The Promise of Economic Integration: Evidence from the First Bank in an American Indian Nation*

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Abstract

American Indian Nation "A" exercised its sovereign authority to license the first-ever retail bank branch on its reservation. The branch is owned by American Indian Nation "B," which also makes it the first modern foreign-owned investment in Nation A. We conduct a first-of-its-kind survey of Nation A's tribal members in the months before the branch's groundbreaking. This unique opportunity allows us to investigate drivers of individuals' support for and, crucially, willingness to become customers of the branch, which is necessary to unleash the developmental promise of this specific instance of economic integration. Without deception, we explore effects of the bank's identity, as well the impact of randomized information treatments communicating endorsement by the Nation A government or general support from the Federal Reserve Bank of the United States, whose mission includes the expansion of financial services into underserved communities. Overall, we find widespread approval for the branch, but small effects of the treatments, which appear more efficacious for those with community connections but even counterproductive for some financially precarious respondents. Throughout, we advocate for the theoretical importance of recognizing American Indian Nations as sovereigns making choices over economic integration.

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1 Introduction

Access to credit, which Nobel Peace Prize winner Muhammad Yunus pronounced as "a fundamental human right," is inequitably distributed within the United States.[1] On average, 6% of adults in the US do not have a bank account, and 16% are underbanked, with an account but still reliant on alternative, and often more predatory, financial services. For American Indians/Alaskan Natives (AIAN) living in and around the 326 independent jurisdictions in Indian Country, the problem of limited capital access is longstanding and outsized (Brown, Cookson and Heimer, 2019; Akee and Jorgensen, 2014).[2] As efforts to quantify its scope have been stymied by consistent undersampling of AIAN communities in national surveys,[3] we collaborated with American Indian Nation "A" to conduct a first-of-its-kind survey documenting capital access their reservation.[4] Extrapolating from our survey, an alarming 33% of Nation A adults do not have a bank account, and 50% are underbanked.[5] Such high percentages were not unexpected, as the Nation A reservation is a "banking desert," without a physical bank, and the closest branch is about ten miles away on roads that are difficult to drive in winter.

What precipitated our survey was a regional retail bank's commitment to open the first on-reservation bank branch, with the unanimous approval of Nation A's Tribal Legislature. Moreover, the bank is owned and operated by nearby American Indian Nation B. This venture caught the attention of the Federal Reserve System of the United States, consistent with its mission to support "the expansion of safe and accessible retail financial services for underserved populations and minority communities."[6] Although the Federal Reserve does not endorse any specific firm, its interests here collide with those of Nation A's government and the Nation B bank on best positioning the branch for success. All these stakeholders understand that success requires more than just the abstract support of Nation A's people; crucially, tribal members must become the branch's customer base.

Though born of very different national settings, theory on individual attitudes toward economic integration should be useful in understanding individual attitudes toward and willingness to become customers of the branch. As Nation B's firm is making a greenfield investment into Nation A,

[1] Muhammad Yunus, Nobel Lecture, 10 December 2006.

[2] Indian Country is the US nomenclature for reserved lands; the US federal government recognizes 574 Nations at the time of writing.

[3] See Ben Kessler, "Native Americans, the census' most undercounted racial group, fight for an accurate 2020 tally." *NBC News*, 29 December 2019.

[4] Consistent with their sovereign rights, Nation A's Tribal Legislature approved the study conditional on anonymity.

[5] Worldwide, 31% of adults are unbanked (Demirguc-Kunt et al., 2018).

[6] Quotation provided to the research team by the Board of Governors, August 2019.

consider recasting the situation in terms of "South-South" foreign direct investment (FDI). What makes this FDI important for theory advancement is that, while Nation A is in many ways inextricably integrated with markets outside of its jurisdiction, it is a modern "FDI desert," which is a scenario that has been out of reach for contemporary scholarship. A bank entering a banking- and FDI-desert nation, bringing an entirely new, welfare-enhancing industry to where capital is scarce, is perhaps the archetype of pro-development FDI. Nonetheless, using a customer-facing retail bank to address problems of financial exclusion places obligations on individuals-as-consumers. That the bank is foreign-owned implicates those individuals-as-consumers' attitudes toward economic integration.

In collaboration with stakeholders, we examine the drivers of individual attitudes toward the branch in the months between its authorization and its groundbreaking. Without deception, we explore whether stakeholders' characteristics and real-world efforts are consistent with theoretical expectations and, practically, their goals to maximize the promise of this particular instance of economic integration. We uncover overwhelmingly positive baseline views on a local bank branch in principle, consistent with the normative hope that FDI can be welcomed as development-enhancing. Non-experimentally, we probe whether the bank's Native identity, and its Nation B identity in particular, is a source of comparative advantage; respondents' abstract support and willingness to become a customer are indeed higher for a branch with a Native foreign owner (Nation B or otherwise) in comparison to a US/American one.

We embed experimental interventions to test whether respondents increase their support in light of their Nation A government's endorsement, or a statement of support from the Federal Reserve. The treatment effects of the government endorsement and the Federal Reserve statement are in almost all cases of equal size and direction, which is important given the specific concern that the Federal Reserve's US-tied identity could be differentially counterproductive. When asked directly, respondents report that the interventions lift their support. However, average treatment effects reveal small and even unintended impacts. In exploratory analyses of potentially heterogeneous effects, we find suggestive evidence that the treatments were most meaningful among respondents with deep sociotropic ties to the Nation A community. Unfortunately, we also find suggestive evidence that treated lower-income respondents are most likely to decrease their support. Overall, our nuanced findings suggest that – especially in the context of very high ex ante support – stakeholders looking to reinforce and lift support should be attentive to possible "backfire" among normatively consequential groups.

In what follows, we first explain the real-world setting under study. We then discuss how this setting can be informed by scholarship on the politics of economic integration, given that American Indian Nations are part of the population of national actors with sovereign authority in international economic relations. Next, we describe the process of survey approval by the Nation A Tribal Legislature, providing context around our commitment to non-deception and our survey design choices intended to balance scholarly and real-world priorities. We report survey results and explore both theoretically and normatively relevant nuance. Throughout, we advocate for scholarship on politics and development in nations like Nation A, in which the political economy of economic integration is incredibly salient.

2 Setting: Improving Capital Access in an Underserved Nation

Expanding domestic access to capital is a cornerstone of economic development policy. In the US context, Americans Indians living on reservations are some of the most economically marginalized communities (Akee and Taylor, 2014), in part due rapid historic resource loss (Feir et al., 2017), disruption of governance structures (Dippel, 2014; Cornell, 2001), education policy (Gregg, 2018), and significant land loss and land tenure issues grounded in 19th century and early 20th century legislation (Leonard, Parker and Anderson, 2020; Dippel, Frye and Leonard, 2020; Anderson, 2018; Russ and Stratmann, 2016; Anderson and Lueck, 1992). Poor economic conditions on reservations are also due to legal differences in US and Native jurisdictions that have limited access to credit and exposure to financial markets (Wellhausen, 2017; Brown, Cookson and Heimer, 2019; Anderson and Parker, 2008). Today, American Indian communities have lower average credit limits (Dimitrova-Grajzl et al., 2015); have less access to formal financial products (FINRA 2017); and face substantially higher interest rates on mortgage debt (Cattaneo and Feir, 2019). Nation A is an archetype for these issues; our focus on it among all nations in Indian Country has the potential to speak to the lower bounds of normatively troubling findings in these literatures.

Nation A, a federally-recognized tribe with over 10,000 members, is among the most impoverished nations in Indian Country. For example, Nation A's poverty rate is 12% higher than the AIAN average (which is 11% higher than the US average).[7] A common way to get at financial precariousness in US surveys is to ask whether a respondent could come up with $400 in case of an emergency. A "yes" answer implies that the respondent either has at least $400 in savings or is confident that they could borrow the money, whether formally or informally. In our survey,

[7] See Appendix Table B.1 for more indicators.

conducted in the context of the strong pre-pandemic economy, 31% answered "no," compared to 12% of Americans.[8] Moreover, 33% report being unbanked, and 50% of those with bank accounts report having auto title, payday, and non-bank loan debt and/or using check cashing services consistent with being underbanked.[9] In this "banking desert," the closest physical bank is a regional US/American bank branch about ten miles away, on roads that are difficult to drive in the winter; only a handful of fee-based ATMs are located on the reservation.[10]

Over the last decades, Nation A community leaders have deliberated on how to address the problem of un- and underbanking. The tribal government runs a subsidized, small-dollar loan program, which anecdotally is well-received in the community but far from satisfying need. The second biggest town on the rural reservation is not covered by cell service, limiting the possibility that online banking or potential substitutes like mobile money accounts could adequately substitute for physical access (Commission et al., 2018).[11] In general, retail banks remain a dominant market-based solution in addressing financial exclusion. Physical bank branches, too, remain relevant: even as half of Americans used online or mobile banking in 2017, 84% visited a physical retail bank, and almost all did more than access the ATM (Merry, 2018). Chartering a domestic financial institution, whether state- or privately-owned, has not been considered as a realistic option. Accordingly, conversations have regularly turned to attracting an externally-owned bank branch.

Nation B's urban reservation helps to make its casino and hotel very profitable, although like many tribes it is seeking to diversify away from gaming. One of Nation B's key ventures is its (wholly-owned) Bank [X], which now a has successful branch in a US city and is considering expansion in Indian Country.[12] In the US, federal programs like Community Development Financial Institution (CDFI)-certification provide grants and tax advantages to financial institutions to incentivize them to expand in underserved areas. Bank [X] became a CDFI, giving it room to re-orient its business strategy in potential Indian Country expansions from profit-maximizing toward commercial viability.[13]

In its first step toward Indian Country expansion, Bank [X] proposed to open a bank branch

[8] A further 16% were unsure. American data from the 2019 Survey of Household Economics and Decision-making (SHED).

[9] As only 44% own a credit card, the majority do not have the option to accrue relatively expensive credit card debt.

[10] Worldwide, 22% of unbanked adults report that physical distance from financial institutions is a barrier (Demirguc-Kunt et al., 2018).

[11] In Sub-Saharan Africa, 21% of adults have mobile money accounts, and half of these adults do not have traditional commercial bank accounts (Demirguc-Kunt et al., 2018).

[12] Bank [X] is licensed in the US and subject to US banking regulations.

[13] Bank [X] CEO, June 2019.

on nearby Nation A's reservation. Nation A has the sovereign authority to make decisions over opening its borders to foreign investment and licensing businesses in its jurisdiction. While Nation A welcomed Bank [X]'s proposal, it took well over a year from Bank [X]'s initial inquiry to a positive, unanimous vote from Nation A's Tribal Legislature.[14] Much of this time lag was due to negotiations over the terms of the investment. One key issue was to specify Bank [X]'s access to dispute resolution in case of conflict. Bank [X] and Nation A ultimately agreed to to use third-party, private arbitration outside of Nation A's, Nation B's, or the US legal system to adjudicate conflicts.[15] Bank [X] also required as a condition of entry that the Nation A government move its finances to Bank [X]. These terms are consistent with Bank [X]'s intention to use the branch as a proof-of-concept that expansion in Indian Country can be commercially viable.

Bank [X]'s expansion is consistent with the mission of the Federal Reserve System of the United States (Federal Reserve), which aims to generate for Native Americans "the attainment of national parity with respect to access to commercial and consumer capital and financial services."[16] While the Federal Reserve does not endorse any particular firm, its goals are furthered should Bank [X]'s investment lead to increased capital access in Nation A. With this motivation, and with the approval of the Nation A government, the Federal Reserve funded the first formal, non-Census survey on the reservation. Scholarly interests as well as the normative goals of these varied stakeholders – Bank [X], Nation A, and the Federal Reserve – collided on the question of what might influence not only Nation A tribal members' attitudes toward Bank [X], but also their willingness to become customers, a necessary condition for a market-based solution to address problems of financial exclusion.

3 Politics of Economic Integration

It is both objectively correct and theoretically useful to recast this scenario around individual attitudes toward economic integration. Nation A, the host nation, is a sovereign that made the choice to open its borders to foreign direct investment (FDI). This specific investment originates from Nation B, making it "South-South" FDI. Moreover, this investment is the archetype of development-enhancing greenfield FDI, bringing not only capital but an entire industry with ex-

[14] Nation A is a parliamentary democracy with legislative and judicial branches of government, as set out in their constitution.

