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 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 experimentally test the effects of Nation A government's endorsement of the branch, as well as general support from the Federal Reserve Bank of the United States, whose mission includes the expansion of financial services into underserved communities. We find widespread approval for the branch, with strong sociotropic motivations, but small and at times unintended effects of the treatments, especially on respondents' interest in becoming customers. Throughout, we advocate for the theoretical importance of recognizing American Indian Nations as sovereigns making choices over economic integration. We also stress the obligations placed on individuals-as-consumers when commercial institutions are used to address problems of financial exclusion.

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1 Introduction

Muhammad Yunus, recognized with the 2006 Nobel Peace Prize as a pioneer in microfinance, has pronounced that "credit is a fundamental human right" (Yunus, 2007). Worldwide, that right remains out of reach of many: 31% of adults are "unbanked," without a formal financial account.[1] In the United States, 6% of households are unbanked, and 16% are "underbanked": they have an account with a financial institution but still rely on alternative sources of credit.[2] Although expensive credit card debt has long been the most important source of non-bank credit in the United States, even it is out of reach or insufficient for many.[3] The payday lending industry, which in one year lent $35 billion and collected $6 billion in interest and fees, has become a lightning rod among a suite of other often-predatory services, such as auto-title lending, pawn shops, rent-to-own businesses, and informal money lending.[4] Given that high-income countries average 1081 financial accounts per 1000 adults, it is undeniable that the "fundamental human right" to credit is inequitably distributed within the United States.[5]

Limited access to credit and capital has been a long-standing, historically-rooted problem for American Indians/Alaskan Natives (AIAN) living in and around the 326 independent jurisdictions in Indian Country (Brown, Cookson and Heimer, 2019; Akee and Jorgensen, 2014).[6] As efforts to quantify the problem's scope have been stymied by consistent undersampling of AIAN communities in national surveys,[7] we collaborated with American Indian Nation A to conduct a first-of-its-kind survey that documents the extent of the problem on their reservation. Extrapolating from our representative sample, 33% of their tribal members are unbanked and many more are underbanked, with 20% having payday loan debt and large percentages with other more-or-less formal non-bank debt. In fact, the Nation A reservation is a "banking desert," without a physical, commercial retail bank, with the closest bank branch 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-

[1] 72% of unbanked adults report that they have not saved in the last year. As of 2018 (Demirguc-Kunt et al., 2018).

[2] As of 2018 (Demirguc-Kunt et al., 2018).

[3] Three-quarters of US adults have at least one, as of 2018 (Foster, Greene and Stavins, 2019). Secured credit cards are available, but limited (Han, Keys and Li, 2018).

[4] Data for 2016 (Allcott et al., 2018).

[5] Compared with the country-level average of 674 per 1000 (Dimitrova-Grajzl et al., March 2017).

[6] Indian Country is the US federal government's nomenclature for reserved lands. The US federal government recognizes 574 Native nations as of November 2020.

[7] For example, American Indians/Alaskan Natives are historically the most undercounted racial group in the US Census. See Ben Kessler, "Native Americans, the census' most undercounted racial group, fight for an accurate 2020 tally," *NBC News*, 29 December 2019.

reservation bank branch. After lengthy negotiations, Nation A's tribal legislature voted unanimously to approve the bank's entry, and agreed to the bank's condition of entry that the government move its accounts to become the lynchpin local customer. The bank is foreign: it is owned and operated by another American Indian Nation B in the region, and it expects its Native identity to be a source of comparative advantage, allowing it to manage risks better than than a comparable US/American bank a la Greif (1993). Moreover, the CEO hopes that proof-of-concept of success in Nation A would justify expansion across Indian Country more broadly.[8] The Federal Reserve Bank of the United States has an interest in this project: while it does not endorse any specific firm, the success of a Native bank in Indian Country is consistent with the Federal Reserve's mission to support "the expansion of safe and accessible retail financial services for underserved populations and minority communities."[9] These varied stakeholders understand that the branch's success requires more than just the abstract support of those living on and around the reservation – tribal members must become the branch's customer base. Normative and scholarly interests collide on the question as to what might influence a tribal member to support the foreign profit-oriented bank as a means of providing local access to credit and, moreover, tribal members' willingness to become customers.

We posit that insights from the body of theory around individual attitudes on economic integration, developed with reference to very different circumstances, should nonetheless internally valid in this setting that concerns cross-national investment flows. Consider recasting the scenario. A multinational corporation (MNC) is soon to make a greenfield investment in a foreign host nation. This is "South-South" foreign direct investment (FDI), coming from a developing home nation into a host nation with even lower levels of development. Stepping back, this is the archetype of development-enhancing FDI, bringing not only capital but an entire intended welfare-enhancing industry to where capital is scarce. The success of this kind of FDI is central to the mission of the Federal Reserve, which in this scenario is an external institutional actor coming from a third nation. What makes this setting even more important to our understanding of international political economy is that the host nation is an "FDI desert," a scenario that has been out of reach for contemporary scholarship examining a deeply economically integrated world.[10] In the time between the national government's vote to authorize this FDI's entry and its groundbreaking, individuals' attitudes are incredibly salient (Converse, 2000). We ask, in this pre-FDI,

[8] Bank CEO's testimony at A Tribal Legislative session, June 2019.

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

[10] To be clear, the host nation is not an "economic integration desert": it relies on imports from outside its political jurisdiction, it pegs its currency, and it benefits from economic migration and remittances (Wellhausen, 2017*b*).

socioeconomically-disadvantaged nation, does the endorsement of the host government or support from an external, third-nation institution move individual attitudes in support of the venture and increase their anticipated (literal) buy-in, as the stakeholders hope?

We conduct Nation A's first nationally representative survey several months before the bank branch's groundbreaking. We uncover overwhelmingly positive baseline views on a local bank branch in principle. This is consistent with the normative hope that FDI with the promise of substantial direct, material, individual-level benefits is a most-likely setting for ex ante popular support. Non-experimentally, we consider the impact of the foreign bank's national identity (Native-owned, from Nation B). Support as well as willingness to become a customer are even higher for a branch with a Native owner, Nation B or otherwise, as opposed to a US/American one. Without deception, we embed experimental interventions to test whether individuals respond positively to endorsement from their national government (Nation A), or support from an external institution (the Federal Reserve). The tribal government and Federal Reserve treatment effects are in almost all cases of equal size and direction, which is important given the concern that the Federal Reserve's US identity would be differentially counterproductive.[11] The average treatment effects reveal scattered significant albeit small positive impacts, especially on respondents' support for the bank. The most positive treatment effects appear among respondents with deep sociotropic ties to the Nation A community. However, treatments on occasion backfired, particularly with respect to interest in becoming a customer. Notably, backfiring is associated with respondents with low income, which is troubling from the point of view of combating financial exclusion via a profit-oriented commercial bank.[12]

As this article has multiple intended contributions, its organization is not standard. First, we explain the real-world setting under study. Second, we leverage scholarship on individual attitudes around economic integration in developing our theory, in conjunction with our argument that American Indian Nations are rightly considered part of the full population of national actors with sovereign authority in international economic relations. Third, we explain our scholar-practitioner collaboration with our Native partners, the approval process for our survey, and the ethical and legal tradeoffs around our implementation decisions, all of which further emphasize Nation A's standing among sovereign nations. Fourth, we present our hypotheses, experimental treatments,

[11] This also means that backfire effects of the Federal Reserve treatment are parallel to backfire effects of the national government treatment, although they are not as robust to re-weighting exercises as the effects of the national government treatment.

[12] We also examine a behavioral outcome capturing respondent interest in access to their free credit reports, but do not find significant effects.

and outcome measures, situating them in the survey instrument for the ease of the reader. Fifth, we report results. Sixth, we consider heterogeneous treatment effects, with an eye toward continued scholarly attention to the importance of individual attitudes in solving problems of financial exclusion. Finally, we call for international relations researchers to consider the full population of nations in which theories should be internally valid, especially as non-randomly excluding nations with economic autonomy like Nation A may unintentionally subverts scholarly and normative goals around understanding economic integration and development.

2 Setting: Access to Capital in an Underserved Nation

Expanding domestic access to capital is a cornerstone of economic development policy.[13] Financial service providers have innovated a variety of methods to improve capital access in underserved communities, through for example concessional efforts by development banks, public-private partnerships, and community-based microfinance. Many of these solutions, such as mobile money accounts, have been promoted as substitutes for traditional commercial retail banks.[14] Still, given the continued dominance of traditional banking in global markets, banking firms' proven scalability, and the principle that financial institutions with wide customer bases have the means to take on riskier ventures, traditional commercial retail banks remain an important option for market-based solutions.

In the United States, retail banks remain the backbone of non-predatory financial service provision. Some 84% of Americans visited a physical bank at least once in the last year, and almost all did more than access the ATM; lower-income and older users were among those most likely to visit a branch.[15] The US government has backed Community Development and Community Development Financial Institution (CDFI) certification programs to incentivize the expansion of formal financial services into underserved communities.[16] There are over 90 financial institutions

[13] The IMF specifically measures financial development in developing countries; the data show that financial services providing access to credit have deepened especially since the 1990s (Johnson, 2016).

[14] Sub-Saharan African countries are noted global leaders in this regard: 21% of adults have mobile money accounts, and half of these adults do not have traditional commercial bank accounts Demirguc-Kunt et al. (2018).

[15] Data for 2017. This is despite the fact that half report using online or mobile banking Merry (2018).

[16] Community Development (CD) banks are depository institutions with a stated mission to primarily benefit the underserved communities in which they are chartered to conduct business. A CD bank pursues this specialized mission by providing financial services to low-and moderate-income (LMI) individuals or communities or benefiting other areas targeted for redevelopment by local, state, tribal, or federal government. CD banks must meet the same safety and soundness, statutory, regulatory, business planning, and procedural requirements as all other national banks. https://www.occ.gov/topics/consumers-and-communities/community-affairs/resource-directories/cdfi-and-cd-bank/index-cdfi-and-cd-bank-resource-directory.html. Community Development Financial Institutions (CDFIs) are mission-driven financial institutions that create economic opportunity for individuals and small businesses, quality affordable housing, and essential community services throughout the United States. The CDFI

that specifically serve Indian Country, many of which take advantage of these US government certifications.[17] Here, we focus on Nation A's choice to pursue expanded capital access for its people by approving the entry of CDFI-certified Bank [X] from Native Nation B as the first bank in its territory.

Consistent with their sovereign rights, Nation A's government required anonymity around their identity, as well as that of Nation B and Bank [X]. Nation A is a parliamentary democracy with two branches of government, the legislative and the judiciary, as set out in its constitution. It is a federally-recognized tribe with less than 15,000 members, and it is among the most impoverished nations in Indian Country.[18] As documented in Table 1, development indicators for Nation A are considerably lower than average levels across Indian Country. Nation A's poverty rate is 11.7% higher than the AIAN average; a greater proportion of its (age 25+) population is educated only at the high school level or lower; and median household income is lower (at 85% of the AIAN average). Disparities between Nation A and the United States as a whole are considerably starker. Most troublingly, life expectancy of 60.3 years in Nation A is 12.7 years less than the AIAN average, which itself is 5.8 years less than the US average. For comparison, the lowest life expectancy in world regions is 61.2 years in Sub-Saharan Africa (WHO 2017).

Table 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%
% ≤ 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.

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 2019, 12% of Americans answered "no," that they could not come up with the

Fund is federally operated and can grant funds to institutions that may also receive tax advantages. https://www.federalreserve.gov/communityaffairs/national/ca_conf_suscommdev/pdf/zeilenbachsean.pdf Typically CDFIs need to be certified by the CDFI Fund in order to take advantage of federal- or state-run programs.

[17] As of November 2020. https://www.minneapolisfed.org/indiancountry/resources/mapping-native-banks.

[18] Because the tribe's legal distinctions between a recognized member and a recognized descendant is not relevant in our context, we refer to all as "tribal members."

money.[19] We asked the same question of our Nation A respondents in January-March 2020 – when the US economy exhibited strong financial indicators, and before pandemic-related unemployment and economic crisis came about. Disturbingly, 31% of our respondents answered "no," they could not come up with $400 in case of an emergency, and a further 16% were unsure. This finding suggests that even non-bank lending is not meeting the needs of Nation A's population. Overall, 33% of Nation A respondents report being "unbanked" without bank accounts, and 50% of those with bank accounts report having debt from alternative credit sources or use check cashing services consistent with being "underbanked."[20] Of particular note is that only 44% of respondents have a credit card. Thus, the majority of respondents do not even have the option to accrue relatively expensive credit card debt.

Nation A is an archetype of the long-standing problem of inadequate access to capital in Indian Country, in which historical limitations on capital access trace through to current limitations (Brown, Cookson and Heimer, 2019).[21] The Nation A reservation is without a physical, commerical retail bank and in this sense is a "banking desert." The closest physical bank to Nation A is a regional US/American bank branch about ten miles away, on roads that are difficult to drive in the winter.[22] Only a handful of ATMs are located on the reservation, although a common complaint is that zero to two ATMs are operational at any moment. Moreover, only two ATMs can be accessed without fees by customers of two different US/American regional banks.[23] Nation A's infrastructure limits the possibility that internet-enabled mobile or online banking could adequately substitute for physical access; for example, the second biggest town is not covered by cell service.[24] Many use off-reservation payday lending businesses and other non-bank lenders located near a popular grocery store.[25] Over the last decades, leaders in Nation A have had many conversations about how to address limited access to capital for their members on and around the reservation. For its part, the tribal government runs a subsidized, small-dollar loan program, but it is far from satisfying need.[26] Conversations have regularly turned to attracting an externally-owned bank branch, but

[19] Federal Reserve Board's 2019 Survey of Household Economics and Decision-making (SHED).

[20] Including auto title, payday, and non-bank loan debt.

[21] One origin of the problem is the legacy of US federal government property rights allocation policies that have left some reservations "checkerboarded" (Akee, 2009).

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

[23] As of our study period; are reported by our enumerators.

[24] 91% of US urban areas have at least 10 Mbps/3 Mbps mobile LTE broadband, compared to 64% of tribal areas (Commission et al., 2018).

[25] There is only one grocery store on the reservation.

[26] Our experimental design allows us to explore the extent to which the government's efforts in the current setting might be undermined by their failure to fully solve the problem to date.

banks have shown limited interest.[27] Interest from Bank [X] was therefore very welcome, and an increasingly serious conversation about opening a branch on the reservation grew over a number of years.

Crucially, Bank [X] is 100% owned by Nation B. Nation B is a nearby federally-recognized tribe, larger than Nation A, and its reservation is in an urban area. Over the last decades, Nation B's economy has grown considerably, in large part because its urban location helps to make its casino and hotel quite profitable. Nonetheless, like many tribes, Nation B has increased its focus on diversifying out of reliance on gaming, given gaming's uncertain future. One of its key ventures was to charter Bank [X], which first served the Nation B community and now has a successful foreign branch (i.e., outside of its national jurisdiction) in a nearby US city that serves both Native and non-Native customers.[28] In testimony before Nation A's Tribal Legislature, Bank [X]'s CEO made clear the bank's hope that proof-of-concept of success in Nation A would justify expansion across Indian Country more broadly. Consistent with this strategy, Bank [X] was certified as a CDFI and cultivated relationships with actors interested in expanding access to capital in Indian Country as it negotiated with Nation A. Nonetheless, Bank [X]'s CEO has made it clear that Bank [X]'s investment in Nation A needs to be commercially viable.[29]

It took well over a year from Bank [X]'s initial inquiry to a positive, unanimous vote from the Legislature to allow its entry. Much of this time lag was due to extensive negotiations between the tribal government and Bank [X] over the terms of the investment. While the research team was not privy to confidential negotiations, a key issue was to specify Bank [X]'s access to dispute resolution in case of conflict. This is not a novel problem: mitigating legal uncertainties inherent in investment transactions taking place across political borders has spawned a wide assortment of more-or-less successful efforts at the international level (St John, 2018). Legal differences between US/American regulation and that in each, unique Indian Country jurisdiction have contributed to the outsized underprovision of credit, even in the presence of US government loan guarantees (Wellhausen, 2017*a*). In general, Native actors attribute most US/American providers' disinterest in serving Indian Country to their poor understanding of each Nation's unique regulations and judicial systems, and moreover their unwillingness to invest in improving their understanding.[30] Thus, observers take Bank [X]'s willingness to engage with Nation A as prima facie evidence that

[27] Tribal elders remember a retail bank branch that in the 1970s entered the reservation but closed after a matter of months.

