

## TECHNICAL APPENDIX

*Note: Where appropriate and with the permission from the lead author, several sections of this appendix have been replicated from the Technical Appendix from the original Custer et al. (2018) report, Ties That Bind: Quantifying China's Public Diplomacy and its Good Neighbor Effect, as it pertains to conceptual frameworks and methods that the research team has borrowed, adapted, and extended to a new region. Retrieved from: [http://docs.aiddata.org/ad4/pdfs/Ties\\_That\\_Bind--Technical\\_Appendix.pdf](http://docs.aiddata.org/ad4/pdfs/Ties_That_Bind--Technical_Appendix.pdf)*

This appendix includes the following sections:

- A-1 Public Diplomacy Definition and Taxonomy
- A-2 Public Diplomacy Theory of Change
- A-3 Quantifying Public Diplomacy: Data, Sources, Uses, and Methods
- A-4 Public Diplomacy Typology: Methods
- A-5 Case Studies: Methods and Approach
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### A-1. Public Diplomacy Definition & Taxonomy

The practice of 'public diplomacy' has evolved significantly over the last few decades in an increasingly globalized world where power is diffuse and technological advances have reduced barriers to entry for governments, organizations, and people to communicate with one another. Public diplomacy experts themselves disagree on what counts as public diplomacy activities for any given country.

Numerous scholars have put forth competing theories and definitions in an attempt to flesh out the broad contours of what is and is not included within public diplomacy. These differences have significant implications for which activities constitute Chinese public diplomacy investments.

#### A-1.1 A Definition of Public Diplomacy

The 'Cold War model' (Gilboa, 2008) of public diplomacy envisions state-based actors as attempting to increase their soft power influence through hierarchical, one-way, government-to-people interactions. Under this model, state actors from the 'sending country' usually define a specific message they want to push to a foreign audience in the 'receiving country', and then control the delivery of that message (Zaharna, 2008).

In contrast, the advent of 'new public diplomacy' (Melissen, 2005) expands the scope of diplomacy to include freeform, network-based interactions between non-state actors, governments, and people. In this view, numerous actors from the sending country interact directly with foreign publics, blurring the lines of who carries out public diplomacy activities, in what domains, and through which activities.

Cull (2008) proposes a definition that is widely used, but favors a more narrow view of public diplomacy as a government's attempt to engage directly with foreign citizens to: "manage the international environment," project a positive image internationally, and convince citizens of other countries to adopt its values, culture, and worldview.

Under this rubric, public diplomacy consists of the following activities: (a) listening; (b) advocacy; (c) cultural diplomacy; (d) exchange; and (e) international broadcasting. There are two drawbacks of Cull's definition for our purpose of quantifying Chinese public diplomacy efforts -- the state must be the primary actor and the primary intent must be to enhance diplomatic influence.

Broader definitions of public diplomacy overcome these constraints by incorporating activities undertaken by both state or non-state actors, as well as activities that may enhance diplomatic influence, even if this was not the primary intention. For example, Zaharna (2008) includes investments such as development aid projects and twinning arrangements (sister cities) to facilitate greater citizen-to-citizen interaction. D'Hooghe (2014) acknowledges an economic dimension of public diplomacy, whereby state or non-state actors undertake activities to promote trade and tourism which ultimately allow the sending country to influence foreign publics.

For the purpose of quantifying China's public diplomacy efforts, this study uses the following definition: *public diplomacy* is a collection of instruments used by state and non-state actors from a 'sending' country with at least some intention of influencing the perceptions, preferences, and actions of foreign citizens in a 'receiving' country in favor of the 'sending' country's values, culture, and worldview.

While this definition lends itself to capturing both state-centric and network-based public diplomacy activities, one crucial constraint we impose is that the activity must be directed specifically at a single receiving country from the sending country. Under this definition, we would exclude public diplomacy activities that are not targeted at one country in particular, such as China's participation as the host of the 2008 Olympics. We have chosen to exclude such non-targeted activities in this exercise so that we are able to collect data that can be disaggregated at the recipient-country level and can be used to assess China's influence in the SCA region.

