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

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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 sovereignty in negotiating the entry of the first bank to its underserved reservation. The bank, Nation A’s only modern foreign investment, is owned by American Indian Nation “B.” We conduct a first-of-its-kind survey of Nation A’s tribal members in the months before the bank’s groundbreaking. This unique opportunity allows us to investigate drivers of individuals’ support for and, crucially, willingness to become customers of the bank. Without deception, we explore effects of the bank’s ownership, as well as randomized interventions cueing Nation A’s endorsement and general support from the Federal Reserve. We find high baseline buy-in, especially given the bank’s nationality, but weak and even counterproductive treatment effects. Exploratory analyses suggest backfire among low-income respondents. This troubling result reinforces the relevance of non-Westphalian sovereigns to building theory around the consequential choices that they too make over economic integration.

Keywords: American Indian; capital access; financial exclusion; economic development; foreign direct investment; international economic relations; experiments

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1 “A Fundamental Human Right”

Access to credit, which Nobel Peace Prize winner Muhammad Yunus pronounced as “a fundamental human right,” is inequitably distributed in the United States.¹ Six percent of adults in the US do not have a bank account, and 16% who have a bank account are reliant on alternative, and often more predatory, financial services. For American Indians and Alaskan Natives (AIAN) living in and around the 326 independent jurisdictions in Indian Country, this problem is longstanding (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 the authors collaborated with American Indian Nation “A” to conduct a first-of-its-kind survey exploring capital access on their reservation (January-March 2020).⁴ Extrapolating from the survey, an 33% of Nation A adults do not have a bank account, 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.⁵ Such high percentages were not unexpected, as the Nation A reservation is a “banking desert” without a local provider of formal financial services, and has been for longer than tribal elders can remember. The closest retail bank branch is about ten miles away on roads that are difficult to drive in winter.

What precipitated the survey was Nation A’s success in securing a bank’s entry to its reservation. What is more, the bank is from American Indian Nation “B,” which intends the branch’s viability to justify further expansion in Indian Country. The pending entry of a Native-owned bank caught the attention of the Federal Reserve System (Federal Reserve), given its mission to mitigate financial exclusion in the US, which includes Indian Country. Remarkably, Nation A’s development goals, the bank’s need to be commercially viable, and the Federal Reserve’s mission are all contingent on the same thing: the voluntary consumption choices of individuals in this severely underserved nation. That the stakeholders’ mutual goal relies on individuals as consumers forcefully demonstrates the power of individual attitudes toward economic integration even in a highly impoverished setting (Rudra and Tobin, 2017). Moreover, Nation A hosts no foreign direct investment (FDI), let alone consumer facing FDI, from the US or otherwise, so this setting provides

¹Nobel Lecture, 10 December 2006.

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

³See Ben Kessler, “Native Americans, the census’ most undercounted racial group, fight for an accurate 2020 tally.” *NBC News*, 29 December 2019.

⁴Consistent with their sovereign rights, Nation A’s legislature approved our study conditional on anonymity.

⁵As only 44% own a credit card, the majority do not have the option to accrue credit card debt.

a unique baseline for individuals' attitudes toward economic integration in their community.

In the months between the branch's licensing and its groundbreaking, the authors collaborated with the stakeholders to consider whether, and how much, they could build *ex ante* support for the branch and, most importantly, spark tribal members' interest in moving their money once it opened. We used the survey instrument as a means of testing cues designed by the stakeholders to be channels of positive influence. This real-world setting concerns national economic policy, FDI, and the influence of an external advisory institution in the development space. Thus, our advantage as scholars is to integrate and challenge cueing theory born of large bodies of work on public opinion over international relations and the links between identity and voluntary economic transactions. Moreover, we do so without deception, using true cues chosen by stakeholders, in an environment where their effects are consequential for individuals' intimate choices over their personal finances as well as positive externalities benefitting the larger nation.

Descriptively, our survey revealed very high and quite homogeneous baseline support for an on-reservation bank branch, highlighting the relevance of not only the cues' positive effects but also any unintended "backfire." The bank approved questions cueing its identity as a Native-owned, and not US/American-owned, foreign investor. Our results support the bank's expectation that its identity and specific Nation B-origin give it a competitive advantage in Nation A. Experimentally, we test two interventions that hinge on the credibility of the messenger: an endorsement by the Nation A legislature, and a statement of general support provided to the authors by the Federal Reserve Board of Governors. Parallel average treatment effects allay the concern that the Federal Reserve's US-tied identity would be differentially counterproductive. However, the positive effects of each cue are small in magnitude and often insignificant, and there is evidence of backfire. Exploratory analyses suggest that the treatments prove effective for respondents with deep community connections, but they weaken buy-in from lower-income respondents. Our nuanced findings suggest that the stakeholders' credibility is unevenly distributed, in ways that could make intervention in itself damaging to groups they are most interested in targeting – especially problematic in the context of quite homogeneous high baseline support.

In what follows, we discuss our real-world setting and ethical issues driving our research design, emphasizing the scholarly benefits of non-deception and stakeholder-driven hypothesis testing. Although our setting is in many ways very different from those in which cueing theory has been developed, we argue for its relevance to our stakeholders' choices while also challenging its implications. We report survey results and explore both theoretically- and normatively-relevant

heterogeneous effects. We conclude by reinforcing the theoretical importance of Nation A’s choice to pursue economic integration as a development strategy, despite it and so many other underserved nations being overlooked when only Westphalian nation-states comprise the unit of analysis.

2 An Underserved Nation’s First Bank

Americans Indians living on reservations are some of the most economically marginalized US communities (Akee and Taylor, 2014), with lower average credit limits (Dimitrova-Grajzl et al., 2015), higher mortgage rates (Feir and Cattaneo, 2020), and less access to financial markets (Wellhausen, 2017; Brown, Cookson and Heimer, 2019; Anderson and Parker, 2008). Extremely marginalized Nation A, a federally-recognized tribe with more than 10,000 members, speaks to the lower bounds of such normatively troubling findings.⁶ Even in the context of the strong pre-pandemic economy, 31% of Nation A survey respondents reported that they could not come up with \$400 in case of an emergency, whether through savings or (informal or formal) borrowing, and a further 16% were unsure.⁷ Nation A leaders have long deliberated on how to improve capital access. As the reservation’s second biggest town is not covered by cell service, internet-enabled solutions remain unrealistic.⁸ The tribal government runs a well-received small-dollar loan program, but expansion is not thought viable. Rather, discussions have centered on attracting a physical branch of a non-Nation-A, and thus foreign, retail bank. Indeed, physical branches remain important throughout the US; in 2017, 84% of Americans visited branches, and almost all did more than access the ATM (Merry, 2018).

Nearby Nation B’s urban reservation helps to make its casino and hotel very profitable, although like many American Indian nations it is diversifying away from gaming given its uncertain future. One of Nation B’s key ventures is Bank [X].⁹ Bank [X] is unique in pursuing expansion in Indian Country; to this end, it has become certified as a Community Development Financial Institution (CDFI), a federal program that allows it to reorient from profit-maximization toward commercial viability. Bank [X] proposed to open its first Indian Country investment on Nation A’s reservation. While Nation A welcomed the proposal, it took well over a year from Bank [X]’s initial inquiry to a

⁶See Appendix Table B.1 for comparative development indicators.

⁷Compare 31% to 12% in the 2019 US Survey of Household Economics and Decision-making (SHED).

⁸Contrast this with Sub-Saharan Africa, where 21% of adults have mobile money accounts, and half of these adults do not have traditional commercial bank accounts (Demirguc-Kunt et al., 2018).

⁹Bank [X] is licensed in the US and subject to US banking regulations. As is common in Indian Country, the firm is wholly state-owned; given our commitment to non-deception, we cannot manipulate whether the bank’s state ownership impacts attitudes.

positive, unanimous vote from Nation A’s legislature. Much of this time lag was due to negotiations over the terms of entry. Like all firms investing abroad in a foreign jurisdiction, the bank’s interest is to mitigate legal uncertainties inherent in cross-border transactions. 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 use third-party, private arbitration outside of the civil law and courts of Nation A, Nation B, or US state and federal systems.¹⁰ Bank [X] also required as a condition of entry that the Nation A government move its finances to the branch. These terms demonstrate that Bank [X] is cognizant of political risks arising from its engagement in FDI, which are not negated by their perceived competitive advantages.

