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# Data Point:

# The Geography of Credit Invisibility

The Bureau of Consumer Financial Protection's Office of Research



This is another in an occasional series of publications from the Bureau of Consumer Financial Protection's Office of Research. These publications are intended to further the Bureau's objective of providing an evidence-based perspective on consumer financial markets, consumer behavior, and regulations to inform the public discourse. See 12 U.S.C. §5493(d).<sup>1</sup>

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# 1. Introduction

Creditworthy consumers can face difficulties accessing credit if they lack a credit record that is treated as “scorable” by widely used credit scoring models. These consumers include those who are “credit invisible,” meaning that they do not have a credit record maintained by one of the three nationwide consumer reporting agencies (NCRAs). They also include those that have a credit record that contains either too little information (“insufficient unscorable”) or information that is deemed too old to be reliable (“stale unscorable”), though the exact definition of what makes a record insufficient or stale unscorable varies from one credit scoring model to another.

The Bureau published two previous *Data Points* about consumers with limited credit histories. The first, *Credit Invisibles*, compared data on the U.S. population from the Bureau of the Census with a nationally representative sample of de-identified credit records from one of the three NCRAs to estimate the number and demographic characteristics of consumers who were credit invisible or had an unscorable credit record. The second, *Becoming Credit Visible*, explored the ways in which consumers first establish a credit record and thus transition out of credit invisibility to help better understand how many consumers are able to make this transition successfully while others have significant difficulty doing so.<sup>2</sup>

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<sup>2</sup> The two *Data Points* referenced in this paragraph are Brevoort, Grimm, and Kambara (2015) and Brevoort and Kambara (2017). This report uses the same data used in the previous reports. For information about how the data were constructed, refer to the data sections of the previous reports.

This study builds on the Bureau’s earlier work and examines the relationship between geography and credit invisibility. The importance of geography in accessing credit has been a long-standing concern for policymakers, going at least as far back as early efforts to combat redlining. In recent years, additional interest has been paid to the problems faced by people in “credit deserts,” which generally are defined as areas with little access to traditional sources of credit. Because credit deserts have limited options for accessing credit, residing in those areas may inhibit the ability of consumers to establish an NCRA credit record. If so, the incidence of credit invisibility should be higher in credit deserts than in areas with better access to traditional credit.

This study examines geographic patterns in the incidence of credit invisibility to assess the extent to which where one resides is correlated with one’s likelihood of remaining credit invisible. While determining the underlying factors that cause sustained credit invisibility is difficult and beyond the scope of this study, highlighting geographic variation in credit invisibility can aid policymakers and advance the conversation around potential causes and solutions.

## 2. Credit Deserts

While the term “credit desert” is widely used, a consensus definition does not exist. Frequently, the term is used to describe geographic areas with limited access to traditional financial service providers and, often, with easy access to alternative financial service providers, such as payday lenders or pawnshops. Nevertheless, the few studies that have attempted to delineate credit deserts have generally focused on identifying those areas where credit usage is low or where limited credit history is relatively common.<sup>3</sup> While low credit usage may be correlated with restricted credit access, the two concepts are not equivalent and using areas with a high incidence of credit invisibility to identify a credit desert can be problematic.

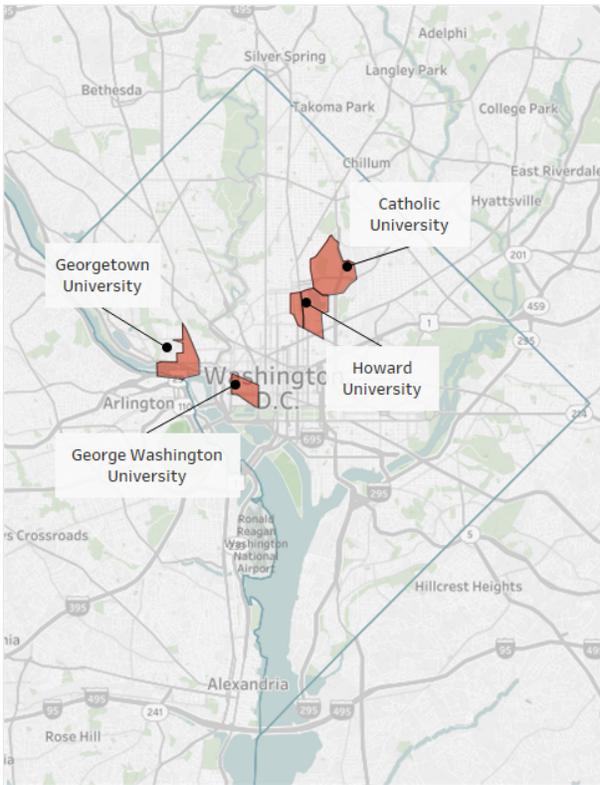
For example, consider Panel (a) of Figure 1, which shows the five Census tracts in Washington, DC that have the highest incidence of credit invisibility. If one were to attribute high incidences of credit invisibility to the presence of a credit desert, one would conclude that credit deserts are mainly found on or near college campuses (at least in Washington, DC) as all five of these tracts either contain one of Washington’s universities or is adjacent to a tract containing a university. This is not a