### A-1.2. A Taxonomy of Public Diplomacy Activities

Our provisional definition lays out helpful boundary markers for which activities should be included in our analysis of China's public diplomacy efforts. In this section, we operationalize this definition as a guide for our data collection efforts through enumerating our assumptions regarding the relevant actors, audiences, and activity sets to include in this exercise.

To be included in our taxonomy, public diplomacy activities must be targeting the citizens in a 'receiving' country (i.e., the country that state or non-state actors seek to influence). The target

audiences in a 'receiving country' could include: public officials, the general public, and relevant socio-economic or political sub-groups.

Our taxonomy will include public diplomacy activities undertaken by state actors, sub-state actors, and non-state actors. However, to bound our data collection efforts and analysis, we specify that in order to qualify as a public diplomacy (PD) activity, there must be intention of influencing citizens or elites in a receiving country.

Multiple actors may be involved in any given public diplomacy activity serving in coordination, funding, or implementation roles. We refer to the country undertaking public diplomacy activities as the 'sending country' in that they are attempting to 'export' or 'extend' their influence outside of their own state borders.

Using a categorization scheme employed in Custer et al. (2018) as a starting point, we draw upon existing literature to present a taxonomy for Chinese public diplomacy in the SCA region. This schema includes five types of diplomacy, and presents a set of illustrative (though not exhaustive) activities under each. Both state and non-state actors can sponsor, fund and/or implement these activities.

### **Cultural Diplomacy**

*Illustrative activities:* Chinese cultural events (culture weeks, culture months, culture years, china tourism years, friendship years, friendship conference, and culture festivals), cultural exhibition tours, Chinese cultural centers, key cultural projects designated by select Chinese government bodies, Confucius Institutes, Confucius classrooms, sports activities through the External Sports Communication Center, and state-sponsored film festivals.

### **Informational Diplomacy**

*Illustrative activities:* Efforts to help Chinese media establish or expand their presence in the 'receiving' country (e.g., Chinese state-sponsored media bureaus, television broadcasting by CCTV, CGTN and CNC World, radio broadcasting by China Radio International, Chinese-language print media), training foreign journalists in China and organizing/sponsoring tours of foreign reporters to China, op-eds by Chinese senior leaders published in foreign media, interviews with Chinese senior leaders published or aired in receiving country, and press briefings/media interviews of senior leaders following state visits and international conferences.

### **Elite-to-Elite Diplomacy**

*Illustrative activities:* Establishing embassies/consulates in country; inbound and outbound high-level visits by government officials and/or military officials; joint military exercises, and People's Liberation Army Navy (PLAN) naval port calls.

### **Exchange Diplomacy**

*Illustrative activities:* Political party exchange programs, political party development activities, providing training to various actors (civilian government officials, military officials, etc.), sister city programs, student or professional scholarships to study in China, student and professional exchange programs, setting up overseas campuses of Chinese universities, and provision of Chinese medical teams.