[15] This solution parallels provisions in treaty-based international investment law, which also aim to mitigate legal uncertainties inherent in cross-border transactions (St John, 2018; Wellhausen, 2017).

[16] "Our History," Federal Reserve Center for Indian Country Development (CICD), www.minneapolisfed.org/indiancountry/about-us/history.

pected welfare-enhancing effects. This FDI has the support of a third-party institutional actor with subject-matter expertise – in this case, not a development bank, but rather the Federal Reserve. This is a moment to understand individual attitudes and preferences (Converse, 2000), in ways similar to key studies focused on sovereign debt, via voters' reactions to the Icesave referendum (Curtis, Jupille and Leblang, 2014), and trade agreements, via the vote on the CAFTA-DR trade agreement in Costa Rica (Hicks, Milner and Tingley, 2014).

Nation A's decision to allow the entry of Bank [X] takes place in context of its own deep economic integration. Nation A relies on imports to its political jurisdiction; its main exports are low-value-added agricultural commodities. It benefits from economic migration and remittances sent in US dollars, to which it pegs its currency. Although Nation A's government has little-to-no access to sovereign borrowing via traditional capital markets, it has benefitted from state-to-state lending from other American Indian Nations. Further, Nation A receives cross-border capital flows from the US government, although to be clear these are state-to-state commitments rather than discretionary foreign aid. Finally, and not to be minimized, Nation A's political economy is inextricably linked to settler colonialism. Nation A's members have long been exposed to economic globalization, and therefore theories about individual attitudes under conditions of deep economic globalization should be internally valid in this setting. Moreover, Nation A provides a unique opportunity for theory development: otherwise-integrated Nation A is a modern "FDI desert," which is a scenario that has been out of reach for contemporary scholarship (Pandya, 2016). Overall, in a "pre-FDI-treatment" environment, individuals' attitudes toward a given investment are not immediately confounded by lived experience with other FDI. This is especially important as FDI is the aspect of economic integration that has been accompanied by some of the grandest promises for the welfare of poor nations and poor people, although lived experience often reveals the failure of those promises (Rudra and Tobin, 2017). Indeed, the near-exception to Nation A's "FDI desert"-status occurred around fifty years ago, when US/American investors explored purchasing tribal land. Suffice it to say, this resulted in huge local outcry. Thus, to the extent that memories of potential on-reservation FDI exist among the population, they are negative.[17]

The overarching debate on individual attitudes toward economic integration concerns the extent to which material factors matter, and whether they balance against or are swamped by non-material factors. "Pocketbook" effects generally derive from wage and other price differentials as causes of the material factors that generate variation in preferences; primarily, FDI can challenge domestic

[17]Some tribal elders recall that a retail bank branch once entered the reservation but closed in a matter of months after a robbery. The coauthors were unable to confirm this, which nonetheless is a very distant memory.

competitors or squeeze out domestic credit (Pandya, 2011). However, such pocketbook effects are not relevant in our setting: there is no domestic banking industry, and the interests of off-reservation and/or predatory service providers are contrary to political and developmental goals. Additionally, a small bank branch is not an investment promising job creation, sidelining possible pocketbook effects on job-seekers. Instead, our setting isolates the direct pocketbook effect on individuals via their status as FDI-consumers, a kind of FDI that is invisible to bulk of theory focused on business-to-business FDI.[18] Indeed, the success of commercial FDI as a means of furthering development goals is built on the back of voluntary, individual-level consumption choices. As such, it is not only appropriate but necessary to understand individual attitudes regarding, quite literally, what they do with the content of their pocketbooks (Pepinsky, 2014).

Other work identifies a multitude of non-material, sociotropic factors that influence individuals' preferences over economic integration. Core among these are cultural, status, racial, nationalist, and xenophobic concerns (Ehrlich, 2018; Guisinger and Saunders, 2017; Mansfield and Mutz, 2013; Baker, 2015). Further, a number of non-material factors that vary little in the developed country context have been linked to attitudes toward integration in developing contexts, including colonial histories (Arias and Girod, 2014); domestic governance quality (Mihalache-O'Keef, 2018; Bodea and LeBas, 2016); and issues of fairness and exploitation (Weitz-Shapiro and Winters, 2017; Moran, 1978). Our setting is particularly relevant in linking non-material factors influential in international economic relations to the robust literature on identity, in-group preference, and trust as substantial influences in economic decisions.[19]

Additionally, research on economic development frequently considers the role played by different types of external institutions in catalyzing or impeding development. Many commonly studied institutions, such as the World Bank or IMF, do not directly serve American Indian Nations. More relevant is scholarship demonstrating that international NGOs can affect outcomes in the developing world, for example by using subject-matter expertise to advise governments on best practices (Brass, 2012; Longhofer et al., 2016). In our setting, the Federal Reserve is an institution external to Nation A or B, with subject-matter expertise, and an admittedly confusing but ultimately non-governmental identity. Regardless of its idiosyncracies, the Federal Reserve's support for a retail bank as a solution to problems of financial exclusion can be understood as consistent with best practices, especially in light of evidence that foreign banks have fostered development by providing

[18] As a notable exception, Post (2014) explores FDI via government contracting to provide essential services to consumers in a monopoly or oligopoly setting. Here, the government's approval of FDI entry is not explicitly granting the firm a monopoly, nor is the government directly accountable for the venture's success.

[19] See Charness and Chen (2020); Shayo (2020); Kalin and Sambanis (2018) for reviews.

financing to previously underserved individuals and businesses in a variety of developing country settings (Gopalan and Rajan, 2018; Léon and Zins, 2020).

4 Survey Approval and Hypotheses

Clearly, the real-world setting of Bank [X]'s entry to Nation A offers many potential avenues to advance theory development, as do American Indian Nations more broadly. We take for a moment to recount the project's approval by Nation A's Tribal Legislature and the ethical as well as legal constraints that shaped the set of hypotheses we were able to rigorously test.

4.1 Nation A Approval

The lynchpin local approval requirement was a resolution and positive vote from Nation A's Tribal Legislature, which itself required approval from Nation A's research ethics regulating commission. From the Legislature's point of view, the most important goal of the survey was for us to reach as many tribal members as possible, in collecting comprehensive data on members' knowledge of, use of, and opinions about personal finance.[20] Consistent with the increasing saliency of data sovereignty among indigenous peoples, approval was also contingent on Nation A retaining control over identifiable survey data. Thus, we anonymize our public-facing output.[21] The Legislature was supportive of the co-authors' collaboration with Nation A's tribal college, which took responsibility for the survey roll-out and enumeration.[22] The approval process required the research team to iterate with the Legislature, including by providing in-person testimony at several sessions. During this process, the Legislature asked Bank [X] to endorse the survey and the capacity of the research team, which it did. However, Bank [X] made clear that its investment was in no way conditional on the survey; it was not part of the research team; and it had no privileged access to data.[23] Following Nation A approval, the survey was approved by the Institutional Review Boards at Nation A's tribal college and the equivalents at the co-authors' institutions.

It is important to note that during the approval process, legislators reviewed survey questions

[20] To this end, the survey replicates items from Consumer Financial Protection Bureau and Financial Industry Regulatory Authority surveys.

[21] On data sovereignty, see for example https://usindigenousdata.org/. We provided Nation A a non-anonymized report, which was also provided to the tribal college (for potential use in their curriculum) and to Bank [X]. Nation A's government has control over the dissemination of that report.

[22] We compensated our partners at the tribal college; there was no cost to any Nation A entity.

[23] The tribal college benefited from a charitable donation from Bank [X], as appropriate under US and Nation A charitable laws.

and requested detailed changes.[24] The most relevant required revisions included cutting standard political-science-research voting and political ideology questions, which several legislators saw as violations of their tribal members' privacy. We also cut replications of questions from national surveys intended to gauge financial knowledge that were viewed by some legislators as simplistic and in that way disrespectful. These legal and ethical considerations constrained our ability to rigorously test potential links between political activity or financial literacy and individual attitudes. On the other hand, the Legislature allowed questions which provided factual information around their licensing of Bank [X]'s entry, which facilitated our ability to test links between top-down governmental endorsement and individual attitudes.

4.2 Design and Hypotheses

In conjunction with Nation A's approval, our survey focused in on hypotheses born of the real-world characteristics and behaviors of our key stakeholders: Bank [X] and its Nation B identity; endorsement by the Nation A government; and support from the Federal Reserve as a third-party institution with subject matter expertise, albeit in context of potentially problematic ties to the US. Figure 1 summarizes the survey flow for the ease of the reader. Dotted boxes indicate the points at which the survey introduced different pieces of information, alongside an information check where appropriate. The survey begins with blocks of questions on demographics; financial knowledge; use of financial services and credit; and respondents' baseline support and willingness to become a customer of a local bank. These blocks are followed by our main questions of interest, in an observational form and then a randomized experimental design. The last block is specific to the needs of our stakeholders, including questions about respondents' priorities regarding financial services and their preferred means of accessing a local bank branch.[25]

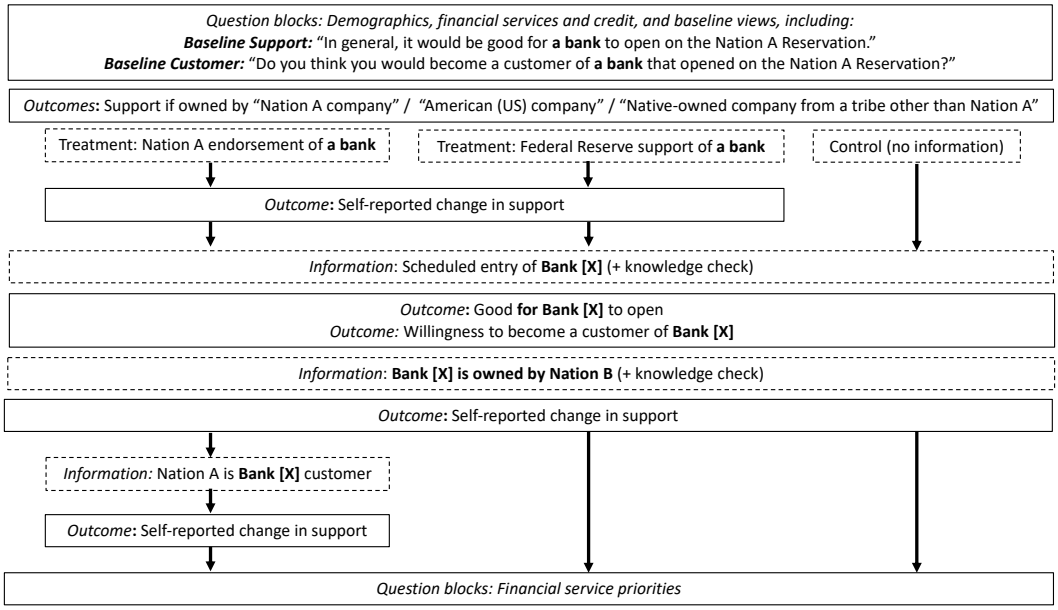
4.2.1 Bank [X]: National Origin

First, we explore the extent to which an investment's identity and ownership contribute to Nation A respondents' support. Our starting point is that people have a well-documented home-country bias in their consumption decisions (Verlegh, 2007). Indeed, the likelihood and extent

[24] As such, tribal leaders read the full set of questions, including each of our randomized treatments. To account for potential confounding if/when they later completed the survey, we check robustness to a set of controls accounting for those involved in the process, while maintaining anonymity (i.e., employment by the tribal government and prior knowledge of Bank [X]'s opening).

[25] Figure 1 excludes a final intervention in which the enumerator provided information to the respondent on how to access their free annual credit reports (annualcreditreport.com). We find normatively positive high levels of respondent follow-up but no significant effects of the treatments. Results available upon request.