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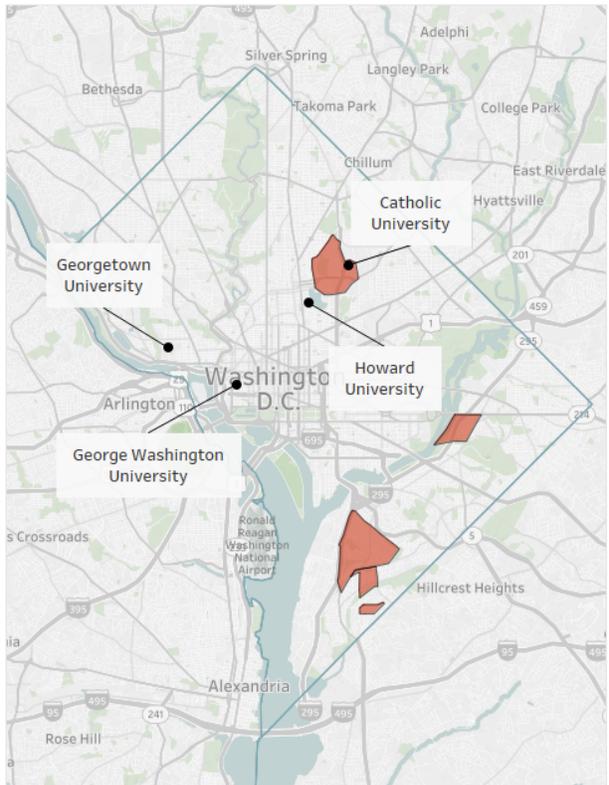
<sup>3</sup> For example, Lukongo and Miller (2017) reports the existence of a credit desert covering all of central Arkansas based on the number of personal loans per capita calculated from a survey conducted by the American Financial Services Association. Turner, Walker, and Wiermanski (2017) defines a “credit data desert” as Census tracts where more than 25 percent of credit records are unscorable; “credit deserts” are defined as areas with high concentrations of unscorable credit records, below-average credit scores, and alternative financial service providers, though a more specific definition is not provided. And Morgan, Pinkovskiy, and Perlman (2018) defines a related concept, a “banking desert,” as any Census tract that does not have a bank branch within 10 miles of its center.

**FIGURE 1: FIVE TRACTS WITH THE HIGHEST INCIDENCE OF CREDIT INVISIBILITY IN WASHINGTON, DC**

**(a) All adults**



**(b) Adults 25 and older**



coincidence. As shown in the Bureau's *Credit Invisibles Data Point*, almost 40 percent of credit invisible consumers are younger than 25. Therefore tracts near universities, or containing other forms of group quarters (such as on-base military housing) that cause large concentrations of young adults to live in close proximity, will tend to have high rates of credit invisibility as a result.

While consumers younger than 25 make up a disproportionate share of credit invisibles, credit invisibility appears to be less of a barrier to credit access for these consumers. The vast majority of consumers do not have a credit record when they turn 18 and yet the incidence of credit invisibility among 25-29 year olds is less than 9 percent. This suggests that over 90 percent of consumers transition out of credit invisibility by their mid-to-late 20s. In *Becoming Credit Visible*, the Bureau showed that about one in three consumers who made the transition before turning 25 did so by opening a credit card<sup>4</sup> and another 20 percent did so using a student loan. In most cases, these loans were taken out without the help of a coborrower, indicating that these consumers made the transition by themselves. For most young people, credit invisibility appears to be a condition that they overcome and not an insurmountable barrier to credit access.