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

[29] Nation A Legislative session, June 2019.

[30] See for example the Native American Financial Officers' Association (`nafoa.org`).

external, traditional financial service providers can find cost-effective commercial opportunities in Indian Country jurisdictions. Additionally, among US/American financial service providers that serve Indian Country, political risk management strategies can be normatively problematic; for example, mobile homes are common on reservations, since they can be physically seized and thus better act as collateral under US law. In contrast, Bank [X] negotiated what it sees as a sufficient credible commitment from the sovereign Nation A government to use third-party, private arbitration outside of Nation A's, Nation B's, or the US legal system to adjudicate conflicts.[31] Bank [X] also required as a condition of entry that the Nation A government move its finances to Bank [X], such that Nation A's literal buy-in to the investment also mitigates political risks. In our survey, we explore the extent to which Bank [X]'s Native identity might have contributed to conditions under which it found sufficient risk-management strategies to support its investment in Nation A, which in itself aligns with efforts by many to expand the capacity of Native businesses in serving Indian Country.

Also in the picture is the Federal Reserve System - the central banking system of the United States, as its jurisdiction includes Indian Country. In 2015, the Federal Reserve created the Center for Indian Country Development (CICD), with a mission that includes generating for Native Americans "the attainment of national parity with respect to access to commercial and consumer capital and financial services."[32] The Federal Reserve is an external, institutional actor, tied to the United States, which does not endorse any particular firm and is thus disinterested in the specific Bank [X] investment. At the same time, its goals are furthered should this investment lead to increased access to capital in Nation A. Thus, the Federal Reserve is a third stakeholder interested in the direct, on-the-ground question of the conditions under which tribal members support Bank [X] and are willing to become its customers.

3 Leveraging International Political Economy Scholarship

We contend that it is 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). That FDI originates from Nation B, the home nation. This is "South-South" greenfield FDI, coming from a middle-income

[31] Notably, this solution parallels the thrust of Investor-State Dispute Settlement provisions in treaty-based international investment law (Wellhausen, 2016).

[32] "Our History," at the Federal Reserve Bank of Minneapolis (www.minneapolisfed.org/indiancountry/about-us/history).

home nation into a lower-income host nation. It is the archetype of development-enhancing FDI, bringing not only capital but an entire industry with expected direct, welfare-enhancing effects. Not just public opinion, but individuals' willingness to become customers, are salient to the host government and the foreign investor. Moreover, the success of this kind of FDI is consistent with the mission of an external institutional actor coming from a third nation, which in this case is 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).

Why is it objectively correct to consider American Indian Nations as hosts and homes of FDI? First principles behind theories of FDI are built on a firm investing where its presence is, ultimately, at the behest of a government other than its own. Governments in Indian Country qualify: they have the sovereign authority to control the entry of foreign businesses into their territorial jurisdictions (Wellhausen, 2017*b*). This sovereign authority exists in the context of the contemporary era of Native-US relations, which is characterized by "self-determination" in US nomenclature. It is true that self-determination is ultimately at the behest of the US federal government as the applicable hierarchical power. For obvious reasons, Native actors do not take this US commitment for granted. Evans (2011) explains how tribes have successfully used "salami tactics" in their interactions with the US federal government in order to reinforce their status. We focus on the well-established "salami slice" of economic self-determination. We acknowledge that reducing Native sovereignty to this one, narrow slice sits uncomfortably with broader research agendas in indigenous-centered international relations that aim to reconceptualize sovereignty in ways that recognize tribes as sovereigns, full stop (Bruyneel, 2007). An important body of international relations theory, especially Lightfoot (2016), makes clear the unforced errors incurred in excluding indigenous nations from the population of nations under study. Our contention is to address the specific unforced error of excluding nations in Indian Country from the set of sovereigns with authority in international economic relations.[33] Furthermore, acknowledging these Nations, and understanding the dynamics of public opinion around their economic policy choices, is of normative value.

Why is it theoretically useful to bring research on public opinion and economic integration, developed with reference to very different circumstances, to this setting? We argue that it is reasonable to expect that theories around individual attitudes and economic integration are in-

[33] Spirling (2012) is just one example of the importance of American Indian Nations to the conflict side of international relations.

ternally valid in these nations and this setting, regardless of these nations having been previously overlooked. At the same time, we argue that the unique aspects of this setting allow us the opportunity to recognize and reconsider the assumptions borne of theory development that selects on Westphalian nation-states as the unit of analysis. We highlight three such assumptions: that the status quo is of pervasive integration with foreign investors; the terms of the debate over material distributional outcomes versus non-material factors in determining individual attitudes; and the role of multilateral economic organizations in developing nations.

3.0.1 Spread of Economic Integration

The bulk of the contemporary research agenda approaching individual attitudes as a unit of analysis in the international political economy focuses on the the backlash against economic integration. Naoi (2020) summarizes the common "globalization-as-treatment" research design: scholars prime globalization as a "source of hardship" and probe which respondents increase their anti-integration sentiment in response, often in survey experiments (Tingley, 2014). In pursuing this research, the aspect of the international political economy that transmits hardship to individuals is typically trade (Owen and Johnston, 2017), although others have examined financial channels (Bearce and Tuxhorn, 2017; Ahlquist, Copelovitch and Walter, 2020) and FDI (Chilton, Milner and Tingley, 2020). Taken together, "globalization-as-backlash" theories rely on mechanisms born of longstanding and deep economic integration, which at some point create sufficient distributional effects to break through into politics (Owen and Walter, 2017).

In our setting, economic integration is from one vantage point very deep. Nation A, a very small and very low-income nation, relies on imports from outside its political jurisdiction. Its exports are primarily low-value-added agricultural commodities. It pegs its currency to the US dollar. It benefits considerably from outward economic migration and remittances. Nation A relies on cross-border capital flows from the United States, although to be clear these are legal, state-to-state commitments rather than voluntary donor commitments in the form of aid. Interestingly, while the Nation A government has little-to-no access to sovereign borrowing via traditional capital markets, it does have access to state-to-state lending between American Indian Nations via transactions that, like much traditional state-to-state lending, take with limited transparency. Finally, and not to be minimized, Nation A's boundaries and history are inextricably linked to settler colonialism and its position relative to a dominant, formal nation-state power. Thus, long-standing international influences in and out of the strict realm of economic relations are clearly potential drivers of

individual attitudes toward external actors of all types.

At the same time, Nation A is an "FDI desert," a scenario that has been out of reach for contemporary scholarship examining a deeply economically integrated world. Among components of economic integration, FDI has been accompanied by some of the grandest promises as a source of economic development (Pandya, 2016).[34] Those include economic growth, technological advancement, skill spillovers, and many other benefits incredibly important for the welfare of poor nations and poor people (Rudra and Tobin, 2017). As might be expected, these promises regularly fall short. In developing country contexts, scholars have linked FDI to a variety of adverse outcomes, including distributional effects on potable water access (Rudra, 2011; Rudra, Alkon and Joshi, 2018), food insecurity (Ballard-Rosa, 2016), limitations on fuel availability (Cheon, Lackner and Urpelainen, 2015), poor sanitation (Post, 2014), limited access to medicines (Sell and Williams, 2020), pollution (Spilker, 2013), declining revenue allocated to welfare policies (Bastiaens and Rudra, 2018), and more. Yet in a "pre-treatment" environment, individuals do not have lived experience on which to form informed priors regarding FDI, although other deep experiences with economic integration would reasonably inform individual attitudes. Nonetheless, this setting offers stakeholders – fully cognizant of the challenges of extracting hoped-for welfare benefits from FDI – an opportunity to influence outcomes. We examine the extent to which real-world stakeholders' choices to issue statements of endorsement or support increase ex ante buy-in necessary for the FDI's welfare-enhancing effects, while uniquely holding previous on-reservation experience with FDI at zero.

3.0.2 Material and Non-Material Sources of Preferences

Next, the overarching debate in scholarship on individual attitudes around economic integration is the extent to which material factors drive individual preferences, 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.[35] A primary reason pocketbook effects are theorized to matter is that FDI challenges domestic competitors, or that in the realm of finance in particular it squeezes out domestic credit. But in our setting, such pocketbook effects are not relevant: there is not a domestic banking industry; and, to the extent that off-reservation and/or predatory service providers are competitors, their interests

[34] Note however that such developmental benefits need not be the determining factor in a nation's choice to open (Pinto, 2013; Wu, 2015).

[35] For contributions focusing on developing country contexts, see Pandya (2011); Ardanaz, Murillo and Pinto (2013); Steinberg and Nelson (2019).

are irrelevant or even contrary to political and developmental goals. Additionally, a small bank branch is not an investment promising job creation, sidelining the pocketbook effects on different job-seekers (Pandya, 2010). We are thus able to uniquely account for these sorts of distributional factors.

Instead, our setting isolates the direct pocketbook effect on individual attitudes via their status as consumers, a kind of FDI that is invisible to bulk of theory focused more or less explicitly on business-to-business FDI. When it comes to individuals as consumers, important previous scholarship explores FDI via government concessions, especially in contracting with foreign firms to provide essential services in a monopoly or oligopoly setting (Post, 2014). In contrast, in our setting the government's approval of FDI entry is not explicitly granting the firm a monopoly, nor is the government directly accountable for the success of the commercial venture. Instead, the potential for profit-oriented, commercially viable 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).[36]

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, anti-immigrant, environmental, and partisan 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 public opinion in developing contexts: colonial histories (Arias and Girod, 2014), links to domestic governance quality (Mihalache-O'Keef, 2018; Bodea and LeBas, 2016), issues of fairness and exploitation (Weitz-Shapiro and Winters, 2017), and more. Our setting is in some ways connected to the 1970s debate over dependency theory, in which the theory's proponents ("dependentistas") argued that foreign investors, particularly large multinational firms, impeded growth in developing nations by limiting sovereignty, extracting rents, and increasing inequality (Moran, 1978). This debate occurred in the wake of a wave of decolonization, in which a number of nascent economies were deciding whether or not to open their borders to foreign firms. While Nation A – despite its considerable sovereignty over its internal affairs – is not independent from its colonizer, it shares in common with the postcolonial nations of the mid-20th century both its need to import capital and likely a baseline mistrust of

[36] We can thus set aside findings from adjacent work arguing that individual-level views on economic integration are of such low-salience that the agenda itself a red herring when it comes to the efficient allocation of scarce research resources (Guisinger, 2009; Pepinsky, 2014; Rho and Tomz, 2017; Betz and Pond, 2019; Walter, 2020).

foreign involvement. That said, it is novel and thus a key contribution of our setting that the foreign investor is not from the colonial power; rather, it is from another nation with a common history of colonization. Our work lends insight as to how individuals interpret non-material factors regarding trust, familiarity, and concerns of discrimination, and how those may or may not coincide with individuals-as-consumers' responses to material factors. Our setting also allows us particular leverage in linking international economic relations to the robust literature on identity, in-group preference, and trust as substantial influences in economic decisions.[37]

3.0.3 Foreign Organizations and Economic Development

Finally, work on Westphalian nation-states and economic development frequently considers the roles played by different types of foreign organizations in catalyzing or impeding development. First, large literatures examine the development impact of multilateral organizations such as the IMF (Przeworski and Vreeland, 2000) and the World Bank (Brazys, Elkink and Kelly, 2017), as well as state-to-state aid or lending (Bunte, 2019). Unlike the units of analysis in those studies, Nation A does not have access to services offered only to Westphalian nation-states, though the dynamics in those transactions may have parallels in state-to-state, development-related legal commitments from the US federal government to Nation A. Second, international NGOs have also been shown to affect outcomes in the developing world through direct aid delivery (Dreher, Mölders and Nunnenkamp, 2010), "naming and shaming" poor governance practices (Dietrich and Murdie, 2017), or using their expertise to advise governments on best practices in their development policy area (Brass, 2012; Longhofer et al., 2016). American Indian Nations lie outside the scope of some but not all development-oriented INGOs' missions; for example, a Doctors without Borders medical team served the Navajo Nation in the midst of the COVID-19 pandemic.[38] Third, foreign organizations in the form of multinational corporations unquestionably affect economic development goals in host states (Pandya, 2016). With respect to problems of financial exclusion in particular, the presence of foreign banks has been demonstrated to foster development by providing financing to previously underserved individuals and businesses (Beck, Senbet and Simbanegavi, 2015; Gopalan and Rajan, 2018; Léon and Zins, 2020). In our setting, the findings in Mian (2006) that foreign banks are particularly successful when their home states are geographically or culturally close to the host state speak to stakeholders' hopes with regard to the entry of Nation B's Bank [X] to

[37] See Charness and Chen (2020); Shayo (2020); Kalin and Sambanis (2018) for reviews of this literature.

[38] Christina Capatides, "Doctors Without Borders dispatches team to the Navajo Nation", *CBS News*, 11 May 2020.

Nation A.

In our setting, the Federal Reserve System (the Fed) is an involved foreign organization with a confusing identity. First, the Fed serves all the nations in Indian Country but it is not a multilateral organization or a bilateral governmental institution. Second, it has specific substantive expertise and a clear, development-motivated mission, like a typical INGO. For example, with regard to Nation A and Indian Country as a whole, the Fed actively works to increase access to finance through initiatives such as the Minneapolis Fed's Center for Indian Country Development. It is also highly autonomous and not subject to direct control by the US federal government. Nevertheless, it does not obviously appear to outsiders as a non-governmental organization, regardless of its technical ownership status. Third, the Fed is very clear in its independence from any particular commercial service provider; it does not take a position on or interest in any particular firm's success. At the same time, its expertise with regard to traditional retail banking corresponds with the entry of a retail bank to Nation A and is part of why it is a relevant actor in our setting. The idiosyncrasies of the Fed allow us the opportunity to, without deception, explore the potential impact of a foreign organization on individual attitudes and theorize around the possible effects of its atypical identity.

Lastly, this work also connects to the growing literature that isolates effects of formal and informal relations with the US on American Indian reservations' economic development. Americans Indians living on reservations are some of the most economically marginalized communities in the United States (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). Economic conditions on reservations are also due to legal differences on reservations that have limited access to credit and exposure to financial markets (Brown, Cookson and Heimer, 2019; Anderson and Parker, 2008). Today American Indian communities have average lower credit limits if they are able to access credit at all (Dimitrova-Grajzl et al., 2015), relatively low levels of use of formal financial products (FINRA 2017), and face substantially higher interest rates on mortgage debt (Wellhausen, 2017*a*; Cattaneo and Feir, 2019). To repeat, Nation A is an archetype for the long-standing problem of limited access to capital in Indian Country; our focus on it among all Indian Country Nations has the potential to speak to the lower bounds of normatively troubling findings in this literature.

4 Approval and Implementation

We take a moment to recount the project's approval by Nation A's Tribal Legislature and key implementation decisions. We highlight the ethical as well as legal constraints that shaped the set of hypotheses we were able to rigorously test.

Bank [X] had been considering conducting an informal survey in Nation A to collect citizens' feedback on what banking services are of most interest. Inspired by Bank [X], our research team came together to consider how a more formal survey with embedded experiment could be of local and scholarly use. This would be the first formal, non-Census survey on the reservation that would elicit information from tribal members on their financial situations, their views, and their preferences over financial development choices made by their government. To be clear, Bank [X] is not a partner in the survey nor part of the research team. This is consistent with Federal Reserve requirements, federal bank regulations, and the ethical standards and legal obligations of both Bank [X] and the co-authors. When the research team sought approval from the Tribal Legislature, legislators asked for Bank [X]'s endorsement of our skills and the usefulness of the research; Bank [X] representatives appeared beside and on behalf of the research team for those purposes at government hearings. Bank [X] specified in its testimony that its investment in a retail branch on the reservation is independent of the survey and was not contingent on its approval. Bank [X] completed formal commitments to the Tribal Legislature while the survey approval process was ongoing.