Figure 1: Survey Flow



of home-country bias underpins all research agendas on the political economy of investment with foreign origins. Therefore, we hypothesize that, given the choice, individuals will systematically support domestic-owned businesses more than foreign-owned.[26]

Hypothesis 1a. *Respondents prefer a local bank owned by Nation A relative to a foreign-owned bank.*

Should a domestically-owned business not be an option, we expect the identity of a foreign-owned business to influence individual attitudes toward it. In the specific setting of foreign banks as a means of addressing financial exclusion, Mian (2006) provides compelling evidence from the developing world that cultural similarities between home and host nations improve market outcomes. Scholarship pointing to trust-building shared identity as a means of facilitating economic transactions suggests as much, too (Charness and Chen, 2020; Shayo, 2020; Kalin and Sambanis, 2018). Might a Native-owned bank, therefore, have a comparative advantage in operating in a Na-

[26] We expect home bias preference to hold whether or not the domestic bank is state- or private-owned, although we do not test this expectation in the survey for reasons of space.

tive Nation? Collective efforts by international Native organizations to address issues of financial exclusion across Indian Country provide prima facie evidence.[27]

To be clear, while foreign firms from nations with closer ascriptive or cultural ties to the host nation may be preferred in general, this preference is conditional on the absence of problematic bilateral relations between the host nation and the firm's specific home nation (Wellhausen, 2015). There is extreme variation among Indian Country Nations as to bilateral relations and perceptions of shared identity. Consider, however, any Native-owned foreign investor in contrast to a non-Native, US/American bank – the most likely alternative foreign origin in this setting. Even aside from the long-standing issues in Native-US relations writ large, US/American financial service providers have a problematic reputation in Indian Country. Among those that do serve Indian Country, political risk management strategies can be normatively questionable; for example, mobile homes are common on reservations, since they can be physically seized and thus better act as collateral under US law (Wellhausen, 2017). Overall, US/American providers' underprovision of financial services in Indian Country connects to their poor understanding of each Nation's unique regulations and judicial system (Dimitrova-Grajzl et al., 2015).[28] In this context, we expect that respondents' net preference for a Native-owned local bank will be greater than that for a US/American bank.

Hypothesis 1b. *Respondents prefer a Native-owned local bank to one owned by a non-Native US/American company.*

Of course, in our setting Bank [X] is owned by the specific Nation B. Moving from preferences over a Native-owned bank in general to specifics introduces a variety of potential mechanisms other than those tied to social identity and trust that could affect respondent preferences.[29] As confirmed by our tribal partners, much about Nation B is familiar to those in Nation A. On one hand, it is well known that Nation B's economic success translates into a very high per capita disbursement to its (considerably larger) membership, compared to the low-to-no per capita disbursement in Nation A.[30] On the other hand, in the mid-1900s, Nation A took actions to support Nation B during a difficult period in B's relations with the US federal government. This cooperation continues to be referenced and honored by leaders in Nation B. Nation B has also has provided state-to-state

[27] See for example Oweesta Corporation (https://www.oweesta.org/).

[28] This issue is recognized by Native actors; see for example advocacy from the Native American Financial Officers' Association (nafoa.org).

[29] Changing from a hypothetical to a true, concrete setting could also reduce noise in question answers if, for example, respondents' attention increases.

[30] Consistent with Nation B's sovereignty over its data, the value of their per capita payment was not disclosed to the co-authors.

lending to Nation A.[31] And, Bank [X]'s well-respected, jovial CEO is Nation B's face on Nation A's reservation. He seems to know the name of everyone walking by – and to have an inside joke with most of them. On net, these kinds of characteristics could reasonably reinforce respondents' preferences for Nation B ownership, at least consistent with their average preference for Native ownership.

Most relevant is that Bank [X] expects its Native and particular Nation B identity in particular to be a source of comparative advantage in Nation A.[32] In general, Bank [X]'s interest in taking on the risks of serving Indian Country Nations is consistent with goals born of its own Native identity. That it alone has approached Nation A about opening a local branch, much less persisted in coming to terms sufficient to manage sovereign risk, would support Bank [X]'s expectation that their identity is an advantage.

Hypothesis 1c. *Respondent support for Bank [X] will match or exceed their support toward a Native-owned bank of unspecified origin.*

For reasons of power and space in the survey, we are not able to test H 1a, H1b, or 1c experimentally. However, we expect to find support from observational data. We also expect to find descriptive patterns consistent with the transitive implication that respondents support Nation A ownership, over Native ownership, over US/American ownership; and that the same ranking holds if Nation B is substituted for general Native ownership.[33]

4.2.2 Nation A Treatment: Endorsement

Next, endorsement by credible political elites has the potential to have a have a causal, positive effect on individual attitudes. Although Nation A is in many ways deeply economically integrated, its status as an FDI- and banking-desert suggests that tribal members have low experience and information relevant to forming attitudes toward Bank [X]. This makes it a likely setting in which a top-down elite endorsement could move individuals in support of the bank. The obvious local endorser is the Nation A Legislature, as its elected officials are the central decision-makers in Nation A's government, and it was a (unanimous) Legislative vote that facilitated Bank [X]'s entry. To be clear, dissatisfaction with the endorser would make it more difficult for us to find positive effects of its endorsement. Anecdotally, tribal members expressing dissatisfaction with the government point

[31] Tribal elder, June 2019.
[32] Conversations with Bank [X] CEO, July 2019.
[33] Nor do we expect these rankings to vary as a result of randomized experimental treatments.

to the importance of family networks in elections, very low voter turnout, and concerns over the government's recent financial decisions. Moreover, the extreme un- and underbanking problem has persisted for decades, and Nation A leaders have not yet succeeded in solving it. Nonetheless, we align our prior with the Legislature's expectation that the net effect of their endorsement will be positive, given their public and unanimous approval of Bank [X]'s entry. We further infer that the Legislature expects its endorsement to be effective, given their approval of our use in the survey of the true statement: "We would like you to know that the [Nation A] Tribal Legislature supports the opening of a bank on the [Nation A] Reservation." We expect to find positive within-subject effects after receiving this information, and as well as effects on levels relative to a control group that does not receive any experimental treatment.

Hypothesis 2a. *Following the Nation A endorsement, respondent support for Bank [X] will increase relative to (a) their baseline support and (b) a control group that does not receive this information.*

We have emphasized the importance of individuals-as-consumers in ensuring the commercial viability of Bank [X]'s local branch. Thus, our prior is that Nation A expects its endorsement to increase not only support but also respondent's willingness to become customers once the bank opens. To be clear, respondents that report being willing to become customers are not making a binding commitment. However, in the months before the branch's opening, Nation A (as well as our other stakeholders) has a compelling interest in drumming up a future customer base, whatever the actual conversion rate from willing-to-actual customers.

Hypothesis 2b. *Following the Nation A endorsement, respondents' reported willingness to become customers of Bank [X] will increase relative to (a) their baseline willingness and (b) a control group that does not receive this information.*

Note that the Nation A endorsement informs the respondent that the Legislature supports the opening of a bank in general, and not Bank [X] in particular.[34] Thus, implicit in H2a and H2b is the expectation that respondents will connect Nation A's endorsement of a bank in general to an endorsement of Bank [X]. For reasons of power and space, the survey does not probe this connection experimentally. Instead, without deception, we provide all those receiving the Nation A endorsement with follow-up information: "We would like you to know that the [Nation A] Tribal

[34]This non-specificity was a design choice intended to make the Nation A endorsement as parallel as possible to our second experimental condition, a statement of general support (albeit not endorsement) from the Federal Reserve.

Legislature voted unanimously to move all of the Tribe's banking services (excluding investments and 401k) to Bank [X]."[35] We expect that this information connects the Nation A treatment's general endorsement to Bank [X] in particular. Therefore, we expect within-subject reactions to the treatment and to this information to be highly correlated. We also calculate the difference-in-means to see whether reactions to the treatment are on average larger in response to the follow-up versus the treatment, especially as the follow-up establishes the government's credible commitment to Bank [X] as its customer.

4.2.3 Federal Reserve Treatment: General Support

Building on evidence that external institutions with subject-matter expertise have found success in spreading what are thought to be best practices abroad (Brass, 2012; Longhofer et al., 2016), we ask whether such institutions can also have a direct effect on moving individuals' attitudes in support of those practices. We solicited a statement from the Federal Reserve Bank Board of Governors for inclusion in the survey, with which we treated a random subset of respondents: "We would like you to know that the Central Bank of the United States, the Federal Reserve, supports the expansion of safe and accessible retail financial services for underserved populations and minority communities." This statement can be understood as consistent with best practices, given evidence from Gopalan and Rajan (2018) and Léon and Zins (2020) that foreign financial service providers have successfully provided financing to previously underserved individuals and businesses in a variety of developing country settings. Might this statement have a positive effect on Nation A tribal members' support for Bank [X]?

Note first that the statement provided to us by the Federal Reserve refers to the relatively abstract concept of "retail financial services," which is terminology is consistent with the Federal Reserve principle of non-endorsement of any specific commercial entity. We see it as a benefit that our research efforts examine the Federal Reserve's true language. At the same time, we highlight that this is likely to be unfamiliar terminology to many, which could generate noisy responses. This issue may itself be of interest to the Federal Reserve in formulating other public statements (Baerg, 2020).

A large body of work has examined the mixed effects of external institutions in using financial literacy programs to move individual-level attitudes toward personal finance (Goyal and Kumar, 2021) However, in our setting we explore a different possible pathway through which an external

[35] We do not provide the information that this was required by Bank [X] to mitigate confounders, for example that respondents would be primed to evaluate Nation A's negotiating power.

institution could affect individual attitudes, via a simple statement of support that does not include a rationale or a teaching component. We see this as isolating a possible credibility mechanism, implying that respondents' reactions to the treatment implicate the source of the information.

Hypothesizing around Nation A individuals' perceptions of the Federal Reserve's credibility requires thinking through what non-specialists think the Federal Reserve is. Formally, the Federal Reserve System is a non-profit, institutional actor with subject-matter expertise that serves all of the greater United States, including all Nations in Indian Country. It is highly autonomous and not subject to direct control by the US federal government. That said, it is unrealistic to expect the average individual to know, much less understand, the Federal Reserve's complicated and unique status as not strictly private nor part of the US federal government. From the point of view of our respondent pool, we expect the Federal Reserve to be understood as a US-tied actor originating from outside of Indian Country, such that its credibility is related to the credibility of the US. We reinforce this expectation by referring to it as "the Central Bank of the United States" in the treatment. The problematic history of US-Native relations and settler colonialism, including specific historic injustices faced by Nation A, has the potential to impugn the credibility of an institution tied to the US. Because its US identity could result in the treatment proving counterproductive, our empirical findings are all the more normatively important to the Federal Reserve and its strategic communication decisions.

Still, our prior is that the Federal Reserve statement will on average move individual attitudes further in support of Bank [X], which would be consistent with what we infer are the Federal Reserve's priors given that they provided us with the statement. As before, we expect to find positive within-subject effects after receiving this information, and as well as effects on levels relative to a control group that does not receive any experimental treatment.

Hypothesis 3a. *Following the Federal Reserve statement, respondent support for Bank [X] will increase relative to (a) their baseline support and (b) a control group that does not receive this information.*

As with the Nation A treatment, our prior is that the Federal Reserve treatment will not only increase support but also respondent's willingness to become customers once the bank opens.

Hypothesis 3b. *Following the Federal Reserve statement, respondents' reported willingness to become customers of Bank [X] will increase relative to (a) their baseline willingness and (b) a control group that does not receive this information.*

We pause to emphasize that the Nation A and Federal Reserve treatments are not parallel. While neither treatment references Bank [X] specifically, they employ different language in order to convey different information. Further, while we are able to provide to the Nation A group a second informational follow-up that ties Nation A's support directly to Bank [X], we are not able to do the same for the Federal Reserve group. Thus, while our commitment to non-deception in this real-world setting facilitated buy-in from our stakeholders and met our ethical priorities, it came with methodological tradeoffs. Nevertheless, comparing the results of the two treatments is of real-world interest. Both stakeholders intended their treatment to move attitudes in the same, positive direction. It would be a normatively bad outcome if either treatment backfired, and it is perhaps more plausible that the Federal Reserve treatment – with potential US-tied baggage in Indian Country – would do so.

5 Survey Design and Observational Results

The survey was intended to run from January through May 2020, which would be approximately one month before Bank [X]'s scheduled groundbreaking. After that time, Nation A would no longer be in a credibly pre-bank and pre-FDI context. We of course stopped the survey abruptly in March, consistent with public health priorities around the arrival of the COVID-19 pandemic. Nonetheless, we collected 982 high-quality responses from the target population, adult (18+) Nation A enrolled members and recognized descendants.[36] For its part, Bank [X] delayed its scheduled groundbreaking until finally able to hold a socially-distanced event in summer 2020.

In this section, we confirm survey representativeness and balance; discuss descriptive patterns in baseline support; provide observational results and experimental results on our hypotheses; and report robustness and extensions.