For the branch to be commercially viable, as Bank [X] requires, and to improve access to capital on the reservation, as Nation A desires, Nation A’s tribal members must support the branch and, most importantly, become its customers. Previously un- and underbanked customers would derive direct, material benefits, and more customers overall would both improve commercial viability and grow the branch’s positive externalities for community development. These outcomes are consistent with the mission of the Federal Reserve, the external institution with a specific mission to mitigate financial exclusion and promote economic growth in Indian Country, as well as the broader US. The Federal Reserve is further interested in proof-of-concept of a Native-owned bank successfully expanding via FDI in other American Indian nations. A question of both scholarly and practical interest arose: prior to the bank’s opening, how might stakeholders grow the ranks of supporters and willing customers that could later convert to actual customers?

To pursue this question, the Federal Reserve funded the first non-Census scientific survey of adult (18+) Nation A tribal members, which the authors executed in collaboration with Nation A’s tribal college. Like many American Indian nations, Nation A has a baseline skeptical view of external actors conducting research – for good reason, given historical exploitation. The approval process required the authors to testify before a legislative committee responsible for IRB-type review, with a focus on any sovereignty-threatening aspects of the research. We committed to anonymizing public-facing research (hence Nation “A”). The full legislature asked Bank [X] to endorse the survey and the capacity of the authors to conduct it. Bank [X] did so while also making clear that it is not part of the research team; it has no privileged access to data; and its investment is in no way conditional on the survey.¹¹ In several rounds of in-person testimony, legislators

¹⁰Nations A and B each have sovereignty over their civil legal systems like many, though not all, nations in Indian Country (Wellhausen, 2017). This solution parallels provisions in treaty-based international investment law (St John, 2018).

¹¹Bank [X] made a charitable donation to the authors’ tribal college partners, as appropriate under Nation A,

carefully reviewed each survey question with the authors.¹² As was their right, legislators required detailed changes, the most relevant of which included cutting voting and ideology questions that they saw as violations of tribal members’ privacy. The authors also cut replications of questions from national surveys intended to gauge financial knowledge that were viewed as simplistic and in that way disrespectful.¹³ Since it is our firm belief that the survey generated positive externalities for Nation A and Indian Country more broadly, the authors felt that making the tradeoffs necessary to secure approval was more valuable than incurring the very high risk that doing otherwise would have led to the legislature’s rejection of the survey.

3 Stakeholder Credibility and Individual Attitudes

Maximizing material gains to tribal members, especially those who are otherwise un- or under-banked, is the key pathway by which the bank’s success could generate direct effects and positive externalities to feed into broader development goals.¹⁴ We incorporated into the survey instrument interventions testing whether stakeholders could bolster respondents’ ex ante buy-in (i.e., support and willingness to become customers of Bank [X]). The key benefits of our design are that these interventions are true, developed in collaboration with stakeholders, and implemented without deception. We support further work pivoting away from “engineered” interventions, especially given well-established findings in lab-based experiments.

Theoretically, all three stakeholders provide cues, or “information that enables people to form evaluations about an attitude object without in-depth knowledge” (Eagly and Chaiken, 1993; Nicholson, 2011). Non-experimentally, the survey cues Bank [X]’s Native and specific Nation B ownership. Experimentally, the survey considers two cues: an endorsement provided by Nation A’s legislature, and a general statement of support solicited by the authors from the Federal Reserve Board of Governors. All three are top-down (or elite) cues that hinge on source credibility, which is comprised of expertise and trustworthiness.¹⁵ The stakeholders shared the implicit hypothesis that their cues would have positive effects via the mechanism that the credibility of the stakeholder is great enough to shape respondent attitudes (Mondak, 1993). A credibility-based intervention

Nation B, and US law.

¹²We check robustness to account for those involved in this process that may have taken the survey (specifically, by controlling for tribal government employment and prior knowledge of Bank [X]’s opening).

¹³Although unfortunate from a research design perspective, getting legislative sign-off on a pre-approval plan would have upset this sensitive process, as the legislature rejected the involvement of other external parties.

¹⁴Maximizing the losses to predatory service providers would be a simultaneous benefit.

¹⁵For a comprehensive review, see Pornpitakpan (2004).

stands in contrast to the standard intervention intended to mitigate financial exclusion, which teaches the respondent *why* they should support the bank via a financial literacy mechanism.¹⁶ Myriad financial literacy programs have long been deployed in underserved communities around the world (Goyal and Kumar, 2021), and many achieve success that parallels lab-based findings that teaching material self-interest can change attitudes (Rho and Tomz, 2017). However, such interventions have not solved Nation A’s issue. For example, of our Nation A respondents who reported being unbanked, 37% of them said that they had participated in a formal financial literacy program, and 50% self-reported levels of financial knowledge above 6 on a 10-point scale. This normatively disappointing mismatch helps explain why none of the stakeholders gravitated toward teaching-based interventions.

The pathways via which each stakeholder builds credibility vary: Bank [X] suggests trust via shared identity, the Nation A legislature suggests democratic representativeness, and the Federal Reserve suggests technocratic expertise (Pornpitakpan, 2004). What is more, the reality of economic integration in this setting places all three pathways in the sphere of individual attitudes and stakeholder credibility in international relations (Guisinger and Saunders, 2017). We highlight theoretical underpinnings for the stakeholders’ intuitions but also potential challenges to their implicit hypotheses regarding credibility.

3.1 Firm National Origin

First, we consider Bank [X]’s expectation that its national origin is a source of competitive advantage in Nation A, which implies that cues regarding Native ownership and Nation B ownership in particular should have positive effects on respondents. Our starting point is the well-documented home-country bias in consumption decisions (Verlegh, 2007), which motivates the entire literature on the consequences of the “foreign” in FDI (Wellhausen, 2021). Home bias should hold in our setting as well.

Hypothesis 1a. *All else equal, respondents prefer a domestically-owned bank to a foreign-owned bank.*

Should a domestically-owned business not be an option, can the identity of a foreign-owned business influence attitudes toward it? Public opinion regarding economic integration, especially

¹⁶Given that the reservation is a formal “banking desert,” and we ended the survey well before Bank [X]’s groundbreaking, we can rule out the possibility that our stakeholders’ cues were affected by simultaneous informal teaching via local learning and experience.

in a developing context, is shaped by a variety of factors including fairness and exploitation (Weitz-Shapiro and Winters, 2017) and colonial history (Arias and Girod, 2014). Nation A is, in many ways, an archetype of these factors. Its US-caused incomplete sovereignty, itself inextricably linked to settler colonialism, means that it is deeply economically integrated with the US while also constrained in its set of economic policy choices (Feir et al., 2019; Leonard, Parker and Anderson, 2020). US/American-owned banks have long been the only realistic foreign investors into Nation A, but no such bank has seriously explored opening on its reservation. Even setting aside possible discrimination-based motivations, this lack of interest is consistent with the high costs of cross-border transactions into sovereigns with unique civil law and courts, small populations, and high poverty levels (Wellhausen, 2017).¹⁷ In fact, no US/American-owned firm engages in FDI on the reservation, which has made it impossible for Nation A to use economic integration as a means of improving capital access or other development outcomes.¹⁸

That a bank with a shared Native identity is the one bank that pursued entering Nation A is consistent with a wealth of scholarship. There is robust evidence that in-group preferences have substantial influences on facilitating economic transactions, especially via the mechanism of establishing trust (Charness and Chen, 2020; Shayo, 2020; Kalin and Sambanis, 2018). These findings are consistent with research in an international relations context that connects moral values such as in-group/loyalty and fairness/respect to individual attitudes over foreign policy (Kertzer et al., 2014). In fact, in the specific setting of foreign-owned banks entering developing Westphalian nation-states, Mian (2006) provides empirical evidence that cultural similarities between home and host correlates with improved market outcomes. Taken together, the implications for our setting are that shared Native identity matters, that in-group understanding and shared values among Native peoples would ease economic transactions, and that Nation A tribal members would support the policy choice to leverage a bank that is Native-owned as a developmental strategy.