The lynchpin local formal requirement to roll-out the survey was a resolution and positive vote from Nation A's Tribal Legislature, which itself required approval from Nation A's research ethics regulating commission. Earning these approvals included presenting the draft survey to the Legislature; in-person testimony from members of the research team at several legislative sessions; and iterated revisions to survey questions consistent with legislators' requirements.[39] The most relevant required revisions included cutting standard political-science-research voting and political ideology questions, which several legislators saw as violations of privacy and sovereignty. 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. Subsequent to approval by Nation A's government, the Institutional Review Board (IRB) at Nation A's tribal college also

[39] As such, tribal leaders reviewed the full set of questions, including each of our randomized treatments. To account for potential confounding if/when they 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).

approved the survey.[40] Nation A has the sovereign authority to maintain the privacy of its data.[41]

The co-authors assembled a research team in collaboration with Nation A's tribal college, which took responsibility for the survey roll-out and enumeration. The co-authors raised funds via their affiliate institutions; we compensated our partners at the tribal college; and Nation A contributed no funds.[42] Our implementation decisions were driven by scientific best practices in conjunction with meeting our stakeholders' needs, and our own ethical concerns. Overall, our survey instrument itself was designed to accomplish two goals. First, it was important that we collect comprehensive data on respondents' knowledge of, use of, and opinions about personal finance. To this end, the survey contains items from other surveys conducted on these topics in the US.[43] Second, we embedded experiments in the survey. As laid out in Section 5, given the lack of retail banking or FDI in Nation A, we focus on how endorsements from institutional actors with applicable expertise might move individuals more in favor of Bank [X], and more likely to report that they plan to become a customer of its branch. We committed to doing so without deception, by incorporating true statements from the Federal Reserve System and the Nation A Tribal Legislature into the survey instrument.

To implement the survey, we deferred to our tribal college partner to hire ten enumerators, prioritizing our partner's judgment of candidates who would commit to this novel endeavor.[44] The competitive process resulted in ten enumerators who are all former or current tribal college students and all women, none of whom had previous enumeration experience. Their formal training centered on a series of in-person sessions led by the co-authors, in which content included best practices, role-playing, and group brainstorming as to how to mitigate potential biases.[45] Each enumerator was equipped with and trained on a tablet computer to conduct surveys via the offline Qualtrics app (Bush and Prather, 2019).[46] 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 (only) on-reservation grocery store; the health clinic; senior centers, the state job center located at

[40] We also gained IRB and equivalent approval from the co-authors' university and the Center for Indian Country Development at the Federal Reserve Bank of Minneapolis.

[41] Data sovereignty is a salient issue throughout Indian Country; see the US Indigenous Data Sovereignty Network (https://usindigenousdata.org/). We provided a non-anonymized report to Nation A's government, the tribal college, and to Bank [X]. Nation A's government has control over the dissemination of that report. To repeat, Bank [X] has no privileged access to data or analysis.

[42] The tribal college benefitted from a charitable donation from Bank [X], consistent with US and Nation A charitable laws.

[43] Specifically, from the Consumer Financial Protection Bureau and the Financial Industry Regulatory Authority.

[44] Enumerators were paid a wage of $15/hour; the average on-reservation wage is around $9/hour.

[45] Enumerators also completed an online ethics course provided by our affiliate university.

[46] We provided the incentive that, upon collecting 100 responses, the enumerator could keep the tablet. Given that the pandemic caused us to abruptly stop the survey, we allowed all enumerators to keep their tablets.

the tribal college; government offices; and the main tribally-owned enterprise during shift breaks.[47] Enumerators took the initiative to leverage their links to many places and people in the community, including: the main on-reservation bar and restaurant; schools and day cares; NGOs and tribal committees; small businesses; tribal elders; disability care services; drug and alcohol rehabilitation services; current and formerly incarcerated tribal members; and tribal social media "influencers."

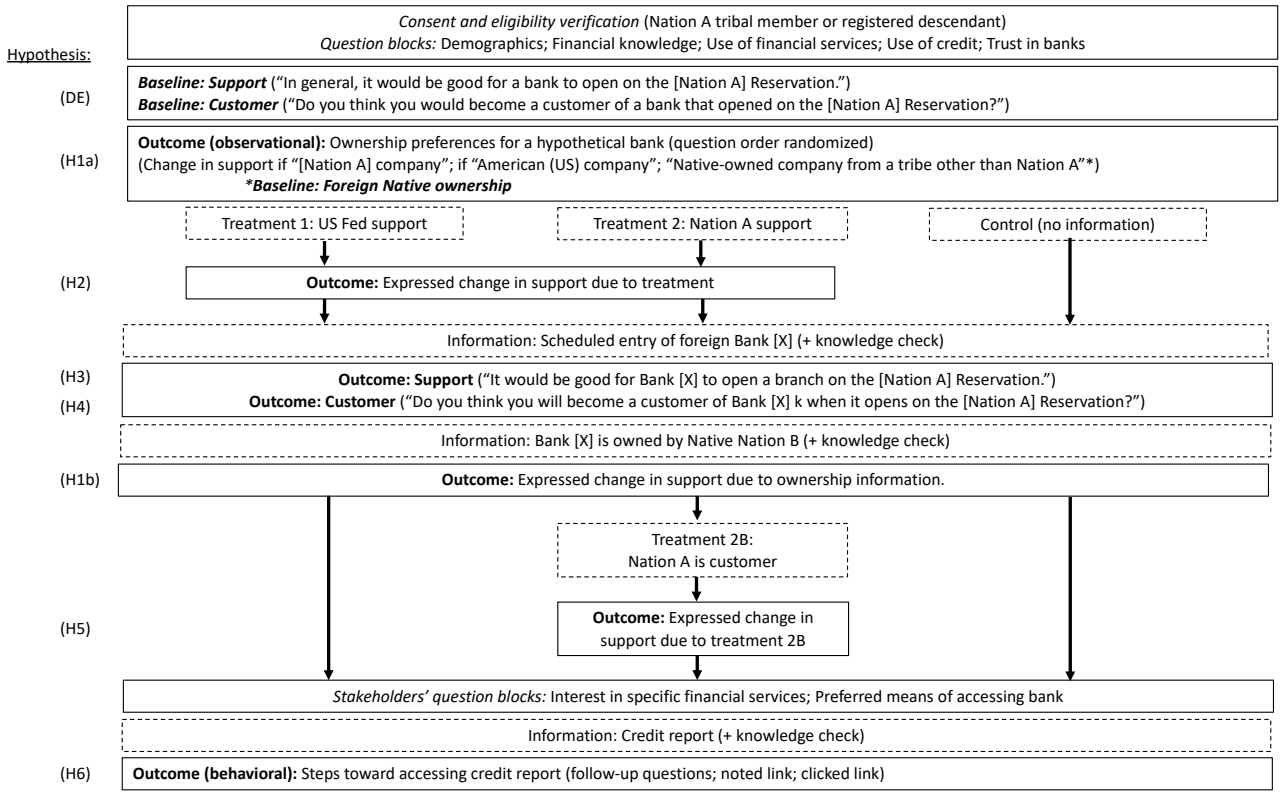
We instructed enumerators to use convenience sampling, rather than selecting potential respondents randomly or randomly within demographic strata. We provide three justifications for our convenience sampling strategy. First, the Tribal Legislature required as a condition of approving the project that as many people from their community as possible 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 nation, 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. We show in Section 6.1 that our sample is still plausibly representative. In our empirical analyses, we confirm robustness to enumerator fixed effects.[48]

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-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, which gives us sufficient power to test our hypotheses. For its part, Bank [X] delayed its scheduled groundbreaking until finally able to hold a socially-distanced event in early summer 2020.

[47] 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 fixed effect.

[48] The fixed effect for one particular enumerator is consistently significant. We expected as much, as we intervened with retraining on several occasions to mitigate likely social desirability bias given her personal enthusiasm about Bank [X].

Figure 1: Survey Flow



5 Hypotheses and Survey Flow

In this section, we present our hypotheses, experimental treatments, and outcome measures. We simultaneously situate them in the survey instrument for the ease of the reader. Figure 1 illustrates the flow of the survey. The questions that form the basis of our outcomes of interest are labeled with the relevant hypothesis on the left-hand side of the figure. Dotted boxes indicate the points at which the survey introduced different pieces of information. After randomization occurs, the two treatment groups and the control group follow the associated vertical arrows. Note that the group receiving Treatment 2 receives a follow-up treatment 2B toward the end of the survey. As explained in Section 5.3.2, we were not able to do a parallel second treatment for the group receiving Treatment 1 without introducing deception.

At the start of the survey, enumerators would verify a respondent's eligibility for the survey with a tribal ID and/or other identification. The enumerator would then assist the respondent in

completing the survey on the tablet computer to the extent required.[49] If the respondent desired, enumerators would share a link to allow them to complete the survey on their own device (12% of surveys). Respondents could also complete the survey at the state job center with the lab attendant filling the enumerator role attendant (2% of surveys). The survey instrument contained 50-57 items, and the average time to completion was approximately 15 minutes.[50] Enumerators distributed $10 gift cards to the on-reservation grocery store to those who completed the survey.

The survey begins with blocks of questions dealing with demographics; financial knowledge; use of financial services; use of credit; and trust in banks. These blocks are followed by our main questions of interest. The last block of questions in the survey consists of questions 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. We walk through our questions of interest and their motivating hypotheses in the next sections.

5.1 Descriptive Expectations

Questions capturing pre-treatment views provide information relevant to our expectations about descriptive patterns in the data. The Baseline: Support question asks the respondent's level of agreement with the following statement: "In general, it would be good for a bank to open on the [Nation A] Reservation" (1/disagree to 10/agree scale). This is immediately followed by the Baseline: Customer question measuring the respondent's self-reported likelihood that they would become a customer (1/definitely no to 5/definitely yes scale).[51] Note that we are unable to ask about respondents' behavior in actually becoming customers, which we see as a reasonable tradeoff against the opportunity to survey them pre-FDI-entry.

In a highly impoverished less developed nation without a retail bank located in its borders, our expectation is that answers to these baseline questions will skew toward the top of the available scales. We also expect such positive views to be widely shared across the nation, given the absence of longstanding experience with FDI and its possible downsides. This implies that variance on these questions should be low. We set these descriptive expectations aside with what we label DE, given that these expectations are not hypotheses, as there is no comparison national setting against

[49] Enumerators recorded their extent of intervention in holding the tablet and entering values.

[50] The exact number of items depended on the experimental condition to which the respondent is assigned and the respondent's answers to certain demographic questions that could trigger follow-up questions. The 15 minute average excludes outliers resulting from enumerator errors.

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

which to test them.

Descriptive Expectations (DE): *Respondents' (pre-treatment) baseline support for a local bank will skew toward top of the scale, and variance should be low. The same should be true of respondents' (post-treatment) support for Bank [X].*

These descriptive expectations suggest that we are more likely to face empirical challenges raised by ceiling effects rather than floor 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, several questions ask respondents directly whether and in which direction a prompt changes their support. This allows even the most (least) enthusiastic respondents to express even more (less) enthusiasm without censoring.

5.2 National Origin

Because of power considerations, our questions on national origin are observational and not experimental. Before introducing the specifics of Bank [X], 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: a "Nation A-owned company," "a Native-owned company from a tribe other than Nation A," and "an American (US) company." Our corresponding hypothesis follows from broadly supported expectations in the FDI literature that domestic firms are preferred over foreign, all else equal. Additionally, we posit that firms from countries with closer ascriptive or cultural ties to the host nation may be preferred, although this is conditional on the absence of belligerent bilateral relations (Wellhausen, 2015). Given that Native-US federal government relations have been problematic over history, to say the least, we expect that American (US) firms are the least preferred, all else equal.

Hypothesis 1a. *Respondents are more likely to support a Nation A-owned company over a Native-owned company from a tribe other than Nation A, and both types of Native-owned companies over 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. The order in which respondents received the three items is randomized in order to avoid issues with order effects.

As shown in Figure 1, we return to the issue of national origin later in the survey (H1b). This is after we have moved from discussion of a hypothetical bank to the specific Bank [X]. We inform all respondents that Bank [X] is 100% owned by Nation B.[52] We then ask whether that information changes their support.

Moving from a hypothetical to the specific Nation B and its specific Bank [X] introduces a variety of potential mechanisms other than those tied to nationality that could change respondent views. As confirmed by our tribal partners, much about Nation B is familiar to those in Nation A. 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. It is certainly well known that Nation B's economic success, particularly through its casino, 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.[53] In general, 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. These kinds of characteristics could reasonably affect Nation A respondent views separately from a Native-ownership effect. Nonetheless, an increase in support for Bank [X] when Nation B is identified as its owner would be consistent with the general expectation that individuals on average prefer FDI from nations with closer cultural ties.[54]

Hypothesis 1b. *Respondents increase their support for Bank [X] following information that it is owned by Nation B, relative to their support prior to receiving that information.*

Note in Figure 1 that the question relevant to H1b is asked post-treatment. We do not expect there to be heterogeneous effects across the treatment and control groups.

5.3 Survey Experiments: Endorsement Treatments

In brief, our survey experiments are built on the theoretical expectation that, particularly in an information-poor environment, credible endorsements can have a causal effect on individual views. In this sense, our setting without a retail bank or FDI is a most likely one in which credible endorsements would increase support. By "endorsements," we mean statements of support from institutional actors with relevant expertise. In this case, that expertise would be relevant to the

[52] Wherever relevant, we include knowledge check questions. We examine these in the Appendix.

[53] Per capita disbursements to tribal members are common in Native Nations, especially since the rise of the gaming industry. Consistent with Nation B's sovereignty over its data, the value of their per capita payment was not disclosed to the co-authors.

[54] At the same time, we acknowledge extreme variation in Indian Country as to perceptions of those cultural ties and the extent to which tribes share a common identity.

expansion of a foreign-owned retail bank into Nation A. Our underlying presumption is that the views proffered by such institutional actors can carry sufficient credibility to move public opinion. Our unique setting allows us to specify two institutional actors that, in theory, are likely to be credible sources of information for people in Nation A. Indeed, the fact that these actors support the principle of expanding formal financial services into Nation A, and have made public statements to that effect, would suggest that they think (hope) such statements would have positive effects.

5.3.1 Treatment 1: Nation A Government as Supporter and Customer

Our first treatment recounts a true statement provided by the government of Nation A: "We would like you to know that the [Nation A] Tribal Legislature supports the opening of a bank on the [Nation A] Reservation." Nation A's government is an endorser per our definition, as an institutional actor with expertise relevant to the expansion of a retail bank into Nation A. The reality of politics is that public support for national government preferences – underpinned by elected political leaders – can be fickle. Dissatisfaction with the endorser would make it more difficult for us to find positive treatment effects. Our prior is that the government's endorsement of Bank [X] will increase (rather than decrease) popular buy-in, based on the logic that the government would not have approved an endorsement in the survey if tribal leaders expected it to backfire. Again, the net empirical effect is of practical interest to Nation A's government. We label this treatment GOVT A SUPPORT.

We take advantage of the opportunity to augment the Government A treatment, as a means of (non-experimentally) probing whether a more robust endorsement affects the presence or magnitude of treatment effects. Toward the end of the this treatment group's survey instrument, we inform them of the following true statement: "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]."[55] Upon receiving this, the Government A treatment includes both abstract support and specific information that the Government is a customer of Bank [X]. We label this augmented treatment GOVT A SUPPORT + CUSTOMER.

5.3.2 Treatment 2: US Federal Reserve Support

Second, the Federal Reserve "supports the expansion of safe and accessible retail financial services for underserved populations and minority communities." This is a true statement from

[55] As introduced above, this was required by Bank [X], but we do not include that requirement in the statement.

the Federal Reserve Bank Board of Governors, which they agreed to have in the survey. This statement does not mention, nor is it specific to, Nation A and Bank [X]. Consistent with the Federal Reserve's ethical standards and legal requirements, the Board of Governors endorses the principle of expanding formal financial services in underserved areas, but it does not endorse any specific retail bank. Nonetheless, this statement clearly encompasses Nation A, which is an underserved, minority community. As Indian Country is part of the United States, promoting the stability and economic health of Indian Country is part of the Federal Reserve's core mission.

The Federal Reserve is an institutional actor that objectively has expertise relevant to this setting, which fits with our definition of an endorser with views that could carry sufficient credibility to move public opinion. But what does the Federal Reserve mean to a given individual in Nation A? In short, we certainly do not expect any respondent to know, much less understand, the Federal Reserve's complicated status as a unique non-profit entity that is not strictly private nor is it a part of the US federal government.[56]

Without deception, we provide context around the Federal Reserve's statement with the intention of helping the respondent interpret the endorsement. The treatment begins: "We would like you to know that the Central Bank of the United States, the Federal Reserve, supports..." We expect that the mention of the United States in the treatment emphasizes that the Federal Reserve is an external international institution, consistent with the fact that it is not under the control of Nation A. The treatment specifically categorizes its international status as bilateral, a US-government-affiliated institution – therefore subject to the baggage that the US government carries in Indian Country.[57] Our theoretical expectation is that bias due to a US government identity would move treatment effects in a negative direction. Therefore, we expect that our framing of the Federal Reserve as will make it more difficult to find support for our hypotheses. The net empirical effect – whether Federal Reserve "branding" is in itself counterproductive – is of practical interest to the Federal Reserve. We label this treatment US Fed support.