5.1 Representativeness and Balance

To conduct the survey, we collaborated with Nation A's tribal college to hire and train ten enumerators, who were all female students without prior experience.[37] Enumerators facilitated the survey on tablet computers via the offline Qualtrics app (Bush and Prather, 2019).[38] Enumer-

[36] We exclude 29 respondents who report that they are already customers of Bank [X], given that resulting biases are uncertain.

[37] Enumerators were paid $15/hour (compared to the on-reservation average of $9/hour). The tribal college received a charitable donation from Bank [X]. There was no cost to Nation A.

[38] 12% of respondents chose to complete the survey on their own device. Although originally an incentive, due to the pandemic halt all enumerators were gifted their tablets.

ators set up stations in high-foot traffic areas on the Nation A reservation, including the casino lobby, which is a typical space used for community events; the on-reservation grocery store; the health clinic; senior centers; government offices; and the main tribally-owned enterprise during shift breaks.[39] Enumerators also leveraged their personal connections, for instance to the main on-reservation bar and restaurant; disability care services; and drug and alcohol rehabilitation services. However, even enumerators' implicit sampling strategies were stymied by the survey's abrupt stop after three months (of a planned five).

We instructed enumerators to use convenience sampling, rather than selecting potential respondents randomly or randomly within demographic strata, for three reasons. First, the Legislature required as a condition of approving the project that as many people from their community as possible participate in the survey. Second, our enumerators helped us settle on a $10 gift card to the only on-reservation grocery store as an effective form of compensation for survey respondents, which had the added benefit of keeping funds in the local economy. Our enumerators assured us that, in this small and highly impoverished community, news of this incentive would travel fast. We therefore saw it as a high risk that randomly denying some tribal members the opportunity to receive a gift card would generate unpredictable confounders via resentment or other mechanisms. Third, methodology aside, the co-authors believed that implementing randomization – thereby forcing enumerators to prevent fellow tribal members from having their voices heard – was simply inappropriate.

To determine whether or not our convenience sample is reasonably representative, we compare it to population averages in Nation A's official records.[40] The main imbalance is our oversample of women relative to their proportion of Nation A's population. This may be a function of the gender composition of our (female) enumerators' social networks, although another similarly-administered survey of American Indian populations also oversampled women (Schroedel et al., 2020). We also find that we oversampled enrolled members and undersampled recognized descendants, although usefully that legal distinction is not relevant in our setting.[41] Regarding the randomization necessary for our experimental results, we find that the each of two treatment groups and the third control group are generally well-balanced on observables, indicative of successful randomization.

[39] Our tribal college partner organized a large initial roll-out in the casino lobby, with free breakfast and lunch. Unexpectedly, the casino donated $5 match play coupons to respondents on the day. Results are robust to a casino or first day fixed effect.

[40] We also compare the sample to the AIAN population in Nation A's state. See Appendix Table B.4.

[41] This may be due to our focus on surveying people on the reservation. A bivariate regression model suggests that enrolled members are 3% more likely to live in the same state as the Nation A reservation than descendants. Results available on request.

Out of 54 different variables, only seven had statistically significant differences across the control and treatment groups, as depicted in Appendix Figure B.1. Nonetheless, we report results with and without a battery of controls, including enumerator fixed effects, to ensure that covariate imbalance is not confounding our estimates.[42]

5.2 Descriptive Patterns: High Baseline Support

Nation A is a highly impoverished less developed nation without a retail bank located in its borders. In this setting, we expect baseline individual attitudes toward an on-reservation bank to be very favorable and low variance, especially as the harm of financial exclusion accrues at the individual level. Further, while Nation A is deeply economically integrated in many ways, the modern absence of FDI to date mitigates the possibility that previous disappointments with FDI would skew attitudes in the opposite direction. Figure A.1 shows patterns in the data consistent with these expectations. For both a hypothetical bank and the specific Bank [X], over 49% respondents chose the highest level of support. There is some indication of lower support for Bank [X], which makes sense given the introduction of confounders associated with a specific named firm, although changes in the distribution are small in magnitude.

These descriptive patterns suggest that we may face inferential challenges due to ceiling effects. They also suggest that treatment effects may be small in magnitude in terms of movement on the relevant scale. In part because of these prior expectations, we incorporated a variety of question formats to capture treatment effects, through within-subject changes, changes in cross-group levels, and asking respondents directly whether and in which direction a prompt changes their support.[43] This last strategy in particular allows even the most (least) enthusiastic respondents to express even more (less) enthusiasm without censoring.[44]

5.3 Observational Results: National Origin

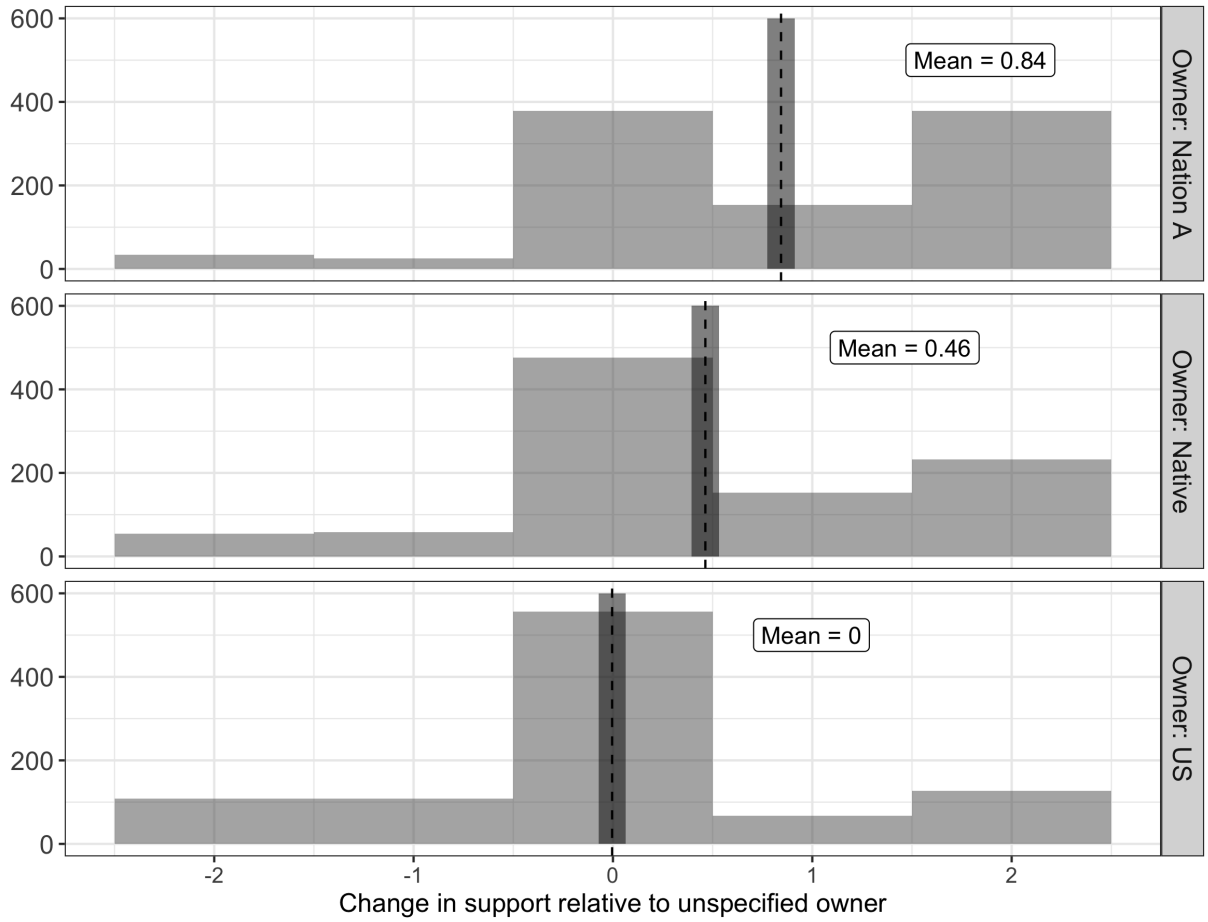
We ask all respondents their opinion on the extent to which different national origins of the owner of a hypothetical on-reservation bank would cause their support to increase, decrease, or stay the same (1-5 scale). All respondents consider the same three kinds of owners, presented in a randomized order: a "Nation A-owned company," "a Native-owned company from a tribe other

[42] See Appendix B.2.

[43] Still, we also perform two post-hoc diagnostics to check for ceiling effects. See Section 6.1.1.

[44] Among treated respondents who reported the maximum level of support for a bank on the baseline item, 52% reported that the treatment *increased* their support.

Figure 2: Evidence of home bias (H1a) and Native- over US-ownership (H1b).



Note: dashed vertical lines identify the means of the distributions, and the shaded regions surrounding the lines are 95% confidence intervals.

than Nation A," and "an American (US) company." We chose the label "American (US) company" in consultation with our local partners, so as to establish that this is a non-Native company from the United States, without implying that Native companies are not themselves American. Figure 2 provides observational evidence consistent with H1a that domestic ownership by Nation A would be significantly preferred to American (US) ownership; Nation A ownership is also preferred to foreign ownership by another Native Nation, although that effect is not as stark. We also find support for H1b that, between foreign ownership choices, Native (non-A) is significantly preferred to American (US). These observational results are consistent with qualitative evidence gleaned from the overall attitudes of actors at both Bank [X] and the Nation A Tribal Legislature – that this Native-owned FDI from Bank [X] is something special and important for Indian Country as a whole.

Later in the survey, we inform all respondents that Bank [X] is 100% owned by Nation B and then ask them to self-report how this information might change their attitudes. We expect, per H1c, that respondents will be equally or more supportive of Bank [X] upon learning that it is owned by Nation B. Figure 3 plots the distribution of responses. In support of H1c, a very large proportion of respondents self-report that their support of Bank [X] is the same or that it increased upon learning of B's ownership. Because this question was asked post-treatment (see again Figure 1), Figure 3 separates respondents by treatment condition; as expected, heterogeneity by treatment group is not meaningful. Further, in the associated knowledge check question, 45% of respondents self-reported that they already knew that Bank [X] was owned by Nation B; of these knowledgeable respondents, 96% answered that their support stayed the same or increased. Moreover, the subset of 8% of respondents who reported a decrease in support were also less likely to support Bank [X] prior to receiving the Nation B ownership information.[45] Taken together, these results are good news for Bank [X]'s public relations as the commercial face of Nation B in Nation A.