To focus on the population that appears to experience more difficulty establishing a credit history, those for whom credit invisibility seems to be a persistent problem, this study focuses on the incidence of credit invisibility among people aged 25 and older. By excluding the young, for whom credit invisibility appears to be predominantly transitory, this metric should better identify those geographic areas where credit access might be more limited. This is demonstrated in Panel (b) of Figure 1, which shows the location of the five tracts with the highest incidence of credit invisibility based on the adult population 25 and older. This method identifies tracts that are mostly in the southeast of Washington, DC, where incomes tend to be lower than they are in the northwest.<sup>5</sup> Additionally, using bank branch location information from the Federal Deposit Insurance Corporation's Summary of Deposits

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<sup>4</sup> About 98 percent of which were unsecured credit cards.

<sup>5</sup> The one Census tract that is highlighted in both maps is tract number 23.02. The high incidence of credit invisibility in this tract is driven by a large number of consumers aged 75 or older, a segment of the population for whom the incidence of credit invisibility is also high. This likely reflects the presence of the Armed Forces Retirement Home. For a more complete discussion of the role of group quarters in credit invisibility, see Brevoort, Grimm, and Kambara (2016).

data, the tracts identified with the highest incidence of credit invisibles for the entire adult population had an average of 11.6 bank branches located within 1-mile of the center of the tract. The tracts identified with the highest incidence of credit invisibles for the adult population 25 and older (as shown in Panel (b) of Figure 1) had an average of 3.4 branches located within 1-mile of the center of the tracts. This suggests that the incidence of credit invisibility among adults 25 and older may be higher for tracts where access to traditional sources of credit is more limited.

### 3. Credit Invisibility in Rural and Urban Areas

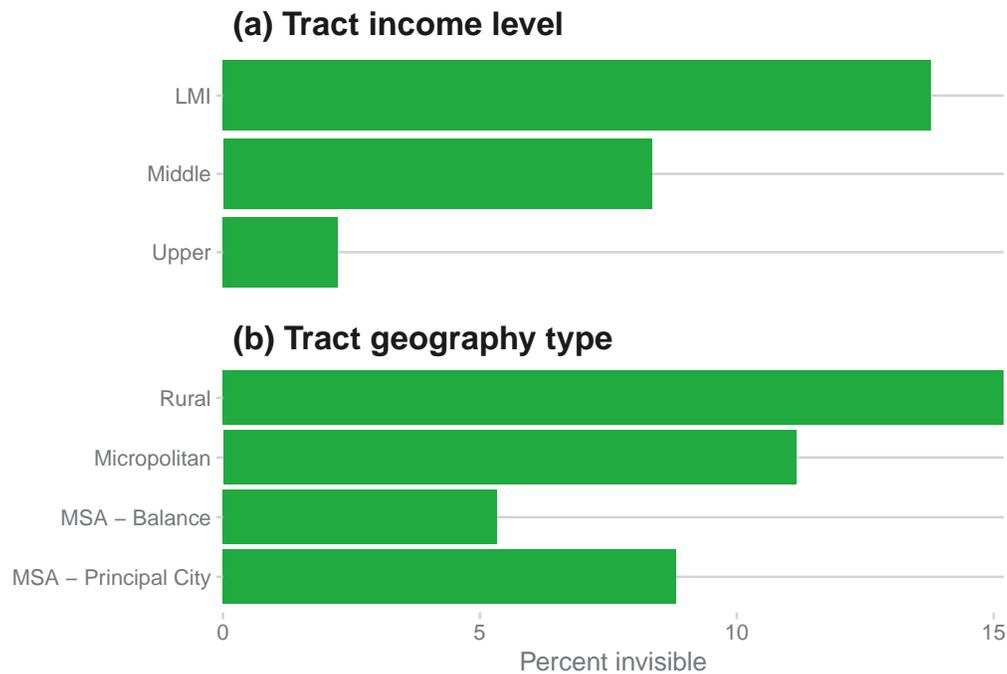
The Bureau's *Credit Invisibles Data Point* showed that the incidence of credit invisibility was significantly higher in lower-income neighborhoods.<sup>6</sup> In particular, almost 30 percent of adults in low-income Census tracts were credit invisible, a rate about 8 times higher than that in upper-income Census tracts. While the overall incidences of credit invisibility are lower when restricted to the adults 25 and older, a similar pattern across income levels emerges as shown in Panel (a) of Figure 2.

