate in bike-sharing. The purpose of this paper is to propose methods for extending the opportunity to use bike-sharing to the population of unbanked Chicagoans. To do this, I researched best practices by interviewing 15 industry experts, planners, and public officials across the United States and Canada. It is intended that this report should help bike-share planners in Chicago and elsewhere to understand the issue of the unbanked and to spur consideration of methods that allow the unbanked to use bike-sharing.

2: WHAT IS BIKE-SHARING?

Bike-share systems provide a fleet of sturdy, public bikes docked at self-service stations for use by anyone who purchases a membership. Due to advancements in technology, bike-sharing has dramatically increased in effectiveness and popularity worldwide in recent years. Every year cities around the world are establishing bike share programs to serve as a flexible, convenient, and affordable supplement to their public transit systems. This section of the report will describe the evolution of bike-sharing from its low-tech roots to the burgeoning industry that it is today, including the current plans for Chicago. It will explain the mechanics of how a program works, is priced, and managed. This section also serves as an introduction to the barriers that keep unbanked consumers from participating in bike-sharing.

Figure 1: Nice Ride is the bike-sharing program in Minneapolis-St. Paul, MN, Photo: Michael Carney

2.1 Evolution of bike-sharing

The origins of bike-sharing begin in Europe during the 1960's. The first generation of bike-share systems was started in July of 1965 in Amsterdam. Called the Witte Fietsen, or White Bikes, ordinary bikes were made available for public use. Users could take a bike, ride it to their destination, and then leave it for others to use. The program proved to be a failure because of the anonymity of its users allowed bikes to be thrown into canals and stolen without consequence. It was abandoned in days.

A second generation of bike-sharing was introduced in 1995 with the Bycyklen, or City Bikes, program in Copenhagen. The Bycyklen system employed many technical improvements to make the bikes more rugged and difficult to steal. These utilitarian bikes with solid rubber wheels and advertising panels could be picked up and returned at stations around the city via coin deposit. Though with no way to track who was using the bikes, the Bycyklen system was also rife with theft.

The first of the third generation was the Bikeabout program in 1996 at Portsmouth University, England. A number of technological improvements were employed to mitigate the risk of theft including electronically-locking racks, telecommunications systems, smartcards or fobs to unlock bikes, mobile phone access, and on-board computers. Over the next nine years, bike-sharing grew slowly. New, small programs opened in cities around Europe every year using much of the same technology, but in 2005, Velo'v in Lyon, France put 1,500 bikes on the street to become the largest bike-share system to date. In 2007, Paris launched its first system, Velib, with 7,000 bikes to become the world's largest system. Paris' Velib has expanded to over 20,000 bikes and 1,800 stations in Paris and 30 suburbs.[1] The success of Paris' system has garnered interest from city officials around the world. As of May 2012, there were an estimated 184 bike-sharing systems in operation in 204 cities around the world.[2]

Throughout its existence, bike-sharing systems have been operated by a number of different entities. Bike-sharing providers have included governments, quasi-government transit agencies, universities, non-profits, advertising companies, and for profits.

The government of Burgos, Spain purchased and operates a bike-share system the same way it would any transit service. The Stationnement de Montreal is an example of a quasi-governmental entity that operates a bike-sharing service. The Stationnement is the local parking authority for the City of Montreal and they now also operate the Bixi bike-share program. Examples of the university-run program include the pioneering University of Portsmouth, England and the University of Washington. The non-profit model usually entails the establishment of an organization solely for the operation of the system. Nice Ride Minnesota, for instance, was created out of an initiative by Minneapolis Mayor R.T. Rybak in 2008 to evaluate bike-share systems and oversee the request for proposals (RFP) process.[3] Some cities have entered into contracts with advertising agencies that will operate a bike-

[1] (Velib)
[2] (Shaheen, Martin, Cohen, & Finson, 2012)
[3] (Vars, 2012)

share service in exchange for revenue-generating advertising space in public places around the city. One notable municipal-advertising agency partnership was between Paris and JCDecaux. With a for-profit model, a bike-share operator can provide their service with little or no involvement from the government. This is similar to the advertising model except that there is usually no contract for ad space with the city.[4]

2.2 Mechanics of a modern bike-share program

Most modern bike-share programs follow the same operational model. Typically, people can use the bikes by purchasing a short-term (one or several days) or long-term (annual) membership. Short-term (also referred to as casual users) can sign up at any station kiosk using a credit or debit card. Annual members sign up for the program online and receive an electronic key (or fob), that when touched to any dock will unlock a bike. Bikes can be picked up from and returned to any station in the network without needing to make reservations or return to the station from which a bike is checked out.

Bike-sharing is intended for short trips—for the last or first mile in a commute combined with transit, to run errands, to visit a friend across town. Bike-share systems have price structures that encourage short trips so that bicycles are quickly turned over for other members to use. Up-front fees range from about $5 to $10 for a 24 hour membership and between$70 and $100 for annual memberships. The average annual membership fee of the seven bike-share programs surveyed for this project was $77. The up-front fee entitles members to unlimited trips under a set time limit that ranges from 30 minutes to one hour. Rides that exceed the time limit incur escalating fees that are automatically billed to the user's account.

[4] (DeMaio, 2009)

Figure 2: Capital BikeShare bike, Washington, DC, Source: DDOT

Bike-share bikes are durable, utilitarian machines equipped with hub-powered lights, several speeds, bells, baskets, chain guards, skirt guards, and fenders. The bikes are made of non-standard components that require special tools to remove and repair. Thus, they have little to no value for bicycle thieves interested in scrapping them for their parts. With on-board computers and GPS devices, bike-share operators can track the location of their bikes to recover lost or stolen bikes, keep track of how long bikes are checked out for and compile data on rider behavior.

Figure 3: Capital BikeShare station, Washington, DC, Source: Elvert Barnes

Typical hardware for a modern bike share station is a computer terminal with a touch screen and credit card reader that is used by casual members to pay for the service. The docks which bikes are electronically locked to feature a keypad that casual users enter a numeric code to unlock a bike and a receiver device that can read annual members' keys. Most bike-share stations also feature a map of the service area and advertising billboard. Early third generation stations would be hard-wired to a nearby electrical source requiring excavation for installation. To circumvent these higher installation costs and allow stations to be moved easily if needed, several bike-share providers such as Bixi have incorporated solar panels into their station design to power their operations.[5]

2.3 Chicago's plans for a bike-share program

On September 21, 2011, the City of Chicago issued a request for proposals (bike sharing RFP) seeking a company to operate a bike-sharing program.[6] The bike-sharing RFP called for a system that would include 3,000 bikes and 300 stations in its initial phase slated for a launch in the summer of 2012. Additional phases would add another 2,000 bikes and 200 stations over the course of 2013 and 2014. This initial bike-sharing RFP covers only the manufacture and installation of the bike-sharing system.[7] On March 14, 2012, the city announced that it had selected Alta Bicycle Share and its partner Public Bike System Company from the pool of applicants and that Mayor Emmanuel would introduce an ordinance to City Council to enter into a contract with Alta. The City Council's Pedestrian and Traffic Safety Committee approved the ordinance on April 14, 2012,[8] and on April 20, the plan received full council approval.[9] The majority of the start-up costs for the program will be covered by federal grants the city received—from the Congestion Mitigation and Air Quality Improvement Program (CMAQ) and the Transportation Investment Generating Economic Recovery Discretionary Grant Program (TIGER).

Despite City Council approval, a contract has not been established between the city and Alta Bicycle Share as of this report's time of writing. The Chicago Sun-Times reported on March 17, 2012 that a losing bidder, Bike Chicago (owner and operator of Chicago's Bike and Roll rental program), charged

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[5] (Bixi Toronto)
[6] (City of Chicago, 2011 A)
[7] (City of Chicago, 2011 B)
[8] (Greenfield, 2012)
[9] (City of Chicago, 2012 B)

that the city's procurement process was tainted because of connections top officials had with Alta.[10] The bid selection process is currently under review by the city's Office of the Inspector General.

Two additional RFPs were released that sought firms to (1) identify the locations of stations where bikes would be docked and to conduct outreach to cyclists and the general public (station siting and outreach RFP); and (2) arrange advertising/sponsorship opportunities for the new system (sponsorship RFP). The station siting and outreach RFP was released on September 21, 2011 to a list of pre-qualified firms. The contract for this work was awarded to Sam Schwartz Engineering who worked with Chicago Department of Transportation (CDOT) staff to determine the service area and locations for bike-share stations in anticipation of the city choosing a vendor for manufacture and installation of the system. The city has yet to award a contract for the advertising and sponsorship services.

[10] (Spielman, 2012)

3: Background of the unbanked/under-banked issue

For many years, researchers, policymakers, financial institutions, and community development practitioners have been grappling with the issue of unbanked and financially underserved populations in the United States. Much research has been done on the socioeconomic demographics of these populations and the behaviors that influence financial decisions. The purpose of this section of the report is to explain the unbanked/under-banked issue, review some of the research that has been done on it, and to present some of the key unbanked/under-banked data at the national level.

3.1 What does it mean to be unbanked/under-banked?

Unbanked is defined as having no checking or savings account. Under-banked individuals have an account, but continue to rely on alternative financial services, such as check-cashing services, payday loans, rent-to-own agreements, or pawn shops.[11] For the purposes of this report, the definitions used for the unbanked and under-banked come from joinbankon.org. This website is a clearinghouse of information on Bank On programs around the United States. These programs, typically led by local governments, are public-private partnerships between local or state governments, financial institutions, and community-based organizations that provide low-cost or free bank accounts and access to financial education to unbanked and under-banked populations. The main goal of this report is to address the credit card requirement as a barrier to participation in bike-share programs. Because of this, the bulk of the analysis will be on the unbanked population rather than the under-banked.

3.2 Unbanked/under-banked data sources

Over the past 35 years, a number of surveys have been developed at the national and local level to measure or at least estimate the number of unbanked households. This section will provide a brief review of those sources and an introduction to the data used for the analysis. Figure 1 shows a summary of national and local surveys and estimates that have been conducted to measure the unbanked population.