[56]The twelve Federal Reserve Banks are separately incorporated and their employees are not government employees. Its Board of Governors is appointed by the president and confirmed by the Senate, and its mission and structure are determined by the Federal Reserve Act. The Federal Reserve is a non-profit, because it is funded by its operations and returns all funds in excess of its operations to the US Treasury.

[57]Respondents likely believe that the Federal Reserve is part of the US federal government; regardless, its legal status in the US system is immaterial for our purposes.

5.3.3 Expected Treatment Effects

To be commercially successful, the foreign firm in our setting requires buy-in from the people of Nation A both in principle and as customers, such that public views on both are of theoretical and practical importance. We therefore examine treatment effects with regard to both outcomes. One set of questions in the survey asks respondents to express their level of support by considering whether "it would be good for..." (1/strongly disagree to 10/strongly agree). Each support question is immediately followed by a complementary question: "Do you think you [would/will] become a customer of..." (1/definitely not to 5/definitely yes). The verb in the customer question changes based on whether the question refers to a hypothetical or the actual upcoming entry of Bank [X].

Our primary expectation is that the FED SUPPORT and the GOVT A SUPPORT treatments increase respondent support for a local bank in principle, and a respondent's expressed likelihood of becoming a customer of a hypothetical local bank.

Hypothesis 2. *Respondent support for a local bank will increase following statements endorsing the principle of a local bank from the (1) US Federal Reserve or (2) Nation A's government, relative to the control group.*

Next, we expect both treatment to have positive effects when the local bank in question is identified as Bank [X] specifically. We introduce Bank [X] as such: "Now we would like to ask you about a specific bank called Bank [X]. Bank [X] is a commercial bank based in [nearby US, off-reservation city]. Bank [X] is scheduled to open a branch on the [Nation A] Reservation in 2020." The information that Bank [X] is based outside of the Nation A reservation (i.e. abroad) is intended to communicate to the respondent that it is not a domestic bank, without specifically establishing who its owners are.

Methodologically, changing from a hypothetical to a true, concrete setting could reduce noise in question answers if, for example, respondents' attention increases. At the same time, specifying 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 one motivation for our empirical strategy that compares both levels and within-respondent changes relative to appropriate pre-treatment baselines. Our stakeholders hope that (and we continue to expect that) respondents increase their support for and their interest in becoming a customer of Bank [X] following either treatment.

Hypothesis 3. *Respondent support for Bank [X] will increase following statements endorsing the*

principle of a local bank from the (1) US Federal Reserve or (2) Nation A's government, relative to the control group.

Hypothesis 4. *H3 holds with regard to respondent self-reported likelihood of becoming a customer.*

Late in the survey, we introduce an augmented GOVT A SUPPORT + CUSTOMER, Treatment 2B (see Section 5.3.1). We expect that the second treatment may move individual views further into a positive direction. It would be reasonable for Bank [X] to expect that having Government A as its customer would be a useful foundation on which to build its local customer base. We examine this through observational data comparing outcomes within Treatment group 2.

Hypothesis 5. *Respondents who have received the (2) Nation A's government endorsement will increase their support after receiving the additional information that Nation A's government has become a customer of Bank [X].*

Finally, behavioral outcomes provide an important way to avoid problems associated with testing attitudes on attitudes. Potential behavioral outcomes in our setting are limited in part because of its particular theoretical usefulness: the foreign retail bank has not yet entered, so people cannot yet patronize the branch. We use a behavioral outcome that is linked to respondent interest in increasing their use of formal financial services. At the end of the survey, enumerators informed respondents that, under US federal law, they are entitled to receive free credit reports annually from each of the three major credit reporting bureaus, and that accessing these reports has no effect on their credit. The enumerator recorded whether the respondent subsequently expressed unprompted interest; the enumerator also showed every respondent the link and recorded whether the respondent took a note of it.[58] For those taking the survey on a private internet-connected device, we record whether they click the link. We combine unprompted interest, taking a note of the link, and/or clicking the link into a single outcome. We expect that both treatments have a positive effect on this outcome.[59]

Hypothesis 6. *Respondents who have received information about support from the (1) US Federal Reserve or (2) Nation A government's support that it is a Bank [X] customer are more likely to take steps toward accessing their credit reports, relative to the control group.*

The full set of hypothesis, and the location of results that speak to each of them can be found in Table 2.

[58] https://www.annualcreditreport.com.

[59] At this point the Government A treatment group has received the augmented GOVT A SUPPORT + CUSTOMER treatment, so the treatments are no longer parallel.

Table 2: List of Hypothesis and Location of Associated Result.

Hypothesis:	**Outcome:**	**Results Location**		:
Observational (pre-treatment):				
DE	Pre-treatment, baseline local bank support level	Figure 2		
	Pre-treatment, baseline local bank customer likelihood level			
H1	Support change for local bank if a "Nation A company"	Figure 3		
	Support change for local bank if an "American (US) company"			
	Support change for local bank if a "Native-owned company from a tribe other than [Nation A]"			
Experimental (post-treatment):		***Nation A v. Control***	***US Fed v. Control***	***Nation A v. US Fed***
H2	Support change for local bank (self-reported effect)	Figure 5(a), Panel 1	Figure 5(a), Panel 2	Figure 5(a), Panel 3
H3	Bank [X] support level	Figure 5(a), Panel 1	Figure 5(a), Panel 2	Figure 5(a), Panel 3
	Difference from pre-treatment local bank support baseline	Figure 5(a), Panel 1	Figure 5(a), Panel 2	Figure 5(a), Panel 3
H4	Bank [X] customer likelihood level	Figure 5(b), Panel 1	Figure 5(b), Panel 2	Figure 5(b), Panel 3
	Difference from pre-treatment local bank customer likelihood baseline	Figure 5(b), Panel 1	Figure 5(b), Panel 2	Figure 5(b), Panel 3
H5	Support change for Bank [X] due to Nation B owner (self-reported effect)	Figure 5(a), Panel 1	Figure 5(a), Panel 2	Figure 5(a), Panel 3
	Difference from pre-treatment Native-owned local bank baseline	Figure 5(a), Panel 1	Figure 5(a), Panel 2	Figure 5(a), Panel 3
H6	Behavior: Steps toward accessing credit report	Figure 5(a), Panel 1	Figure 5(a), Panel 2	Figure 5(a), Panel 3

The precise questions related to the outcome variables of interest and their respective baselines can be found in Table A.1

6 Results

We report and discuss four sets of results. First, we report a set of descriptive results in which we assess the representativeness of our sample compared to Nation A's own records, as well as data from the American Community Survey (ACS). We check to make sure that our treatment groups are balanced on observable covariates. We also examine how well the data fits our descriptive expectations (DE). Second, we report our main experimental results: how did the randomized endorsement treatments affect respondents' attitudes and behavior? Third, we test for heterogeneous effects along several theoretically-informed dimensions: respondents' discount rates; financial resilience; knowledge about finance; community connections; and negative views of banks. Finally, we report observational results from survey items in which we asked all respondents how much their support for the bank would change in response to different types of ownership.

6.1 Representativeness and Balance

As noted previously, we did not use random or stratified random sampling techniques to identify potential survey respondents. Instead, we encouraged our enumerators to set up temporary survey stations in high-traffic areas and draw on their own personal networks in order to survey as much of the Nation A population as possible. In this section, we investigate the demographic characteristics of our convenience sample to determine whether or not it is reasonably representative of the population. In order to preserve the anonymity of Nation A, we report only differences between our sample and other data sources. This preserves anonymity by not allowing the summary statistic means to be compared to other publicly available information.

First, we compare our sample demographics to the population averages according to Nation A's official records. Nation A maintains a database of all enrolled members and their recognized descendants; the database, to which we have access, contains information on each individual's enrollment status (member vs. descendant) as well as their gender, birth date, and home address. The first column of Table B.1 compares our sample to the tribal population averages as maintained by Nation A. We sample over 10% of all enrolled members of Nation A, and over 5% of known descendants. Relative to the population, we oversampled enrolled members and undersampled descendants; this may be due in part to the fact that our data collection took place either on our very close by to the Nation A Reservation, and enrolled members are more likely to live on or nearby the reservation than descendants.[60] Our sample is quite representative of the population with

[60] A bivariate regression model using Nation A's official data suggests that enrolled members are 3% more likely

regard to age. Finally, we oversample women relative to their proportion of Nation A's population. This may be a function of the gender composition of our enumerators' social networks, though a recent and similarly-administered survey of Native American populations also oversampled women (Schroedel et al., 2020).

Second, we compare our sample demographics to a relevant comparison group from the US Census Bureau's American Community Survey (2014-2018 wave). Specifically, we compare our sample to the ACS sample of adult respondents who live in the same state as the Nation A Reservation and identify as American Indian and Alaskan Natives ($N = 2{,}171$). Unsurprisingly, we again find that we have oversampled women. Likewise, respondents in our sample are more likely to be unmarried, and substantially more likely to be employed, than those in the ACS sample. Our sample contains fewer individuals who have not completed high school, and more individuals who have received an associate's degree, than the ACS sample. Finally, we slightly undersample the youngest (18-24) and oldest (65+) adults. Thus, while there is some evidence that our respondents may be more highly educated and more frequently employed than the statewide AIAN population average, our respondents are generally representative of that population despite our convenience sampling strategy.

Finally, in order for our experimental results to identify average treatment effects, it is necessary that our procedure for assigning respondents to their treatment group was successfully randomized. While we cannot determine whether or not our groups are balanced on unobservable covariates, Figure A.1 demonstrates that the groups are well-balanced on all observable covariates: of the large number of balance tests that we conducted, in only seven cases did two treatment groups differ significantly. However, since one of these mean differences is in one of our important baseline covariates (specifically in whether respondents believe it is good for a bank to open on the reservation) and we find differences across the distribution of responses in some of our other baseline variables, we report all outcomes in terms of differences from their respective baselines and also conduct robustness checks to ensure that covariate imbalance is not confounding our estimates. Generally speaking however, we believe the results from our balance tests are strongly indicative of successful randomization.

Finally, Figure 2 shows patterns in the data consistent with our descriptive expectations that, in this "banking desert" setting, support for the entry of a bank will be on average quite high, and variance would tend to be low. This holds for all treatment groups. There is some indication of

to live in the same state as the Nation A reservation than descendants.

less support for Bank [X], but the general pattern holds for both it and an a hypothetical bank.

6.2 Observational Results: National Origin

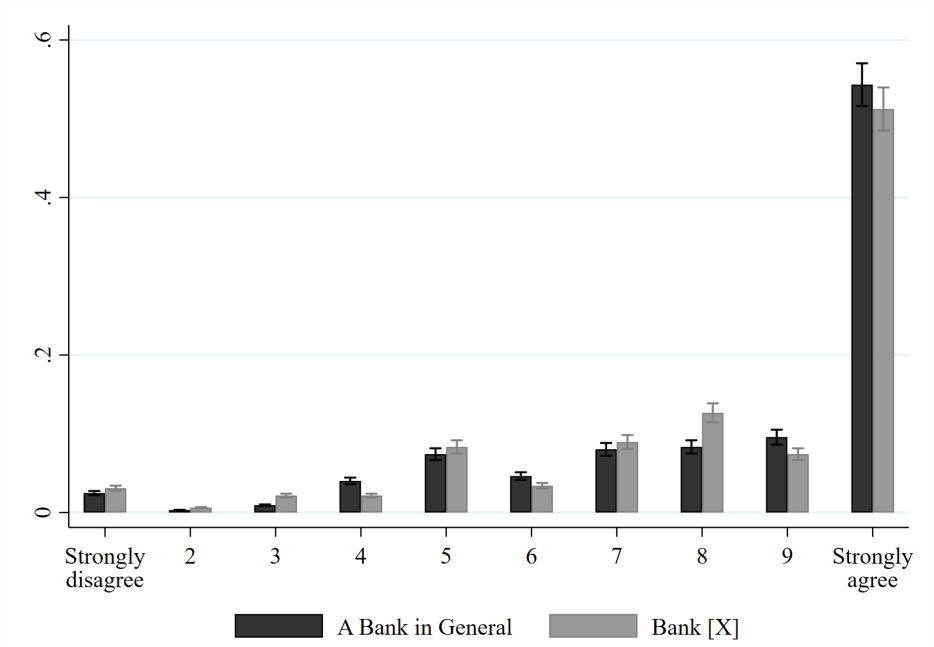
Figure 3 provides observational evidence consistent with H1a that domestic ownership by Nation A would be significantly preferred to American (US) ownership. Nation A ownership is also preferred to foreign ownership by another Native Nation, but that effect is not as stark. It is about on par with the positive effect 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 FDI is something special, and something important for Indian Country as a whole.

Post-treatment, we inform all respondents that Bank [X] is 100% owned by Nation B and ask them to self-report how this information might change their views (Figure 4). As expected, there is not meaningful heterogeneity across the treatment groups. While the modal response is "stay the same," the proportion of respondents reporting that it increases support is significantly greater than those who report that it decreases support. We takeaway that there is not obvious opposition to the fact that the Native owner is from Nation B, which suggests that it is unlikely that the observational results in Figure 3 would be so different as to flip signs if the unidentified Native owner were replaced with Nation B – which is good news, practically, for Bank [X]'s public relations.

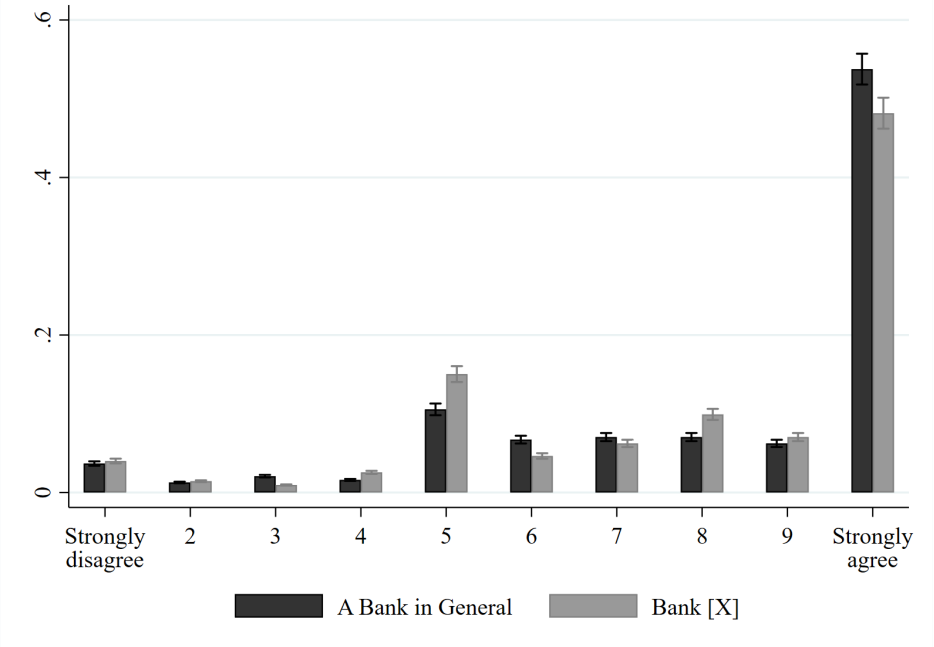
6.3 Experimental Results

Our main experimental results, presented in Figure 5, consist of difference-in-means tests conducted between each pair of treatment groups (Nation A treatment vs. control, US Federal Reserve treatment vs. control, and Nation A treatment vs. US Federal Reserve treatment) for each of our outcome variables. For each panel "A vs. B," the estimates presented are equal to the outcome variable mean among Group A minus the mean among Group B. All presented estimates have been standardized by their mean and standard deviation, and thus can be interpreted as the ATE measured in standard deviations of Y. As noted previously, all respondents were asked to answer comparable versions of each of the outcome items (except for the behavioral measure and the self-assessed impact of the statements on support) prior to receiving treatment. This allows us to examine the effects of treatment on each outcome variable in two different ways:

Figure 2: Patterns are consistent with our descriptive expectation (DE): Distributions for both treated and untreated groups are highly left-skewed.