### **Financial Diplomacy**

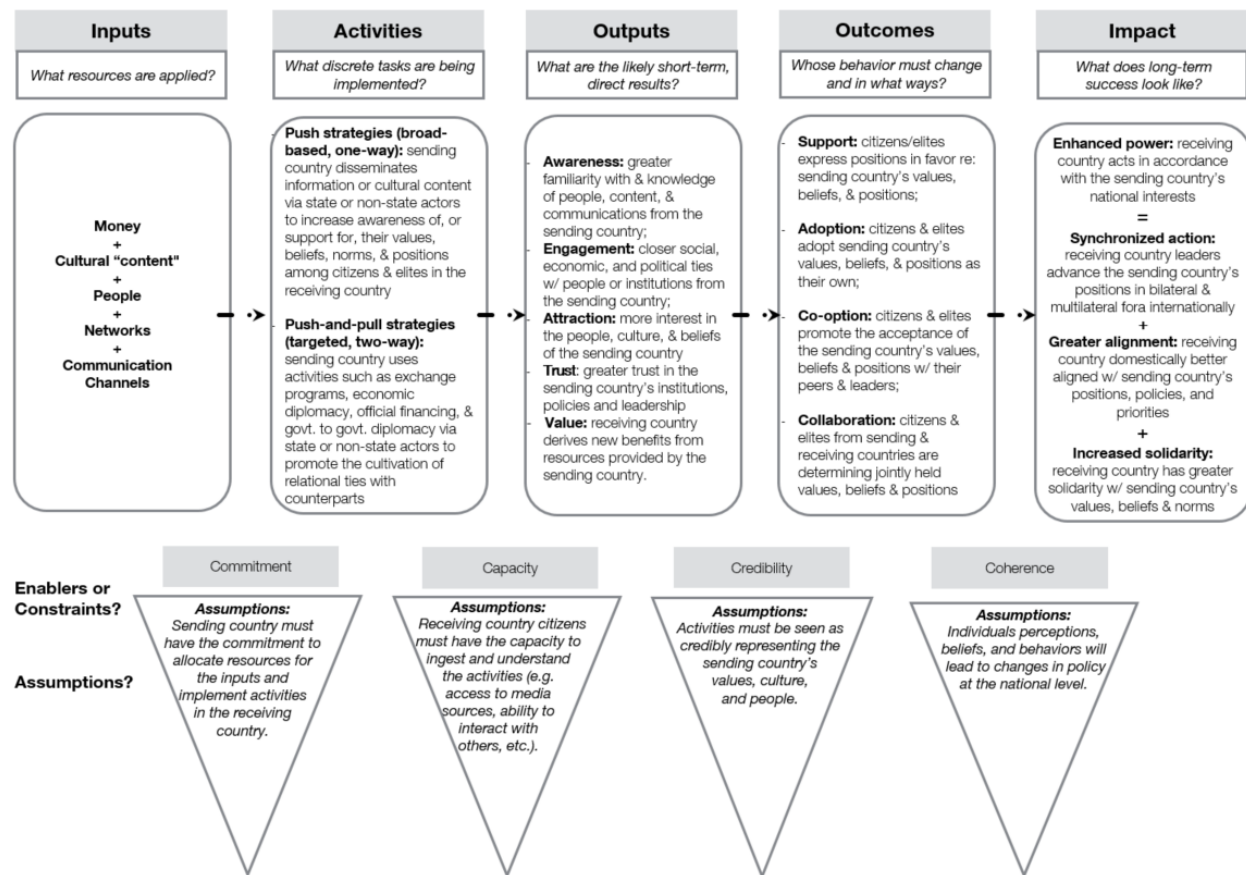
*Illustrative activities:* Providing direct support to national budgets, debt relief/restructuring, humanitarian relief programs (emergency response), and investments in infrastructure within the receiving country.

## **A-2. Public Diplomacy Theory of Change**

State and non-state actors spend vast amounts of time and resources with the intent to 'export' or 'extend' their influence with citizens and policymaking elites outside of their country's borders. These actors do so to both advance specific policy priorities or positions, as well as more broadly increase the acceptance of their country's values, culture, and worldview in the eyes of foreign publics. In this report, we will explicitly focus on how state and non-state actors use a collection of tools in their arsenal—public diplomacy activities—to enhance the sending country's power to convince or co-opt foreign publics to act in accordance with its interests. We refer to the country undertaking public diplomacy activities as the 'sending country' and the country targeted by these activities as the 'receiving country' in that it effectively 'imports' or 'accepts' these overtures.

What are the mechanisms by which state and non-state actors are able to translate discrete public diplomacy overtures into their desired end goal of influencing the perceptions, preferences, and actions of foreign citizens in order to advance a sending country's interests? Which activities successfully lead to such impact, and why? In this report, we examine these questions by delineating a theory of change (see Figure A1) articulating how a sending country might use public diplomacy activities to enhance its influence with foreign publics and test these relationships in the very specific context of assessing the reach and impact of China's forays in the SCA region.

Figure A1. Theory of Change: How Chinese Public Diplomacy Advances its Foreign Policy Interests



Source: Adapted from Custer et al. (2018)

As an initial step, sending countries (and their constituent state and non-state actors) dedicate various resource *inputs* to implement specific activities in a receiving country. This process includes organizing people, money, selected content, and networks to be deployed towards two categories of public diplomacy *activities*: "push" and "push-and-pull".