[11] (Bank On, 2012)

National Surveys that Measure the Number of Unbanked/Underbanked	Local Estimates of Unbanked	Local and Neighborhood Household Surveys of Financial Services Usage
FDIC Survey of Unbanked and Underbanked Households	Pew Safe Banking Opportunities Project	Survey of Financial Activities and Attitudes (Office of the Comptroller of the Currency, 1999)
Survey of Consumer Finances (SCF)	Acxiom and Social Compact (New York City study)	Financial Services Survey of Low and Moderate Income Households (Metroedge, 2003)
Survey of Income and Program Participation (SIPP)		Detroit Area Household Financial Services Survey (University of Michigan, 2006)
Panel Study of Income Dynamics (PSID)		Clinton Foundation Methodology for Unbanked Research (New York City, 2008 & Savannah, 2009)
CFSI Underbanked Consumer Study		Los Angeles Neighborhood Survey (Pew Health Group, 2010)

Figure 4: Summary of national and local surveys of unbanked and under-banked, Source: Corporation for Enterprise Development

Research of the unbanked is rooted in the body of work conducted by John Caskey in the early 1990's that examined the financial situation of low-income consumers. The Office of the Comptroller of the Currency (OCC) conducted the first random survey with the intention of understanding financial behaviors of low-income households in 1999. The MetroEdge survey followed closely in 2003. After these initial surveys, interest in unbanked and under-banked populations started to grow and a number of national and local surveys were conducted as can be seen in Figure 1.

3.3 How many people are unbanked or under-banked in the US?

The survey sizes, representative areas, and results vary widely for these surveys as evidenced by Figure 2 which summarizes the five national level surveys that measure the population of the unbanked and under-banked. With such disparate survey results, it is difficult to give a definitive answer to the question of how many people in the United States are unbanked. Estimates for the unbanked population at the national level vary from 7.7% to 22%. In the absence of a local survey on unbanked households in the City of Chicago, the analysis in this report relies on the data of the most recent FDIC

Survey of Unbanked and Underbanked Households. It is the most complete and recent dataset on the subject and it is the first time that such data is available at the national, state, and large Metropolitan Statistical Area (MSA) levels. This survey was the de facto choice for this report's analysis largely because it was used by the US Treasury Department's Bank On initiative to analyze smaller geographies as explained below.

	Panel Study of Income Dynamics (PSID)	Survey of Income and Program Participation (SIPP)	Survey of Consumer Finances (SCF)	CFSI Underbanked Consumer Study	FDIC Survey of Unbanked and Underbanked Households
Survey Size	9,000 families	46,500 households (2004 panel)	4,422 families	2,799 underbanked adults 18 or over	47,000 households
Mode	Face-to-face and telephone interviews	Face-to-face and telephone interviews	Face-to-face and telephone interviews	N/A	Face-to-face and telephone interviews
Representative Area(s)	Nation	Nation and 30 states	Nation	Nation	Nation, state and 69 MSA's
Produced By	University of Michigan, Institute for Social Research	U.S. Census Bureau	Federal Reserve Board and the Department of the Treasury	Experian Consumer Research	FDIC and U.S. Census Bureau
Most Recent Year for Available Survey Data	2007	2008	2007	2008	2009
Most Recent Unbanked Estimate	22% (1994)	19% (2000)	7.9% (2007)	17% unbanked and 18% underbanked (2008)	7.7% unbanked and 17.9% underbanked (2009)

Figure 5: Summary of national surveys that measure unbanked & under-banked populations, Source: Corporation for Enterprise Development

The FDIC survey was a result of an FDIC-sponsored supplement to the Census Bureau's Current Population Survey that was conducted in January of 2009. The purpose of the FDIC supplement was to provide insights into the size of the unbanked and under-banked populations, their demographic characteristics, and reasons for not participating in the financial mainstream. The supplement is complementary to the *FDIC Survey on Bank's Efforts to Serve the Unbanked and Underbanked*, published in February 2009 in compliance with the FDIC's statutory mandate to conduct ongoing surveys of banks on their efforts to serve the unbanked. The aim of these surveys is to aid policymakers and the financial industry in the arena of economic inclusion issues.

The Census Bureau surveyed approximately 54,000 households of which about 47,000 (86%) participated in the FDIC supplement. The survey asked respondents questions about their use of financial services. If respondents said that they did not currently have a checking or savings account, they were asked their reasons for not having an account, if they were planning to open an account and why, and if they use alternative financial services (check cashers, payday loans, rent-to-own stores, etc.) and their reasons for doing so. Demographic data of respondents was also collected in the survey process.

The survey results offer data on the percentage of households that unbanked or under-banked for the nation, each of the 50 states and the District of Columbia, and 69 largest metropolitan regions (MSAs). It was released on www.economicinclusion.gov which is under the auspices of the FDIC.

In order to analyze the unbanked population at smaller geographies, the Corporation for Enterprise Development (CFED), under the US Treasury Department's Bank On USA initiative and in collaboration with Haveman Economic Consulting, developed an estimation technique based on the FDIC data. These estimates measure the unbanked and under-banked populations for each city, county, metropolitan area, and census tract in the United States with more than 250 households. Haveman used a two-stage process and the methods are as follows. In the first stage, a model of how various household characteristics contribute to un- and under-banked status was created using a regression analysis of the FDIC data. Then, local estimates of un- and under-banked status are derived using data on household characteristics from the American Community Survey (ACS) as the inputs to the estimation model developed in the first phase.[12] Through these methods, correlates can be determined to banking status based on the FDIC data.

Two methods were used by Haveman to establish these correlates depending on the size of the geography in question. The 2005-2009 ACS Public Use Microdata Sample (PUMS) are released for Public Use Microdata Areas (PUMAs), which are geographies with a population of 100,000 . This

[12] (Haveman Economic Consulting; CFED, 2011) p.1

method was used to create estimates of many counties and MSAs with populations greater than 100,000 that the original FDIC survey did not provide data on. For geographies smaller than 100,000, including all Census places and census tracts, summary estimates at the geographic rather than household level are used to determine correlates. Data used for these correlates came from the Census Bureau's Regional Summary Files of the 2005-2009 ACS data.

Using the two methods above, estimates of unbanked and under-banked status were determined using a set of four regressions:

1. The proportion unbanked in metropolitan areas
2. The proportion unbanked in non-metropolitan areas
3. The proportion under-banked in metropolitan areas
4. The proportion under-banked in non-metropolitan areas

A literature review found that the household demographics and characteristics that correlate to being unbanked or under-banked are consistent across various surveys. "Those most likely to be unbanked are low-income, members of particular racial and ethnic groups, young and less-educated households. In addition, citizenship, nativity, speaking a language other than English at home and household composition have all been found to be related to unbanked status."[13]

3.4 Who are the unbanked in the United States?

In order to better understand the unbanked issue and apply it to planning practice in the realm of bikesharing, it is important to know more about the population's demographics and their reasons for not participating in the financial mainstream. This section will provide a review of the research on the characteristics associated with households that are unbanked and the common reasons cited for not using banks. The literature show a pattern in household characteristics among the unbanked across the country and in all of the surveys taken.

Income

Research on the unbanked consistently shows that households with lower incomes tend to be unbanked. The FDIC survey showed that a much greater percentage of households earning below

[13] (Haveman Economic Consulting; CFED, 2011) p. 3

$30,000 were unbanked than other income groups and the population as a whole.[14] In a 2003 study, Hogarth, et al explored the reasons for not having a checking account, including product design, human capital, motivation for having a checking account, and institutional factors. Their analysis was based on data from the triennial Surveys of Consumer Finances (SCF) from the years 1992, 1995, and 1998. They found that more than half the sample was at or below the poverty threshold. Thre- fifths of the sample (59%) had net worth below $5,000. Nearly four-fifths (79%) reported spending all their income, and more than half (53%) had a planning horizon of a year or less.[15]

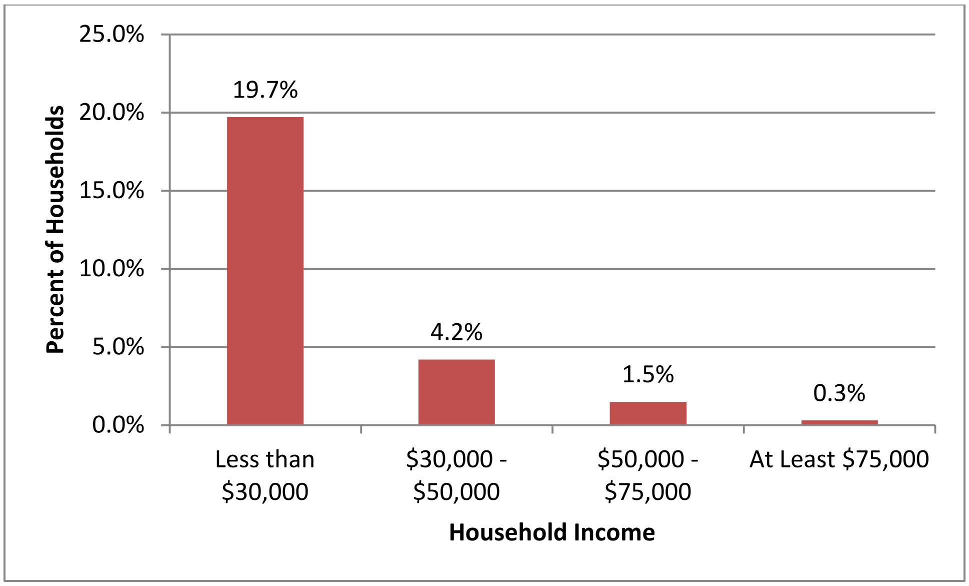

Figure 6: Unbanked Households by Income, Source: Corporation for Enterprise Development & 2009 FDIC National Survey of Unbanked and Underbanked Households