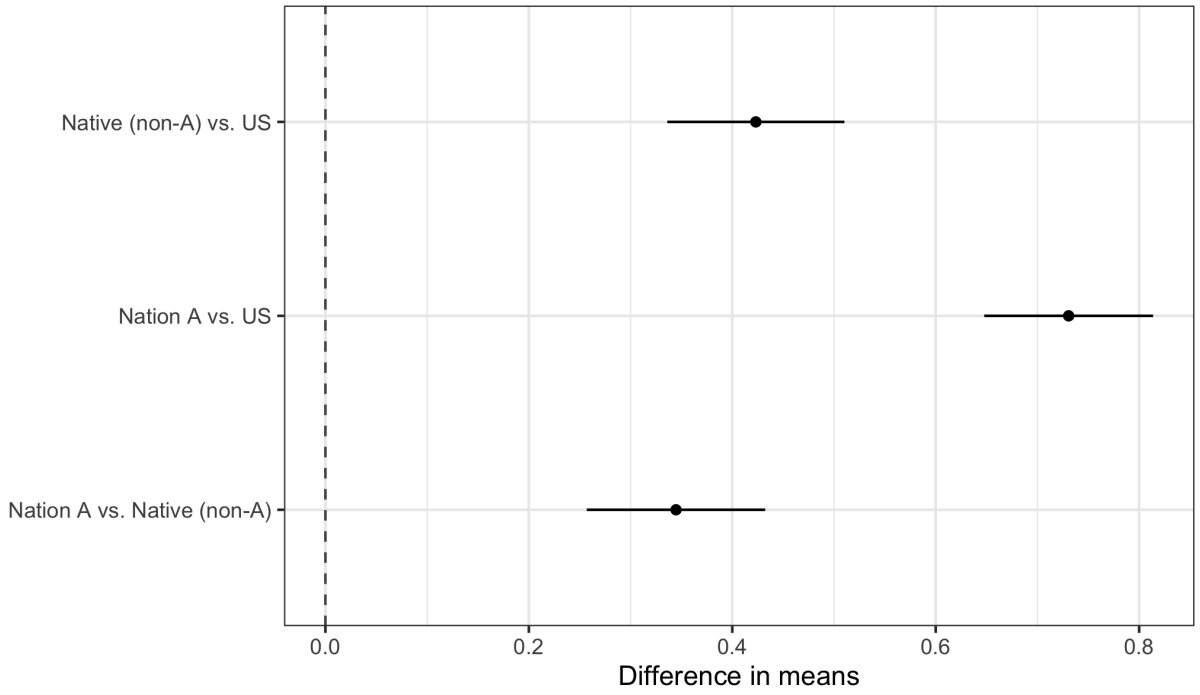


(a) Control Group Only.



(b) Treatment Groups Pooled.

Figure 3: Differences in self-reported change in support for a bank in response to different hypothetical owners



1. For each outcome variable, we examine the difference between treatment groups in the average value of the corresponding survey item that appeared *post-treatment*. Formally, we calculate the quantity $\bar{Y}_{D=1}^{Post} - \bar{Y}_{D=0}^{Post}$. These estimates are referred to as "difference(s) in levels" and are presented in Figure 5 with solid black confidence intervals.

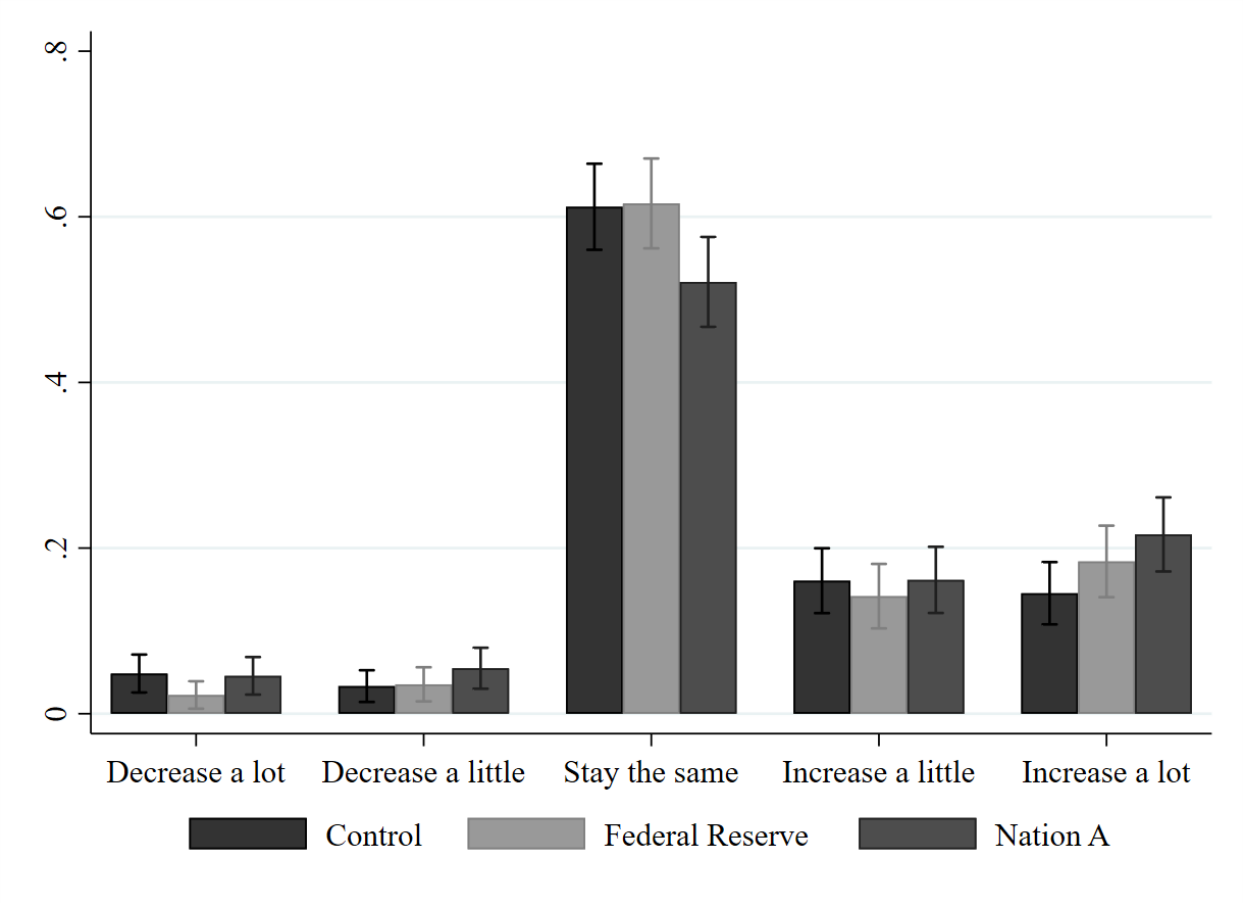
2. For each outcome variable, we also examine the difference between treatment groups in the average *change* between respondents' baseline (pre-treatment) and their post-treatment responses to each corresponding survey item. Formally, we calculate the quantity:

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

   Estimates of the above kind are labeled "difference(s) in changes" and are presented in Figure 5 with dashed confidence intervals.

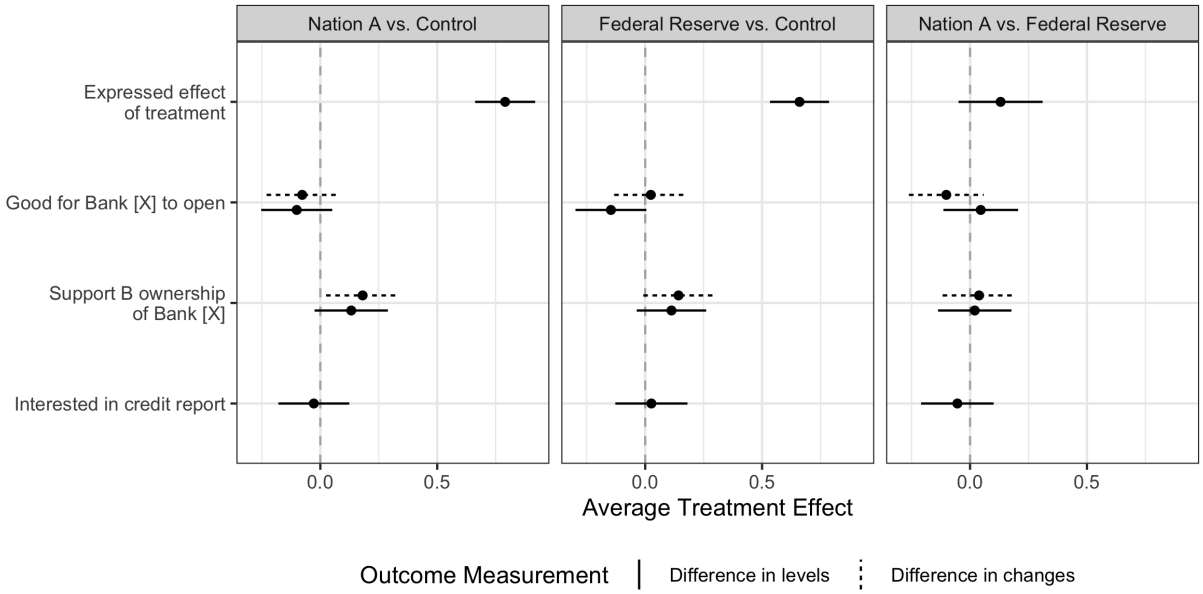
The first outcome variable, titled "Expressed effect of treatment", captures respondents' own assessments of how Nation A/the Federal Reserve statement affected their support for a bank opening on the Nation A Reservation. The control group baseline is merely a vector of zeroes, reflecting our assumption that control group individuals' post-treatment support for a bank is no

Figure 4: Change in Stated Support of Bank [X] After 100% Nation B Ownership Information Shared

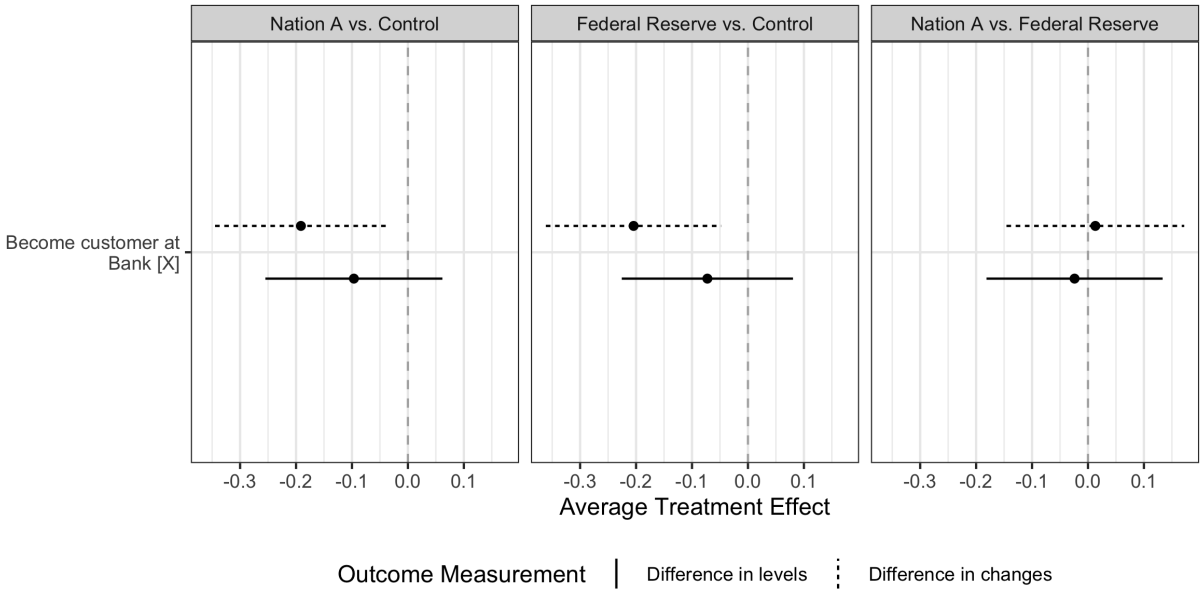


Notes: Expressed change in support due to ownership information.

Figure 5: Causal effects of knowledge of Nation A support for the opening of a bank in their Nation and Federal Reserve support for the expansion of safe and accessible financial services for under-served populations with 95% CIs.



(a) Results for H2, H3, H5, and H6.



(b) Results for H4.

Notes: All treatment effects presented as proportions of the outcome variables standard deviation.

different from their pre-treatment support, as they did not receive treatment. Figure 5a shows that both treatments had substantial positive effects on individuals' self-reported support for a bank to open on the reservation; on average, treated respondents report that the treatments increased their support for a bank. These effects are also large in magnitude, as the Nation A and US Fed treatments increased support for a bank by .66 and .79 standard deviations (respectively). The Nation A endorsement effect is larger than that of the Federal Reserve statement, although the difference is statistically significant only at the 10 percent level at the mean of the index.[61]

The second outcome variable, titled "Good for Bank [X] to open", measures respondents' support for the specific Bank [X] opening a branch on the Nation A Reservation on a scale from 0 to 10.[62] We find no evidence that respondents' support for Bank [X] was affected by either of our endorsement treatments, as none of the estimated average treatment effects achieve statistical significance. While Figure 5a shows that the effect of the US Fed treatment had a borderline significant ($p = .058$) *negative* effect on support for Bank [X], Figure 5b shows that this effect disappears once respondents' baseline beliefs are accounted for. The effect size is also small in magnitude, constituting a change of only .14 standard deviations in the "Good for Bank [X] to open" variable.

Our next outcome variable, "Support B ownership of Bank [X]", reflects respondents' answers to the following question: "Does knowing that Bank [X] is 100% owned by Nation B make your support of Bank [X] increase, decrease, or stay the same?" Figure 5 shows that respondents in both treatment groups were more supportive of Bank [X] after learning that it was owned by Nation B than those in the control group. The only statistically significant difference is that between the group that received the Nation A endorsement and the control group (accounting for baseline responses); however, the baseline-adjusted effect of the US Fed endorsement is also positive and borderline significant ($p = .064$), and Figure 5b shows that the difference between the two treatment groups is small and statistically indistinguishable from zero. The effect sizes are again fairly small, as both treatments result in an average change of less than .2 standard deviations in the "Support B ownership of Bank [X]" variable.

Next, we turn from measures of support for Bank [X] to a measure of whether or not the individuals in our survey intend to directly benefit from Bank [X]'s entry. The outcome variable "Become customer of Bank [X]" reflects respondents' self-reported likelihood of becoming a customer of

[61] Tests for differences across the distribution of the ranking between the Nation A and the Federal Reserve treatment suggest that the Nation A treatment does induce greater positive self-assessed response.

[62] Specifically, respondents were asked to rank their agreement or disagreement with the following statement: "It would be good for Bank [X] to open a branch on the Nation A Reservation."

Bank [X] once it opens a branch on the Nation A Reservation. When looking only at differences in post-treatment averages (in Figure 5a), both Nation A and Federal Reserve statements have slightly negative but insignificant effects on the likelihood that respondents will become customers of Bank [X]. However, once baseline responses are adjusted for, both treatments have significant negative effects that are similar in magnitude. Only the Nation A treatment, however retains it size and statistical significance upon adjusting for pre-treatment differences in observables (results presented in Table B.3). Again, the effect sizes are relatively modest; both treatments result in a decrease of approximately .2 standard deviations in the "Become customer of Bank [X]" variable.

In our framework, this suggests that respondents express that National and international statements of support matter for their own support for a bank in their Nation, but when explicitly asked about Bank [X] explicitly, the statements of support mattered little for their support for a specific bank. However, they mattered for how Nation B ownership affects their support for Bank [X] – knowledge that Bank [X] is foreign, but Native owned, increases support for the bank more when Nation A's government expresses support for the opening of a bank. However, before knowledge of Nation B ownership, Nation A's government's statement of support and federal reserve statement of support actually seem to make people less likely to think they will become customers of the bank.

Finally, we examine the effects of our treatments on the behavioral outcome measure of steps toward accessing their free annual credit reports. Recall we measure whether or not respondents wrote down or took a picture of the link to www.annualcreditreport.com if they took the survey with an enumerator or whether or not they actually clicked the link if they took the survey online. Approximately 45 percent of respondents took some step towards accessing their credit report suggesting a relatively high average interest in learning more about their own financial position.