While the Bureau's previous study found that neighborhood income level is closely related to the incidence of credit invisibility, other geographic characteristics appear related as well. One of these factors is the extent to which the neighborhood is in a more urban area. To highlight the differences across these areas, each tract was assigned to a geographic category based upon whether it was within a Core Based Statistical Area (CBSA) as defined by the Office of Management and Budget. Tracts located within Metropolitan Statistical Areas (MSAs) were categorized based on

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<sup>6</sup> Consistent with the earlier *Data Point*: Relative income is defined as the ratio between the median household income of the tract and the median household income of the surrounding area, which is the Metropolitan Statistical Area (MSA) for urban tracts or the county for rural tracts. Following the definitions used in the Community Reinvestment Act, this study characterizes each tract as low, moderate, middle, or upper income, depending on whether the tract's relative income is below 50 percent, between 50 and 80 percent, between 80 and 120 percent, or above 120 percent. Because of the relatively low number of low income tracts (particularly within rural areas), the analysis combines all tracts with relative incomes of below 80 percent into a low-to-moderate income (LMI) category.

**FIGURE 2:** INCIDENCE OF CREDIT INVISIBILITY BY TRACT INCOME AND GEOGRAPHY (ADULTS 25 AND OLDER)

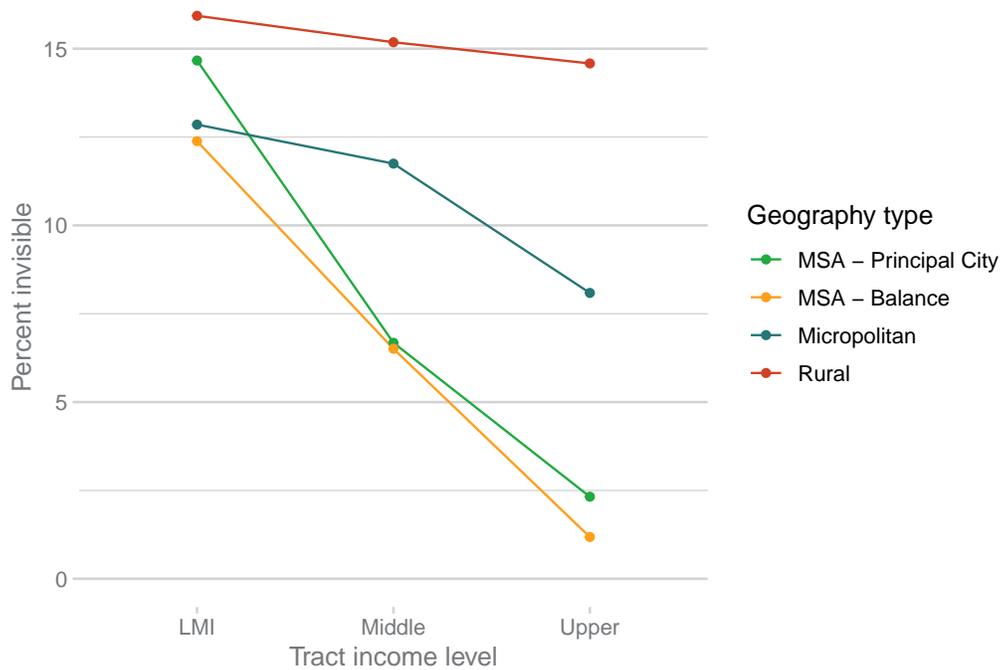


whether the tract was part of the MSA’s principal city (MSA - Principal City) or was outside of the principal city, which we refer to as the balance area (MSA - Balance). The remaining tracts were categorized as “Micropolitan” if they are within a Micropolitan Statistical Area or “Rural” otherwise. The incidence of credit invisibility in each of these four areas is shown in Panel (b) of Figure 2.

Rural areas have the highest incidence of credit invisibility among the four geographic areas. The next highest incidence is in Micropolitan Statistical Areas. Credit invisibility does not invariably decrease with urbanization, however. Within MSAs, the more urban principal cities have a higher percentage of adults 25 and older who are credit invisible than the more suburban balance areas of the MSAs. As such, credit invisibility appears to be more common in rural areas; however, because of the higher populations within MSAs, over two-thirds of adults 25 and older who are credit invisible reside in MSAs.