Race and Ethnicity

African-Americans have the highest rates of being unbanked (21.7%), followed by Hispanics (19.3%), and American Indians (15.6%).[16] Unbanked respondents were disproportionately minority (53%).[17] In his paper reviewing the MetroEdge unbanked surveys of Los Angeles, Chicago, and Washington DC, Christopher Berry noted that only about 7% of unbanked households were white.[18]

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[14] (Corporation for Enterprise Development, 2011)
[15] (Hogarth, Anguelov, & Lee, 2003)
[16] (Corporation for Enterprise Development, 2011)
[17] (Hogarth, Anguelov, & Lee, 2003)
[18] (Berry, 2004)

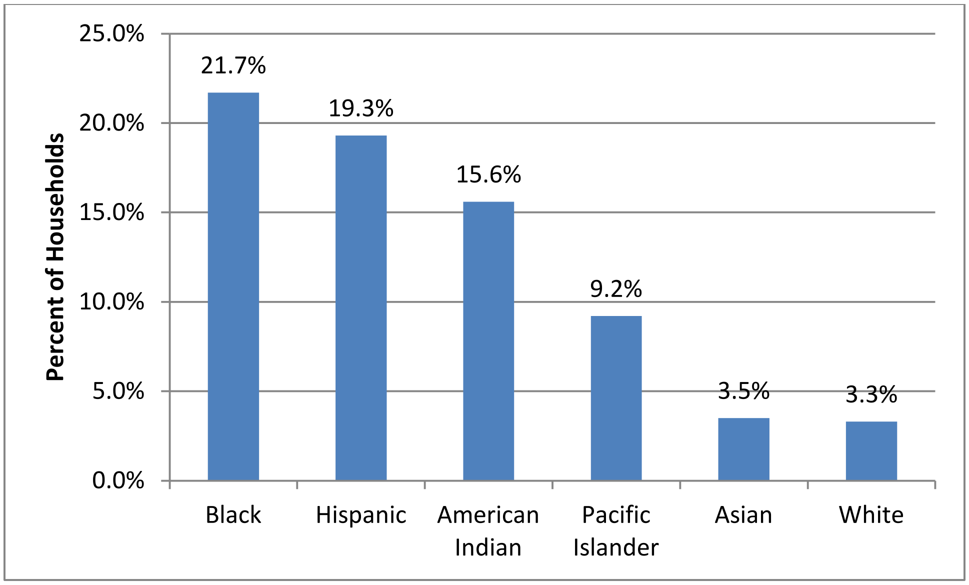

Figure 7: Unbanked Households by Race & Ethnicity, Source: Corporation for Enterprise Development & 2009 FDIC National Survey of Unbanked and Under-banked Households

Educational Attainment

Households with lower levels of education attainment tend to be unbanked. The FDIC survey showed that 24.5% of those without a high school degree and 9.6% of those with only a high school degree were unbanked.[19] Hogarth's study found that unbanked respondents were less educated (46% had less than a high school education) than the banked.[20]

Age

Banked households are older than their unbanked counterparts. A greater proportion of households headed by people under 45 are unbanked than the greater population. The youngest cohorts are most prone to being unbanked—16.2% of those 15 to 24 and 11.7% of those 25 to 34.[21] Banked respondents in the Pew study were 40 years old on average compared to the unbanked average of 34.5 years.[22]

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[19] (Corporation for Enterprise Development, 2011)
[20] (Hogarth, Anguelov, & Lee, 2003)
[21] (Corporation for Enterprise Development, 2011)
[22] (Pew Health Group, 2010)

Citizenship and Nativity

Foreign-born noncitizens are more likely to be unbanked than native or naturalized citizens. This is likely attributed to barriers both statutory (lack of proper documentation) and perceived (unfamiliarity with procedures of financial mainstream in US).[23] Although the Pew study results show that both unbanked and banked households have similar likelihoods of being foreign born—69% and 65% respectively, this can likely be attributed to Pew's sample being limited to Greater Los Angeles.

Other Household Characteristics

Household composition is another characteristic with patterns among the unbanked population. Hogarth found that single females (43%) made a significant proportion of the unbanked.[24] The FDIC found that single households, both male- and female-headed were more likely to be unbanked than married households.

Hogarth et al found that of the 1,361 households surveyed, 49% previously had an account, and 22% had some other type of bank account. 40% were "hard-core unbanked" meaning they did not have a checking account previously, nor did they have any other type of bank account. One out of eight previously had a checking account and still have some other type of account. The Pew study found that most of the unbanked population in Los Angeles has never had a bank account. Some two-thirds (63%) of unbanked individuals in their survey have never had a bank account. More than one-fifth (22%) of the Los Angeles unbanked who have had bank accounts voluntarily left their last bank.[25]

3.5 Why don't they use banks?

Researchers of the unbanked issue have made attempts to grasp the reasons why consumers stay out of the financial mainstream. Many of the papers view the unbanked population as a vast untapped market for banks to capitalize on. Others approach it from a social services perspective and offer suggestions to educate unbanked consumers on achieving greater financial stability. The reasons for not holding a bank account are numerous, though varied little among the literature.

The Hogarth study of checking account use found that, overall, most households cited product design reasons for not having a checking account (48%), primarily because they "don't write enough checks

[23] (Corporation for Enterprise Development, 2011)
[24] (Hogarth, Anguelov, & Lee, 2003)
[25] (Pew Health Group, 2010)

to make it worthwhile." Motivation for having a checking account as a product was the second-most cited category (24%), with "don't have enough money" as the primary reason within this category. Nearly one out of five (18%) listed institutional considerations as the reason for not having an account, with "don't like dealing with banks" as the most-cited reason.[26] Berry found that nearly half of the Chicago, Los Angeles, and Washington unbanked respondents cited explanations having to do with income, with a large proportion saying they "don't have enough money."[27] About 1 out of 10 (9%) gave human capital considerations as the reason for not having an account, with "can't manage or balance an account" as the main reason cited.[28]

Most studies found that physical access to banks did not seem to be a significant barrier. Only 1% of households cited bank hours and location as a reason for not having a checking account.[29] Only 2% of unbanked households in the MetroEdge study claimed that branch locations or operating hours precluded them from having an account.[30] The Pew study however, remarks that the main reason for selecting a financial institution is geographic proximity. The vast majority (85%) of unbanked (Alternative Financial Services) AFS users will patronize a service provider because it is close by. Likewise, most of the banked (60%) choose a bank based on proximity.[31]

Form of household income is a huge determining factor in banking status. The Pew study found that bank accounts strongly correlate with non-cash payments from employers. The unbanked are twice as likely to be paid in cash as the unbanked.[32] Unbanked households also have little incentive to open a checking account if they can't use it to pay any of their bills. Berry found that 1 in 5 households, banked or unbanked, report that their landlord will not accept a check for rent payments. And 40% of unbanked households report that none or only a few of their close friends and family have a bank account. Berry refers to these situations as network externalities.[33]

3.6 Conclusions about the characteristics of the US unbanked population

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[26] Ibid.
[27] (Berry, 2004)
[28] (Hogarth, Anguelov, & Lee, 2003)
[29] Ibid.
[30] (Berry, 2004)
[31] (Pew Health Group, 2010)
[32] Ibid.
[33] (Berry, 2004)

Hogarth et al concluded that households without checking accounts are quite heterogeneous so there is no one-size-fits-all solution to bring this audience into the financial mainstream. In the area of product design, issues of minimum balance, service charges, and number of checks written were included in the Hogarth study's data. Knowledge and experience seem to be key factors associated with citing product design as the main reason for not having a checking account. Analysis showed that some people may need some education and information to help them feel comfortable in the banking system. Privacy of financial records may be another driving concern and these households may never want to be part of the financial mainstream.[34] Further, most households' financial situations are rarely as cut and dry as banked or unbanked. Most households exist at some point along the continuum between banked and unbanked, relying on a patchwork of financial services from both mainstream and alternative financial services providers.[35] [36] The Pew survey found that one-third of their banked respondents also use alternative financial services. Of the under-banked respondents 78% claim to use AFS services at least once a month.[37]

Berry found that unbanked consumers are generally well-informed about the relative costs of financial services at banks and alternative financial services providers. Of the unbanked he surveyed, he saw that those that cashed checks at AFS providers did so out of convenience and those that cashed checks at banks were motivated by lower costs.[38] His findings echoed that of several other researchers who discovered that many unbanked households get by just fine under the financial radar with the perception that they do not need a bank account. When living paycheck to paycheck, consumers see little incentive in opening a savings account. If a household makes and receives few non-cash payments, it can cash a check for free at the bank from which it is drawn or at a supermarket while making other purchases.

While some unbanked consumers may be able to get by without an account at little expense to themselves, research shows that 20 to 40% of the unbanked pay fees to cash their paychecks.[39] For these transactions, those households turn to commercial check-cashing outlets (CCOs). Most CCOs charge their customers between 2 and 3% of the face value of a check to cash it. For instance, this translates to roughly $450 of annual fees for a family with a take-home pay of $18,000.

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[34] (Hogarth, Anguelov, & Lee, 2003)
[35] (Seidman, Hababou, & Kramer, 2005)
[36] (Berry, 2004)
[37] (Pew Health Group, 2010)
[38] (Berry, 2004)
[39] (Caskey, 2002)

Education, outreach, and marketing materials intended to bring the unbanked into the financial mainstream need to be tailored to the unique needs of differing consumer types. For instance methods to bring previously banked individuals back into a bank would need to be different from the approach taken towards someone who has never had a bank account.[40]

[40] (Seidman, Hababou, & Kramer, 2005)

4: THE UNBANKED POPULATION IN CHICAGO

In this section of the report I will present estimates and analysis of the unbanked population of Chicago. The analysis in this section is in two parts—1) analysis I made at the Chicago census tract level of some of the leading characteristics of the unbanked population and 2) an analysis of local estimates made based on the FDIC survey data. Issues of transportation equity relating to transportation cost burden and convenient access to transit are also given consideration. First, I will present the findings of my unbanked characteristics analysis.