5.4 Experimental Results: Nation A and Federal Reserve Treatments

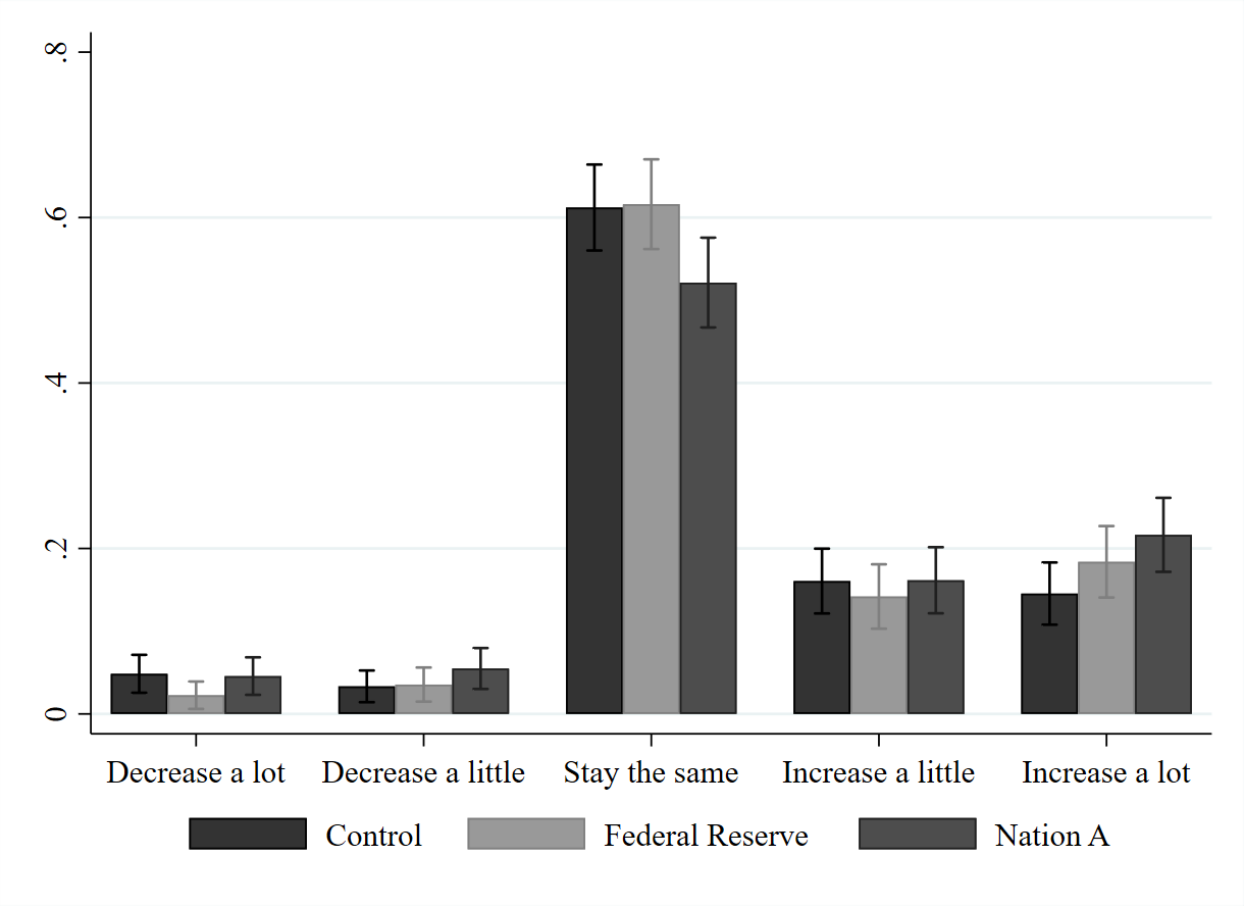
In measuring experimental effects, we leverage three outcome variables. The first is a respondent's *Self-reported effect of the treatment on their support for a bank*. As such, treated respondents' self-reports are updates on their responses to the previous *Baseline Support* question regarding a hypothetical on-reservation bank (see again Figure 1). The control group outcome is a vector of zeroes, assuming that in the absence of new information their *Baseline Support* is unchanged. The second outcome variable is a respondent's post-treatment answer to whether it is *Good for Bank [X] to open*, and the third is their post-treatment answer regarding their *Likelihood of becoming a customer of Bank [X]*. With this set of variables, we are able to explore the effect of experimental treatments on respondents views regarding both a hypothetical and a specific bank; both support and interest in becoming customers; and via both direct reactions as well as more standard indirect measures of treatment effects.[46]

We examine each outcome variable in two ways. First, we calculate "difference(s) in levels," that is, the difference between treatment groups in the average value of the relevant post-treatment survey item. Formally, we calculate the quantity $\bar{Y}^{Post}_{D=1} - \bar{Y}^{Post}_{D=0}$. Second, we calculate "differences(s) in changes," that is, the difference between treatment groups in the average *change* between respondents' pre-treatment (baseline) and post-treatment responses to the relevant survey item. Formally,

[45] Mean support of 5.5 compared to the overall mean of 8.0 on a 1-10 scale.

[46] See again footnote 25 for information on an unreported behavioral outcome regarding credit score interest.

Figure 3: Evidence of overall stable or increasing support for Bank [X] after 100% Nation B ownership information shared (H1c).



we calculate the quantity:

$$[\frac{\sum_{i=1}^{n} Y_{i,D=1}^{Post} - Y_{i,D=1}^{Pre}}{n}] - [\frac{\sum_{i=1}^{m} Y_{i,D=0}^{Post} - Y_{i,D=0}^{Pre}}{m}] = \overline{\Delta Y}_{D=1} - \overline{\Delta Y}_{D=0} \quad (1)$$

The move in the survey from attitudes toward a hypothetical bank to those toward Bank [X] raises the possibility of new confounders that, if not balanced across the treatment groups, would mean that subsequent changes in views could be misattributed to treatment effects. This is a key motivation for our empirical strategy that compares both levels and within-respondent changes relative to appropriate pre-treatment baselines.

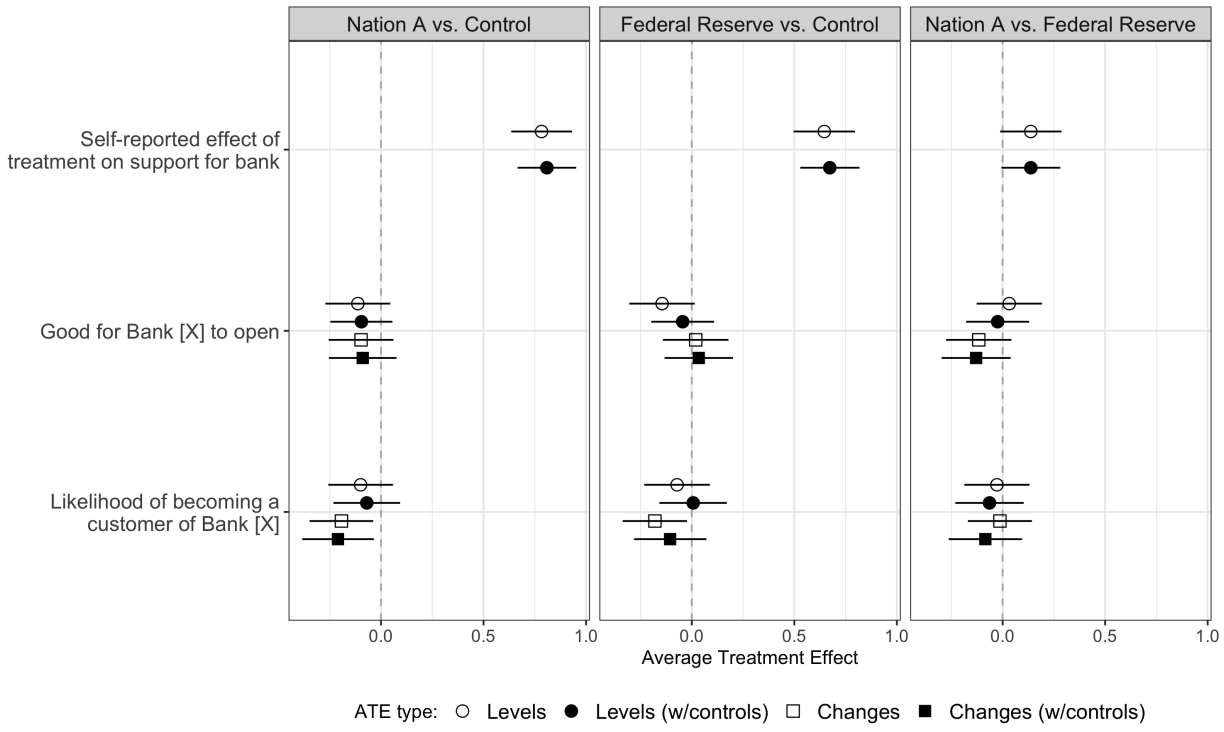
Figure 4 summarizes our experimental results for each of three outcome variables. We plot average treatment effects and 95% confidence intervals for models using "difference(s) in levels" and "difference(s) in changes."[47] In the first two panels, estimates presented are equal to the outcome variable mean among the treatment group (Nation A in the first panel, Federal Reserve in the second panel) minus the mean among the control group. In the third panel, we report estimates based on the difference between the Nation A treatment group and the Federal Reserve treatment group. All presented estimates have been standardized by their mean and standard deviation, and thus can be interpreted as the average treatment effect (ATE) measured in standard deviations of Y. All the standard errors have been estimated using seemingly unrelated regression (SUR) to account for possible correlation in the standard errors across outcomes.

With regard to the outcome *Self-reported effect of treatment*, we report only results on "difference(s) in levels," as the question effectively asked respondents to estimate their own change. Figure 4 shows that both treatments had substantial, positive average treatment effects. These effects are also large in magnitude: the Nation A treatment increased self-reported support by 0.66 standard deviations, and the Federal Reserve treatment by 0.79 standard deviations. When asked directly, respondents are significantly likely to report that the treatments worked as the stakeholders intended.

Effects on the outcome variable *Good for Bank [X] to open* are much more muted. Here, the "Changes" ATEs compare respondents' post-treatment support for Bank [X]'s opening on the reservation to their pre-treatment support for a a hypothetical on-reservation bank (*Baseline Support*). Neither of the treatments have a positive and significant effect on support for a bank, regardless of how this outcome is measured and whether or not covariates are included. In fact,

[47] We report results without and with a battery of controls. For full results, and details on controls, see Appendix Table B.2.

Figure 4: Causal effects of Nation A treatment and Federal Reserve treatment.



Notes: Treatment effects presented as the difference in means, and are standardized by their mean and standard deviation. 95% confidence intervals. For controls, see Appendix Table B.2.

the majority of the treatment effects are negative; the Federal Reserve treatment effect nears statistical significance, though this disappears when adjusting for controls. While these negative effects are small in magnitude and not statistically distinguishable from zero, the fact that neither endorsement increased support for a bank does not provide support for our H2a or H3a.

Effects on the outcome variable *Likelihood of becoming a customer of Bank [X]* are also quite muted and raise further normative concerns. Here, the "Changes" ATEs compare respondents' interest in becoming a customer of Bank [X] to their pre-treatment interest in becoming a customer of a hypothetical on-reservation bank (*Baseline Customer*). Conversely to our predictions (and our stakeholders' hopes) in H2b and H3b, the endorsements have negative and significant effects on respondents' interest in becoming a customer of Bank [X]. These effects remain in the "Changes" ATEs, meaning that treated respondents report lower willingness to become a customer of Bank [X] than nontreated respondents compared to their baselines. As both endorsements either directly or indirectly encourage respondents to use the bank's services, these results are both normatively

and empirically puzzling.

While we do not have strong priors on the relative size of the Nation A treatment versus the Federal Reserve treatment, we do know that both stakeholders intended them to be in a positive direction. Further, given the Federal Reserve's US identity, there is realistic concern that its treatment could be counterproductive. However, Panel 3 of Figure 4 shows that both sets of treatment effects are highly similar. Consistent with the observational results reported in Figure 2, respondents who received the Nation A treatment self-reported larger increases in support than those who received the Federal Reserve treatment, though the difference is only marginally significant. However, the differences between treatment groups on all other outcome variables are statistically insignificant and near zero in magnitude. While respondents who received the Nation A treatment may have reported more positive treatment effects than those who received the Federal Reserve treatment, their responses to the outcome items of interest were not significantly different, consistent with the hope that the Federal Reserve treatment does not carry counterproductive "baggage."

To summarize, when asked directly, respondents reported that receiving both the Nation A and the Federal Reserve endorsements increased their support for a local bank. However, observed differences across treatment groups in the outcome items of interest tell a different story: treated respondents do not express greater support for Bank [X], and troublingly they report significantly less interest in becoming a customer of the bank once it opens compared to the control group. In a sense, statements from both the Federal Reserve and the Nation A government "backfired" – while they were intended to increase Bank [X]'s legitimacy and encourage community members to use its services, there is evidence that they may have had the opposite effect.[48]

5.5 Robustness and Extensions

Here, we probe the robustness of our results to several possible concerns. We also consider two extensions to our results. First, how might the additional information provided only to the Nation A treatment group, that Nation A's government has become a customer of Bank [X], shape views? Second, and of perhaps greatest interest: what insights can we generate into the normatively troubling results in Figure 4? To the extent that heterogeneous effects underpin the average treatment effects, what might they indicate for our stakeholders?

[48] This negative treatment effect is robust to accounting for multiple hypothesis testing: the SUR standard errors are reported and the statistical significance is robust to the Bonferri, Romano-Wolf, and Young corrections.

5.5.1 Robustness

We address three main concerns about our results in this section: ceiling effects, the volition of the stable unit value treatment assumptions, and consistency bias and fatigue. First, given the high levels of *ex ante* support for a bank, one may be concerned about potential ceiling effects: if many respondents chose the most favorable response to the baseline items, we may fail to capture a positive effect of treatment given that they cannot choose a higher level of support/interest in becoming a customer in the corresponding post-treatment item. We address this by first re-estimating the main results after dropping respondents who gave the most favorable possible response to the baseline items (Appendix C.1), and also by regressing the outcome variables on treatment while controlling for respondents' baseline responses (Appendix D.2). In both cases, the main results are unchanged.