Within each of these geographic areas, there are significant differences in the incidence of credit invisibility. Figure 3 shows the incidence of credit invisibility in each of the four geographic areas, broken down by the relative income level of the

**FIGURE 3: INCIDENCE OF CREDIT INVISIBILITY BY TRACT INCOME LEVEL AND GEOGRAPHY (ADULTS 25 AND OLDER)**



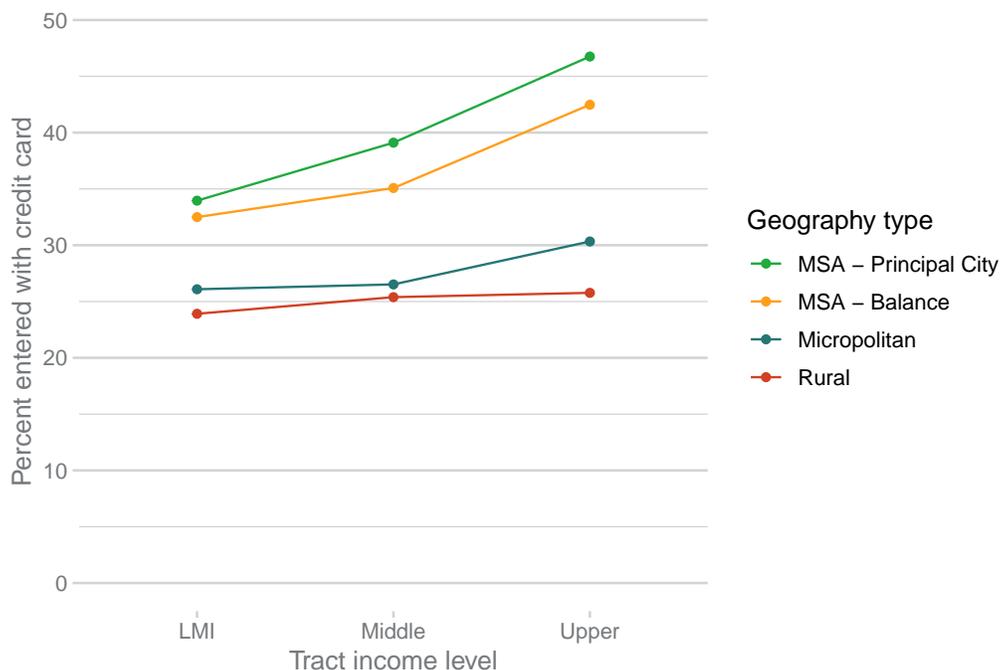
tract. Within MSAs, there is a strong relationship between neighborhood income and the incidence of credit invisibility. Low-to-moderate income (LMI) neighborhoods have higher concentrations of credit-invisible adults 25 and older. In contrast, the relationship between income and credit invisibility is much weaker in rural areas, where credit invisibility is higher even if the tract's relative income level is higher. Specifically, upper-income tracts in rural areas have concentrations of credit invisibility that are comparable to those of LMI tracts in the principal cities of MSAs and higher than those of all tracts in micropolitan areas or suburban areas of MSAs.

## 4. Entry Products by Geography

One way of shedding light on the underlying reasons why credit invisibility is more persistent in rural and lower-income urban areas is to look at differences in the means by which consumers in these locations first establish their credit histories. In *Becoming Credit Visible*, a credit card was the predominant “entry product” (that is, the first reported item that established their credit record) consumers used to transition out of credit invisibility. This section explores how the propensity to use credit cards as entry products varies among geographic areas. Because this study focuses on the incidence of credit invisibility among adults 25 and older, this section analyzes the behavior of consumers who were able to make the transition prior to turning 25 and thus avoided becoming a credit-invisible older adult.

Figure 4 shows the share of consumers younger than 25 whose entry product was a credit card. These percentages represent shares of consumers who *successfully transitioned out of credit invisibility* and not the share of the adult population. As a result, the lower rate outside of MSAs is not attributable to fewer consumers able to transition out of credit invisibility in those areas. Instead, these patterns are consistent with consumers in rural and LMI areas using credit cards as an entry product less often than consumers within MSAs. There are two notable patterns shown in the graph. First, the upward-sloping relationship between neighborhood income and the likelihood of establishing a credit card is much stronger in MSAs than it is in Micropolitan or rural areas. In contrast, outside of MSAs, the relationship is flatter, much like the overall relationship between the incidence of

**FIGURE 4:** SHARE OF PEOPLE UNDER 25 WHO TRANSITIONED OUT OF CREDIT INVISIBILITY VIA A CREDIT CARD, BY TRACT INCOME LEVEL AND GEOGRAPHY



credit invisibility and neighborhood income in these areas. Second, the overall rate of using a credit card as an entry product is much lower (about 10 percentage points) outside of MSAs than compared to within MSAs.