We find that neither treatment had any discernible effect on respondents' propensity to seek out additional information about their own credit. Further, the ATEs are very close to zero and estimated fairly precisely. As a further set of behavioral outcome measures we test whether respondents were more likely to leave any open ended comments, any supportive of the bank comments, or any negative comments about the Nation A government if they were exposed to one statement of support versus others.[63] Like the behavioral outcome measure of taking steps to accessing a free credit report, we find ATEs very close to zero in all cases.

[63]The proportion of people who left some comment was 23.5 percent, 9.7 percent left a comment expressing excitement the bank was opening and 2.3 percent left a comment expressing concern about Nation A government involvement or upset with the Nation's government for other reasons.

Appendix Tables B.2 and B.3 show that quantitatively and qualitatively, most of these findings are robust for adjusting for random differences in pre-treatment observables that may affect the outcomes we observe,[64] but have been asymmetrically distributed across treatments due to the finite sample size; enumerator fixed effects; and controls for where the survey was taken and by what method it was taken (with an enumerator on a tablet, in the job center, or on a personal device). We show whether we use regression adjustment, inverse probability re-weighting, a doubly robust combination of them both, or ordered or binary probit to estimate the average treatment effects above, the results are largely unchanged. The one significant exception is the estimated effect of the Federal Reserve treatment on the likelihood of becoming a customer or nation B ownership. This effect is statistically insignificant and smaller in magnitude once differences in pre-treatment observables are accounted for. For completeness, these tables show the treatment effects for the unscaled variables (without the mean and standard deviation normalization).

One concern when trying to estimate average treatment effects, particularly in a randomized control trial in a relatively small and potentially tight-knit community 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 is known as the Stable Unit Treatment Value Assumption (SUTVA). This would impact our estimates of the average treatment effect. However we can explore the likelihood that this is a problem by controlling for a linear time trend in our models for the "days since the start of the survey" plus an additional indicator variable for having taken the survey during the roll-out day of the survey.[65] and interacting these variables with the treatments themselves. We find no evidence that the effect of the statements of support changes over time (or that those who took the survey on the day of the roll-out are affected differently than those that took the survey on other days). The one exception is is that those that took the survey are likely to express that the US Fed statement of support increases their support for Bank opening on the reservation over time. However, this is only borderline statistically significant. Those that took the survey the day of the roll-out are also slightly more negatively affected by the Fed's statement of support on their probability of becoming a customer (in levels) than those that took the survey on other days. While we find some time trends in our level outcome variables of interest, such as the likelihood of becoming a customer, once we difference the outcome variables

[64] These include measures of age, income, education, gender, access to technology, knowledge about finance, opinions about banks and opinions of value of native, American and Nation A member ownership of the bank, and indicators for being an enrolled member.

[65] Since a large proportion of our sample – roughly 38 percent – took the survey during this day, we believe if information about the survey and the statements of support spread, it would be non-linearly impacted by this day

from their respective baselines, all time trends are eliminated. Overall, the evidence is consistent with SUTVA holding, particularly for the outcome variables that are expressed in changes from their baselines.

In sum, while the self-reported measure suggests that both the Nation A government's endorsement of a bank opening in the nation and the Federal Reserve's support of access to finance have a large effect on respondents' expressed support for FDI in retail banking in general, we find limited support for the hypothesis that statements from the Federal Reserve or the Nation A government increase respondents' support for a particular new entrant (Bank [X]). Specifically, we find no evidence that the treatments directly increase support for Bank [X]; however, they may increase support *in*directly through magnifying the positive effect of Bank [X]'s native (Nation B) ownership. Contrary to our prediction, we find that both statements make respondents *less* likely to report that they intend to become customers of Bank [X] once it opens on the reservation before the ownership of Bank [X] is revealed.

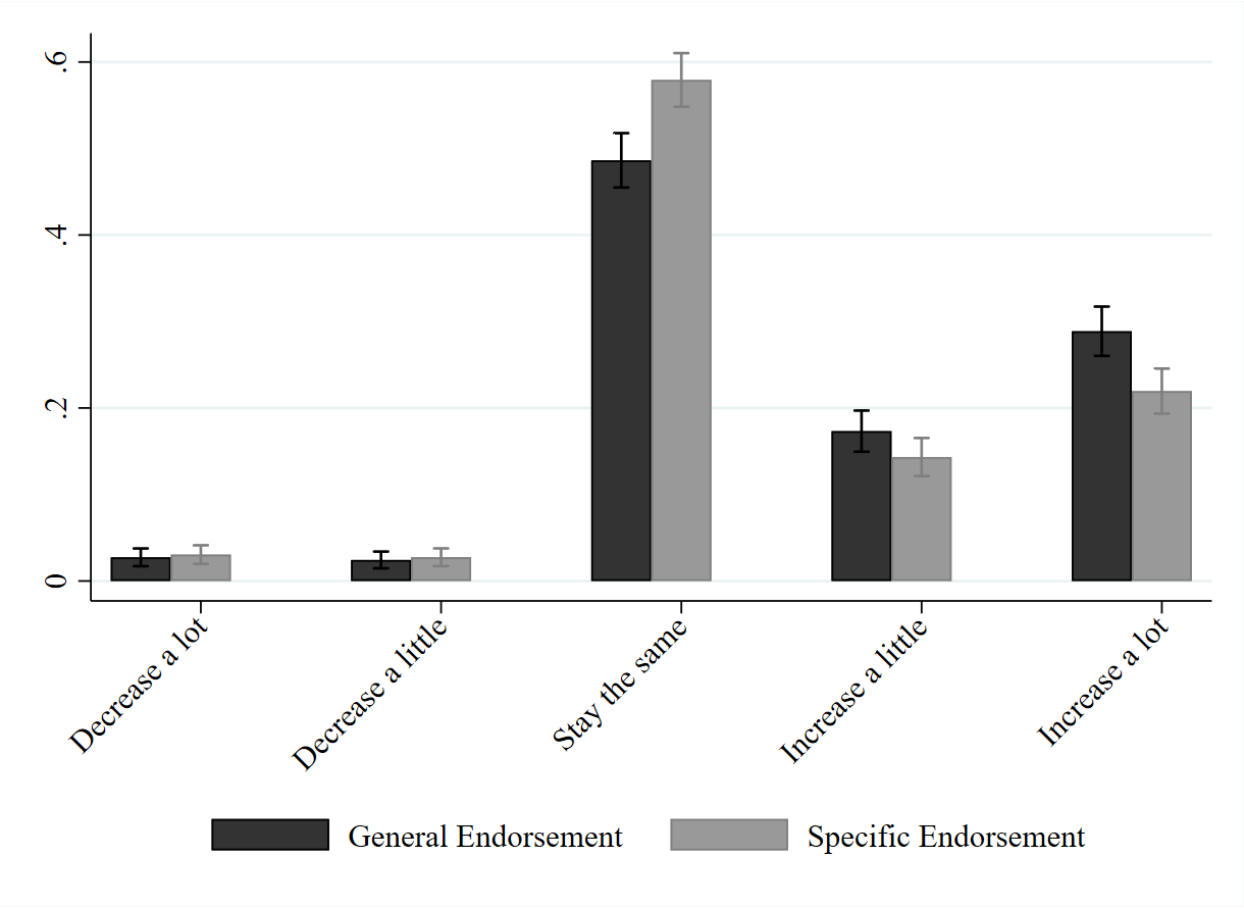
All significant effects are relatively small in magnitude, particularly when compared to the expressed effects of treatment. We also find that our treatments did not increase respondents' interest in learning more about personal finance, as captured by our behavioral measure. Further, we find that the differences between the effects of Nation A's endorsement and the Federal Reserve's statement are small and insignificant; respondents did not react differently to endorsements from the international institution or their own national government.

Is there evidence consistent with H5, that respondents in the Nation A treatment group are further influenced by the follow-up information treatment that Nation A has become a customer of Bank [X]? Figure 6 shows descriptive data on respondents' self-reported effect of the first "support" treatment (black) and the second "customer" treatment (gray) on their views. The distributions are very similar; the modal answer for both treatments is that it did not directly influence their views. However, that answer occurred significantly more often in reference to the specific "customer" treatment. The proportion of respondents reporting that the "customer" treatment moved their views in a positive direction is also lower. While only descriptive, this plot suggests possible declining marginal returns relevant to institutional choices over resource allocation.

6.3.1 Exploring Heterogeneous Effects

There is often significant heterogeneity in how people respond to information. We explore this potential heterogeneity in this section in two ways. First, we use our ex post theoretical intuition

Figure 6: Change in Stated Support Among Respondents Who have Received Statements of Support for a Local Bank in Principle from Nation A after receiving additional information that Nation A's government has become a customer of Bank [X]



about what forms of individual heterogeneity might matter for how people respond to learning about their government's support for Bank [X] and for the Federal Reserve's general statement of support for access to banking services. Second, we attempt to provide insight into whether the "back-firing" from the statements of support on the likelihood of becoming a customer are driven by particular groups of individuals within the community. We do this use a two-step method that combines flexibility estimating the individual ATEs based on a extensive set of observable covariates and then using an adaptive least absolute shrinkage and selection operator (lasso) to identify the variables that are most predictive of having a negative treatment effect on the likelihood of becoming a customer. Both these exercises are useful because they may inform practitioners when such statements of support are useful for increasing support and when they are not. These exercises are also useful from a theoretical perspective because they allow us to explore ex post whether identity or material consideration impact responses to information about authorities beliefs about various foreign ventures.

First, it is plausible that those with more pressing needs for access to affordable credit and banking services (i.e., high discount rates) would be less responsive to treatments than those with lower needs for access to banking; and that they would not be a subgroup contributing to unexpected negative effects of the treatment. Second, those who are already financially resilient might respond differently, since their material interests in a specific local bank opening are less important given their current financial position. Third, those that are financially knowledgeable might have a greater sense about what the statements from the Federal Reserve and their government imply and thus also respond differently than those with less financial knowledge. Fourth, those who are more connected to the Nation A community may respond differently (in either direction) than those less connected to their community. Finally, those with a negative history or beliefs about banks might also respond to the treatments differently because of their prior beliefs about banks and thus their assumptions about what a bank opening would mean for them and thus the implications of external and government support for the bank.

To measure each of these dimensions of potentially meaningful heterogeneity, we construct a series of indices using relevant questions available from our survey. We then construct binary indicators for each category that equal to one if a respondent's value of that the index passes a threshold such that 75% or more of respondents have at least this value of the index. To more clearly illustrate, consider our index of having a higher discount rate. In this index, we create indicators for each time one of the following things is true about a given respondent and then

sum across them: the respondent does not have a bank account; they could not get $400 in an emergency; they are the primary earner in a household with at least two more people beyond their spouse; and they have very poor self-assessed credit. We divide this sum by the total number of these questions they answered. Once we have a value for this index, we compute the threshold for which as least 75% of respondents are covered and give a respondent a value equal to one if they pass this threshold and zero otherwise. Table B.4 describes the questions and thresholds used in generating each index. Table B.5 presents the correlation between all of these indexes and related binary variables to show they are all relatively uncorrelated (the maximum correlation coefficient is roughly 0.3) and thus capturing conceptually and empirical distinct dimensions of heterogeneity among respondents.

In 3 and Table 4 we present the sign and statistical significance of the results of the same exercise for our other indices.[66]

Per Table 3, we see again that there are heterogeneous treatment effects for those that are connected to their community, as well as some evidence for those who are knowledgeable about finance. Per Table 4, respondents represented in each of these indices respond more positively to US Fed treatment than averages. This is especially true of those who are connected to their community. Results on the other indices are more sensitive to different specifications.

The quantitatively largest interactions between our indexes and the treatments were the community connection interactions. We present these coefficients in Figure 7. The first thing that the results in this Figure suggest is the expressed effect of both the Fed and Nation A statements of support are amplified among those that are most connected to their community according to our index. It can also be seen from this figure that among those that are connected to their community, the effect of the Fed and Nation A's statements are to increase support for Nation B ownership more than average, amplifying an already positive treatment effect.[67]

Another takeaway from this figure is that the negative effect of the statements of support on the likelihood of becoming a customer before the respondents are told that Bank [X] is Nation B owned is non-existent for those most connected to their community according to our measure. To see this, note that the negative effect on becoming a customer for both the Federal Reserve statement and the Nation A statement is approximately -0.2 on average. The interaction between the community connection indicator and the Fed statement is a bit less than 0.2 bringing the

[66] Estimated coefficients and standard errors can be found in Appendix Tables B.6 and B.7.

[67] This effect is statistically significant for the Fed treatment at the five percent level when using the differenced outcome measure of support for B ownership.

Table 3: **Nation A Treatment Heterogeneity**: This table reports the sign and significance (when present) of the interaction effect between each index (columns) and the Nation A treatment for each outcome variable (rows).

Outcome	High Discount rates	Financial resilience	Knows about Finance	Connected to Community	Negative Views of Banks
Expressed effect of treatment	.	(-)***	(+)***	(+)***	.
Interested in credit report	.	.	.		.
Levels	.				
Good for Bank [X] to open	.	.	.		.
Support B ownership of Bank [X]	.	.	.		.
Become customer of Bank [X]	.	.	.	(+)***	.
Differences	.				
Good for Bank [X] to open	.	.	.	.	(+)*
Support B ownership of Bank [X]	.	(+)**	.		(-)*
Become customer of Bank [X]	.	.	.	(+)***	.

See Table B.4 for variable definitions and Tables B.6 and for coefficients. Observations vary due to missing responses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: **US Federal Reserve Treatment Heterogeneity:** This table reports the sign and significance (when present) of the interaction effect between each index (columns) and the Fed treatment for each outcome variable (rows).

Outcome	High Discount Rates	Financial resilience	Knows about Finance	Connected to Community	Negative Views of Banks
Expressed effect of treatment	.	(+)***	(+)***	(+)***	.
Interested in credit report	.	.	.	.	.
Levels					
Good for Bank [X] to open	.	.	.	.	.
Support B ownership of Bank [X]	.	.	.	(+)**	.
Become customer of Bank [X]	.	.	.	.	.
Differences					
Good for Bank [X] to open	.	.	.	.	(+)*
Support B ownership of Bank [X]	.	(+)**	.	(+)**	.
Become customer of Bank [X]	.	.	.	.	.

See Table B.4 for variable definitions and Tables B.6 and B.7 for coefficients. Observations vary due to missing responses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

treatment effect close to zero among those that are community connected. The interaction between the community connection indicator and the Nation A statement is over 0.5 which actually implies a positive treatment effect point estimate on becoming a customer for this group. One ex-post rationalization for this is that individuals who are highly engaged in their community may see their own government as closer to representing their own interests regardless of whether the bank is foreign. However among those that feel disconnected from their community, knowledge of their governments support of a foreign organization, assuming they had not been aware of it before, may make them feel more disconnected from their community and less likely to see the bank opening as representative of their interests.

6.3.2 For Whom do Treatments "Backfire"?

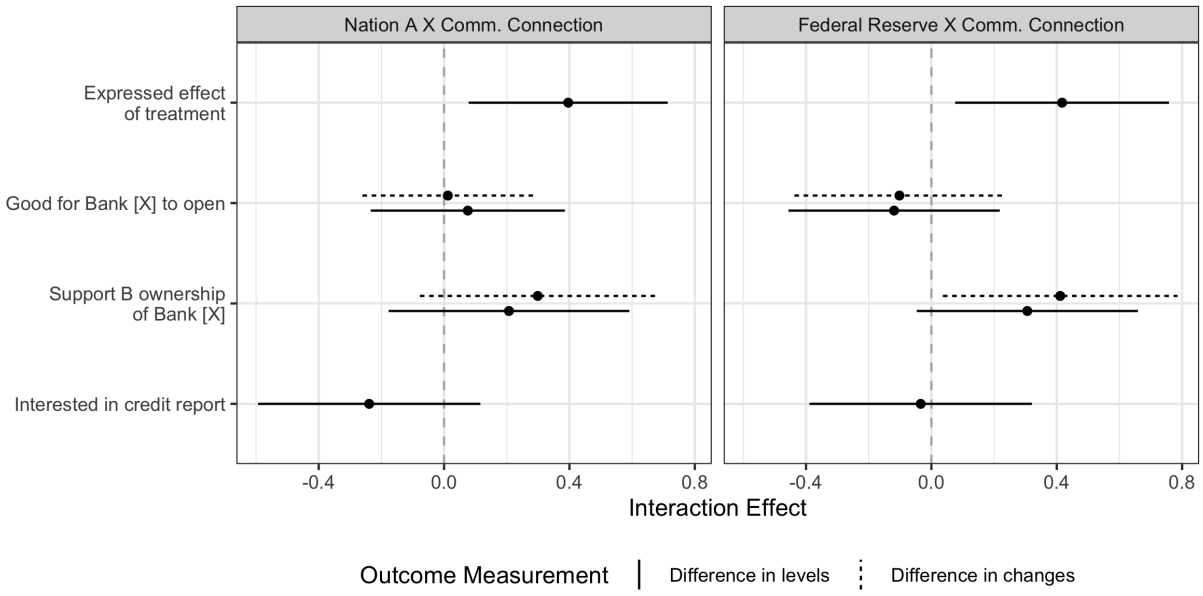
We explore the factors associated with the negative treatment effect of Nation A statements of support on the likelihood of becoming a customer in this section. We do this using a two-step exercise where we first estimate the individual treatment effects based on a large set of possible pre-treatment covariates. Specifically we regress the differenced index of "how likely a respondent is to become a customer" on a comprehensive set of covariates for the Nation A treatment group, the Fed treatment group, and the control group and predict the counterfactual outcomes for each treatment group. We show the results of this exercise in appendix Table B.8 along with the actual and predicted mean of the outcome variable.