When trying to estimate ATEs, particularly in a randomized control trial in a relatively small and tight-knit community, a potential concern is that the survey treatments themselves or the information revealed generally in the survey may impact respondents who have not yet taken the survey but will in the future. This would violate the stable unit treatment value assumption (SUTVA), biasing our estimates. To address this concern, we estimate additional models to determine whether the effect of the treatment variables changed over the duration of the survey; if SUTVA were to be violated, we would expect the ATEs to shrink towards zero over time as information spread through the community. However, we find little evidence of differential responses to treatment between earlier and later respondents, increasing our confidence that the SUTVA assumption holds (Appendix B.6).

A final concern regards the effects of repeating similar questions to our respondents before and after treatment. Specifically, we asked respondents before treatment about their support in general for a bank opening on their reservation and their likelihood of being customers. We then asked virtually identical questions about their support for Bank [X] specifically and their likelihood of becoming customers of Bank [X] after treatment. We did this for two reasons: first, Nation A, Bank [X] and the Federal Reserve System (as well as ourselves) were interested in general baseline support for a financial institution independent of any specific bank. Second, asking these baseline questions would allow for within-subject changes in the instance of a lack of balance in observables characteristics across treatments. While there is a clear rationale for asking these questions before and after, it does come at a cost on at least two dimensions. First, respondents may suffer from fatigue over being asked similar questions at different points in the survey and give less reliable

answers the second time they are asked the question. Second, respondents may feel an innate desire to respond consistently between the questions despite the treatments potentially impacting their feelings regarding the entry of Bank [X].[49]

While it is difficult to provide direct evidence on whether respondents were suffering from fatigue or consistency bias, we can shed some indirect evidence on the possible importance of fatigue. If respondents are suffering from fatigue, we may anticipate their answers become more random in nature and thus the variance of responses increases. Alternatively, fatigue may increase the likelihood that a respondent selects a "middle of the road" answer. Either way, fatigue may change the variance of the original responses even within the control group. We report the p-values for a classical F-test for differences in the variances within control group in Appendix B.7. We cannot reject the hypothesis that the variance in question responses within the control group before and after treatment is the same. This lends some supporting evidence that question fatigue is not a major concern. However, the question of consistency bias remains. We cannot reject the possibility this biases the treatment effect of the endorsement towards zero. Thus, our results might be thought of as a lower bound on the effect of the institutional endorsements and are thus conservative.

5.5.2 Extension: Reactions to Nation A as Customer

Without deception, all those who the Nation A endorsement were later provided follow-up information: "We would like you to know that the [Nation A] Tribal Legislature voted unanimously to move all of the Tribe's banking services (excluding investments and 401k) to Bank [X]." While we cannot experimentally test the effect of this second, non-randomized information relative to the treatment, we expect within-subject reactions to the treatment and to this information to be highly correlated. In general, this appears to be the case: responses on a five-point scale of change in self-expressed change in support due the statement have a correlation coefficient of 0.46.

We also calculate the difference-in-means to see whether reactions to the treatment are on average larger in response to the follow-up versus the treatment, especially as the follow-up establishes the government's credible commitment to Bank [X] as its customer. The median respondent responds just as positively to the Nation A treatment as to the follow-up (i.e., the difference is zero). However, there is some skew in the distribution: the average respondent reports increased support by approximately 18% of a standard deviation, suggesting a slight increase in support due to the

[49] Such consistency bias has been shown to exist in surveys that ask similar questions in other contexts, see for example Falk and Zimmermann (2013).

specific follow-up information.

5.5.3 Extension: Possible Heterogeneous Effects and Treatment "Backfires"

It is possible that the ATEs reported in Figure 4 are masking underlying heterogeneity in effects across groups of respondents. From a normative point of view, this is particularly relevant when it comes to the evidence of "backfire" in ATEs. In particular, if treatments backfired for identifiable groups, our stakeholders could use those insights to update their public engagement strategies by improving message targeting. On the flip side, if treatments worked well for other identifiable groups, our stakeholders might explore how those positive effects could be further leveraged. From a scholarly perspective, exploring individual-level heterogeneous effects connects to the nuance of not just whether but under what conditions individuals see benefits from economic integration (Rudra and Tobin, 2017).

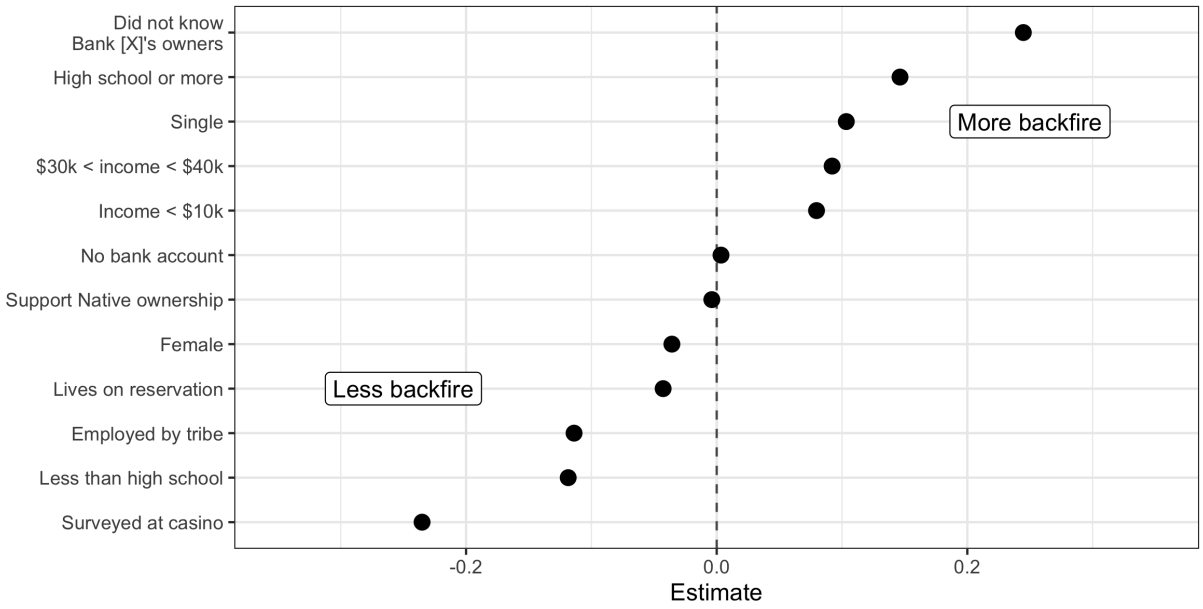
To be clear, looking into heterogeneous effects is a post-hoc exercise, which should be taken as exploratory and descriptive. Given the special importance of the *Likelihood of becoming a customer at Bank [X]* outcome to the success of Bank [X]'s commercial venture, we focus on that outcome variable. Specifically, we focus on the outcome in its "difference(s)-in-changes" form, given those ATEs were the only that consistently "backfired" (see again Figure 4). We employ a several-step process. First, we estimate individual treatment effects based on a large set of possible pre-treatment covariates derived from our survey questions (Appendix B.2). Specifically, we regress the outcome variable on a set of covariates for the Nation A treatment group, the Federal Reserve treatment group, and the control group, and we predict the counterfactual outcomes for each treatment group (Appendix B.8).

We then use these predicted counterfactual outcomes to generate estimated individual-level treatment effects based on observable covariates (see Appendix A.2 for the distribution). We then form an indicator variable of whether each individual's predicted treatment effect is negative, which would indicate that it "backfired." Next, we want to examine whether we see patterns among the sets of individuals for whom our process has predicted "backfire." To do so, we use lasso regression, which minimizes the sum of squared errors while constraining the sum of all estimated coefficients below some threshold, and in the process retains the strongest predictors of Y while shrinking the rest of the coefficients towards zero (Tishbirani, 1996). In our case, the dependent variable Y is the "predicted backfire" dummy. We plot the variables and coefficients retained via the lasso selection procedure in Figure 5. Given that we are not aware of any theoretically grounded post-

selection inference procedure that would give us correct standard errors for our multi-step process, we do not report them. Thus, we again emphasize that this exercise is speculative, although we see it as potentially informative about what respondent characteristics are most likely to result in "backfire."

Figure 5 can be read as follows. The vertical axis indicates the variables selected by the lasso procedure; these are the factors one can think of as most predictive of "backfire" out of the full set of covariates in Appendix B.2. Along the horizontal axis, we plot the associated marginal effect of the variable on the estimated ATE. If the coefficient is to the right of the dashed line, the variable results in a higher probability of "backfire" and if the coefficient is the left of the dashed line, the variable results in a lower probability of "backfire."

Figure 5: **Which variables are most predictive of treatment "backfire"? LASSO estimates.**



The results of the lasso exercise suggest the existence of heterogeneous treatment effects and potential patterns in that heterogeneity that merit further study. First, among the factors that predict the treatment is more likely to work as intended, that those with less than high school education may be particularly receptive to information is normatively promising. Conversely, it is troubling that "backfire" is high among these are groups with lower incomes, given that a key developmental goal shared by the stakeholders is that Bank [X] can improve financial security especially for the most precarious groups. It is also troubling that not having a bank account, while a meaningful factor recovered by the lasso procedure, is not obviously associated with individuals

being more receptive to the treatment.

We see several of the other factors as suggestive of a role for community connectedness in treatment heterogeneity. Given that the casino effectively functions as a community center, it and other "less backfire" factors – employed by the tribe, lives on the reservation, and female – suggest that individuals tied into the community are particularly receptive to the treatment. It would be normatively useful if such individuals were effective influencers in the broader population. Moreover, the strongest predictor of "backfire" is not previously knowing that Bank [X] was owned by Nation B. One might interpret this factor as suggestive of weak involvement in the community. (Knowledge of Bank [X]'s ownership is almost certain for anyone who was paying attention to the lengthy government-bank negotiation process.) This interpretation mirrors the importance of community connectedness among those for whom the treatment was especially likely to work as intended.[50]

6 Conclusion

In this article, we report results from a unique survey in American Indian Nation A, a highly-impoverished banking and modern FDI desert, in which an intended development-enhancing branch of a retail bank is soon to break ground. We find that the bank is overwhelmingly desired by our Nation A respondents, and that their support does not fade away when the bank is identified as Bank [X] owned by American Indian Nation B. Without deception, we use embedded experiments to test whether endorsement by Nation A's Tribal Legislature or a general statement of support from the Federal Reserve moves respondent attitudes in favor of the bank. Such information treatments are deserving of theoretical attention when it comes to individual attitudes around economic integration-related issues, especially in a nation like Nation A. While Nation A is in many ways deeply economically integrated, its extremely high levels of financial exclusion suggest that information interventions could help turn a foreign-owned retail bank into an economic development solution.

Of particular relevance to the Federal Reserve, for which a US-tied identity could carry baggage in Indian Country, is that the direction and size of its treatment effects are on par with those for Nation A. When asked directly, respondents on average report that their support for an on-reservation bank increases in response to the treatments. However, when measured indirectly, the treated are

[50] We see the other most predictive factors – at least high school education, single, and supportive of Native ownership – as less theoretically relevant in even post hoc speculation.

no more likely to express support for Bank [X] or interest in becoming its customer. Moreover, both treatments show evidence of "backfiring." In exploratory analyses, we find suggestive evidence that the treatments may be most valuable for respondents deeply tied into the Nation A community. In contrast, there is troubling evidence that they backfire for some financially precarious groups.

That our results are in many ways complex is worthy of acknowledging. Even given high baseline support for the entry of a foreign bank to a formal banking desert, and the support of both the national government and an external institutional actor with subject-area expertise, it is not a foregone conclusion that such top-down support is useful in moving individual attitudes toward the preferred outcome. Indeed, there are many actors in the world interested in bringing the benefits of economic integration to underserved areas – including a firm like Bank [X] that is taking a risk in investing abroad to provide some of those needed services. Especially when goals consistent with national, international, and private interests overlap, one might hope that scholarly work could prove useful. That the path to maximizing shared economic development goals is complex should further motivate scholarly activity in such normatively compelling spaces.