4.1 Estimating the likelihood of being unbanked in Chicago using Unbanked Indicator Score

In order to estimate how many people in Chicago may be unbanked and where they live, I used census tract level data from the 2005-2009 American Community Survey estimates to analyze four recurring characteristics of the unbanked population described in Section 2—age of householder, race, household income, and educational attainment. As described in the literature review, multiple research papers have found that unbanked households in the United States tend to be African American, low-income, with a young head of household, and a low level of educational attainment. The parameters set for this analysis are described in Figure 4.

Indicator	Description
Householder Under 25 Years Old	If greater than or equal to citywide percentage of 5%
Median Household Income	If less than or equal to 50% of city median household income ($23,391)
No High School Diploma	If greater than or equal to city average of 22%
African American	If greater than 50%

Figure 8: Parameters for Unbanked Indicator Score Analysis

Each census tract was scored one point for every indicator it met from the table above. Of the 850 census tracts in the city, 131, accounting for 283,978 residents, or 10.0% of the population are living in census tracts that scored at least three points in the Unbanked Indicator Scoring (UIS). Figure 9 on the following page displays the complete UIS results.

Score	# Census Tracts	Population	Pct. Pop.
0	160	596,360	21.1%
1	353	1,279,073	45.3%
2	206	664,653	23.5%
3	102	226,146	8.0%
4	29	57,832	2.0%
Totals	**850**	**2,824,064**	

Figure 9: Results of Unbanked Indicator Score Analysis, Source: 2005-2009 American Community Survey 5-Year Estimates

The results of this analysis show that in 131 census tracts that are home to 283,978 Chicagoans, a higher proportion of residents display 3 or more of the leading characteristics of unbanked people nationwide. This analysis omits 29 census tracts for which there was no data available.

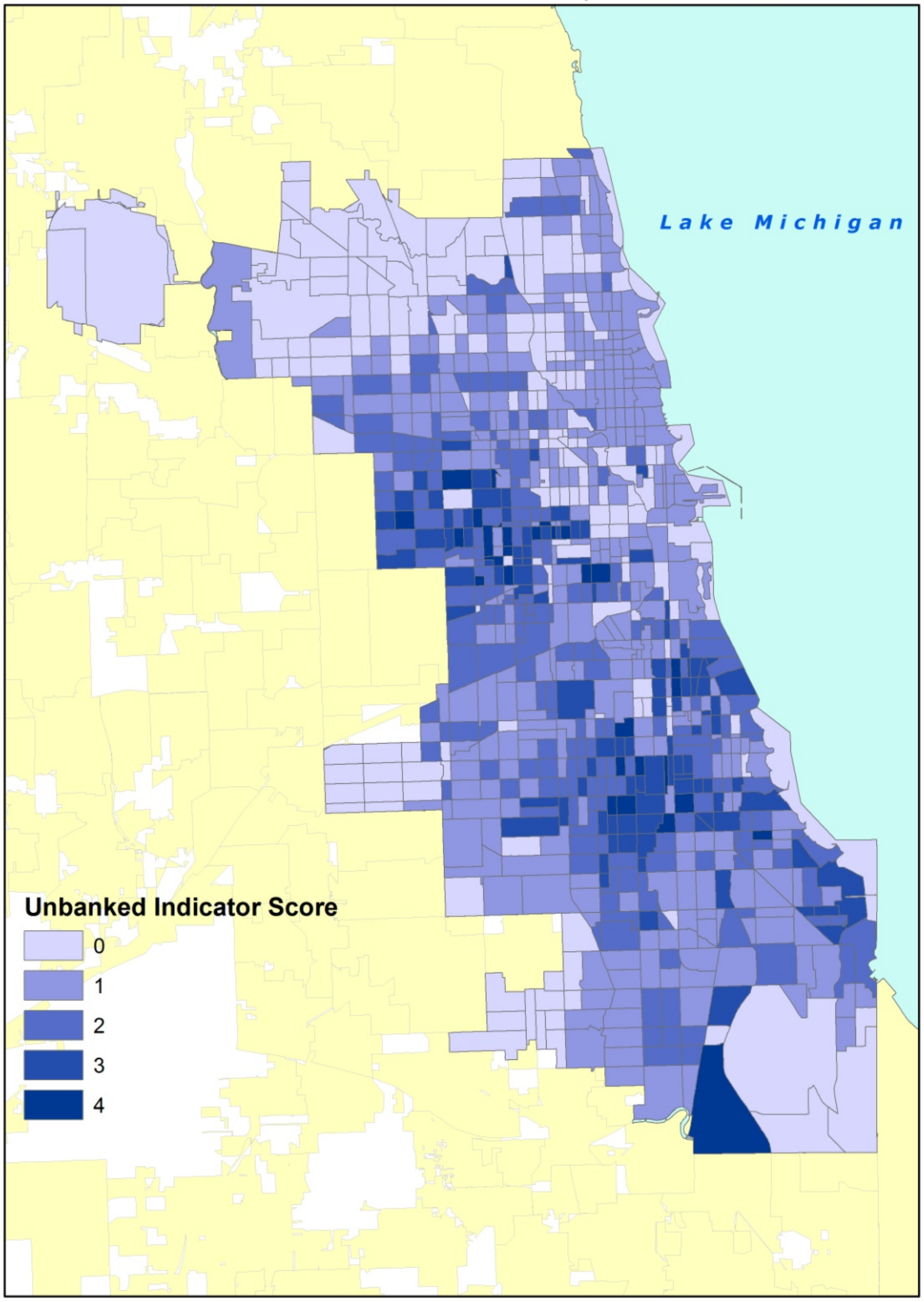
To be able to consider the unbanked population in the planning of a transportation system like bike-sharing, it's important to understand where in the city these populations live. I mapped these data using ArcGIS to demonstrate the geographic distribution of census tracts with a high likelihood for a large unbanked population. Figure 10 on the next page shows that there are clusters of census tracts with higher Unbanked Indicator Scores on the west and south sides of the city. Pockets of populations with low instances of unbanked characteristics exist primarily in the far northwest and southwest sides of the city.

Figure 11 on page 22 demonstrates where populations with high likelihood for being unbanked live in relation to public transportation. This map shows the Unbanked Indicator Score by census tract with an overlay of Chicago Transit Authority rapid transit (elevated trains and subway) lines and stations. Around each station I placed a half-mile buffer meant to denote area within walking distance of the station. The rule of thumb employed by transportation planners for determining walking distance is that transit users will usually walk a quarter mile to a bus stop, but up to a half mile for a rail stop.[41]

Figure 11 shows that many of the census tracts at a higher risk for being unbanked are poorly served by rapid transit. Public transit trips among these neighborhoods require may require multiple bus trips or long walks to reach train stations. This demonstrates a potential demand for a low-cost, flexible transportation option like bike-share to connect these residents to transit stations.

[41] (Ewing, 1999)

Unbanked Indicator Score by Census Tract



Prepared by Michael Carney using data made publicly available by the City of Chicago and the American Community Survey 2005-09 5-year estimates
State Plane Illinois East Projection

