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Why Worry about Financial Exclusion?

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Should policymakers aim to expand access to bank accounts? When financial exclusion is due to frictions that prevent banking from operating efficiently, intervention may be justified. Applying simple economic principles, we highlight possible frictions that may give rise to inefficient exclusion in the United States, and we assess their importance using insights from data and the academic and policy literature.

Introduction

The Federal Deposit Insurance Corporation (FDIC) Survey of Household Use of Banking and Financial Services reports that 5.4 percent of US households were unbanked in 2019. This means that approximately 7.1 million households had neither a checking nor a savings account at a bank or credit union (FDIC, 2020).[1] Despite a decline since 2011, the unbanked rate in the United States is still higher than in most other developed countries (Demirgüç-Kunt et al., 2018).

The aim of this *Commentary* is to examine whether financial exclusion in the United States is a problem that needs addressing by policymakers. Does the existence of households without bank accounts justify intervention? After all, for most goods and services, policymakers do not generally intervene in markets to ensure that everyone can have access. On the other hand, there are sectors, such as those for healthcare and education, in which the government does intervene with an aim to maximize inclusion.

In this *Commentary*, we use economic principles to discuss when financial exclusion—defined here as lack of bank account ownership—can be seen as the outcome of an efficient market. We then study data and the existing academic and policy literature to assess whether frictions exist that prevent bank accounts from being allocated in an optimal way. Several studies suggest that such frictions do indeed exist in the United States, although there is little consensus in the literature.[2] But private market initiatives and new technologies may already be helping mitigate, if not eliminate, such frictions.

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A simple economic framework to analyze financial exclusion

We introduce a very simple framework to think about whether financial exclusion is economically "efficient" or "inefficient." By "inefficient," we mean a situation in which either a bank or customer—or both—does not agree to open an account even though society would benefit from the account's opening. When exclusion is efficient, society's total welfare cannot be improved by forcing a bank and customer to open or close an account. But when exclusion is inefficient, policy intervention in the market for bank accounts could be justified. We emphasize that our definition of efficiency is driven by a utilitarian approach, as is traditional in economics. As a consequence, we do not take into account normative considerations such as fairness or inequality, although such factors are important for society.

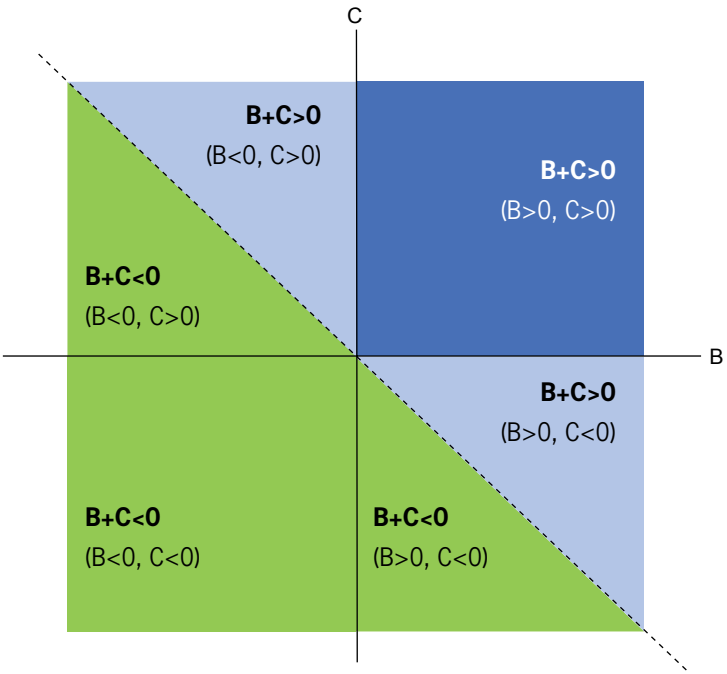
Suppose a customer approaches a bank to open an account. If the bank agrees to open it, the bank and the customer receive payoffs of B and C, respectively. Otherwise, both receive zero.[3] If both $B > 0$ and $C > 0$, it is in the two parties' mutual interest to open the account. And this transaction is good for society because total utility (that is, welfare) increases by $B + C > 0$. Conversely, if both $B < 0$ and $C < 0$, then it is in neither party's interest to open an account, and, since $B + C < 0$, that is also the best outcome for society. In this case, exclusion is efficient.