This first instance of FDI provides the first opportunity for Nation A tribal members to express meaningful preferences over the identity of a foreign investor. It also upends the expectation that a foreign investor into Nation A must also be a US/American-owned one. Nonetheless, the realistic alternative remains a US/American-owned bank, and there is reason to believe that identity could

¹⁷Among US banks that do invest elsewhere in 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.

¹⁸Anecdotally, tribal members understand that the few local US-branded stores are franchises that shift risks onto the Nation A operators. Other American Indian nations host FDI from the US as well as other Westphalian nation-states, for example via Foreign Trade Zones (FTZs). See: *Tribal Economic Development Principles-at-a-Glance Series*, US Department of the Interior (accessed November 2021).

decrease support. Thus, Native ownership is consistent with a most-likely-case of an identity-based advantage.

Hypothesis 1b. *All else equal, respondents prefer a Native-owned local bank to one owned by a non-Native US/American company.*

However, there is extreme variation among Indian Country nations’ bilateral relations and perceptions of shared identity, which becomes especially relevant when moving from preferences over a hypothetical Native-owned bank to a specific bank owned by Nation B. 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 membership, compared to the low-to-no per capita disbursement in Nation A.¹⁹ On the other hand, Nation A took actions to support Nation B during a difficult historical period in B’s relations with the US federal government, and that cooperation continues to be referenced and honored by leaders in Nation B. Most relevant is that Bank [X]’s jovial CEO – Nation B’s face on Nation A’s reservation – expects the bank’s Nation B identity to add to rather than detract from its Native competitive advantage.²⁰

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

Due to practical constraints, we are not able to test H1a, H1b, or H1c experimentally. We expect to find observational data 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.²¹

3.2 Nation A Endorsement

Next, we consider Nation A’s implicit hypothesis that its endorsement will have a positive effect on respondent buy-in. Nation A is a parliamentary democracy with a legislative and judicial branch. Its elected legislature voted unanimously to approve the terms of Bank [X]’s entry, which is notable given that legislators are well-known to butt heads (as supported by the authors’ experience). The legislature also unanimously approved the following for inclusion in the survey: “We would like you to know that the [Nation A] Tribal Legislature supports the opening of a bank on

¹⁹Consistent with Nation A’s and B’s sovereignty, the value of their per capita payments was not disclosed to the authors.

²⁰Conversations with Bank [X] CEO, July 2019.

²¹Nor do we expect these rankings to vary as a result of randomized experimental interventions.

the [Nation A] Reservation.” The literature suggests that unanimity on the part of elites providing a cue meaningfully increases its effectiveness.²² In contrast, the divergent effects of political polarization on public opinion is well-established, whether over domestic or international issues (Aldrich et al., 2006; Druckman, Peterson and Slothuus, 2013; Guisinger and Saunders, 2017; Saunders, 2022).

The legislators’ approval of this intervention suggests that they see it as coming from a credible messenger, with both sufficient trustworthiness and expertise that the cue will have its intended positive effects. Two possible counteracting factors are worth considering. First, the Nation A intervention cues the respondent that the legislature endorses the opening of a bank in general, and not Bank [X] in particular. In light of scholarship on business-government relations, especially in an FDI context, it is understandable that the legislature does not explicitly “hitch its wagon” to Bank [X] and thereby risk political backlash should the venture fail to provide desired benefits (Pandya, 2016; Walter, 2021).²³ In this sense, the non-specificity is by design aimed at preserving credibility. The endorsement invokes the legislature’s expertise and trustworthiness with regard to its economic development strategy in principle, and not in practice. Even for respondents predisposed to respond to the intervention, the onus is on them to interpret that the legislature intends to increase buy-in to Bank [X] in particular.

A second issue is that dissatisfaction with the government would weaken the credibility and thus the effects of the legislature’s endorsement. Anecdotally, some tribal members are dissatisfied with the fairness of the government’s budget decisions especially in the preceding year, as well the role of family networks in elections.²⁴ Perhaps most importantly, Nation A leaders have for decades failed to bring about exactly the investment that they are endorsing now. Indeed, the tribe has not always been marked by such poor economic conditions. Entrepreneurship and economic success are important themes in Nation A’s early history, which could further reinforce the perception of government failures in the modern era.

Nonetheless, we align our prior with the legislature’s expectation that the net effect of their endorsement will be positive. We expect to find positive within-subject effects on support for Bank

²²A trusted interlocutor supports our interpretation that unanimity is implied in the cue, although to be clear it is not explicit.

²³Late in the survey those receiving the Nation A endorsement were informed that the legislature agreed as terms of Bank [X]’s entry “to move all of the Tribe’s banking services (excluding investments and 401k) to Bank [X].” We cannot experimentally test the effect of this non-randomized information. However, within-subject reactions are highly correlated (correlation coefficient of 0.46 on a 5-point scale), which helps mitigate concerns over the move from hypothetical to specific.

²⁴A trusted interlocutor suggested that one reason the legislature rejected survey questions on voting behavior is that tribal elections are characterized by very low turnout.

[X] after receiving the cue, and as well as effects on levels relative to a control group that does not receive any experimental intervention.

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

When asked about their attitudes toward becoming Bank [X]’s future customers, respondents are obviously not making binding commitments. Still, raising the possibility of becoming a customer asks respondents to consider the bank’s potential role in their own consumption choices. A positive effect of the intervention would indicate that the government can causally affect respondents’ intentions over what to do with their own money. When put this way, it is reasonable to suspect respondents could see the intervention as an overstep that damages the government’s credibility as a trustworthy messenger, as opposed to one with commercial interests. That said, we again align our prior with the legislature’s implied hypothesis.

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

3.3 Federal Reserve System Support

In our second experimental intervention, the cue is a statement provided by the Federal Reserve Bank Board of Governors to the authors for inclusion in the survey: “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.” The intended positive cue is consistent with scholarship on the credibility of external institutions with subject-matter expertise, especially in the development space (Broome, Homolar and Kranke, 2018). For example, in the context of foreign aid, cueing an external institutional “brand” has been linked to positive or at least null effects on support for local government (Dietrich, Mahmud and Winters, 2018; Dietrich and Winters, 2015). Further, the statement is consistent with widely-accepted best practices. It is well-established that predatory service providers do harm, especially in marginalized communities (Demirguc-Kunt et al., 2018).²⁵ Further, when it comes to expanding formal financial services via FDI, Gopalan and Rajan (2018) and Léon and Zins (2020) provide

²⁵In Indian Country, see arguments by the non-profit Oweesta Corporation (<https://www.oweesta.org/>).

compelling empirical evidence that foreign-owned formal service providers have had considerable success in improving capital access in underserved Westphalian nation-states.

It is an advantage that we employ the Federal Reserve’s true language approved exactly for this purpose. As well-established by [Baerg \(2020\)](#), Central Bank messaging is subject to detailed word-smithing in order to achieve its goals. The statement’s specific design choices reinforce the importance of eliciting true cues, as “engineered” cues would not obviously be of use practically or in theory development. However, those design choices also raise complications relevant to the Federal Reserve’s status as a meaningful or credible messenger to survey respondents. First, the statement includes phrasing that may be unfamiliar and thus generate noisy responses. In particular, the statement refers to the relatively abstract concept of “retail financial services,” which is terminology consistent with the Federal Reserve principle of non-endorsement of any specific commercial entity. The word “bank” is not inclusive of all formal financial service providers, which puts the onus on respondents to understand an on-reservation bank as within the scope of the statement. Of course, the statement does not cue Bank [X] either.

Second, building theory around the Federal Reserve’s credibility as a messenger requires us to pin down what respondents 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 US, 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 respondents to know, much less understand, the Federal Reserve’s complicated and unique status as not strictly private nor public. From the point of view of our respondent pool, we expect the Federal Reserve to be understood as an institution originating from the United States, which is considered to be external to Nation A and Indian Country as a whole. We expect cueing it as “the Central Bank of the United States” to reinforce this interpretation. Undoubtedly, the consequences of settler colonialism and the specific historical injustices faced by Nation A have the potential to impugn the credibility of an institution tied to the US, especially in terms of its trustworthiness. Therefore, there is a legitimate concern that the Federal Reserve intervention could have a counterproductive, negative effect on respondent attitudes if it cues the US federal government.