Date: 7/8/2012

Figure 10

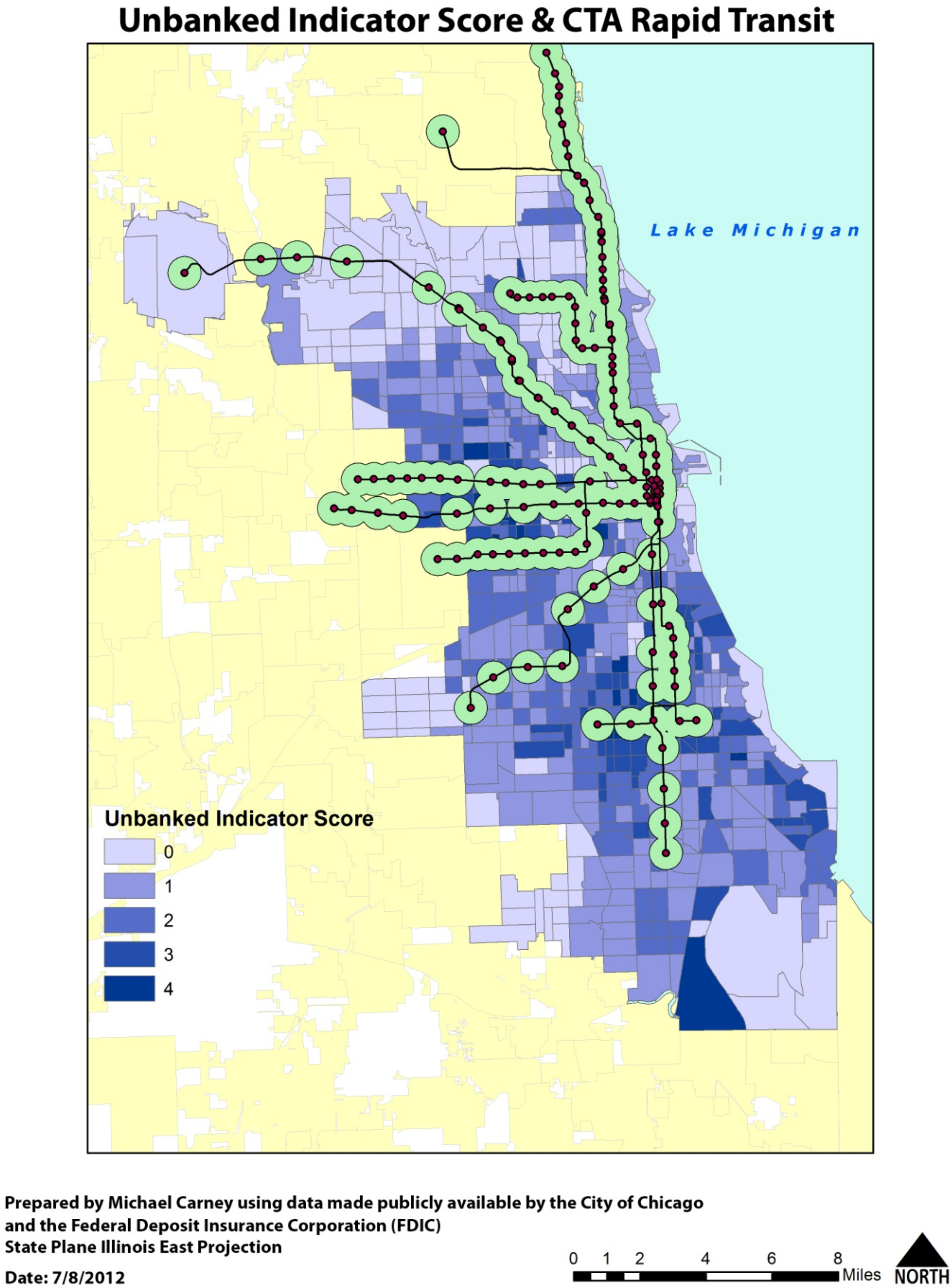

Unbanked Indicator Score & CTA Rapid Transit
Lake Michigan
Unbanked Indicator Score
0
1
2
3
4
Prepared by Michael Carney using data made publicly available by the City of Chicago
and the Federal Deposit Insurance Corporation (FDIC)
State Plane Illinois East Projection
Date: 7/8/2012
0 1 2 4 6 8
Miles
NORTH

Figure 11

4.2 Analysis of FDIC Unbanked Survey Data

By using the methodology described in Section 3, the CFED was able to make estimates of local unbanked and under-banked populations to the census tract level using data derived from the FDIC's 2009 National Survey of Unbanked and Under-banked Households. CFED estimates that 12.7% of Chicago households (135,006 households) are unbanked compared to 7.7% (9,085,000) of the entire United States, 6.2% (294,462) of Illinois and 7.4% (251,677) of the Chicago Metropolitan Area.

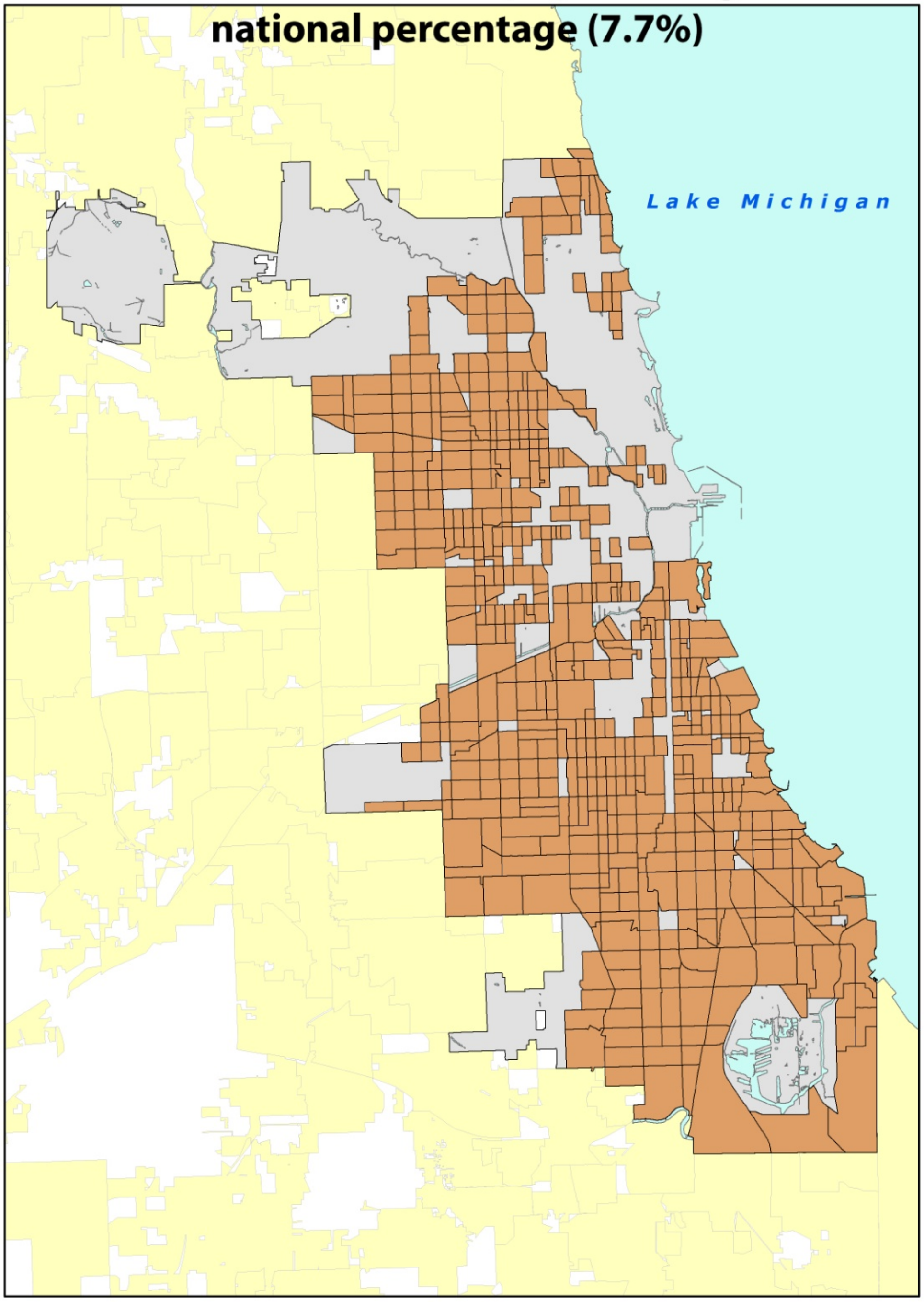
	Chicago	Chicago-Joliet-Naperville Metro	Illinois	United States
% Unbanked Households	12.7%	7.4%	6.2%	7.7%
# Unbanked Households	135,006	251,677	294,462	9,085,000
% Under-banked Households	21.6%	13.8%	15.7%	17.9%
# Under-banked Households	229,618	469,344	745,653	21,276,000

Figure 12: Unbanked and Unber-banked Households in the Chicagoland Area Compared to Illinois and the United States, Source: www.joinbankon.org

According to the CFED, 545 of Chicago's census tracts have an unbanked population estimated to be above the national estimate of 7.7%. Figure 13 on the following page illustrates that a substantial portion of the city is made up of those census tracts (colored in orange) with higher rates of unbanked households.

Figures 14 and 15 on the following pages rather predictably demonstrate that census tracts with higher estimates of unbanked and under-banked populations are concentrated in low-income communities on the west and south sides of Chicago. This analysis is congruent to my findings from using the Unbanked Indicator Scores.

Census tracts with unbanked population greater than national percentage (7.7%)



Prepared by Michael Carney using data made publicly available from the City of Chicago and the Federal Deposit Insurance Corporation (FDIC)

State Plane Illinois East Projection

Date: 7/8/2012

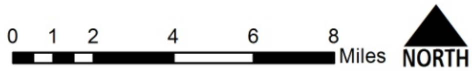
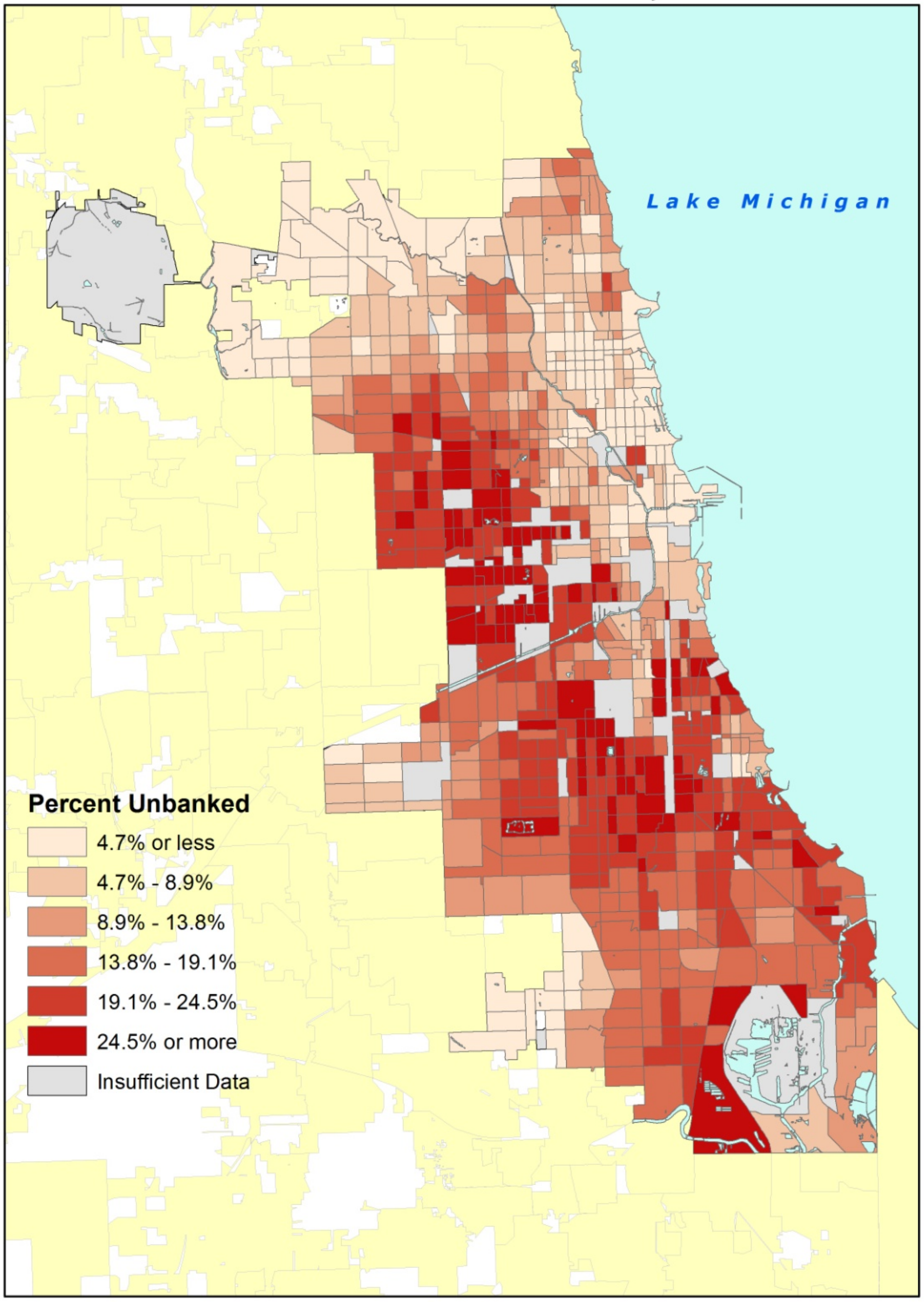