Last, there exist many nations in the world that are not Westphalian nation-states but nonetheless have sovereign authority over whether a business, a cash flow, a good or service, or an economic migrant can come across their border. In Indian Country alone, there are 326 such sovereign political jurisdictions. We advocate for the theoretical importance of recognizing such nations as sovereigns making choices over economic integration. Moreover, we call for scholars of international economic relations to consider the full set of sovereigns relevant to their research agendas, and to acknowledge whether their work covers the population, a random sample, or a biased sample that excludes nations like Nation A, where steps toward deeper economic integration are incredibly salient.

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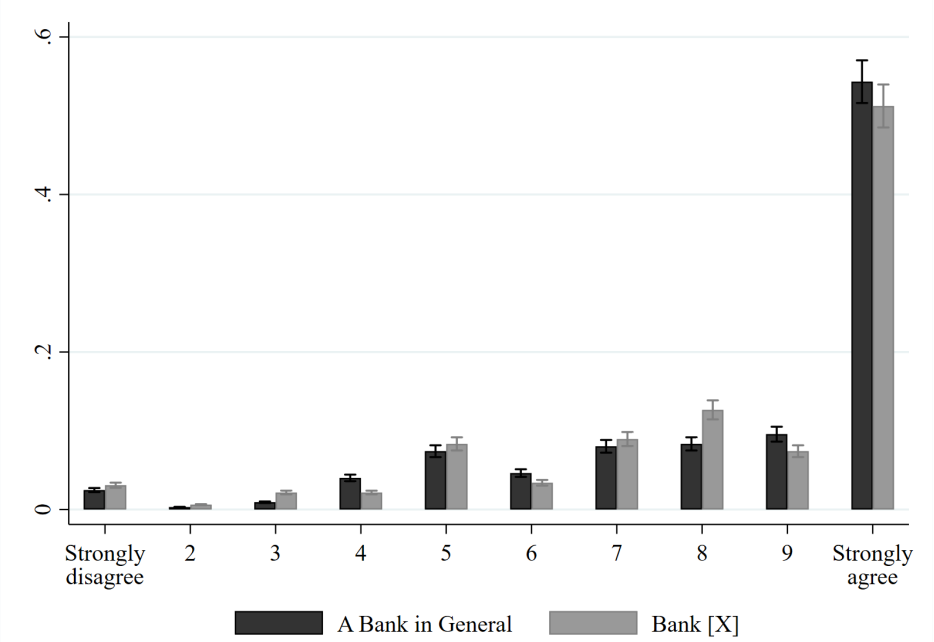
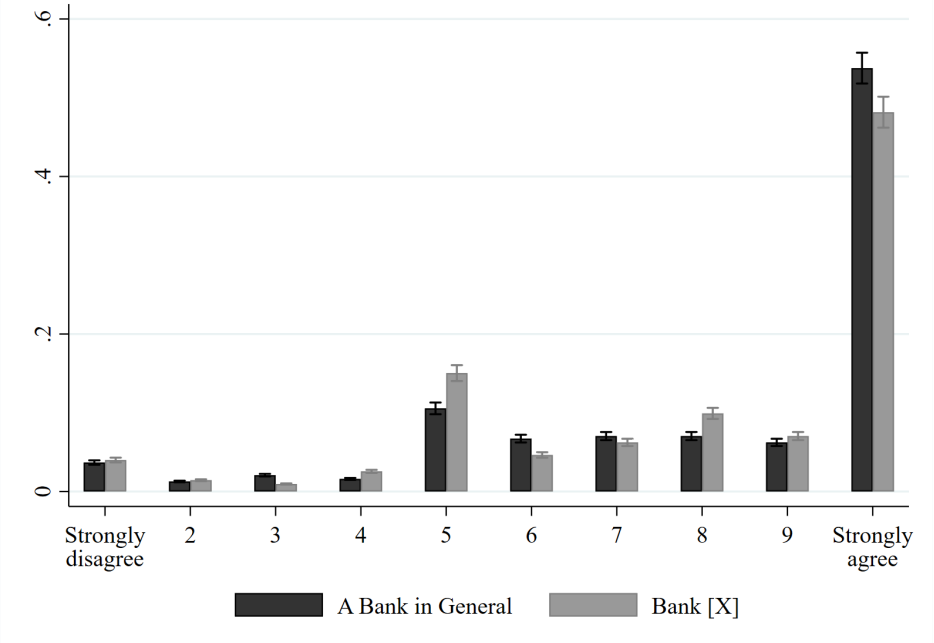
Appendix

A Figures

Figure A.1: *"It would be good for (a bank / Bank [X]) to open a branch on the Nation A Reservation."* Patterns are consistent with descriptive expectations of high baseline support and a skewed distribution.

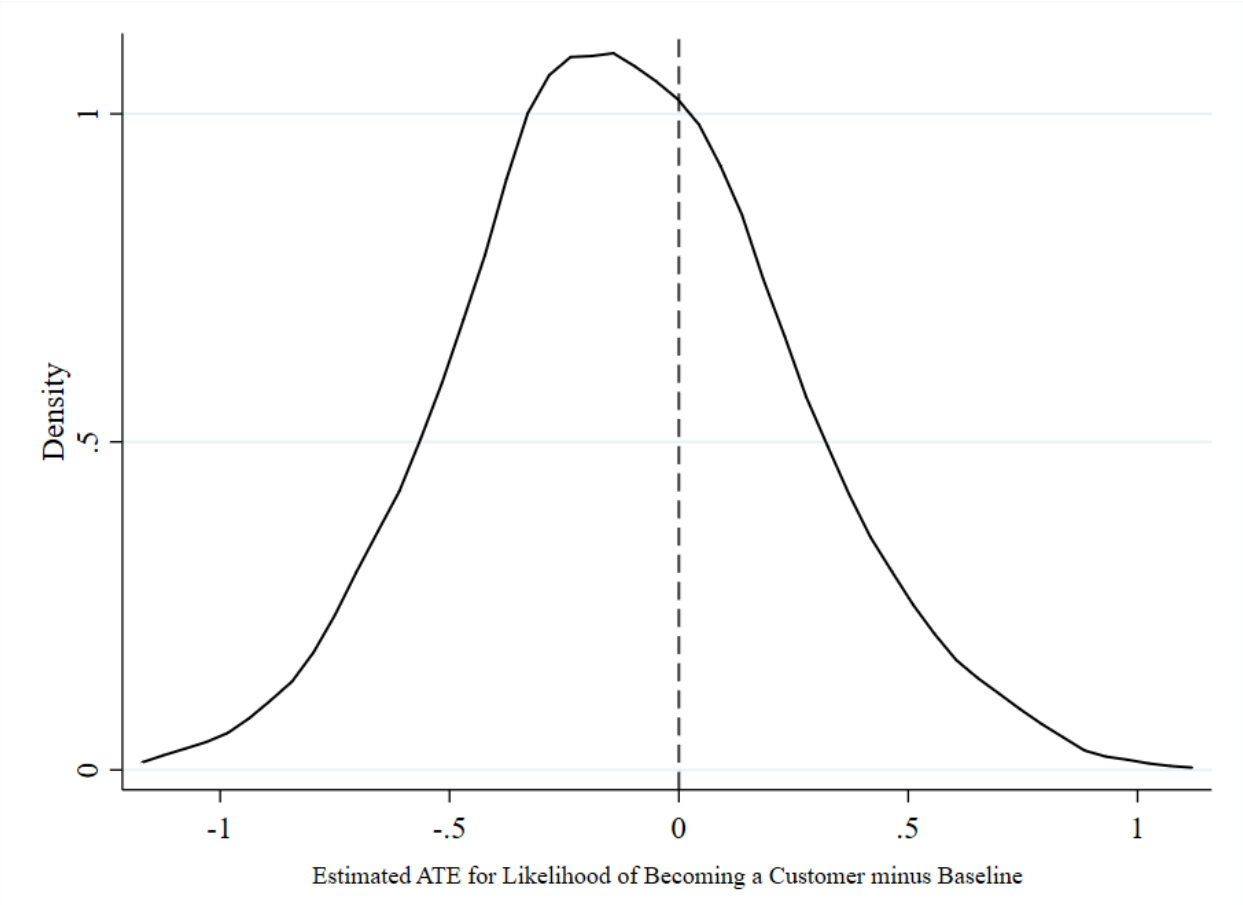


(a) Control Group Only.



(b) Treatment Groups Pooled.

Figure A.2: Distribution of estimated individual treatment effects on "Become a customer (change from baseline)" DV



B Tables

Table B.1: Comparison of Nation A, AIAN, and United States Development Indicators

	Nation A	**AIAN Avg.***	**United States**
Poverty rate	37.9%	26.2%	14.6%
% $\leq$ High school education**	56.3%	45.9%	37.9%
Median household income	$33,836	$39,719	$57,652
Life expectancy***	60.3	73.0	78.8

Notes: *AIAN Avg. = Average values for individuals self-identifying as AIAN. **Of adults age 25+. ***2013-2016 average. Sources: Tribal records, Indian Health Service, US Center for Disease Control and Prevention, and the American Community Survey conducted from 2013-2017.

Table B.2: List of Variables included in Reweighting and ATE LASSO Procedure.

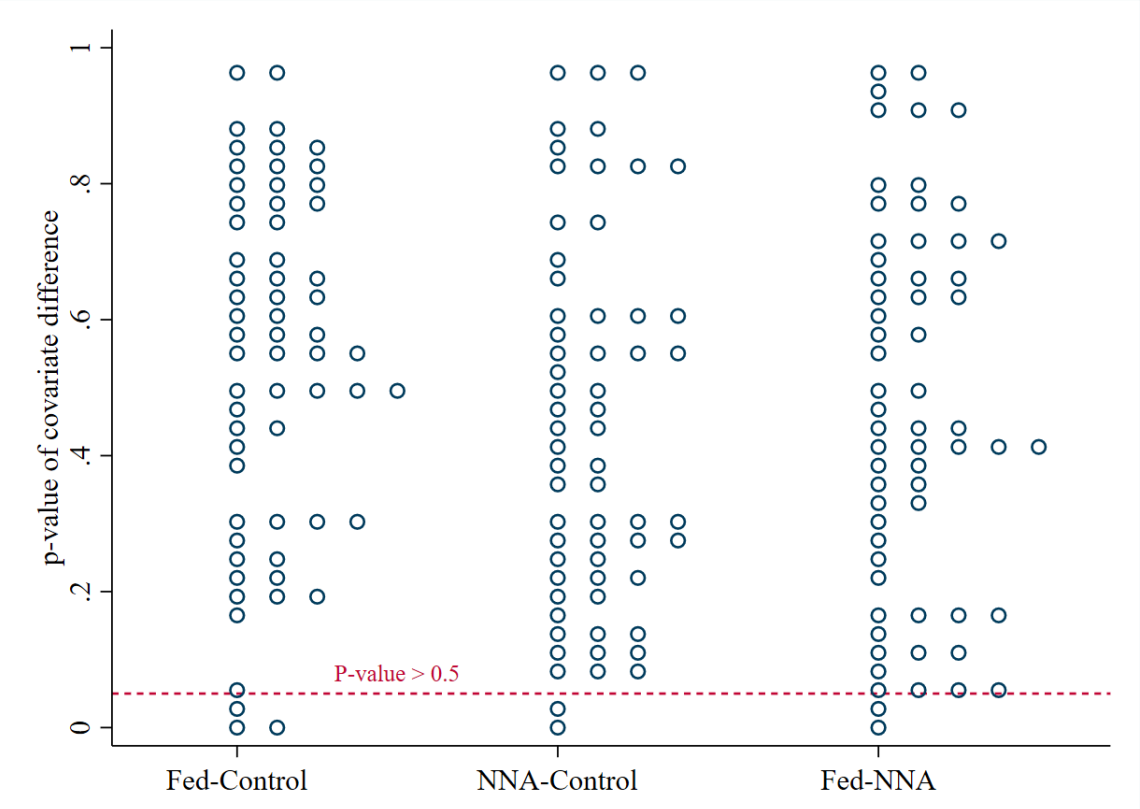
Indicator of whether someone took the survey on a tablet
Enumerator fixed effects
Indicator of having less than a high school education
Indicator of having a high school education
Indicator of having a some college
Indicator for indicating sex as female
Indicator of having a household having at least four dependents (either adults or children)
Indicator of being Single (rather than married or in a common law relationship)
Indicator for living on the reservation
Indicator for not being employed
Indicator for being employed by the tribal government (government only - not enterprises)
Indicator for having an invalid age answer
Indicator for being 18-25 years old
Indicator for being 26-35 years old
Indicator for being 36-45 years old
Indicator for being 46-55 years old
Indicator for having household income less than $10,000
Indicator for having household income between $10,000 to 20,000
Indicator for having household income between $20,000 to 30,000
Indicator for having household income between $30,000 to 40,000
Indicator for having household income between $40,000 to 50,000
Indicator for having done the survey at the Casino
Indicator for having done the survey on their cellphone
Indicator for having done the survey at the first day of the rollout
Their ranking of support for a Nation A owned bank opening
Their ranking of support for a US owned bank opening
Their ranking of support for a Native owned bank opening
Indicator of being an enrolled member
Indicator of having not having got their free credit report
Indicator of not being able to get $400 in an emergency
Indicator of having Internet access at home
Indicator of listening to Natin A news most of the time
Indicator of having payday loan debt
Indicator of not having a credit card
Indicator of having trust in banks five or less out of 10
Indicator of not having a bank account
Indicator of not wanting a bank account
Indicator of self-assessed "very bad" credit
Indicator of having more than four different sources of debt
Indicator of using cash checking services most of the time
Indicator of having a self-assessed financial knowledge less than 5 out of ten
Indicator of having self-assessed financial satisfaction less than four out of ten
Indicator of not knowing their could get a free credit report
Indicator of not knowing Bank [X] was Nation B owned
Indicator of not knowing Bank [X] was going to open