Still, our prior is that the Federal Reserve statement will have a positive effect on individual attitudes, consistent with its intent. As before, we expect to find positive within-subject effects after receiving this intervention, 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 intervention, respondent support for Bank [X] will increase relative to (a) their baseline support and (b) a control group that does not receive this intervention.*

To be clear, the Federal Reserve does not give personal financial advice. While its statement provides detail as to what the Federal Reserve supports, it does not contain a financial literacy component to explain why, and it is not connected to a hypothetical bank or Bank [X] in particular. Thus, although a statement from an external institution with expertise in banking could conceivably be a credible and meaningful input into the decision to become a Bank [X] customer, it is deliberately designed not to speak to respondents' personal consumption decisions. Additionally, consistent with potential distrust associated with its US identity, the intervention could be insufficiently credible to result in positive effects. Nonetheless, as with the Nation A intervention, our prior is that the Federal Reserve intervention will not only increase respondent support for but also willingness to become customers once Bank [X] opens.

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

We pause to emphasize that the Nation A and Federal Reserve treatments are not parallel. While neither treatment references Bank [X] by name, they employ different language at different levels of generality that communicates different information. While our commitment to non-deception in this real-world setting facilitated buy-in from our stakeholders and meets our ethical priorities, this is a key methodological tradeoff. Nevertheless, implicit in both stakeholders' interventions is the intent to move attitudes in the same, positive direction, though there are plausible counteracting effects in either case. Of particular concern was that the Federal Reserve intervention would be so polluted by its US-tied identity as to have the opposite effect of the Nation A intervention. This made our empirical findings all the more relevant to the Federal Reserve and its strategic communication decisions.

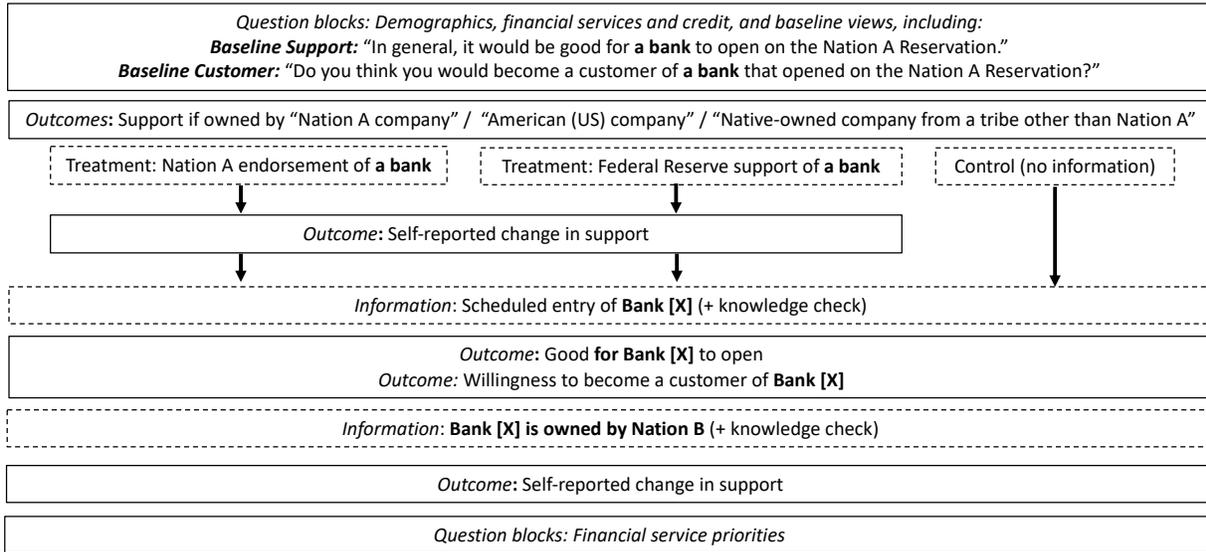
4 Implementation Considerations

Figure 1 summarizes the survey flow.²⁶ Dotted boxes indicate the points at which the survey introduced different pieces of information, alongside an information check where appropriate. The

²⁶See Appendix B.3 for question wording.

survey begins with blocks of questions on demographics; financial knowledge; use of financial services and credit; and respondents’ baseline support for 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.²⁷

Figure 1: Survey Flow



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 context. We of course stopped the survey abruptly in March, consistent with public health priorities around the arrival of the COVID-19 pandemic.²⁸ Nonetheless, we collected 982 high-quality responses from the target population, adult (18+) Nation A’s legally recognized members.²⁹ For its part, Bank [X] delayed its scheduled groundbreaking until finally able to hold a socially-distanced event in summer 2020.

To conduct the survey, we collaborated with Nation A’s tribal college to hire and train ten

²⁷The last block also provided additional information to the Nation A treatment group as described in footnote 23. Figure 1 excludes a concluding 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.

²⁸We find little evidence of differential responses to treatment between earlier and later respondents, increasing our confidence that the SUTVA assumption holds (see Appendix B.6).

²⁹We exclude 29 respondents who report that they are already customers of Bank [X]. The target population incorporates registered descendants, a legal distinction that is not relevant here.

enumerators, who were all female students without prior experience.³⁰ Enumerators facilitated the survey on tablet computers via the offline Qualtrics app (Bush and Prather, 2019).³¹ Enumerators 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 health clinic; senior centers; government offices; and the main tribally-owned enterprise during shift breaks.³² 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.

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 low-income community, news of the 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 authors believe that implementing randomization – thereby forcing enumerators to prevent fellow tribal members from having their voices heard in the first non-Census survey – was simply inappropriate. However, even enumerators’ implicit sampling strategies were stymied by the survey’s abrupt stop after three months (of a planned five).

To determine whether or not our convenience sample is reasonably representative, we compare it to population averages in Nation A’s official records and its US state (Appendix B.4). The key observational imbalance is our oversample of women, which may be a function of the composition of our (female) enumerators’ social networks (Schroedel et al., 2020). Each of two treatment groups and the third control group are generally well-balanced on observables, indicative of successful randomization. Nonetheless, we report results with and without a battery of controls (listed in Appendix B.2).

³⁰Enumerators were paid \$15/hour (compared to the on-reservation average of \$9/hour).

³¹Although originally offered as an incentive, due to the pandemic halt all enumerators were gifted their tablets.

³²Our 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.

5 Results

Baseline measures of attitudes provide a reference point on which to layer inferences regarding stakeholder cues. As the stakeholders hoped, baseline attitudes toward an on-reservation bank in Nation A were very favorable and also low variance. For both a hypothetical bank and the specific Bank [X], over 49% respondents chose the highest level of support (Appendix A.1). 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.³³ One concern is that high baseline support will generate inferential challenges due to ceiling effects. Additionally, treatment effects may be small in magnitude in terms of movement on the relevant scale. In part because of these prior expectations, one of our question formats asked respondents directly whether and in which direction a cue changed their support, which allows even the most (least) enthusiastic respondents to express even more (less) enthusiasm without censoring.³⁴

5.1 Observational Results: Firm 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 than Nation A,” and “an American (US) company.”³⁵ See Figure 2 for a visualization of results. Consistent with H1a, domestic ownership is preferred to American (US) ownership; domestic ownership is also preferred to foreign ownership by another Native nation, although that effect is not as stark. Consistent with H1b, between foreign choices, non-A Native is preferred to American (US).