We use these predicted counterfactual outcomes to generate estimated individual level treatment effects based on observable covariates.[68] We then form an indicator variable of whether each individual's predicted treatment effect is negative (or whether the treatment "backfired"). In order to understand which groups might be driving treatment backfire, we use lasso regression. The lasso minimizes the sum of squared errors while constraining the sum of all estimated coefficients below some threshold, identifying the strongest predictors of Y while shrinking the rest of the coefficients towards zero (Tishbirani, 1996). We estimate a lasso regression using the backfire dummy as the dependent variable: the results of this exercise are found in Figure 6.

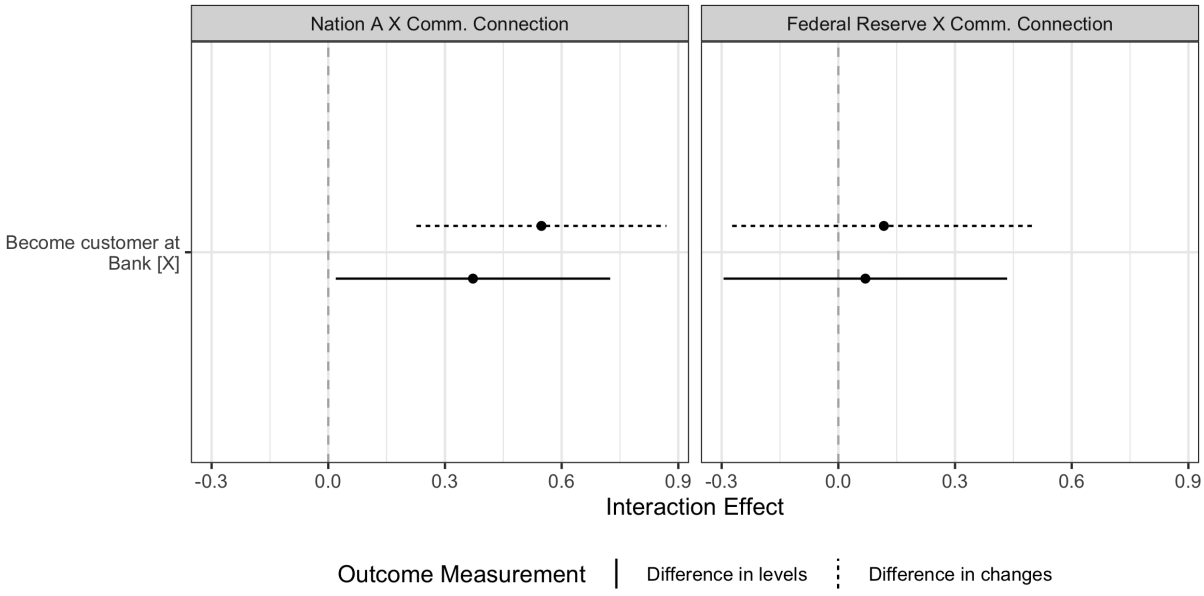
The results of the lasso should be taken as exploratory and descriptive.[69] However, we note some interesting findings that merit further study. First, participants who reported that they did not know that Bank [X] was Native-owned were much more likely to have a negative response to treatment. This complements the result that participants with stronger ties to the community

[68] The distribution of these estimated treatment effects can be seen in Appendix Figure A.2.
[69] Particularly because we have yet to calculate standard errors for the estimates.

Figure 7: Causal effects of knowledge of Nation A support for the opening of a bank in their Nation and Federal Reserve support for the expansion of safe and accessible financial services for underserved populations with 95% CIs. for respondents with **high levels of community connection.**



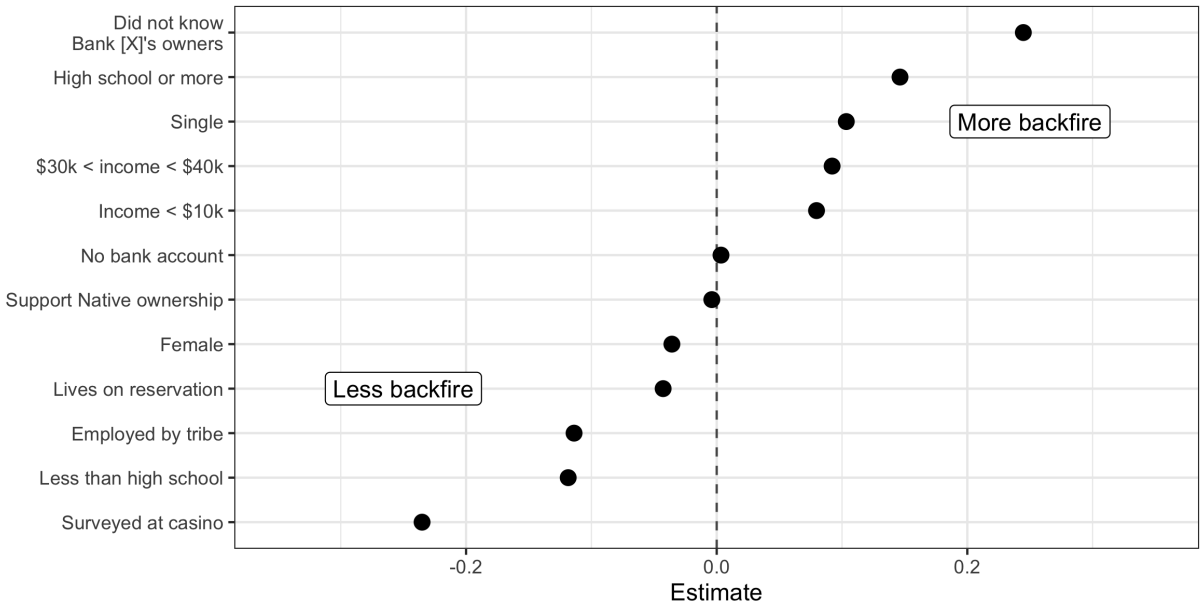
(a) Results for H2, H3, H5, and H6.



(b) Results for H4.

Notes: All treatment effects presented as proportions of the outcome variables standard deviation.

Figure 8: **Which variables are most predictive of treatment backfire? LASSO estimates.**



had stronger positive reactions to treatment: individuals who came into the survey with less prior knowledge of community events (such as the opening of a Native-owned bank) were more likely to experience treatment backfire. Backfire is more common among the low-income participants who may stand to benefit the most from becoming customers. Interestingly, the effect of education appears to be nonlinear: compared to participants with a college education, backfire was more likely among participants who have completed high school but *less* likely among those who have not.

7 Conclusion

In this article, we report results from a unique survey and set of survey experiments in pre-FDI-treatment Native Nation A, in which a retail bank is overwhelmingly desired by Nation A's citizens, and that overwhelming support does not fade away when the FDI breaking ground in a few months is identified as Bank [X] owned by Native Nation B. Without deception, we probe statements of support from both the Federal Reserve and Nation A's Tribal Legislature, to evaluate their treatment effects and possible heterogeneity within them. Endorsements are an important concept deserving of theoretical attention when it comes to foreign firm-government relations and public opinion on economic integration-related issues, especially in very low information and experience environments.

We find that expressed effects of the statements of support for Bank [X] from the Tribal legislature and the Federal Reserve are significant and positive, but other implicit measures of support and willingness to become a customer reveal a more nuanced story. Specifically, those with stronger sociotropic ties to their community are the most likely to respond positively to the statements of support while lower income community members actually may respond negatively.

That our results are in many ways complex and conditional is worthy of acknowledging for several reasons. First, even given high baseline support for the entry of a foreign bank to a formal "banking desert," and institutional actors with specific expertise in exactly this issue, it is not a foregone conclusion that institutional support is useful in moving public opinion toward a preferred outcome. Second, the deep research agenda into individual-level preference heterogeneity around economic integration is of practical use. Third, there are many actors in the world interested in bringing the benefits of economic integration to underserved areas – including the US Federal Reserve, Nation A's government, and a firm like Bank [X] that is taking a risk in investing abroad to provide some of those needed services. Especially when national, international, and private interests overlap, one might hope that scholarly work could inform normative goals.

Fourth, there exist nations that are not Westphalian nation-states but nonetheless have a rightful place in IPE. When a nation has full sovereign authority over whether a business, a cash flow, a good or service, or an economic migrant can come across its border, then that nation is fertile territory for understanding the internal validity of theories such as those on public opinion and government choices over openness. We suggest that researchers consider the full set of applicable (semi-)sovereigns in international economic relations, and acknowledge whether datasets cover the population, a random sample, or a biased sample excluding nations like Nation A where steps toward deeper economic integration are incredibly salient.

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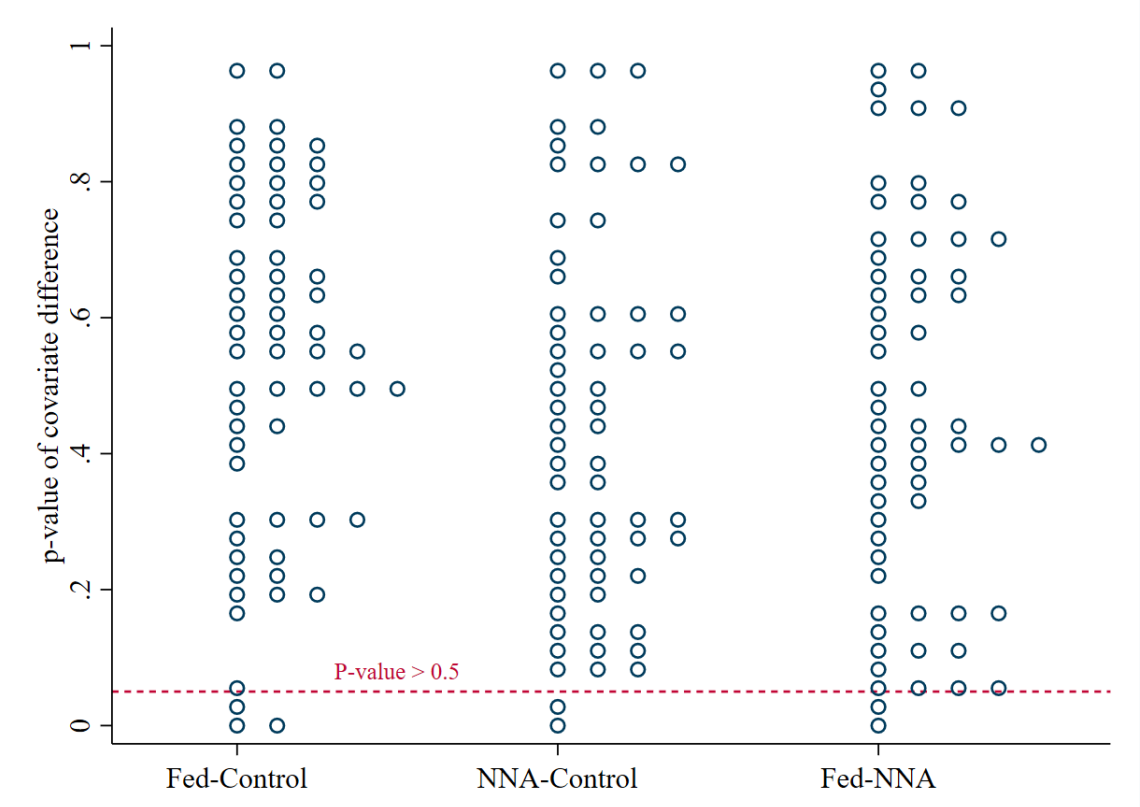
Figure A.1: Treatment groups are well-balanced on observable covariates

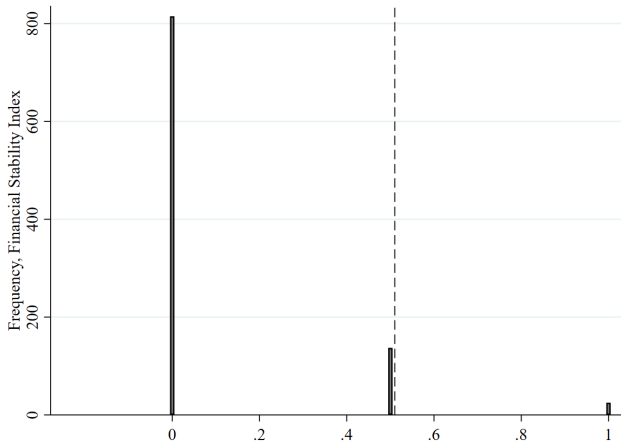


Notes: This figure presents the p-values for the difference in means of our pre-treatment covariate measures including our baseline opinion measures, age, sex, education, income, employment, opinions about banks, knowledge of finance, access to financial services and location.

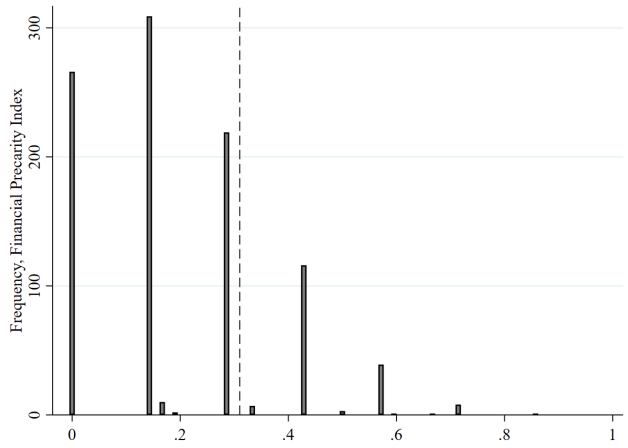
Appendix

A Figures

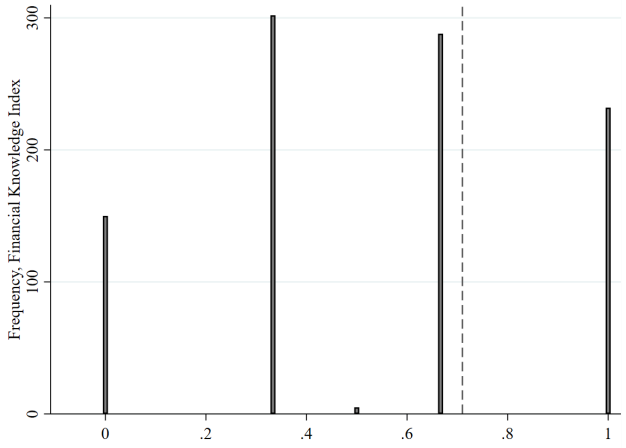
Figure A.2: The Distribution of Values and Cut-offs for Heterogeneity Indexes



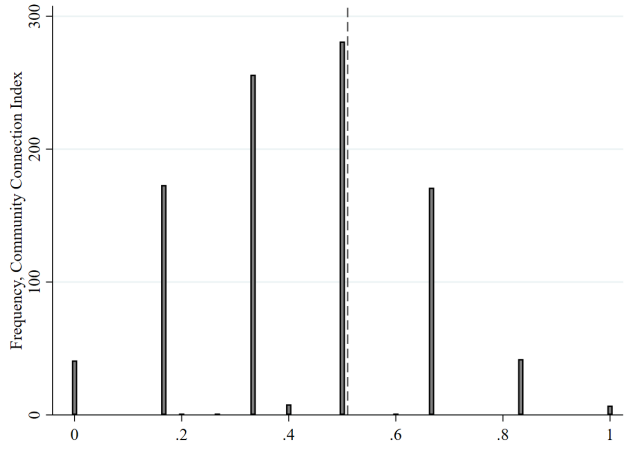
(a) Financial Resilience.