Push activities involve one-way communication strategies where the sending country identifies, packages and pushes positive messages about their culture, values, and beliefs for consumption by general audiences in the receiving country. Push-and-pull activities, meanwhile, establish a two-way communication channel to facilitate positive interactions between citizens of the sending and receiving countries in order to increase mutual understanding and closer ties. Many of these push-and-pull activities (though not all) are targeted to specific subsets of the population, including political or economic elites.

A given sending country may deploy a variety of push and push-and-pull activities in a receiving country to move them closer to their desired outcomes. The short-term or direct results (*outputs*) of these activities are intended to move foreign publics along a continuum of growing favorability towards the sending country through: (a) increased awareness of the sending country's people and content to make

it less alien; (b) deeper engagement between peers to build personal ties; (c) greater attraction to or interest in the perspectives of the people, culture, and beliefs of the sending country; and (d) greater trust in the sending country in the eyes of foreign publics; and (e) receiving country derives value from resources provided by the sending country.

Public diplomacy activities target both citizens and policymaking elites because there is a recognition that each group has the potential to advance the sending country's interests in different ways. Policymaking elites -- high-level (or influential) leaders in government, civil society, academia, or the private sector -- often have oversight of, or at least visibility on, decisions of interest to the sending country. In this respect, public diplomacy activities targeting these elites have the potential to alter or change the attitudes and preferences of relevant decision-makers to be more favorable to sending country positions. However, sending countries also engage with a broader set of citizens in a receiving country who can indirectly apply pressure individually (e.g., voting and negotiation) or collectively (e.g., advocacy and community organizing) in order to influence the decisions of policymakers to be favorable to the sending country.

However, regardless of whether one is a citizen or elite, we envision that the process of convincing foreign publics to take action in accordance with a sending country's interests goes through similar stages. As a first step, citizens and elites may express support or sympathy for the positions/policies, values, or beliefs of the sending country. When citizens and elites begin to view the sending country positions/policies, values, or beliefs as their own, they have taken a further step of adoption. A sending country is able to co-opt others to act in its interests if it can incentivize foreign citizens or elites to actively promote, rather than tacitly or passively endorse, its views with their peers and leaders. A sending country may also actively collaborate with foreign citizens and elites to identify new jointly held positions, values or beliefs.

While some individuals in the receiving country have outsized influence on the receiving country's trajectory and engagement with the sending country, the extent to which a sending country's public diplomacy activities yield their desired *impact* likely depends upon the cumulative effect of the attitudes and actions of many citizens and elites over time. Specifically, as more people within a receiving country adopt the values, beliefs and norms of the sending country, the greater the likelihood that they view the receiving and sending countries as being in solidarity with each other.

There are two envisioned outflows of that new-found solidarity: (a) domestically, receiving country leaders are likely to set policies and take positions that are in greater alignment with the sending country interests; and (b) internationally, receiving country leaders are willing to synchronize their actions with sending country leaders in bilateral and multilateral fora in line with sending country interests. Taken together, the ability of a sending country to use public diplomacy activities to increase solidarity, bolster alignment, and synchronize action on the part of receiving countries are markers of its influence. These developments ultimately serve the national interests of the sending country and enhance its power regionally or globally.

This theory of change makes several important assumptions. Perhaps the most important underlying assumption is that individual citizen and elite perceptions, beliefs, and behaviors will lead to changes in policies at the national level (coherence). Other assumptions include that the receiving country's citizens must have the capacity to ingest and understand the public diplomacy content pushed by the sending country, the activities must be seen as credible representations of the sending country, and the sending country must have the commitment and follow-through to mobilize inputs to public diplomacy activities.

It is also important to recognize that PD activities are not the only interactions that individuals from receiving countries have with sending countries. In this respect, it is entirely possible that the positive response a sending country is able to generate via its public diplomacy activities could be easily supplanted or undercut by its actions or policies in other spheres that generate a negative response. For example, some of the goodwill that China may be able to cultivate with foreign publics through cultural or peer-to-peer exchange programs in the SCA region may be undercut by the perception that China is discriminating against the Uighurs and other ethnic minorities in its Xinjiang region. Conversely, it is also possible that non-PD activities could prompt a positive response from the recipient country.