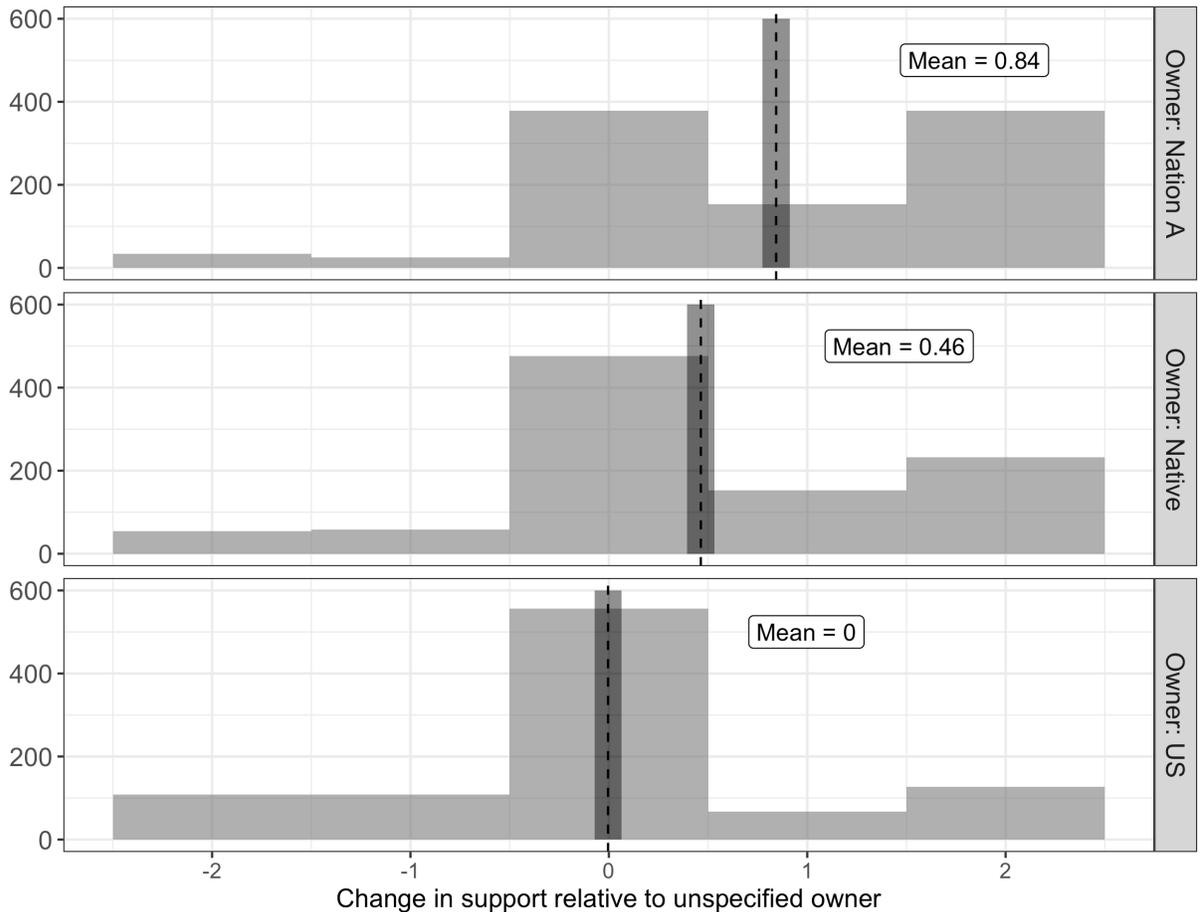
Later in the survey, all respondents are informed that Bank [X] is 100% owned by Nation B and asked to self-report how this information might change their attitudes. Consistent with H1c, a very large proportion answer that their support of Bank [X] was the same or higher, and there is not heterogeneity across treatment groups (Figure 3). Further, in the associated knowledge

³³Changing from a hypothetical to a true, concrete setting could also reduce noise in question answers if respondent attention increases.

³⁴Results are robust to data manipulations relevant to potential ceiling effects (Appendix C.1).

³⁵We chose the name “American (US) company” in consultation with our local partners to avoid implying that Native companies are not themselves American.

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



Notes: Each plot reports the distribution of relevant responses. Dashed vertical lines identify the distribution means, and the shaded regions surrounding the lines are 95% confidence intervals.

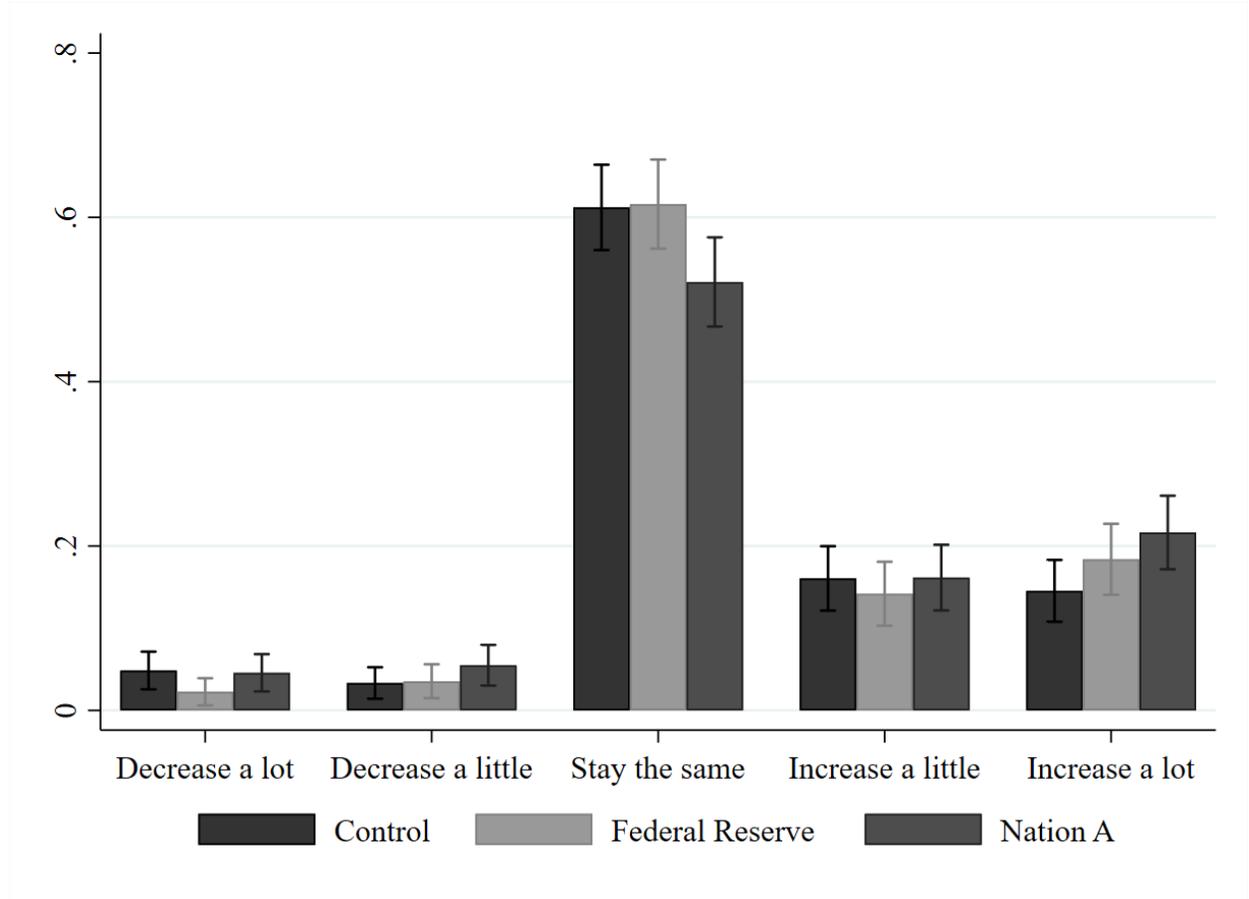
check question, 45% of respondents answered that they already knew that Bank [X] was owned by Nation B, and 96% of them answered as predicted by H1c.³⁶ Taken together, these results support Bank [X]’s implicit hypothesis that its Native identity and Nation B identity in particular provide positive cues to respondents.

5.2 Experimental Results: Nation A and Federal Reserve Interventions

We leverage three experimental outcome variables: a respondent’s self-report of the effect of the treatment; their post-treatment answer as to whether it is good for Bank [X] to open; and their post-treatment answer as to how likely it is that they will become a customer of Bank [X]. We first measure “difference(s) in levels,” or the difference between treatment groups in the

³⁶Eight percent of respondents decreased their support after learning of Nation B’s ownership, which is inconsistent with H1c. These respondents also had lower baseline support for Bank [X].