Now consider what happens when $B < 0 < B + C$. The customer wants to open the account, but the bank declines. This situation is inefficient exclusion because, since $B + C > 0$, the account would be beneficial for society. Fortunately, the market provides a solution: The bank can ask the customer to pay a fee, F, in exchange for an account. So long as $-B < F < C$, then both the bank and customer are happy with this arrangement. The customer obtains $C - F > 0$, the bank gets $B + F > 0$, and overall welfare increases by $B + C > 0$. Similarly, if $C < 0 < B + C$, then a negative fee can induce account opening; that is, the bank pays the customer to open the account, for example by providing cashback or free services. Figure 1 illustrates the idea.

In our simple framework, as long as the account is socially beneficial (that is, if $B + C > 0$), there is an arrangement in which the bank and customer agree to open the account. Under this condition, there is always an efficient outcome: An account is opened if and only if it benefits society. This insight implies a market solution: If the account is useful to the customer, she is willing to pay for it. Similarly, if the account benefits the bank, it is willing to pay the customer to open it. Within this ideal, there is not an obvious economic case for policy intervention.

However, our analysis so far assumes a frictionless market for banking services. This assumption may not be realistic. What happens when the market departs from a model of frictionless trade? In the remainder of this *Commentary*, we draw on academic and policy evidence to assess the importance of possible frictions that can lead to inefficient exclusion and a suboptimal allocation of banking services. Under these circumstances, the bank and customer might not agree to open an account even though society would be better off if they did. This situation could justify policy intervention.

Figure 1: Bank (B) and consumer (C) payoffs from opening a bank account



Note: A bank account increases welfare if $B + C > 0$ (light blue and dark blue areas) and decreases welfare if $B + C < 0$ (green area). In the light blue areas, a fee must be paid between the bank and customer in order to incentivize account opening.

Externalities

So far, we have assumed that the benefit to a society of an account relationship is the sum of the payoffs to the bank and customer. Now suppose the relationship has an impact on others, too. Using our framework, let us now assume some agents in society—other than the bank and customer—obtain a net payoff X from the account opening. This payoff is what we call an externality. Suppose that the total benefit of the account to the bank and customer is not high enough to incentivize opening (that is, $B + C < 0$), although society at large would benefit from it ($B + C + X > 0$). Then the account is not opened even though it would boost aggregate welfare. This is inefficient exclusion. Policymakers should be willing to subsidize either the bank or customer by as much as X in order to incentivize them to open an account. We give two examples of externalities that are likely to arise when bank accounts are opened: the ability to make electronic payments and opportunities to accumulate wealth and access credit.

Electronic money

A bank account provides a consumer not only with a safe and secure deposit account but also with access to a payment instrument in the form of electronic money. Payments are characterized by strong network externalities, meaning that each user's adoption payoff increases as more users join. If some potential users are excluded, then the network effects are not as strong as they might ideally be, making society worse off. For example, if some customers are forced to use cash while others use electronic money, then merchants will have to accept both, raising the costs of commerce.[4]

Access to electronic money is important because it allows participation in markets—for example, online shopping—that are not available using notes and coins. In other words, electronic money makes allocations feasible that are not otherwise possible. This is good for societal welfare. The consumer benefits directly from being able to participate in more markets because she now has more options when shopping. But society also benefits because more complete markets mean more economic activity, which can boost the economy as a whole (Lange, 1943).

The benefit of access to electronic money is particularly relevant in the United States, where unbanked individuals make considerable use of cash (Cole and Greene, 2017). According to the Federal Reserve Bank of Atlanta's Survey of Consumer Payment Choice, unbanked individuals used cash for 60 percent of their transactions in 2020. Across all consumers, that number was just 21 percent.[5] Network effects are again important here: If fewer consumers use a means of payment, then fewer merchants will be willing to accept it, a situation which, in turn, further disincentivizes its use (Rochet and Tirole, 2003; Gowrisankaran and Stavins, 2004). Additionally, if some individuals have no choice but to use cash, they may find they are unable to access certain parts of the economy (Tarlin, 2021).[6] In any case, evidence on the strength of network effects is mixed since cash payments remain cheaper to accept than cards for merchants in the United States (Hayashi, 2021).