## A-3. Quantifying Public Diplomacy: Measures, Sources, & Uses

### A-3.1 Quantitative Measures for Chinese Public Diplomacy

Box 1 in the report provides the measures for which we collected data and the corresponding sources drawn upon. Here we provide additional details on a subset of these measures as well as information on measures that the team explored but ultimately did not include in the report.

#### **Cultural diplomacy**

**Cultural centers:** The team collected data on cultural centers but since we only found three in the SCA region, we did not use this data in the report.

**Cultural projects:** In 2007, to facilitate the development of cultural industries in China and correct the trade deficit of cultural goods, the Ministry of Commerce, the Ministry of Foreign Affairs, the State Administration of Radio, Film and Television, the General Administration of Press and Publications and the State Council Information Office jointly formulated the "Cultural Products and Services Export Guidance Catalogue".

Based on the item types and the enterprise characteristics listed in the catalogue, relevant agencies will have to devise on an annual basis, a list of "State Culture Export Key Projects" which "spread Chinese traditional culture and develop China's friendships with various foreign countries". They would also have to devise a list of "State Culture Export Key Enterprises", which have good international reputation, are

internationally competitive, and possess talents who specialize in international cultural trade. Ultimately, we did not use this data because the database rarely included information on the recipient country.

### Exchange Diplomacy

**Scholarships:** The team collected data on the number of Chinese Government Scholarships announced for recipient countries in SCA. There were five countries for which no scholarship announcements were found on the Chinese embassy or other official sources, the data was thus not available (NA). These were Bhutan, India, Maldives, Sri Lanka and Tajikistan. For other countries, where number of scholarships were reported over a span of time, we divided this total by the number of years to get the count for individual years. For example, if in October 2014, China announced 500 scholarships to Sri Lanka over the next 5 years, we would record 100 scholarships per year starting 2015.

We also collected data on scholarships actually provided to students, but did not end up using this data because the reporting was highly inconsistent across the time period we are interested in.

### Elite-to-elite diplomacy

**Party visits:** The China Foreign Affairs Yearbooks seem to under-report the number of party visits between SCA countries and China. We did a more thorough search for Chinese outbound visits to three South Asian countries that were part of our case studies and that received the largest share of these party visits. Using sources such as the Central Committee of CPC, Embassy websites and the media, we could identify nine such visits to Bangladesh, 15 visits to Nepal, and 16 to Sri Lanka (as opposed to one, two, and four visits respectively recorded in the Yearbooks).

### Information diplomacy

**Presence of Chinese state-owned television in-country:** We used the list of television providers in each of the 13 SCA countries from the Global Pay TV Operator Databook (see [https://www.digitaltvresearch.com/ugc/Global%20Pay%20TV%20Operator%20Databook%202017%20OC\\_toc\\_176.pdf](https://www.digitaltvresearch.com/ugc/Global%20Pay%20TV%20Operator%20Databook%202017%20OC_toc_176.pdf)), published by the UK-based company Digital TV Research. In an email correspondence with the company, they clarified that these operators were the largest in the country in terms of the number of subscribers.

- The Databook did not have information on Afghanistan, Kazakhstan, Tajikistan, and Kyrgyzstan. For these countries, we used the BBC Media profiles or Wikipedia to arrive at a provider list.
- The team looked at the channel list of the websites of each of these providers, and noted whether any Chinese TV channel was a part of this list. The two channels that came up during this search were CCTV and CGTN.

**Presence of Chinese state-owned print media in-country:** The team used the list of Chinese-state owned print media published in the BBC media profile, which includes:

- Xinhua
- China Daily
- People's Daily



- Global Times
- People’s Liberation Army Daily (Jiefangjun Bao)
- China Youth Daily (Zhongguo Qingnian Bao)

To conduct the search in a systematic manner, the team considered two metrics to track: (a) presence of a bureau (of print media agency) in a SCA country and (b) whether that newspaper/print publication is in circulation (anytime during the period 2000-2017).