Figure 3: Evidence of overall stable or increasing support for Bank [X] after 100% Nation B ownership is cued post-treatment (H1c).



average value of the relevant post-treatment survey item. Formally, we calculate the quantity $\bar{Y}_{D=1}^{Post} - \bar{Y}_{D=0}^{Post}$.³⁷ Second, “differences(s) in changes” is the difference between treatment groups in the average *change* between respondents’ baseline and post-treatment responses to the relevant survey item.³⁸ Formally, we calculate the quantity:

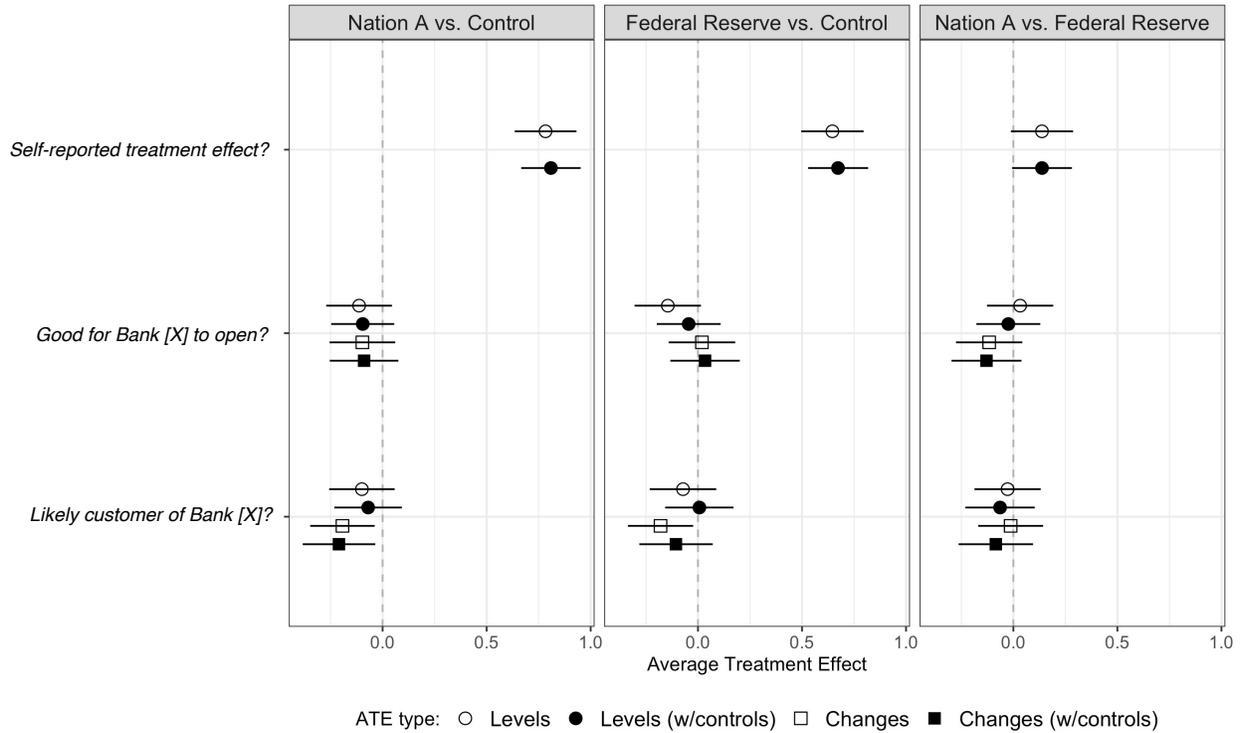
$$\left[\frac{\sum_{i=1}^n Y_{i,D=1}^{Post} - Y_{i,D=1}^{Pre}}{n} \right] - \left[\frac{\sum_{i=1}^m Y_{i,D=0}^{Post} - Y_{i,D=0}^{Pre}}{m} \right] = \overline{\Delta Y}_{D=1} - \overline{\Delta Y}_{D=0} \quad (1)$$

Because of our commitment to non-deception, the survey moves from a hypothetical bank to Bank [X] in particular. If this generates confounders that are not balanced across the treatment groups,

³⁷For *Self-reported treatment effect?* the control group outcome is a vector of zeros.

³⁸Measuring within-subject change requires asking similar questions at different points in the survey. This could generate fatigue, which may change the variance of responses even within the control group if for example respondents become more likely to select a “middle of the road” answer, or if responses become more random. Helpfully, we cannot reject the hypothesis that the variance in question responses within the control group before and after treatment is the same (Appendix B.7). In the case of consistency bias, our results could be thought of as a lower bound of the treatment effect (Falk and Zimmermann, 2013).

Figure 4: Causal effects of the Nation A intervention and the Federal Reserve intervention, alone and compared.



Notes: Standardized treatment effects. 95% confidence intervals. For controls, see Appendix B.2.

we could misattribute changes to treatment effects. This is a key motivation for our empirical strategy that considers both levels and changes relative to appropriate baselines, without and with a battery of controls (Appendix B.2).

Figure 4 plots standardized “difference(s) in levels” and “difference(s) in changes” estimates, which can be interpreted as the average treatment effect (ATE) measured in standard deviations of Y .³⁹ Standard errors are estimated using seemingly unrelated regression (SUR) to account for possible correlation in the standard errors across outcomes. The first panel of Figure 4 shows that, when asked to self-report the effect of the Nation A treatment in light of their baseline view, respondents reported a positive and large effect. The same is true of the Federal Reserve treatment in the second panel. Compared to the control group, those receiving the Nation A treatment increased their support by approximately 0.8 standard deviations, and those receiving the Federal Reserve treatment increased by approximately 0.7 standard deviations.

³⁹“Differences in changes” are not relevant to the *Self-reported treatment effect?* outcome.

Effects on outcome variables that do not rely on self-reports are much more muted. Neither the Nation A nor the Federal Reserve treatment have a positive effect on the outcome variable *Good for Bank [X] to open?* Contrary to the stakeholders’ implicit hypotheses, there is no evidence of increased support from respondents treated with the Nation A endorsement (H2a) or the Fed statement (H3a). Nor do the treatments have positive effects on the outcome *Likely customer of Bank [X]?* Both treatments have negative and significant effects on “difference(s) in changes,” meaning that on average a respondent was more interested in becoming a customer of Bank [X] before receiving either of the treatments, exactly opposite to the stakeholders’ intentions (H2b and H3b).

Panel 3 of Figure 4 shows that both sets of treatment effects are highly similar. Respondents who received the Nation A treatment self-reported larger increases in support than those who received the Federal Reserve treatment, but both were positive and the difference is only marginally significant. The differences between the Nation A and Federal Reserve treatment groups on all other outcome variables are statistically insignificant and near zero in magnitude. This is a positive result for the Federal Reserve, insofar as its intervention’s effects were on par with that of Nation A and not differentially counterproductive.

Interventions from both Nation A and the Federal Reserve aimed to leverage credibility in generating positive treatment effects. However, not only were the cues inconsistent in generating positive effects, but they appear to have “backfired” in some instances. This is especially concerning for the *Likely customer of Bank [X]?* outcome, given its importance to the success of this commercial venture as an economic development strategy.

6 Extension: Exploring “Backfire”

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 evidence of “backfire.” To be clear, looking into heterogeneous effects is a post-hoc, exploratory exercise. However, if treatments backfired (or worked well) for identifiable groups, our stakeholders could use this information in updating their priors, and we could gain insight into the conditions under which top-down cues might trigger individual attitudes contrary to policy goals.

We focus on the “difference(s)-in-changes” of the *Likely Bank [X] customer?* outcome, given its special importance and that its ATEs most consistently “backfired.” We employ a several-step process. First, we estimate individual treatment effects based on the large set of possible

pre-treatment covariates we employed as our battery of controls (Figure 4; Appendix B.2). 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 (Appendix A.2). We then form an indicator variable of whether each individual’s predicted treatment effect is negative, which would indicate that it backfired.