Figure 13

Percent of Unbanked Households by Census Tract



Prepared by Michael Carney using data made publicly available from the City of Chicago and the Federal Deposit Insurance Corporation (FDIC)

State Plane Illinois East Projection

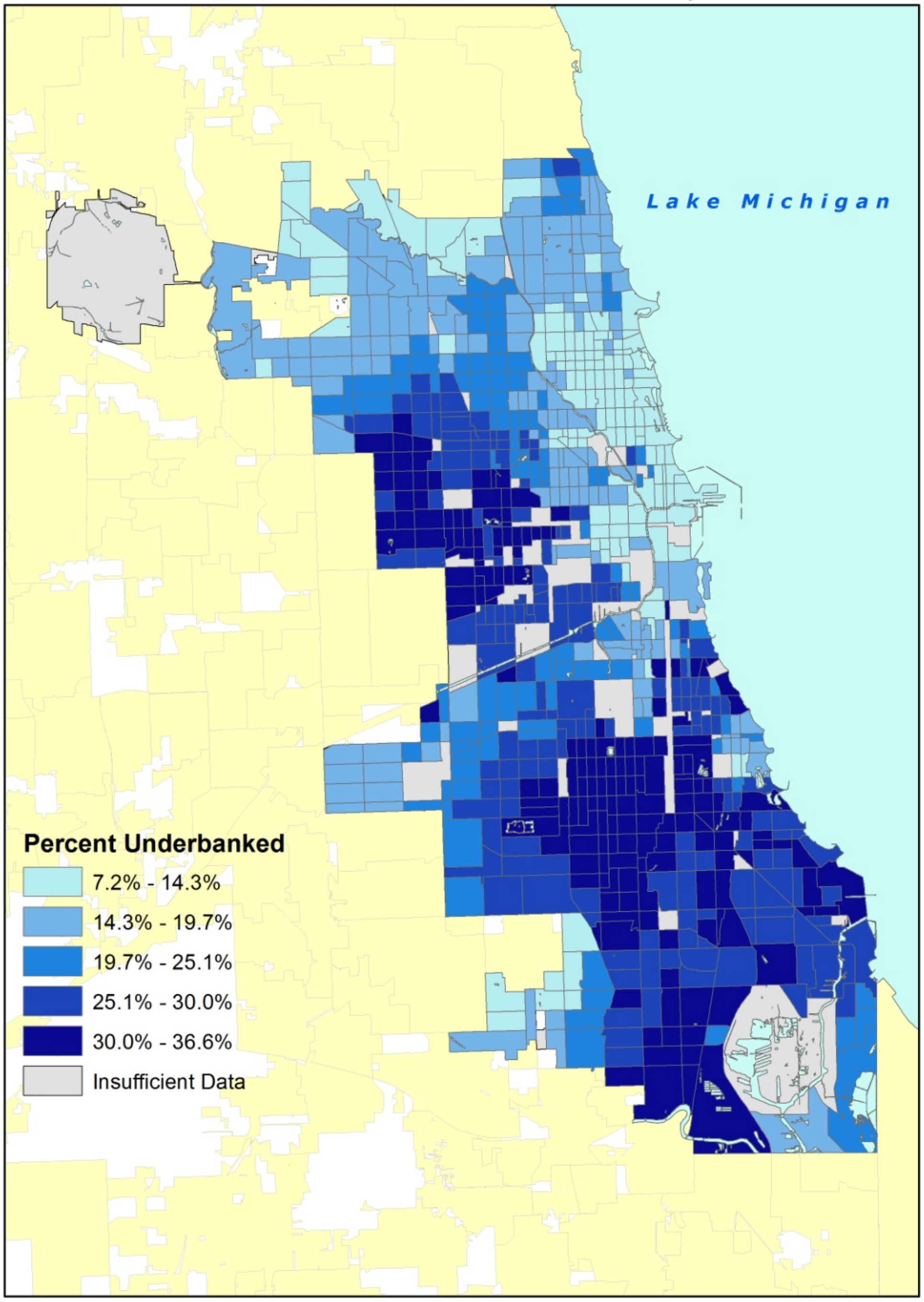
Date: 7/8/2012

0 1 2 4 6 8 Miles

NORTH

Figure 14

Percent of Under-banked Households by Census Tract



Prepared by Michael Carney using data made publicly available from the City of Chicago and the Federal Deposit Insurance Corporation (FDIC)

State Plane Illinois East Projection

Date: 7/8/2012

Figure 15

CFED estimates for percentage of a census tracts' population being unbanked ranged from 0%--three census tracts in Beverly, Near North Side, and Forest Glen—up to 37.7% for one census tract in North Lawndale. Figure 16 shows the census tracts with the top 20 highest estimated unbanked populations. The majority of the top 20 census tracts are in struggling community areas such as Greater Grand Crossing, West Garfield Park, and West Englewood.

Community Area	Census Tract	Percent Unbanked
North Lawndale	291000	37.7
Near West Side	280900	33.5
North Lawndale	291200	33.3
Greater Grand Crossing	690100	33.0
Greater Grand Crossing	690600	32.5
Logan Square	222800	32.1
South Lawndale	300100	32.0
Washington Park	400800	32.0
Riverdale	540100	30.7
Near South Side	330300	30.3
West Garfield Park	260100	30.2
Douglas	351100	30.2
West Englewood	671700	30.0
East Garfield Park	271000	29.8
East Garfield Park	270300	29.7
Humboldt Park	230500	29.6
Near West Side	281300	29.6
Near West Side	283900	29.3
Fuller Park	370100	29.3
West Englewood	671000	29.2

Figure 16: Top 20 Census Tracts - Estimated Unbanked Populations, Source: 2009 FDIC National Survey of Unbanked and Unberbanked Households, www.joinbankon.org

Although it does not adjust for size of community area, Figure 17 on the following page further shows that the unbanked population is estimated to be concentrated in a handful of low-income communities. Austin has 22 census tracts with estimated unbanked populations above the national average of 7.7%. While areas like West Englewood and North Lawndale follow closely behind at 21 and 16 respectively.

Figure 13: Top 20 Community Areas with Number of Census Tracts Greater than Estimated 7.7% Unbanked

Community Area	Number of Census Tracts Greater than 7.7% Unbanked
Austin	22
Logan Square	21
West Englewood	20
North Lawndale	16
Humboldt Park	16
New City	16
West Town	16
Near West Side	15
South Lawndale	15
Auburn Gresham	15
Belcragin	14
South Shore	14
Greater Grand Crossing	13
Englewood	13
Grand Boulevard	13
Roseland	13
East Garfield Park	12
Woodlawn	12
Douglas	11
Lower West Side	11

Figure 17: Top 20 Community Areas with Number of Census Tracts Greater than Estimated 7.7% Unbanked

5: BEST PRACTICES FOR ENGAGING THE UNBANKED IN BIKE-SHARING

In this section of the report I will present the findings of a series of interviews conducted over the Summer of 2012 with planning professionals in seven cities across North America who have been involved with the planning of bike-share programs in their cities. I spoke with people involved with bike-share in Boston, Denver, Minneapolis-St. Paul, New York City, San Antonio, Toronto, and Washington DC. Because of an inherently similar membership structure to that of bike-sharing and a shared challenge of reaching out to unbanked consumers, I also spoke with representatives of car-sharing services in Ithaca, New York and San Francisco. The principal questions I sought to answer were what have other cities done to try and get the unbanked using bike share? And what have been the results? The initiatives being undertaken by the sampled cities included a range of different partnerships undertaken by the city's department of transportation or bike share operator including arrangements with local Bank On initiatives, other non-profits, the private sector, financial institutions, and city agencies.

5.1: Boston, MA

Boston has developed two programs to reach out to low-income and unbanked communities and encourage them to participate in bike share. The City has started one program in collaboration with the Boston Public Health Commission and has another in development with the Boston Medical Center.[42]

The City received an American Recovery and Reinvestment grant through the Boston Public Health Commission (BPHC) that is being used to subsidize 600 Hubway memberships. Daisy De La Rosa, of the BPHC explained to me that her organization is serious about health equity. The BPHC wanted to make sure that if they were going to give grant money to Boston Bikes, the City's bicycle planning office, that low-income residents would be able to use bike-share. The three caveats to the grant money being used for Hubway were that 1) stations would be located in low-income neighborhoods, 2) jobs at Hubway would be advertised in low-income neighborhoods, and 3) subsidized memberships would be provided to people that want them.[43]

[42] (Herr, 2012)
[43] (De La Rosa, 2012)

Residents pay $5 for subsidized memberships and get a free helmet. The BPHC pays the balance to the operator, Alta. The fee structure of these subsidized memberships is also relaxed in that members get free use of the bike for the first 45 minutes before additional charges are incurred as opposed to the first 30. To qualify for a BPHC-subsidized Hubway membership, applicants must be Boston residents, at least 16 years of age, receive some form of public assistance, and have an income at or below 400% of the poverty line. Currently, a credit or debit card is required to receive a subsidized membership.[44]

In the planning stages is a partnership with the Boston Medical Center that is being dubbed "Prescribe a Bike." If patients come into the medical center with issues like obesity, diabetes, or cholesterol, doctors can direct them to partake in some physical activity by prescribing cycling. Through this program, the medical center holds onto a pool of subsidized Hubway memberships that doctors can hand out to low-income patients who cannot afford the fees. No credit card is required on the part of the patient in this program. The City of Boston and the Harvard School of Public Health are helping to underwrite this program to cover cost and injury liabilities.