**Presence of Chinese Radio International (CRI) in-country:** The team looked at whether CRI had radio stations in the biggest cities in each SCA country using the World Radio Map. We captured three types of information from this source: (1) whether CRI had an FM radio station in a given SCA country (2) whether CRI had medium- or short-wave radio stations in a given SCA country and (3) number of languages that CRI station is available in (any frequency). We view (1) as the strongest evidence of Chinese radio presence in a country (see Table A1).

**Table A1: CRI stations in SCA countries**

	CRI (FM station)	CRI (Medium or short wave)	Languages (any frequency)
Afghanistan	No	Yes	Urdu, Hindi
Bangladesh	No	Yes	English, Thai, Laotian, Burmese, Hindi, Bengali, Nepali
Bhutan	No	Yes	English, Burmese, Hindi, Bengali, Nepali
India	No	Yes	English, Burmese, Hindi, Bengali, Nepali
Kazakhstan	No	Yes	Mongol, Russia, Urdu, Hindi
Kyrgyzstan	No	Yes	Mongol, Russia, Urdu, Hindi
Maldives	No	No	
Nepal	Yes (Nepali)	Yes (CNR)	Nepali
Pakistan	Yes (Urdu, English)	Yes	Urdu, Hindi, English
Sri Lanka	Yes (Sinhala)	No	Sinhala
Tajikistan	No	Yes	Urdu, Hindi
Turkmenistan	No	No	
Uzbekistan	No	Yes	Urdu, Hindi

**Journalist visits:** The data are sourced from China Foreign Affairs Yearbooks and embassy websites. Data from Yearbook is of "visits" (and these are always hosted by the MFA), which means that the number of journalists that are part of these visits would be higher. Where we obtain data on visits from the Embassy websites, there is typically a reference to meetings between the journalists and Ambassadors, so we assume that these visits were facilitated by the Embassy.

## Financial Diplomacy

The project draws upon AidData’s Chinese official finance data collected using Tracking Under-reported Financial Flow (TUFF) methodology to quantify Chinese financial diplomacy (see Table A2). While official finance covers a wide range of projects, a subset of those projects qualify as financial diplomacy—below we describe the categories of projects we classify as financial diplomacy in the SCA region between 2000 and 2017. All categories include projects classified as Official Development Assistance (ODA), Other Official Flows (OOF), and Vague Official Finance. We only included projects that have been classified as “Recommended for Research,” meaning that the project has at least entered the commitment stage and is not an umbrella project. For more information on these classifications in our dataset, please see our glossary: <http://aiddata.org/pages/tuff-glossary>

Projects that are a part of Chinese financial diplomacy are those funded by (a) Government agencies, including ministries and Chinese embassies; (b) Provincial governments; (c) Policy banks, including China Development Bank and China Export-import Bank; (d) State-owned commercial banks, including the Bank of China, the Industrial and Commercial Bank of China, the Agricultural Bank of China, and the Construction Bank of China, and Bank of Communications; and (e) State-owned Investment Funds, including the Silk Road Fund and China Investment Corporation. While AidData does collect data on financial flows from Chinese state-owned companies, these flows are excluded from the official finance dataset as we are unable to guarantee how representative the data are.

**Table A2: Chinese official finance by type of financial diplomacy**

Category of projects	Amount (USD billion)	Number of projects
Debt relief	1.91	10
Emergency response	1.45	161
General budget support	2.69	8
New infrastructure	101.08	299
Improvements to infrastructure	9.03	72
Provision of goods	9.97	218
None of the above	0.58	102
<b>Total</b>	<b>126.70</b>	<b>870</b>

Projects in the dataset were coded into one of seven categories: new infrastructure, improvements to infrastructure, provision of goods, debt relief, humanitarian assistance, general budget support, and none of the above. Only the first six qualify as financial diplomacy, per our definition.

To illustrate differences between new infrastructure, improvements to infrastructure and provision to goods, we share illustrative projects for two CRS sector codes - 110 (Education) and 120 (Health):

1. **New Infrastructure:** We defined infrastructure financing with diplomatic intent as activities involving construction of physical, permanent structures. This category includes new construction.

Illustrative projects from selected CRS codes:

110: Building primary, secondary, vocational, or tertiary school buildings (e.g., classrooms), as well as ancillary structures for vocational or universities (e.g., building a dormitory, gymnasium, pool, library, dining hall, etc.).