Another benefit of bank account access is that it allows governments to pay benefits directly to individuals. Assuming government policy is good for the whole of society, facilitating it has positive externalities. Murphy (2021) describes how a lack of bank account access caused delays and costs for American households receiving government stimulus checks in 2020. For example, the use of paper checks meant recipients paid an estimated $66 million in cash checking fees. These costs and delays meant that people with low or no income, who are less likely to have bank accounts, may have benefited less from the program than they would have if they had had accounts.

It is important to point out that alternatives exist that allow access to electronic payments without the need for a bank account. For example, general purpose reloadable (GPR) prepaid cards branded with a major payment card network such as Visa, Mastercard, American Express, or Discover can be used anywhere the corresponding brand is accepted, including for online purchases. In fact, the US Treasury experimented with mailing out stimulus payments via a prepaid card rather than a paper check (Murphy, 2021). However, Hayashi, Hanson, and Maniff (2015) point out that high fees can actually make GPR cards more expensive than a bank account.[7]

Of course, there can also be drawbacks to using electronic money. For example, it may not preserve users' privacy as well as cash (Garratt and van Oordt, 2021). As long as electronic money is superior to cash for at least some transactions, it can be socially beneficial for customers to have access to affordable bank accounts. If so, there is a motivation for intervention by policymakers to promote financial inclusion.

Wealth accumulation and access to credit

Another example of an externality related to bank account access is the ability of a customer to boost her financial standing, for example, by facilitating saving and wealth accumulation. Ampudia and Ehrmann (2017) estimate that banked households in the United States have net wealth that is $42,000 higher than unbanked households with the same characteristics. They posit that a bank account allows a household to accumulate wealth, particularly in the form of home ownership. Wealth accumulation may benefit the household directly, but it also expands the tax base, creating positive spillovers for the rest of society.

Along these lines, Célerier and Matray (2019) find that the increase in financial inclusion induced by the Riegle-Neal Act led to banked households' accumulating more interest-bearing assets, investing more in durable assets, and becoming less likely to face financial difficulties. Stein and Yannelis (2020) study the impact of the Freedman's Savings Bank, which was created following the American Civil War to serve newly emancipated Black communities. Their analysis suggests substantial positive effects from financial inclusion even after controlling for selection: Families with accounts had higher income, real estate wealth, and business-ownership rates.

A bank account can also help a customer boost her access to credit. For example, a potential mortgage lender typically asks the customer to provide recent bank account statements. Without a bank account, it is difficult for the customer to show that she can manage her money well. This system allows lenders to be better informed about the quality of potential borrowers and leads to a better allocation of credit in society. Fitzpatrick (2015) shows that bank account access in the United Kingdom has a large, positive effect on credit card ownership, which in turn is related to increased consumption of household durable goods. Célerier and Matray (2019) also provide evidence that having a bank account leads to better access to credit.

Market power

A bank may be able to increase profits by exerting market power. It could do this by charging high fees for services and restricting the supply of account services. However, if the bank's profit-maximizing fee level is so high that some customers decide not to open bank accounts, then inefficient exclusion can result.

To illustrate this concept, we consider the framework described previously, but now with two customers: Xavier with $C = 1$, and Yvette with $C = 3$. In other words, Yvette derives more benefit from having an account than Xavier, so she is willing to pay a higher fee. Suppose the bank knows one customer has $C = 1$ and the other $C = 3$ but cannot tell which is which. This opacity means the bank cannot distinguish between customers and must charge them both the same fee.

Let us suppose that the bank is monopolistic and, for simplicity, $B = 0$. The policy that maximizes total welfare is for the bank to open accounts for both Xavier and Yvette, since $C > 0$ for both customers. Xavier's account contributes 1 to total welfare (since $B + C = 1$), and Yvette's contributes 3, for a total benefit to society of 4. The bank can achieve this while charging each customer any fee F satisfying $0 \leq F \leq 1$. For example, the bank can charge $F = 1$ and earn a total payoff of 2. But the bank can actually do better than this. If it charges $F = 3$, then only Yvette opens her account, and the bank earns a payoff of 3. In this case, Xavier is excluded from the financial system. This is inefficient, since total welfare is now only 3. In a competitive banking system, another bank might step in to offer Xavier an account, but if market power is strong enough to prevent this, society is made worse off.