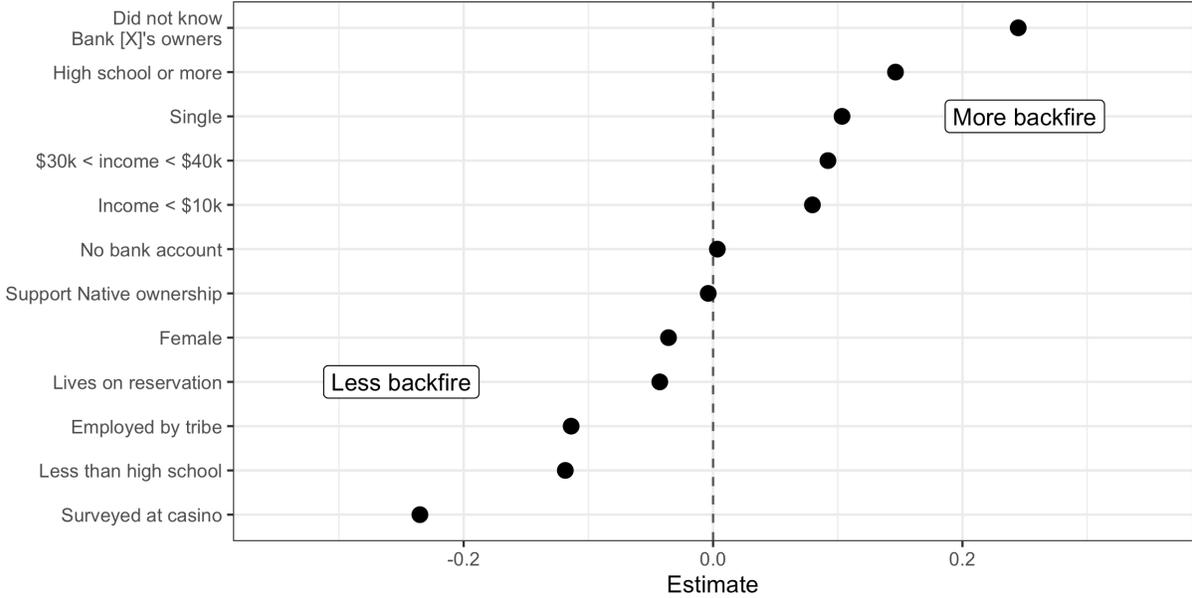
Next, we want to examine whether we see patterns among the sets of individuals for whom our process has predicted backfire. To do so, we use lasso regression, which minimizes the sum of squared errors while constraining the sum of all estimated coefficients below some threshold, and in the process retains 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 and again emphasize that this is an exploratory exercise.

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.

The results suggest heterogeneity that merits further attention.⁴⁰ First, we see several of the “less backfire” factors as suggestive of a role for community connectedness in especially positive treatment effects. Given that the casino is a meeting place at which the survey was initially rolled out, it alongside being employed by the tribe and living on the reservation suggest that respondents with strong sociotropic ties are particularly receptive to the treatment. Additionally, knowledge of Bank [X]’s ownership is almost certain for anyone who was attentive to the lengthy negotiation process, so one could interpret not knowing Bank [x]’s ownership (the strongest predictor of “backfire”) as evidence of weak community involvement. It would be consistent with the stakeholders’ interests if individuals exhibiting strong community connectedness were effective influencers in the

⁴⁰We focus only on recovered factors that we see as reasonably interpretable even via post-hoc speculation.

Figure 5: Which covariates are most predictive of treatment “backfire”? LASSO estimates.



broader population.

Given the policy goal that Bank [X]’s entry would mitigate financial exclusion, and the context of very high baseline buy-in, patterns in the set of factors most predictive of backfire are of special normative concern. First, it is a reasonable assumption that financially precarious respondents are among those with less community connectedness. Second, it is troubling that backfire is higher among lower-income respondents. Third, while not having a bank account is a meaningful factor recovered by the lasso procedure, the interventions are not especially effective for those who are unbanked. It is normatively promising that the interventions had a positive influence on respondents with less than a high school education. Nonetheless, our overall interpretation of this exercise is that the Nation A and Federal Reserve interventions were damaging especially to respondents in groups that they were most interested in targeting. As the interventions relied on a credibility mechanism, a broader takeaway is that stakeholders’ ex ante evaluations of their credibility – and not only its average, but also its distribution in the target population – is a key input to deciding whether intervention in itself is on net a productive choice.

7 Conclusion

We implemented a unique survey in American Indian Nation A, an economically marginalized “banking desert” bereft of a formal financial service provider, in which an intended development-

enhancing branch of a retail bank was soon to break ground. By successfully negotiating the entry of a foreign bank to its reservation, Nation A made a policy choice to leverage FDI in pursuit of its goal to mitigate financial exclusion in its jurisdiction. Nation A, Bank [X], and the Federal Reserve as an external advisory institution have shared interests in the branch’s viability. However, the strategy of fighting financial exclusion via economic integration relies on the voluntary consumption choices of individuals, and thus their attitudes toward and intentions with regard to the branch.

We find very high baseline buy-in to a hypothetical local branch, as well as the specific Native-owned Bank [X] from Nation B, consistent with expectations that shared identity eases economic transactions even across national borders. Our experimental interventions used true cues chosen by stakeholders, employed without deception, in a real-world environment where treatment effects matter. The Nation A and Federal Reserve interventions had parallel effects, reassuring in the sense that the Federal Reserve’s US-tied identity did not generate specific backlash. However, both interventions generated weak and even counterproductive results. While exploratory analyses suggest that those with strong community connectedness responded positively to the treatment, it is normatively problematic that “backfire” was associated with lower-income respondents.

There are many actors in the world interested in leveraging the benefits of economic integration to promote development in underserved areas. Still, even given high baseline buy-in, as well as support from the national government and an external advisory institution, it is not a foregone conclusion that top-down cues are useful in moving individual attitudes toward the intended development-enhancing outcome. Our post hoc exploration suggests heterogeneous treatment effects that in turn point to unforeseen variation in stakeholders’ credibility. If the credibility of stakeholders is not homogeneous but rather distributed unevenly across a population of interest, then even cues from united stakeholders could generate unintentionally counterproductive effects. That the path to maximizing shared economic development goals is not obvious should further motivate scholarly activity in such normatively compelling spaces.

Finally, 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. Including such nations in the unit of analysis allows us to extend theory development and testing to the full set of sovereigns making choices over economic integration. These additional sovereigns include many others like Nation A, where steps toward deeper economic integration are incredibly salient and normatively consequential.

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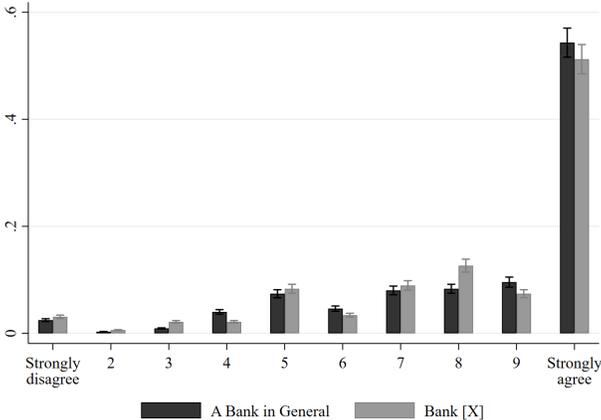
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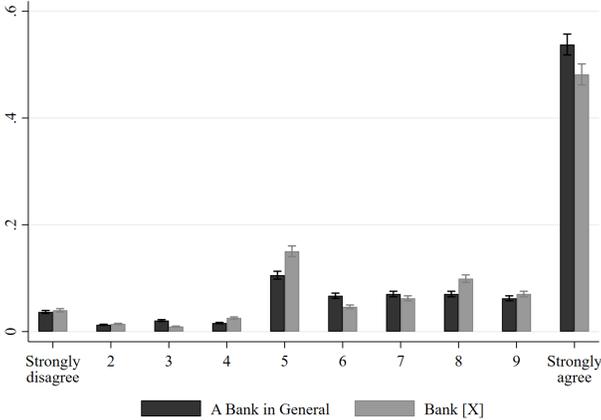
Online Appendix

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.