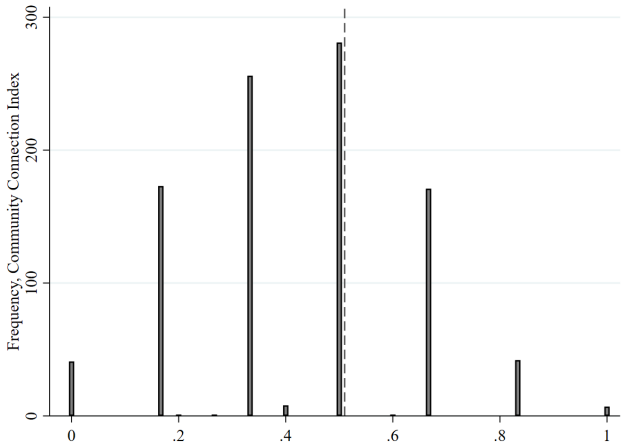
(b) Financial Precariousness.



(c) Financial Knowledge.



(d) Community Connection.



(e) Negative Beliefs about Banks.

Notes: The dashed line represents the cut-off for the binary indicator for this measure.

Figure A.3: Distribution of estimated individual treatment effects on "Become a customer (change from baseline)" DV

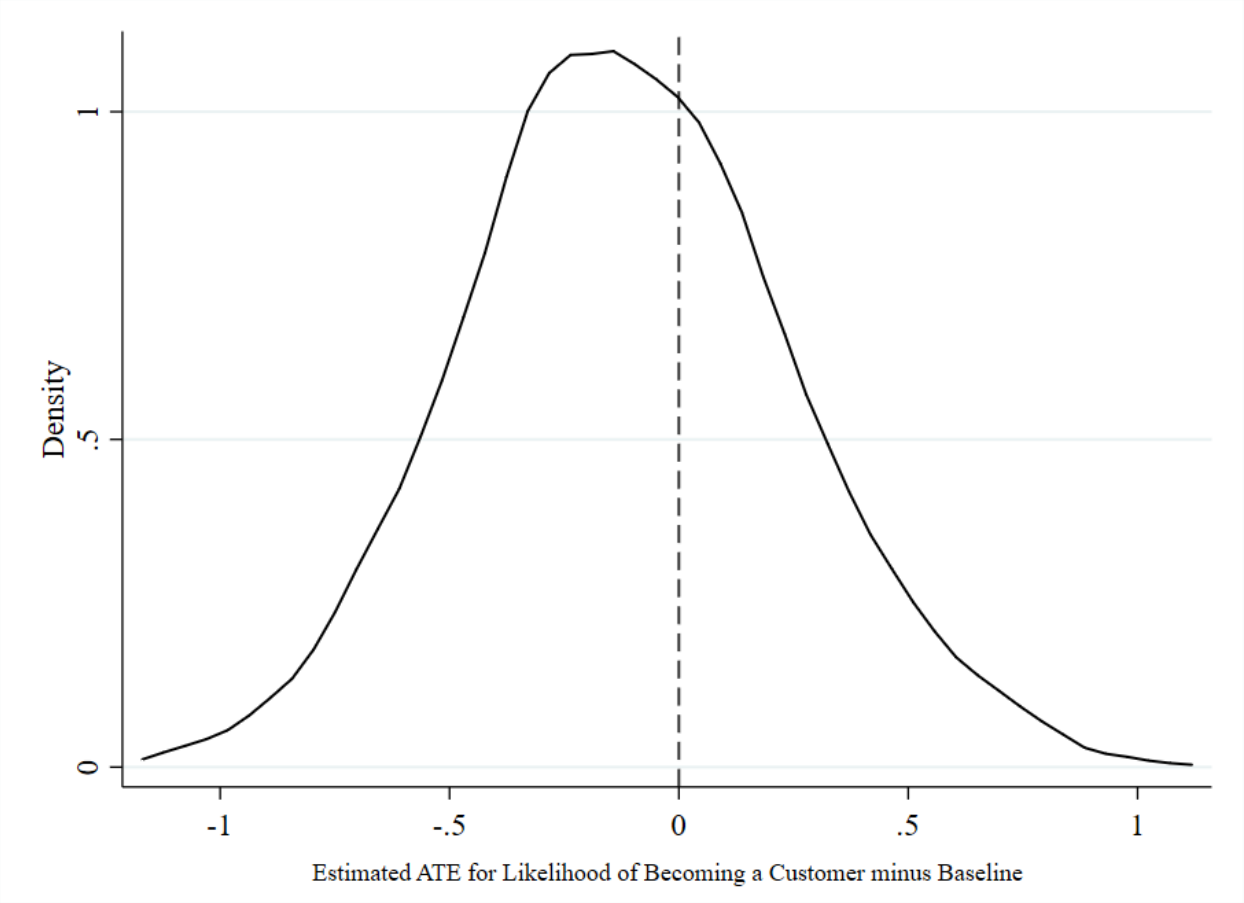


Table A.1: Outcome Variables of Interest and Associated Questions and Baselines A

	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)

B Tables

Table B.1: 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.2: Average Treatment Effect in Levels: Adjusting for Random Differences Respondent Characteristics Across Treatments

	Unadjusted	Regression	IPW	Doubly Robust	Orded Probit or Probit
			Expressed effect of treatment		
Federal Reserve	0.561***	0.567***	.	.	0.934***
	(0.054)	(0.053)	.	.	(0.099)
Nation A	0.672***	0.711***	.	.	1.073***
	(0.055)	(0.056)	.	.	(0.102)
			Interested in credit report		
Federal Reserve	0.0131	0.0152	0.00952	0.00684	-0.099
	(0.039)	(0.038)	(0.039)	(0.036)	(0.087)
Nation A	-0.0139	-0.0211	-0.0226	-0.0278	-0.111
	(0.038)	(0.037)	(0.037)	(0.035)	(0.089)
			Good for Bank [X] to open		
Federal Reserve	-0.370*	-0.278	-0.258	-0.25	-0.156*
	(0.195)	(0.174)	(0.184)	(0.165)	(0.086)
Nation A	-0.255	-0.18	-0.225	-0.205	-0.080
	(0.195)	(0.183)	(0.192)	(0.173)	(0.088)
			Become a customer of Bank [X]		
Federal Reserve	-0.0844	-0.0579	-0.0232	-0.0485	0.0331
	(0.091)	(0.099)	(0.099)	(0.095)	(0.098)
Nation A	-0.112	-0.101	-0.0763	-0.0956	-0.0352
	(0.094)	(0.097)	(0.098)	(0.092)	(0.097)
			Support of B ownership of Bank [X]		
Federal Reserve	0.108	0.0825	0.0935	0.0759	0.117
	(0.073)	(0.068)	(0.069)	(0.065)	(0.084)
Nation A	0.127*	0.225***	0.196**	0.200***	0.135
	(0.077	(0.077	(0.078)	(0.071)	(0.089)

Marginal effects; Standard errors in parentheses. Linear outcome model used. Multinominal logit used for propensity score reweighting. Heteroskedasticity robust standard errors reported. Observations vary due to missing responses. Significance stars: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. "IPW" is inverse probability weighted estimates. "Doubly-robust" is a doubly-robust inverse propensity score weighted and regression adjusted estimator.

Table B.3: Average Treatment Effect Conditional on Difference in Baseline Opinion Measures: Adjusting for Random Differences Respondent Characteristics Across Treatments

	Unadjusted	Regression	IPW	Doublely Robust	Orded Probit
			Good for Bank [X] to open		
Federal Reserve	0.0497	0.0676	0.00674	0.0243	0.026
	(0.165)	(0.172)	(0.163)	(0.162)	(0.086)
Nation A	-0.16	-0.165	-0.220	-0.188	-0.099
	(0.160)	(0.167)	(0.170)	(0.158)	(0.083)
			Become a customer of Bank [X]		
Federal Reserve	-0.158**	-0.087	-0.0904	-0.0891	-0.238**
	(0.062)	(0.065)	(0.063)	(0.062)	(0.093)
Nation A	-0.148**	-0.154**	-0.183**	-0.158**	-0.257***
	(0.060)	(0.071)	(0.073)	(0.067)	(0.092)
			Support of B ownership of Bank [X]		
Federal Reserve	0.163*	0.0825	0.0798	0.0759	0.141*
	(0.088)	(0.068)	(0.069)	(0.065)	(0.082)
Nation A	0.207**	0.225***	0.241***	0.200***	0.185**
	(0.091)	(0.077)	(0.074)	(0.071)	(0.084)

Marginal effects; Standard errors in parentheses. Linear outcome model used. Multinominal logit used for propensity score reweighting. Heteroskedasticity robust standard errors reported. Observations vary due to missing responses. Significance stars: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. "IPW" is inverse probability weighted estimates. "Doubly-robust" is a doubly-robust inverse propensity score weighted and regression adjusted estimator.

Table B.4: Components of Indexes for Heterogeneous Treatment Effects

Index	Component Description	Median of Index	Cut-off Point for Indicator =1
Discount Rate	No bank account	0.143	0.28
	Can't get 400 dollars in an emergency		
	Household less than $10,000 per year		
	Has more than three different source of debt		
	Most of the time or always uses cash checking		
	Primary earner for a larger household		
	(responsible for at least 3 children)		
	(and one other non-spouse adult)		
	Very poor self-assessed credit		
Financial Resilience	Household income over 80,000	0	0.5
	Very good self-assessed cred		
Negative Views of Banks	Believes banks don't have their best interests at heart	0	0.1
	Has opinion bank accounts are too complicated		
	They have felt disrespected by banks		
	Has opinion that bank fees are too high		
	Has opinion you lose control of your money in a bank		
	Has opinion that banking is unnecessary		
	Has opinion money is not safe in a bank		
	Has opinion you lose your privacy to banks		
	Has opinion going to banks is unpleasant		
	Low trust in banks		
	(ranks trust in banks less than 5 out of 10)		
Community Connection	Lives on reservation	0.5	0.667
	Knew a bank was opening		
	Pays attention to news most of the time		
	Employed in Tribal Government		
	Has tribal loan debt		
	Learned about finance from community program		
Financial Knowledge	High self accessed financial knowledge	0.667	1
	Knew they could get credit score for free		
	Handles household finances		

The index is constructed by $\frac{\sum components}{no.non-missingresponses}$. The binary indicator equals one when the value of the index surpasses the 75th percentile of the distribution. When the median and the 75th percentile have the same value, we chose the 90th percentile of the index as the cut-off.

Table B.5: Correlations Between Measures for Heterogeneous Treatment Effects

	Indexes				
	Higher discount rate	Financial resilience	Knows about Finance	Connected to Community	Negative Views of Banks
Higher discount rate	1				
Financial Resilience	-0.2897	1			
Knows about finance	0.0076	0.1725	1		
Connected to Community	-0.0095	0.0667	0.324	1	
Negative Views of Banks	0.1574	-0.09	-0.1173	-0.0666	1
	Binary Measures				
	Higher discount rate	Financial resilience	Knows about Finance	Connected to Community	Negative Views of Banks
Higher discount rate	1				
Financial Resilience	-0.0758	1			
Knows about finance	0.0778	0.0313	1		
Connected to Community	0.0024	0.0362	0.2787	1	
Negative Views of Banks	0.1123	-0.0408	-0.0947	-0.0359	1

See description in Table B.4 for the construction of the indexes. The cells present the correlation coefficients between the indexes in the first panel and the binary measures in the second.

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 ohone	0.0947	-0.443	-0.251
	(0.470)	(0.290)	(0.288)
Rank NNA 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)
Rank Native ownership change support?	-0.0527	0.0213	-0.0166
	(0.054)	(0.044)	(0.045)
Rank 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)
Didn't get credit report	0	0	0
	(.)	(.)	(.)
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

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Table B.8 – continued from previous page

	Control	Federal Reserve	Nation A
	(0.121)	(0.131)	(0.151)
Didn't know Bank [X] Nation B owned	0.201*	-0.156	-0.0652
	(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 less than 5/10	0.134	0.115	0.103
	(0.149)	(0.165)	(0.165)
Satisfaction with finances less than 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.

Table B.6: Heterogeneity in treatment by indicators of financial stability, knowledge, connection to the local community, and beliefs about banks: Outcomes of interest in levels

	Expressed effect treatment	Good for Bank [X] to open	Support for B Ownership of Bank [X]	Become a Customer of Bank [X]	Expressed Interest in credit report
			Higher Discount Rate		
Federal Reserve	0.108	-0.117	-0.177	-0.271	-0.00666
	(0.174)	(0.206)	(0.199)	(0.207)	(0.200)
Nation A	0.0947	-0.0701	0.0124	-0.126	-0.0528
	(0.209)	(0.220)	(0.221)	(0.228)	(0.204)
			Financially Better Off		
Federal Reserve	-0.374	-0.286	0.0218	-0.846	-0.193
	(0.459)	(0.447)	(0.422)	(0.538)	(0.502)
Nation A	-0.597***	-0.137	0.111	-0.458	0.288
	(0.153)	(0.364)	(0.432)	(0.486)	(0.498)
			Knowledgeable about Finance		
Federal Reserve	0.471***	0.113	-0.0218	-0.0456	0.0803
	(0.175)	(0.172)	(0.180)	(0.199)	(0.181)
Nation A	0.624***	0.139	0.209	0.165	0.0379
	(0.160)	(0.170)	(0.192)	(0.196)	(0.179)
			Connected to Community		
Federal Reserve	0.417**	-0.119	0.306*	0.0695	-0.0341
	(0.174)	(0.172)	(0.180)	(0.186)	(0.181)
Nation A	0.396**	0.0757	0.207	0.372**	-0.239
	(0.162)	(0.158)	(0.196)	(0.180)	(0.181)
			Negative Believes about Banks		
Federal Reserve	0.0952	-0.0263	-0.0255	-0.0712	-0.0962
	(0.129)	(0.154)	(0.151)	(0.156)	(0.157)
Nation A	0.0471	0.0982	0.0869	0.0845	0.0277
	(0.132)	(0.155)	(0.160)	(0.161)	(0.155)

Notes: The cells show the sign and statistical significance of the interaction term between the binary measures of respondents having a higher discount rate, being financially resilient, knowledgeable about finance, and connected to the community and whether they have negative attitudes about banks. The construction of these variables are discussed in B.4. The underlying coefficients can be found in Tables B.6 and . Observations vary due to missing responses. Significance stars: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B.7: Heterogeneity in treatment by indicators of financial stability, knowledge, connection to the local community, and beliefs about banks: Outcomes of interest in differences

	Good for Bank [X] Open	Support for B Ownership] of Bank [X]	Become a Customer of Bank [X]
		Higher Discount Rate	
Federal Reserve	0.0996	-0.244	0.0304
	(0.184)	(0.202)	(0.224)
Nation A	-0.251	-0.194	0.00231
	(0.195)	(0.219)	(0.219)
		Financially Better Off	
Federal Reserve	0.349	0.936*	0.429
	(0.324)	(0.525)	(0.630)
Nation A	-0.146	1.051**	0.564
	(0.232)	(0.451)	(0.623)
		Knowledgeable about Finance	
Federal Reserve	-0.0742	0.219	0.0494
	(0.172)	(0.187)	(0.219)
Nation A	0.0205	0.168	0.268
	(0.170)	(0.196)	(0.187)
		Connected to Community	
Federal Reserve	-0.102	0.411**	0.117
	(0.171)	(0.191)	(0.199)
Nation A	0.0119	0.299	0.548***
	(0.139)	(0.192)	(0.164)
		Negative Believes about Banks	
Federal Reserve	0.288*	-0.113	-0.0504
	(0.160)	(0.154)	(0.160)
Nation A	0.286*	-0.270*	-0.208
	(0.157)	(0.160)	(0.157)

Notes: Normalized outcomes variables calculated as 1: The cells show the sign and statistical significance of the interaction term between the binary measures of respondents having a higher discount rate, being financially resilient, knowledgeable about finance, and connected to the community and whether they have negative attitudes about banks. The construction of these variables are discussed in B.4. The underlying coefficients can be found in Tables B.6 and . Observations vary due to missing responses. Significance stars: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.