For market power to lead to inefficient exclusion, two conditions must be satisfied. First, the bank must not be able to identify which customers have a high willingness to pay for an account (that is, high C). Otherwise, it would be able to engage in price discrimination and charge different fees to each customer.[8] Second, the customers' bargaining power must be weak; otherwise Xavier and Yvette could bargain fees down close to the bank's marginal cost (which is $B = 0$).

Empirical evidence supports the idea that market power does indeed affect access to bank accounts. For example, Célerier and Matray (2019) show that the Riegle-Neal Act of 1994—which removed many of the restrictions on opening bank branches across state lines in the United States—boosted competition between banks and led to an increase in financial inclusion. However, a more competitive banking sector can also mean more bank account closures. For example, Campbell, Martínez-Jerez, and Tufano (2012) find that involuntary bank account closures—that is, account closures that are not initiated by customers but, rather, initiated by banks as a consequence of fraudulent activities or unpaid fees—are higher in US counties with more intense competition by banks. This finding suggests that less market power leads to banks' providing accounts to less-profitable customers, implying greater financial inclusion. But it also means that riskier customers open accounts, so involuntary closure activity is higher.

Limited rationality

As pointed out by Prescott and Tatar (1999), opting out of a checking account is a rational choice for many individuals since maintaining a low-balance account can attract fees, for example, for an overdraft or breaching minimum-balance requirements. Similarly, it is rational for a bank to open and maintain a low-balance account only if the cost of servicing it is lower than the revenue generated (Berre, Blickle, and Chakrabarti, 2021). According to our definition, financial exclusion would be efficient in these cases. But when agents depart from perfect rationality, inefficient exclusion can occur.

Consider, for example, a situation in which opening an account would benefit society, but the customer underestimates the value of the benefit to her. Then she might decide not to open the account, resulting in inefficient exclusion. A similar situation can occur if the bank underestimates its profit from opening the account. Illustrating this in our simple framework, suppose $B + C > 0$, but the customer mistakenly believes she gets $\hat{C}$ from the account rather than C, where $\hat{C} < C$. If $B + \hat{C} < 0$, then there exists no fee (F) that would make both the bank and customer willing to open the account.

Why would the customer underestimate the value of a banking relationship? She might be unaware of the benefits a bank account can bring, especially in the long term. Or she may have had a bad prior experience with a bank. This problem can be difficult for a policymaker to detect because it is not obvious that a policymaker can know how much a customer values having a bank account better than that customer does herself. Financial education could provide a customer with the information she needs to better understand the benefits of having a bank account (for example, the FDIC's #GetBanked campaign).[9]

On the bank's side, it may miscalculate the profit a customer's account yields because of limitations in how risk is modeled. When a bank wishes to assess how desirable a prospective or existing customer is, it will typically look at that individual's banking history and demographic characteristics. But these modeling processes are not perfect. Campbell, Martínez-Jerez, and Tufano (2012) study the determinants of involuntary closures of US bank accounts. They find that such closures are less frequent in counties with a stronger presence of local banks. They suggest this difference in closure rates may occur because local banks better understand their customers' needs; that is, they

are better at modeling *B*.

There is also evidence that customers from racial and ethnic minorities are less likely to have a bank account than the average US customer. Figure 2 compares unbanked rates by race/ethnicity using data from the FDIC (2020). Black, Hispanic, American Indian and Alaska Native households all tend to have less access to bank accounts than the average US household.[10]

Yogo, Whitten, and Cox (2021) find that the effect of race/ethnicity on access to bank accounts disappears once income and zip codes are taken into account. Their data set consists of all tax filers during the period 1999–2018, but their analysis focuses on people who are 50–59 years old, so their results are specific to that age cohort. However, other studies suggest that race/ethnicity may be an important factor in banking access. There are, broadly, two possible reasons for this. The first is that banks may be less willing to provide account services to racial and ethnic minority customers. For example, Faber and Friedline (2020) find that Black and Hispanic communities face higher costs than white communities to open and maintain checking accounts, including minimum opening deposits, minimum balance requirements, regular maintenance or service fees, and overdraft fees. Within our framework, these higher costs suggest that the bank might underestimate the true value of *B*. We can think of these higher costs as a supply friction.