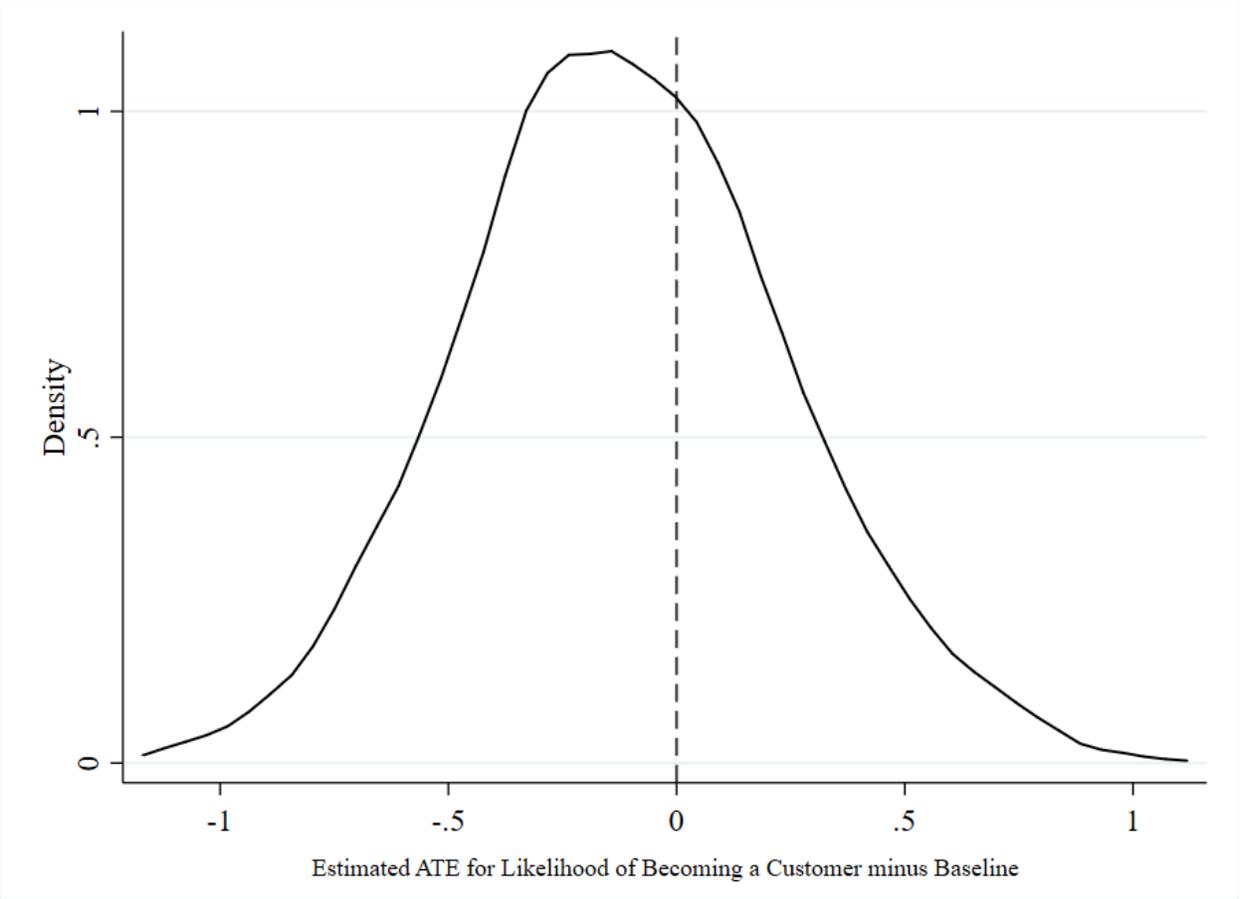


(a) Control Group Only.



(b) Treatment Groups Pooled.

Figure A.2: Distribution of estimated individual treatment effects on *Likely to become a customer of Bank [X]?* in terms of change from baseline.



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 covariates included in controls 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: Experimental outcome variables and associated questions

Outcome	Exact Question
1	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	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."
Baseline for Good for Bank [X] to open?	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	Do you think you will become a customer of Bank [X] when it opens on the [Redacted] Reservation? (0 Definitely not to 5 Definitely yes)
Baseline for Likely customer of Bank [X]?	Do you think you would become a customer of a bank that opened on the [Redacted] Reservation? (0 Definitely not to 5 Definitely yes)

Table B.4: How representative is our sample? Comparison of our respondents to Nation A administrative data and 2013-2018 American Community Survey data for American Indians living in the same US state as Nation A's reservation.

	Nation A Records	ACS
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. ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$ *** $p < 0.001$.

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

Comparison:	Control				Federal Reserve	
Outcome:	Support	Customer	Support	Customer	Support	Customer
Federal Reserve treatment	-0.082 (0.151)	-0.153*** (0.058)				
Nation A treatment			-0.231 (0.152)	-0.142** (0.058)	-0.080 (0.156)	0.012 (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: Very little evidence of violations of SUVTA.

	Levels			Changes	
	Self-reported	Open	Customer	Open	Customer
Federal Reserve	0.770*** (0.121)	-0.00929 (0.160)	0.228 (0.164)	0.0888 (0.142)	-0.270* (0.143)
Days Since Start	-1.85e-16 (0.000)	0.00761** (0.004)	0.00380 (0.004)	0.00114 (0.003)	-0.00254 (0.004)
(Federal Reserve) ×Days Since Start	-0.00865** (0.004)	-0.00627 (0.006)	-0.0108* (0.006)	-0.00571 (0.005)	0.00797 (0.005)
Roll-Out Day	-5.23e-15 (0.000)	0.165 (0.121)	0.252* (0.129)	-0.137 (0.122)	-0.0932 (0.123)
(Federal Reserve) ×(Roll-Out Day)	0.0559 (0.151)	-0.0925 (0.180)	-0.351* (0.180)	0.0461 (0.190)	-0.164 (0.188)
Nation A	0.828*** (0.131)	0.0399 (0.162)	0.0291 (0.176)	0.000663 (0.141)	-0.226 (0.148)
(Nation A) ×(Days Since Start)	-0.00462 (0.005)	-0.0108* (0.006)	-0.00762 (0.006)	-0.00493 (0.005)	0.00186 (0.006)
(Nation A) ×(Roll-Out Day)	0.0840 (0.149)	0.0755 (0.176)	-0.00672 (0.187)	-0.0172 (0.179)	0.0102 (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. Interpretation: Across five models, we recover only a few non-systematic, small magnitude, and weakly significant relevant coefficients. We interpret this as very little evidence of differential responses to treatment between earlier and later respondents, increasing our confidence that the SUVTA assumption holds.

Table B.7: No evidence in support of fatigue effects.

	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 within the control group before and after treatment. P-values reported in cells. Interpretation: We cannot reject the hypothesis that the variance in question responses within the control group before and after treatment is the same; therefore, we do not find evidence in support of fatigue effects.

Table B.8: Models that predict *Likely customer of Bank [X]?*, by treatment group.

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

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Table B.8 – continued from previous page

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

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Table B.8 – continued from previous page

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

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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 (0.135)	-0.0401 (0.114)	-0.187 (0.122)
Didn't know about free credit report	-0.0441 (0.102)	-0.123 (0.099)	-0.116 (0.104)
Self-assessed financial knowledge < 5/10	0.134 (0.149)	0.115 (0.165)	0.103 (0.165)
Satisfaction with finances < 4/10	-0.296* (0.157)	-0.0395 (0.116)	-0.317** (0.142)
Uses check cashing most of the time	0.274* (0.157)	0.135 (0.171)	0.239 (0.224)
Doesn't have or want a bank account	-0.256 (0.297)	-0.0422 (0.164)	0.0670 (0.198)
More than four sources of debt	0.150 (0.144)	0.161 (0.138)	0.0370 (0.162)
Very bad self-assessed credit	0.0936 (0.259)	0.232 (0.149)	0.143 (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.