The significant variation in credit card use as an entry product across geographic areas might be surprising. Credit cards are often marketed directly to consumers through the mail, television, or online and do not have to be applied for in person. This suggests that credit cards should be as accessible to people in rural areas as they are in MSAs. Nevertheless, the *2015 National Survey of Unbanked and Underbanked Households* from the Federal Deposit Insurance Corporation (FDIC) suggests that consumer credit card use may be closely tied to other services that banks provide locally. According to those data, only 7 percent of unbanked consumers, defined as those without a checking or savings account, report having had a credit card in the past 12 months. This is significantly lower than the 58 percent of banked consumers with credit cards.<sup>7</sup>

<sup>7</sup> Similar rates are observed when the sample is restricted to respondents younger than 25.

There are many potential reasons why people who do not use banking services are less likely to hold credit cards, such as lower income or comfort with using financial services.<sup>8</sup> Nevertheless, it is possible that when credit card lenders make decisions about credit-invisible applicants, they may be more willing to extend credit to those with whom they have an existing deposit account relationship. If so, the problem of credit invisibility may be closely related to a lack of access to traditional banking services. This report proceeds to examine the relationship between credit invisibility and bank proximity in the next section.

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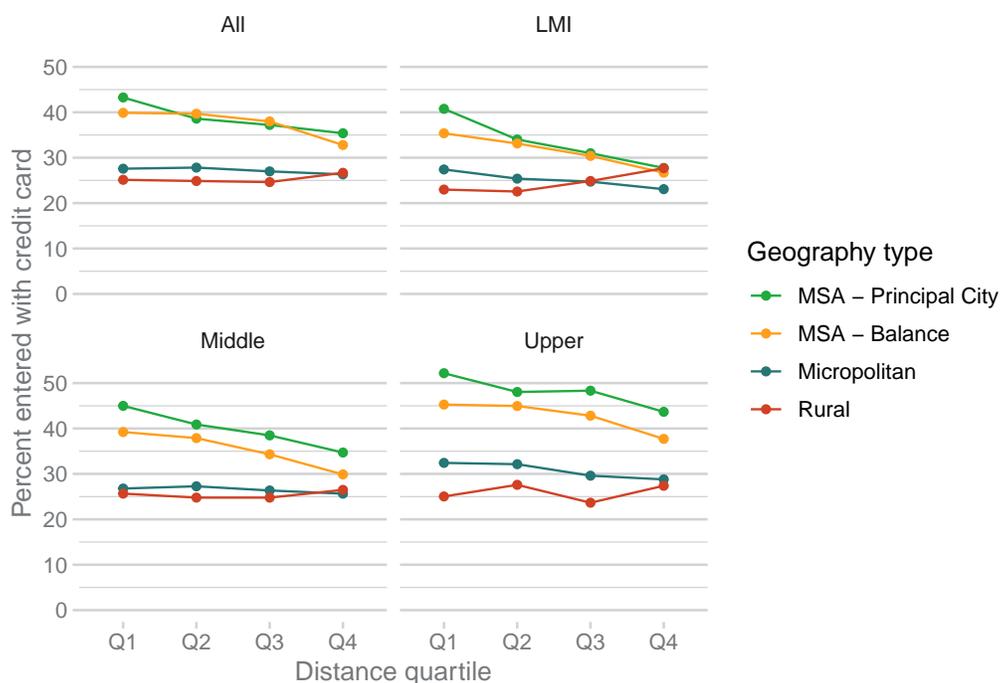
<sup>8</sup> Figure 3.8 in Burhouse et al. (2016) shows the top three reasons consumers do not have a bank account are “do not have enough money to keep in account”, “avoiding bank gives more privacy”, and “don’t trust banks”.

## 5. Credit Invisibility and the Proximity of Depository Institutions

If access to traditional banking services matters for credit invisibility, then the high levels of credit invisibility in rural areas and the lower-income areas of MSAs might reflect less ready access to banking services. Such a result would be consistent with the idea of credit deserts—geographic areas with little or no access to traditional lenders—being a cause of credit invisibility.

One measure of the availability of banking services is proximity to banking institutions. This study analyzes whether the proximity to banks is a factor in the frequency with which people use credit cards as their entry products or in the incidence of credit invisibility. To do so, this study determined the bank branch that was closest to the center of each Census tract using bank branch locations from the FDIC's Summary of Deposits data. The proximity to traditional financial institutions was calculated as the distance from the center of a given consumer's tract to the closest branch. Because there may be differences between urban and rural areas in terms of the time it takes to travel the same distance, distance

**FIGURE 5:** PERCENTAGE OF CONSUMERS UNDER 25 TRANSITIONING OUT OF CREDIT INVISIBILITY FOR WHOM CREDIT CARDS WERE THEIR ENTRY PRODUCT BY GEOGRAPHY, DISTANCE QUARTILE, AND INCOME