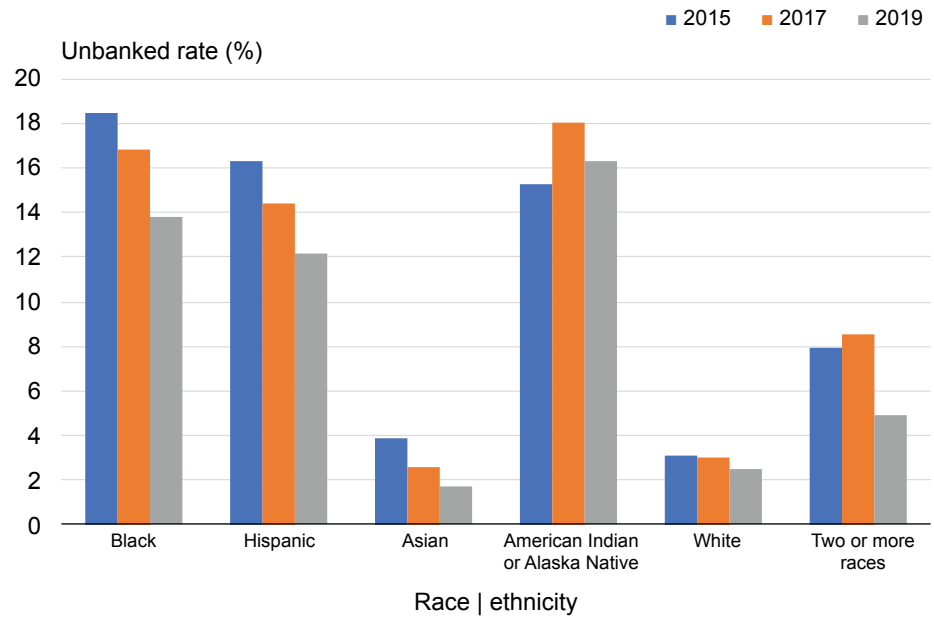
The second reason is that potential racial and ethnic minority customers may be less likely to apply for a bank account. They may have an impression that they will not be treated fairly (Armantier et al., 2021), perhaps because of historic ill treatment (Florant et al., 2020). This belief translates to the customer's underestimating the true value of *C*, so we can think of it as a demand friction.

Policy can help to alleviate these supply and demand frictions. For example, financial education can help individuals to better understand the benefits of having a bank account, and it can help bank staff to better assess the needs of local communities (Rengert and Rhine, 2016).

Conclusion

We use economic principles along with evidence from the data and the academic and policy literature to discuss frictions that might lead to inefficient financial exclusion in the United States, defined here as a suboptimal allocation of bank account services. Private market initiatives—such as financial education schemes or new online banks—or new technologies—such as prepaid cards—can help mitigate such frictions. But if the frictions persist, intervention by authorities may be justified.

Figure 2: Unbanked Rates by Race/Ethnicity, Selected Groups



Note: We follow the FDIC classifications for race and ethnicity.

Source: FDIC (2020).

Endnotes

1. The FDIC survey is a commonly cited reference on access to bank accounts in the United States because of its large sample size.

2. For a more thorough review of the literature on access to bank accounts in the United States, see Boel and Zimmerman (2022).

3. The utility from opening the account can comprise both monetary and nonmonetary benefits. For example, C could include the convenience of having a bank account for making payments online. For simplicity, we assume linear utility functions, but our framework can be generalized easily.

4. Of course, if many customers use the same payment network, the payment provider might attain market power and extract rents from users or merchants, making society worse off (Katz and Shapiro, 1985).

5. Other payment instruments frequently used by unbanked individuals are prepaid cards (19.5 percent), credit cards (14.9 percent), and money orders (3.2 percent), according to our calculations using the results of the Survey of Consumer Payment Choice.

6. During the COVID-19 pandemic, use of cash as a payment instrument decreased; see O'Brien (2021). Some retailers began to decline cash, underlining the importance of having another payment option available.

7. The Consumer Financial Protection Bureau introduced additional protections for prepaid cards in 2016, including the requirement for upfront fee disclosures.

8. In the example above, a price-discriminating bank would charge a fee of 1 to Xavier and 3 to Yvette. Then it would earn a payoff of 4 and could do no better. From society's perspective, both customers have accounts, and the first-best allocation is achieved.

9. See https://www.fdic.gov/getbanked/index.html.

10. The FDIC survey collects data at the household, not individual, level. The race/ethnicity of a household is determined by that of the owner or renter of the home. We drop the category "Native Hawaiian or Other Pacific Islander" because the sample size in 2019 is too small to produce a precise estimate.

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