120: Construction of hospital and permanent health clinics/health centers (roaming health clinics were not included), and drug detoxification centers. Includes building new wings of a hospital, a new specialized laboratory for the hospital, medical dormitories, and disability centers.

2. **Improvements to infrastructure:** It includes "upgrades" to existing infrastructure, "maintenance" of existing structures, "rehabilitation", "renovation" "expansion" or "modernization" of existing structures. It includes rehabilitation of old, historical buildings/structures. It also includes "smart city plans". The team attempted to determine whether if the modernization or expansion was akin to building something new or installing new/fresh capacity (e.g., power, networks), in which case it the project was coded as "New infrastructure".

Illustrative projects from selected CRS codes:

110: Restoration projects for schools (equipping classroom windows with glass, reinforcing and rainproofing the roof); relocation and development of a technology institute.

120: Reconstruction or renovation of hospitals

3. **Provision of goods:** It includes projects where China donated or provided certain goods or products to organizations or a group of individuals in the recipient country. It also includes projects where China gave loans or grants to purchase the equipment.

Illustrative projects from selected CRS codes:

- 110: Provision of tables, chairs, books, computers, joining e-education network, microwaves, language lab with equipment.
- 120: Donating medicines to hospitals, donated equipment including advanced machines for MRI, digital radiography, mammography, and fluoroscopy.

Categories 1-3 were rolled up into "infrastructure".

4. **Debt relief:** Debt relief includes standard debt forgiveness as well as debt restructuring (e.g., delaying repayment for 10 more years, etc.). All projects with a sector code of 600 (Action Relating to Debt) were reviewed and selected to include in this category.
5. **Humanitarian assistance:** Humanitarian aid projects are those that are given as emergency response or recovery flows. All projects with a sector code of 700 (Humanitarian Aid). The sector codes are assigned by AidData researchers at the time of data collection and are reviewed by AidData staff during the quality assurance stage. We use the OECD-Creditor Reporting Service (OECD-CRS) sector coding scheme to assign sectors to each project.
6. **Budget support:** Budget support Includes grants given as “gifts” to the receiving country with no stated purpose, grants and loans given to the receiving country with no purpose stated in available sources. We reviewed project descriptions and identified projects that reported China providing money to the receiving government with no earmarked purpose (mostly coming from the 510 sector).
7. **None of the above:** This category has projects that are still part of public diplomacy, but may be captured in the other categories of public diplomacy (exchange, cultural, elite, information).

Illustrative projects from selected CRS codes

- 110: Granting scholarships to students, sponsoring workshops in universities, signing MoUs to develop programs/courses; training students and professionals in SCA countries.
- 120: Training medical personnel; funding health coordination efforts following earthquake; donation for bird flu prevention.

### A-3.2 TUFF Methodology Overview

Our financial diplomacy data are primarily drawn from AidData’s Global Chinese Official Finance Dataset (Version 1.0). However, for the purposes of this study, we have extended the time coverage of this dataset through 2017 for the SCA region. The Global Chinese Official Finance Dataset captures the known universe of Chinese Government-financed projects in 5 regions of the world from 2000-2014 (including Africa, the Middle East, Asia and the Pacific, Latin America and the Caribbean, and Central and Eastern Europe). It captures concessional and non-concessional sources of funding from Chinese government institutions (including central, state or local government institutions) with development, commercial, or representational intent. More specifically, it captures (a) highly concessional, Chinese development projects that meet the OECD’s criteria for Official Development Assistance (ODA); and (b) Chinese Government-financed projects that lack development intent or are provided with higher interest rates and lower grant elements (i.e., projects that fall within the OECD’s criteria for “Other Official Flows,” or OOF). Chinese ODA represents “Chinese aid” in the strictest sense of the term, but Chinese official finance (ODA and Other Official Flows) is sometimes used as a broader definition of aid.