5.2: Denver, CO

Denver's non-profit bike-sharing operator, Denver Bikesharing, received a $25,000 grant from Live Well Colorado to help it provide access to unbanked individuals in the city. The $25,000 covered staff time spent on outreach efforts and reserves to hedge the risk of lost membership fees and bikes to unbanked customers. In 2011, Denver Bikesharing entered into a partnership with the Denver Housing Authority to reach out to low-income and unbanked residents. This program allowed people to buy into the system at a lower rate ($15 annual membership fee) and no credit card is required.[45] The Housing Authority paid for the installation of two bike-share stations—costing roughly $50,000 each—on public housing properties and helped with recruitment of new members by putting promotional and application materials in their leasing offices.

Participation in this program was only marginally successful in the 2011 season. Approximately 35 new members were signed up through it of which only about 10 used the system with any regularity. In the off-season, Denver Bikesharing conducted a series of focus groups to learn how they could improve for 2012. The focus groups included people who signed up and rode, signed up and never rode, and people who had never heard of the program. They learned that the system was cost-

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[44] Ibid.

[45] (Virlee, 2012)

prohibitive and that promotional materials were not effective. Focus group participants indicated that public housing residents have little monthly disposable income and that the $15 membership fee was too high. They also explained that the black and white recruiting materials on plain white paper are too similar to documents from the government, banks, the Housing Authority leasing office, etc.—things that tend to convey bad news that people want to avoid. They suggested dropping the $15 fee and using more well-designed materials that convey a sense of luxury and positivity.

Denver Bikesharing used the feedback from its focus groups and rolled it into the 2012 program re-launch with the remaining $11,000 in grant money. As of June 28, 82 people had signed up for subsidized memberships and 425 trips had been taken using those memberships. My interviewee at Denver Bikesharing suggested that a successful 2012 season would help to carry the program toward financial sustainability without the aid of further Live Well grants. The benefit to partnering with the Denver Housing Authority, aside from them covering station installation costs, is that they can hedge their risk in granting membership to unbanked customers. Public housing residents who may not have credit cards can still have their credit worthiness (ability to pay rent) assessed by their relationship with the leasing office.

5.3: Minneapolis-St. Paul, MN

Minneapolis-St. Paul's Nice Ride partners with various non-profit groups that provide outreach to low-income communities in the Twin Cities. These partners attempt to educate the community on the benefits of cycling and entice them to participate in bike sharing by offering free memberships. Equipped with essentially a stack of coupons redeemable for a free membership, these non-profit partners go to the community to scout potential members. The partners are tasked with determining eligibility of potential customers. To work around the credit card requirement, these partners consider alternative methods of evaluating credit-worthiness including acceptance of applicants' W-2's to determine ability to pay.

In an effort to spark demand for bike-share and educate the community about its function, Nice Ride works with its non-profit partners to set up educational bike rides that take people on a half-hour tour, show them what they can do with the system, give out a free membership voucher and a bike helmet.

5.4: New York, NY

New York City's bike-share program is slated to be launched during the Summer of 2012. This system of 600 stations and 10,000 bikes in its first phase alone will become the largest bike-share system in North America. An exact launch date had not been announced at the time of writing, but I spoke with Kate Fillin-Yeh of New York City Department of Transportation to learn what New York is planning for inclusion of the unbanked. New York has not yet identified a solution to grant membership to unbanked customers, but have been focusing their efforts on reducing fees to be able to reach lower income residents. Fillin-Yeh expressed concern that because New York's system will be completely privately funded without public subsidy, prices will be driven higher and could exclude low-income New Yorkers. The DOT have created a special membership for New York Housing Authority residents that features a reduced annual fee of $60 that can be paid in quarterly installments.

Fillin-Yeh and the NYC DOT would like to be able to extend their partnership with the Housing Authority to offer bike-share memberships to unbanked residents, but they are weary of the massive institutional hurdle it poses. She explained that roughly a half a million people are residents of public housing in New York, so that the Housing Authority may not have the capacity handle such an initiative. Instead, the DOT will be looking to enter into agreements with community-based non-profits. Fillin-Yeh explained that smaller, more nimble member-based non-profits who have good relationships are better-equipped to refer eligible candidates to bike-sharing.[46]

5.5: San Antonio, TX

San Antonio's bike-share program is relatively young and has made its primary goal the smooth operations of the stations and bikes it currently has. A solution for unbanked residents who are interested in bike-share has not been found yet. As most bike-share programs do, San Antonio's was started in the central business district where employment and residential density is its highest. San Antonio B-Cycle has placed two stations on San Antonio Housing Authority properties, but penetration into low-income neighborhoods is limited due largely to the low-density urban form of the city. The two stations installed at public housing projects were subsidized by the Housing Authority and promoted among its residents, but no specific financial incentives or recruitment strategies were implemented. According to my interviewee in San Antonio, Julia Diana of San Antonio B-Cycle, the program's focus has

[46] (Fillin-Yeh, 2012)

been on increasing accessibility through bilingual (English & Spanish) kiosk interfaces and promotional materials. Some of the program's start-up grant money was also set aside to subsidize up to 50% of qualified low-income applicants' memberships.[47]

5.6: Toronto, ON

BIXI Toronto has also partnered with their local housing authority to bring bike-sharing to low-income communities, though to a lesser extent than Denver. BIXI cooperated with a housing developer that was building a mixed-income housing development in the city. BIXI placed a bike-share station at the project site and the developer and housing authority gave away free memberships to all interested residents. About 50 of those memberships have been activated, but due to the mixed income nature of the development, it is impossible for BIXI to tell if the new members were from the subsidized or market-rate units.[48]

5.7: Washington, DC

Washington DC's District Department of Transportation (DDOT) forged a partnership with Bank On DC, a collaboration between DC government, financial institutions, and non-profits to provide access to financial services and products to unbanked and under-banked households. In return for opening a bank account through the District Government Employees Federal Credit Union or United Bank, one can receive a $25 discount on the full $75 annual membership fee for Capital Bike Share. Bank On DC's banking partners are very flexible about an applicant's banking and credit history. Virtually anyone can open a bank account and take advantage of the discounted bike share membership. As of June 15, 3 people had participated in the program since its launch 6 months prior.[49]

I pointed out to my Washington interviewee, Josh Moskowitz, that the partners of Bank On DC include a number of banks and local community development corporations (CDCs). I asked him if there was ever any discussion to get these partners to sponsor Capital BikeShare memberships, to help hedge against the risk of losing bikes from people who remain unbanked. He explained that arrangements like these were considered and discussed. Nothing ever panned out because the root issue remains to be that of liability for the bikes. Someone needs to put up some sort of collateral to be able to use the bikes. As of now, that collateral is a credit or debit card. He expressed agreement that this would be

[47] (Diana, 2012)
[48] (Wheldrake, 2012)
[49] (Moskowitz, 2012)

the way to go, but the collateral issue is the major barrier. He said that inevitably banks are not interested in sponsoring bike share memberships; they are interested in gaining more customers.

Washington DC established another initiative with a group called Back on My Feet. Back on My Feet is a national non-profit organization that is dedicated to creating independence and self-sufficiency within the homeless and other underserved populations by engaging them in running as a means to build confidence, strength, and self-esteem. The "Next Steps" phase of the program gives participants access to educational, job training, and employment opportunities, as well as financial aid. As part of the Next Steps program in Washington DC, members are offered free memberships to Capital Bike Share. Back on My Feet covers all membership fees and the liability for the bicycles. To date, 1 person has taken advantage of this program.

5.8: Lessons from Car Share: Ithaca, NY & San Francisco, CA

Ithaca Car Share in Ithaca, New York has never required a credit card for membership; customers have always been able to pay in cash. The cash payment process had been cumbersome and geographically exclusive, however, because members were required to visit the Ithaca Car Share office in person to put down a $200 deposit before using a vehicle. My interviewee in Ithaca explained that this was geographically exclusive because their office is located at the top of a hill near the Cornell University campus, far from the low-income communities who live in the flats of the city.[50]

To streamline the cash payment process and reach more low-income residents the organization formed a partnership with the Greater Ithaca Activities Center (GIAC), a city program that does community work with primarily the African-American community, kids after school activities, and senior activities; and Alternatives Federal Credit Union which is located downtown close to GIAC. GIAC serves as a familiar face for area residents to go to with questions about car share and fill out applications. At Alternatives, Ithaca Car Share set up an account with special car share deposit slips that customers can use to make walk-up cash payments. To date, approximately 50 to 60 people have signed up for Ithaca Car Share through the GIAC partnership. Approximately 35 GIAC-linked customers are currently enrolled. Five to six current members are using the credit union cash payment system.