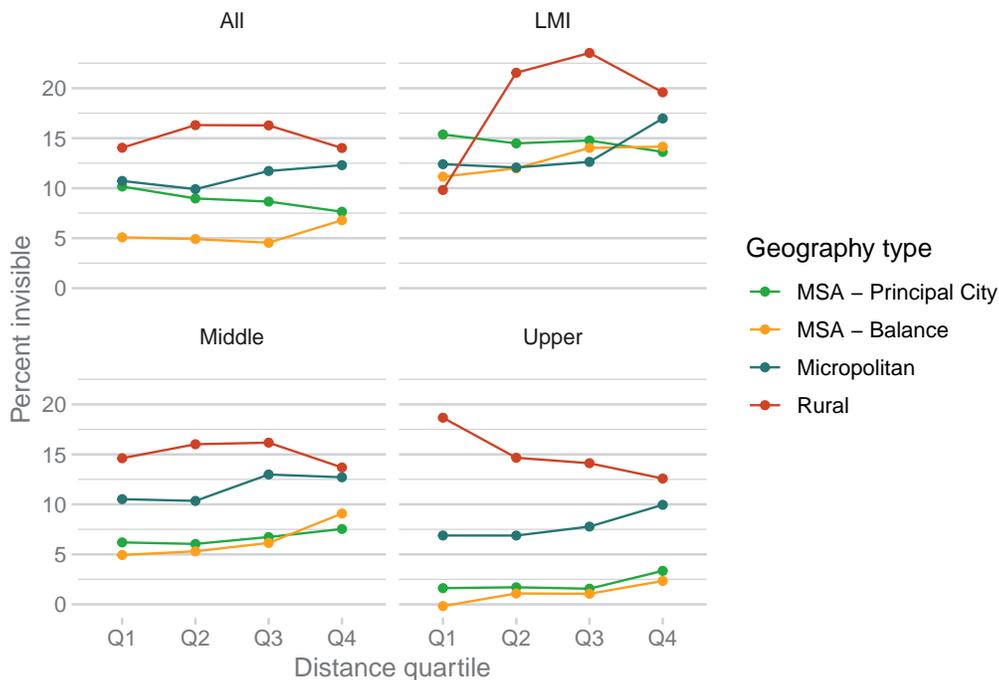
quartiles were used to make results more comparable across geographies. Distance quartiles were calculated separately for each type of geographic area.<sup>9</sup>

Figure 5 shows the share of consumers under 25 transitioning out of credit invisibility who used credit cards as their entry product in each distance quartile by geography and income. If proximity to a depository was an important factor in obtaining a credit card, then one might expect the use of credit cards as an entry product to be higher among consumers for whom the distance to the nearest branch is shorter.<sup>10</sup> Among people in MSAs who transitioned out of credit invisibility before turning 25, the use of credit cards as an entry product does decline with distance.

<sup>9</sup> For example, within the principal city of MSAs, distances between the center of the tract and the nearest branch were shorter than for other geographies. The 25th, 50th, and 75th percentiles of distance in principal cities were 0.3, 0.6, and 0.9 miles, respectively. For portions of MSAs outside of the principal cities, those percentiles were 0.5, 0.9, and 2 miles; in Micropolitan areas they were 0.9, 2.4, and 4.8 miles; and in rural areas they were 2, 4.2, and 6.9 miles.

<sup>10</sup> The distance used to determine a consumer's quartile is based on the Census tract in which their residence is located. It is possible that a consumer may work farther than a mile from their home census tract, and the census tract of their workplace is closer to a bank branch than their house. This scenario cannot be accounted for with the given data.