The precise questions related to the outcome variables of interest and their respective baselines can be found in Table B.3

Table B.3: Outcome Variables of Interest and Associated Questions and Baselines A

	Outcome label	**Exact Question**
1	Support change for local bank (self-reported effect)	We would like you to know [statement treatment]. Does knowing this about the [treatment] make your support for a bank opening on the [Redacted] Reservation increase, decrease, or stay the same? (0 Decrease a lot to 5 increase a lot)
2	Bank [X] support level	How much do you agree with this statement, on a scale from strongly disagree (1) to strongly agree (10)? "It would be good for Bank [X] to open a branch on the [Redacted] Reservation."
3	Support change for Bank [X] due to Nation B owner	Does knowing that Bank [X] is 100% owned by the Nation B make your support of Bank [X] increase, decrease, or stay the same?
4	Bank [X] customer likelihood level	Do you think you will become a customer of Bank [X] when it opens on the [Redacted] Reservation?
5	Behavior: Steps towards accessing credit report	After telling them they could get a free copy of their credit report every 12 months, this variable equals one if they a) ask the enumerator about how to get their credit report, click on the website link provided, or write the link down (as indicated by the enumerator).
Baseline for		
2	Bank [X] support level	How much do you agree with this statement, on a scale from strongly disagree (1) to strongly agree (10)? "In general, it would be good for a bank to open on the [Redacted] Reservation."
3	Support change for Bank [X] due to Nation B owner	Do you think you would become a customer of a bank that opened on the [Redacted] Reservation? (0 Definitely not to 5 Definitely yes)
5	Bank [X] customer likelihood level	Would your support increase, decrease, or stay the same if the bank was owned by a Native-owned company from a tribe other than Nation A? (0 Decrease a lot to 5 Increase a lot)

Figure B.1: Treatment groups are well-balanced on observable covariates



Notes: This figure presents the p-values for the difference in means of our pre-treatment covariate measures including our baseline opinion measures, age, sex, education, income, employment, opinions about banks, knowledge of finance, access to financial services and location.

Table B.4: Evaluating Representativeness of Our Respondents: Comparison to Nation A Administrative Data and 2013-2018 American Community Survey Data for American Indians Living in the Same State as Nation A

	Nation A Records	ACS
Proportion enrolled members	0.13***	
Average age	0.64	
Proportion female	0.11***	0.13***
Single		0.09***
No children in household		-0.03^{+}
Employed		0.16***
Less than HS		-0.09***
High school or GED		0.00
Some college		0.03
2-year degree		0.05***
4-year degree		0.01
Advanced degree		-0.01
18 to 24		-0.04**
25 to 34		0.06***
35 to 44		-0.01
45 to 54		-0.03^{+}
55 to 64		0.00
65 and over		-0.04**

Differences in proportions or means reported. Observations vary due to missing responses. Significance stars: $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$ *** $p < 0.001$.

Table B.5: Regressions of outcome variables on treatments, controlling for baseline response.

Comparison:	Control		Control		US Fed	
Outcome:	Support	Customer	Support	Customer	Support	Customer
US Fed treatment	-0.082	-0.153***				
	(0.151)	(0.058)				
Nation A treatment			-0.231	-0.142**	-0.080	0.012
			(0.152)	(0.058)	(0.156)	(0.060)
Baseline FE	Y	Y	Y	Y	Y	Y
Num.Obs.	628	622	645	637	625	623
R2	0.186	0.126	0.143	0.107	0.166	0.096
R2 Adj.	0.173	0.119	0.130	0.100	0.152	0.089

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table B.6: Evidence on Whether SUVTA Holds: Evidence of Time Trends in the Treatment Effect?

		levels		changes	
	Self-reported	Open	Customer	Open	Customer
Federal Reserve	0.770***	-0.00929	0.228	0.0888	-0.270*
	(0.121)	(0.160)	(0.164)	(0.142)	(0.143)
Days Since Start	-1.85e-16	0.00761**	0.00380	0.00114	-0.00254
	(0.000)	(0.004)	(0.004)	(0.003)	(0.004)
(Federal Reserve)	-0.00865**	-0.00627	-0.0108*	-0.00571	0.00797
×Days Since Start	(0.004)	(0.006)	(0.006)	(0.005)	(0.005)
Roll-Out Day	-5.23e-15	0.165	0.252*	-0.137	-0.0932
	(0.000)	(0.121)	(0.129)	(0.122)	(0.123)
(Federal Reserve)	0.0559	-0.0925	-0.351*	0.0461	-0.164
×(Roll-Out Day)	(0.151)	(0.180)	(0.180)	(0.190)	(0.188)
Nation A	0.828***	0.0399	0.0291	0.000663	-0.226
	(0.131)	(0.162)	(0.176)	(0.141)	(0.148)
(Nation A)	-0.00462	-0.0108*	-0.00762	-0.00493	0.00186
×(Days Since Start)	(0.005)	(0.006)	(0.006)	(0.005)	(0.006)
(Nation A)	0.0840	0.0755	-0.00672	-0.0172	0.0102
×(Roll-Out Day)	(0.149)	(0.176)	(0.187)	(0.179)	(0.178)
Observations	982	970	946	949	941
Adjusted R^2	0.124	0.006	0.008	-0.002	0.011

Notes: Linear outcome model used. Heteroskedasticity robust standard errors reported.

Table B.7: Evidence on Fatigue: F-Tests for Difference in Variance within the Control Group Before and After Treatment

	Good for Bank/Bank [X] to Open	Likelihood of Becoming Customer of Bank/Bank[X]
Ha: ratio < 1	0.2436	0.4771
Ha: ratio $! = 1$	0.4872	0.9541
Ha: ratio > 1	0.7564	0.5229

Notes: Classic F-test for differences in variance. P-values reported in cells.

Table B.8: Models the Predict Likelihood of Becoming a Customer By Treatment Group

	Control	**Federal Reserve**	**Nation A**
Less than high school degree	0.0774	-0.307	0.447
	(0.184)	(0.256)	(0.298)
High School or GED	0.0658	-0.0780	-0.0625
	(0.155)	(0.166)	(0.135)
Some college but no degree	-0.0448	-0.104	0.0798
	(0.154)	(0.149)	(0.123)
Female	-0.0988	0.0319	0.0574
	(0.111)	(0.108)	(0.120)
Has at least four dependents	-0.0858	0.186*	-0.0191
	(0.115)	(0.103)	(0.132)
Single	0.0213	-0.0779	-0.0402
	(0.107)	(0.110)	(0.120)
Lives on reservation	-0.0897	-0.155	0.117
	(0.120)	(0.111)	(0.128)
Not employed	0.0824	0.232	0.0900
	(0.113)	(0.148)	(0.125)
Employed in Tribal Government	-0.121	-0.143	0.00485
	(0.144)	(0.119)	(0.140)
Missing age	0.297	0.0450	0.0722
	(0.203)	(0.192)	(0.274)
18 to 24	0.0511	-0.262	0.228
	(0.296)	(0.290)	(0.227)

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Table B.8 – continued from previous page

	Control	Federal Reserve	Nation A
25 to 34	0.234	-0.105	0.190
	(0.158)	(0.149)	(0.160)
35 to 44	-0.0373	-0.0520	-0.0803
	(0.163)	(0.150)	(0.149)
45 to 54	-0.191	-0.0487	-0.186
	(0.140)	(0.164)	(0.152)
Less than $10,000	-0.0433	-0.369*	-0.457**
	(0.162)	(0.189)	(0.195)
Between $10 to $20,000	-0.0803	-0.151	-0.349**
	(0.178)	(0.173)	(0.148)
Between $20 to $30,000	0.114	-0.197	-0.165
	(0.166)	(0.170)	(0.151)
Between $30 to $40,000	0.260	-0.348*	-0.156
	(0.180)	(0.177)	(0.167)
Between $40 to $50,000	0.243*	0.0974	0.0306
	(0.141)	(0.154)	(0.174)
casino	-0.150	-0.0192	0.258**
	(0.123)	(0.101)	(0.114)
Survey taken with enumerator	0.240	0.0666	-0.223
	(0.440)	(0.263)	(0.275)
Took on cell phone	0.0947	-0.443	-0.251
	(0.470)	(0.290)	(0.288)
Nation A ownership change support?	-0.0335	-0.0161	0.0109

Continued on next page

Table B.8 – continued from previous page

	Control	Federal Reserve	Nation A
	(0.049)	(0.045)	(0.047)
Native ownership change support?	-0.0527	0.0213	-0.0166
	(0.054)	(0.044)	(0.045)
US ownership change support?	-0.0133	-0.0937*	-0.00483
	(0.055)	(0.056)	(0.051)
Enrolled member	0.0841	0.106	0.125
	(0.098)	(0.122)	(0.121)
Can't get $400 in emergency	0.00374	0.0862	0.0384
	(0.103)	(0.117)	(0.110)
Has internet at home or smartphone	-0.178	-0.0812	-0.193
	(0.158)	(0.124)	(0.206)
Pays attention to NNA news most times	0.172	-0.0454	0.0573
	(0.108)	(0.103)	(0.103)
Has Payday loan debt	-0.0943	-0.000183	-0.0374
	(0.158)	(0.143)	(0.131)
Doesn't have a credit card	-0.114	0.151	-0.0657
	(0.116)	(0.109)	(0.099)
Less thank median bank trust, less than 7/10	0.145	0.0655	0.200*
	(0.103)	(0.095)	(0.107)
No bank account	0.0720	-0.203	-0.0620
	(0.121)	(0.131)	(0.151)
Didn't know Bank [X] Nation B owned	0.201*	-0.156	-0.0652

Continued on next page

Table B.8 – continued from previous page

	Control	Federal Reserve	Nation A
	(0.114)	(0.106)	(0.098)
Didn't know Bank [X] was going to open	-0.196	-0.0401	-0.187
	(0.135)	(0.114)	(0.122)
Didn't know could receive free credit report	-0.0441	-0.123	-0.116
	(0.102)	(0.099)	(0.104)
Self-assessed financial knowledge ranked $< 5/10$	0.134	0.115	0.103
	(0.149)	(0.165)	(0.165)
Satisfaction with finances less $< 4/10$	-0.296*	-0.0395	-0.317**
	(0.157)	(0.116)	(0.142)
Uses cash checking most of the time	0.274*	0.135	0.239
	(0.157)	(0.171)	(0.224)
Doesn't have or want a bank account	-0.256	-0.0422	0.0670
	(0.297)	(0.164)	(0.198)
More than four sources of debt	0.150	0.161	0.0370
	(0.144)	(0.138)	(0.162)
Very bad self-assessed credit	0.0936	0.232	0.143
	(0.259)	(0.149)	(0.163)
Observations	299	290	298
Adjusted R^2	0.014	0.065	0.034
Actual Mean of Outcome	0.071	-0.059	-0.11
Predicted Mean of Outcome	0.071	-0.059	-0.11

Linear outcome model used. Heteroskedasticity robust standard errors reported. Observations vary due to missing responses.