[50] (Cook, 2012)

San Francisco's City CarShare service is a non-profit entity that has been operating in the Bay Area since 2001. City CarShare has not conceived a workaround for the credit card requirement, but they have established a program that increases access to cars to low-income households. The Community Share program is geared toward low-income Bay Area residents who are eligible for housing assistance benefits. City CarShare partners with several affordable housing agencies who in turn refer residents to the car sharing service. Eligible participants are entitled to reduced application and membership fees and lower hourly rates.[51]

5.9: Challenges Beyond the Credit Card Requirement

Aside from the credit card requirement, many of my interviewees expressed that there are other barriers to low-income populations' participation in bike share. One of my Boston contacts, Jessica Robertson of the Metropolitan Area Planning Council, explained that chiefly, there is a perception problem about cycling that leads to very little interest or ridership in general. The low income communities in Boston are not seeing high levels of cycling period, whether it is on bike share or privately owned bikes. Robertson explained that bike commuting and biking for longer distances is not popular in lower income neighborhoods. There, bikes are used more for riding to friend's house or the local park. People use bikes to take short trips around their neighborhood. For getting downtown the norm is to use transit. It does not occur to folks to hop on a bike in a low-income neighborhood like Dudley Square and ride it downtown even though it takes a third of the time it would by transit.[52]

In the low-income neighborhoods, cycling is perceived as something for kids or something to do for fun. It is not considered a serious mode of transportation for running errands and getting to school or work. Educating communities about the benefits of cycling and garnering more interest in it in general is necessary to get lower income people participating in bike share. Robertson anticipates that the city will need efforts from bicycling ambassadors, champions of the Hubway program to go out into the neighborhoods and make contact with the real on-the-ground social networks of schools and churches to educate people about cycling and make them want to use Hubway.[53]

With data in hand that showed the stations in low-income neighborhoods were the lowest utilized in Boston, BPHC officials held a series of partner meetings to discuss challenges. Included at those

[51] (Nguyen, 2012)
[52] (Robertson, 2012)
[53] Ibid.

meetings were the Boston Housing Authority, universities, bike advocacy organizations, small business owners, and non-profit community organizations. De La Rosa cited the top issues discussed as: 1) concern of overage fees for using bikes past the 30 minute free period, 2) misinformation about a deposit being required to use bikes as an annual member (only casual members have a hold placed on their card), 3) public perception that you need a computer to sign up, though it is possible to enroll on the phone, and 4) credit card requirement. Partner organization Madison Park Development Corporation proved especially effective by holding two membership drives that resulted in 80 new Hubway members.[54]

IT Director of Nice Ride Minnesota, Mitch Vars, commented that reaching the unbanked population is difficult primarily because of the electronic billing issue and that lost or stolen bikes is not a major concern. He cited a case of a bike that went missing for over a year until someone reported finding it in an alley completely undamaged. They need the electronic billing to be able to charge the fees. Unless fees are rapidly increasing the longer you use the bikes the system would break down.[55]

Aside from the fee structure issue, Vars echoed Robertson's sentiments that there is little demand for bike share in the low income and unbanked communities. Nice Ride is apparently having a hard time giving away free memberships in low-income communities. Vars attributes this to a different attitude about cycling in these communities. There, he says, cycling is considered as something just for kids or for people who can't afford a car. He said that only once have they been approached by someone interested in membership who didn't have a bank account. Ultimately it was found that he did have a bank account and that he just needed to be convinced to get a debit card from his bank so that he could enroll. That individual is one of Nice Ride's biggest users now.[56]

Even if there is a strong demand for bike-sharing in a city's low-income communities, there may not be bikes there to serve them. I heard from a number of my interviewees that bike-share stations are often not in the right locations to serve low-income or unbanked users. Most North American bike-share programs are relatively young, and to this point have been primarily concentrating on developing a sustainable system centered around their respective central business district where high population and employment densities drive demand. As the fledgling bike-share systems are able to stand on their own, cities are starting to expand outward from downtown. Boston is adding 11

[54] (De La Rosa, 2012)
[55] (Vars, 2012)
[56] Ibid.

stations in 2012, including some in low-income neighborhoods, as well as expanding into the neighboring municipalities of Brookline, Cambridge, and Somerville.[57]

Most of the bike-share representatives I spoke to work for programs that were kick started with federal grant money but now cover operating expenses from a combination of membership fees and sponsorship deals. Bike-share programs across North America seem to be under pressure to maintain a sustainable business model without burdening the local taxpayers to foot the bill. For instance, Boston's Hubway system is underwritten by New Balance shoes and New York City's forthcoming Citi Bikes program is sponsored by Citibank. To help cover the cost of outreach, education, and membership sponsorship for low-income and unbanked communities in the Twin Cities, Nice Ride partnered with Target. Target purchased 600 one year memberships that were given to local non-profits to be distributed through the aforementioned process explained in section 5.3.[58]

[57] (Robertson, 2012)
[58] (Cameron, 2012)

6: CONCLUSIONS AND RECOMMENDATIONS FOR CHICAGO

With this report I have reviewed the evolution of bike-sharing and described its current state including Chicago's plans for bike-share, presented the major research and data on the unbanked, analyzed the estimates of Chicago's unbanked population, and presented best practices in bike-share unbanked outreach based on a series of interviews with planning professionals around the US and Canada. The purpose of this paper was to compile this knowledge for the benefit of Chicago's bicycle planners to help provide a framework for ensuring unbanked Chicagoans have the opportunity to use bike-sharing. In this section I will draw conclusions from the literature review, analysis, and best practices research to offer some recommendations that could be applied in Chicago.

Planning and implementing a bike-share system is a considerable challenge for a North American city to undertake. The concept is relatively new and few cities have the underlying cycling culture or infrastructure to support one. In the cities where bike-share programs have been established in the United States, planners are focused on keeping them afloat operationally and financially. Extending outreach to unbanked and low-income communities has largely taken a back seat to the day-to-day concerns of getting a bike-share system off the ground.

6.1: Transportation Equity Issue – Chicagoans should be able to become bike-share members whether they have bank accounts or not

It is generally agreed upon that not having a bank account puts a household at a disadvantage. Low-income households who patronize alternative financial services institutions spend disproportionate amounts in fees for conducting transactions like cashing checks, paying bills, or sending money overseas. Without a savings account, one has little incentive to build their personal savings to a point to be able to access money in an emergency. By not having access to credit, many households are shut out from homeownership. Being unbanked hinders an individual's or family's financial stability for many reasons and it is certainly a worthy cause to promote financial literacy and encourage people to open bank accounts. However, a city department of transportation's first priority is to provide transportation infrastructure that is accessible to all residents. Bike-sharing is an innovative, flexible, low-cost complement to public transportation that can be especially beneficial to low-income residents. In the interest of transportation equity, all Chicagoans should be able to become bike-share members whether they have a bank account or not.

6.2: Form inter-agency partnerships to circumvent the credit card requirement through alternative credit worthiness measures

As mentioned before, an unbanked person's lack of credit disqualifies him/her from a number of opportunities including loans for homeownership, purchasing a car, getting an education, etc. However, to extend bike-sharing to the unbanked requires us to re-think the concrete definition of credit. Many of the unbanked receive some sort of public assistance. As a result of this, they exist in a government system of some sort. Instead of depending on a credit score, bike-share operators can assess an individual's credit-worthiness based on their ability to pay bills or rent. Denver Bikesharing's partnership with the Denver Housing Authority described in Section 5.2 is a prime example of the type of inter-agency agreement that can be applied in virtually any city. As new affordable housing developments are being planned, CDOT should proactively reach agreements with the Chicago Housing Authority and developers to have bike-share stations placed on the property. There is room for future research to estimate the number of unbanked households who live in public housing or receive assistance of some sort.

6.3: Invest in an earnest outreach/marketing/education campaign to increase knowledge of and demand for cycling in low-income communities

Several of the planning professionals interviewed for this report commented that in the low-income neighborhoods in their cities there is currently little interest or demand for bike-sharing or cycling in general. Review of two programs' member surveys revealed that the early adopters to bike-share tend to be young, white, employed males with at least a bachelor's degree. These planners explained that their city bike programs and bike-share operators have made concerted efforts to reach out to the low-income communities in their cities, but hinted that there is still much room for improvement.

Chicago already has an excellent system in place in the form of the CDOT's Bicycle Ambassadors that can be leveraged to educate residents about bike-sharing. A distinct challenge of the Bicycle Ambassadors should be to go into the low-income communities as champions of bike-sharing and influence residents through the real, on-the-ground social networks they trust such as churches and schools.

Grassroots organizations of minority cycling enthusiasts have also started to develop in Chicago and elsewhere. Groups such as Red Bike and Green, The Pioneers, and The Chicago Cruisers should be engaged as partners to build interest and demand for bike-sharing. Red Bike and Green is a collective of Black urban cyclists that seeks to improve the mental and physical health of African Americans by cultivating a relevant and sustainable Black bike culture. The Pioneers and The Chicago Cruisers are two other grassroots cycling clubs from Chatham and Humboldt Park respectively.

Effective outreach to minority communities is especially important as bicycle facilities have often been considered harbingers of gentrification in cities around the US even in bicycle-mad Portland, Oregon.[59] A forthcoming paper by Adrian Lipscombe at the University of Texas aims to research active transportation choices, intervention, and health disparities in African American women with particular attention given to African American women's perception of cycling. The study will employ a hand-mapping exercise with 20 to 30 women that takes into account each participant's definition of her neighborhood. Through this exercise, participants will identify nodes within a two-mile radius of their home. Next, the participants will attend a cycling safety course in which instructors will lead educational rides to the nodes identified in the hand-mapping exercise. Participants will be lent bicycles equipped with GPS for thirty days, and at the end of the study will conduct a second hand-mapping exercise so researchers can observe changes in perception of barriers to cycling.[60]

6.4: Seek private sector partnership to mitigate risk and burden on taxpayers

Detractors of any government initiative like to point at how much taxpayer money it is spending and declare it a boondoggle. The best way to deflect such criticisms is to develop a sustainable business model that can stay fiscally solvent without forcing taxpayers to foot the bill. Nice Ride Minnesota's partnership with Target is a great example of a case in which corporate sponsorship was used to serve the community, in this case paying for bike-share memberships for low-income residents. CDOT has already issued an RFP seeking a contractor to develop a marketing plan for bike-share in Chicago. If done tastefully, on-bike advertising and naming rights can be used to defray the cost to Chicago taxpayers.

[59] (Goodyear, 2011)
[60] (Lipscombe)

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