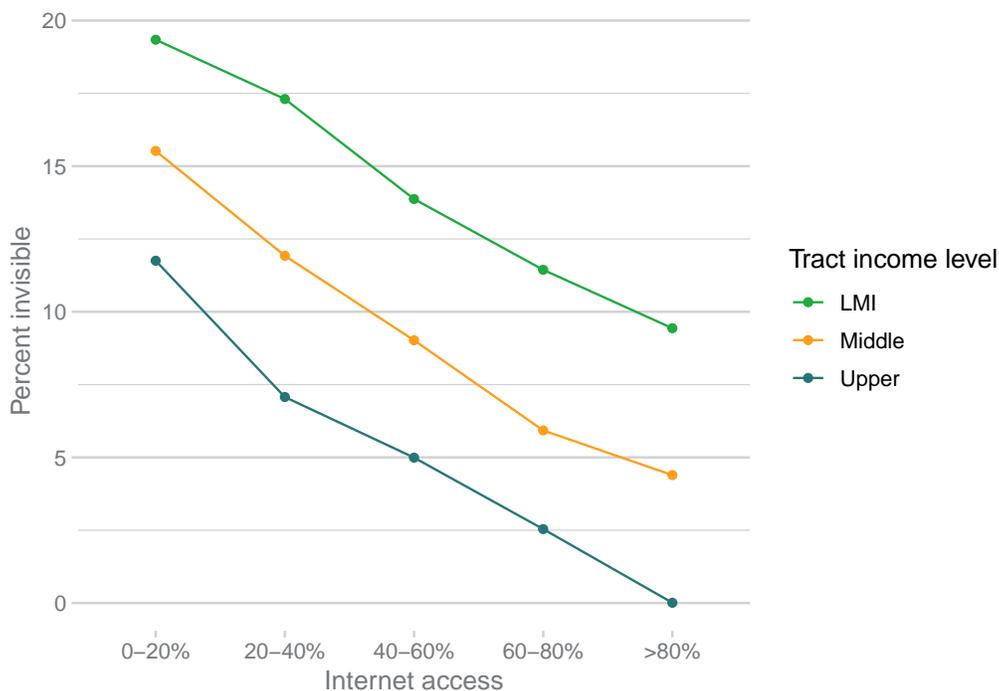
**FIGURE 6:** INCIDENCE OF CREDIT INVISIBILITY BY DISTANCE TO NEAREST BANK AND GEOGRAPHY (ADULTS 25 AND OLDER)



However, in Micropolitan and rural areas, there appears to be no such relationship. In the remaining three panels of Figure 5, graphs of the same relationship are shown based on the data for each tract’s relative income level. These graphs confirm that—within MSAs—residing farther away from a bank branch is associated with less use of credit cards as an entry product.

Figure 6 shows the relationship between the incidence of credit invisibility and branch distance among adults 25 and older. Like the previous figure, the upper-left panel shows the pattern across all tract relative income levels and the other three panels show the pattern for each income level separately. If proximity to financial institutions was an important factor in access to credit, the lines should be upward sloping, reflecting a higher incidence of credit invisibility at greater distance. Instead, there appears to be little relationship between distance to the nearest

**FIGURE 7:** INCIDENCE OF CREDIT INVISIBILITY BY RELATIVE TRACT INCOME LEVEL AND INTERNET ACCESS RATE (ADULTS 25 AND OLDER)



branch and the incidence of credit invisibility.<sup>11</sup> Similar patterns are observed for each relative income level.

These results provide little evidence that bank branch proximity is an important factor in explaining why consumers are credit invisible. Nevertheless, they are consistent with data from the FDIC’s *2015 National Survey of Unbanked and Underbanked Households* finding that proximity to a bank is one of the less common reasons that consumers remain unbanked. When respondents without checking or savings accounts were asked why they did not have an account, only 9 percent cited “inconvenient locations” as a reason and only 2 percent identified it as the main reason for not having an account. Other factors were cited as being much more

<sup>11</sup> Linear regressions of distance on the incidence of credit invisibility were also conducted for each geographic area. *MSA - Balance* was the only geographic area where the regression produced a positive and statistically significant (at the 1 percent level) coefficient on distance. In contrast, the regression for *MSA - Principal City* produced a negative coefficient that was statistically significant at the 0.1 percent level. These results provide little evidence of a consistent relationship between distance and the incidence of credit invisibility.

important, such as “not having enough money to keep in an account” and “a distrust of banks.”<sup>12</sup>

One factor that might reduce the importance of a nearby bank branch is easy access to the Internet. This is particularly true for credit cards, where applications tend to be made online.<sup>13</sup> The Federal Communication Commission’s *Internet Access Services Report* provides the percentage of households in each Census tract with high-speed internet. Using these data, Figure 7 shows that the incidence of credit invisibility is consistently higher in tracts where fewer households have high-speed internet, a pattern observed for all three tract income levels. While this relationship is not necessarily causal, credit invisibility is more prevalent in areas with less digital access to traditional financial service providers.

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<sup>12</sup> Responses to this and other questions in the FDIC’s *2015 National Survey of Unbanked and Underbanked Households* are provided by Burhouse et al. (2016).

<sup>13</sup> According to Mintel Comperemedia (2017), 70 percent of credit card applications are submitted online. The remaining applications are made via direct mail, in-person, or over the phone.

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