Quantifying and tracking China's financial diplomacy efforts is a formidable task, given that Beijing does not participate in international aid or debt reporting systems. To address this challenge, AidData has developed a methodology called Tracking Underreported Financial Flows (TUFF) that standardizes and synthesizes information from a wide array of open sources to create a detailed and comprehensive dataset of Chinese Government-financed projects. The TUFF methodology is an attempt to not only track Chinese official financing at the project level, but also ensure that the data are compatible with international reporting standards—in particular, those established by the OECD's Development Assistance Committee (DAC).

Since the release of Global Chinese Official Finance Dataset (Version 1.0), AidData has substantially revised its data collection methodology to capture more project-level information from official sources. The first stage of the methodology focuses on project identification and seeks to establish a basic set of facts about each Chinese Government-financed project, such as the name of the project, the name of the financier, the name of the recipient institution, and the year of the financial commitment. This information is drawn from official sources in recipient countries and China. The official sources from recipient countries include, but are not limited to, debt registries, aid information management systems, sovereign bond prospectuses, government repositories of legislative acts, and the annual reports and websites of ministries and state-owned enterprises. The official sources from China include, but are not limited to, the websites of Chinese embassies and Chinese Economic and Commercial Counselors' Offices (ECCOs), the annual reports and websites of China's policy banks and state-owned commercial banks, and country-specific investment guides published by China's Ministry of Commerce.

AidData then integrates a complementary set of sources, including IMF Article IV country reports, project implementer websites and publications, academic publications, NGO reports, and media articles from the Factiva database and Data, News & Analytics (DNA) Platform owned by Dow Jones.<sup>1</sup> The TUFF robot automates the Factiva searches and identifies the search results that are most likely to have project information in them. It first ingests a large amount of training data that "teaches" the software to accurately classify articles into "relevant" and "irrelevant" categories within a few seconds (i.e., identify the subset of articles that are most likely to contain information about officially-financed projects for the donor/lender of interest). AidData researchers then review each of the Factiva records that the machine learning algorithm has classified as "relevant" and make case-by-case determinations about whether those records contain information about a Chinese Government-financed projects. For details on the TUFF methodology, please see the latest version on AidData website: <http://aiddata.org/publications/aiddata-tuff-coder-instructions-version-1-3>.

Once a project is identified, it is entered into the data management platform and assigned to a different researcher, which marks the beginning of the second stage of the methodology. The purpose of this

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<sup>1</sup> To simplify the data collection process and increase efficiency and accuracy, AidData has integrated the use of a machine learning tool into the first stage of data collection, which is called the "TUFF robot."

stage is to identify more details about each project (e.g., implementation start and end dates, the subnational locations of project implementation, specific terms and conditions in grant and loan agreements) and to corroborate existing details by triangulating across a wider variety of open sources. To this end, targeted online searches are conducted in English, Chinese, and local languages (including Spanish, French, Portuguese, and Arabic) by trained language experts and native speakers. After stages 1 and 2 are complete, all project records are subjected to multiple rounds of rigorous scrutiny by AidData and staff and faculty and external peer reviewers.

## A-4. Public Diplomacy Typology: Methods

### A-4.1 Creating a Normalized Index of Public Diplomacy Effort Over Time

#### A-4.1.1 Engagement Score of Chinese Public Diplomacy

As explained in Table 1 in Chapter 2 of the report, we selected five proxy measures for our five types of public diplomacy. These are Chinese leader media engagement through interviews and press briefings, sister cities, high-level government visits, Confucius institutes and classrooms, and financial diplomacy. To create the PD engagement measure, we normalized each public diplomacy type according to the highest value in that PD type. We did this across time on a scale of 0-10 and then combined their scores (so we used equal weighting among the five types of PD).

#### A-4.2.2 Diversity Score of Chinese Public Diplomacy

To create the diversity score, we took the normalized scores of the 5 PD types for each country, and calculated the distance between what we would expect for a well-balanced portfolio (where each type of PD took up 20% of the total engagement). For example, Afghanistan was about 11% sister cities, 7% CIs and CCs, 79% government visits, 3% financial PD and 0% informational diplomacy. So its calculations looked like  $|11\%-20\%|+|7\%-20\%|+|79\%-20\%|+|3\%-20\%|+|0\%-20\%| = 1.175$ . To transform these scores so they are more intuitive (with higher values representing higher levels of diversity), the value was then inverted using this equation:  $2 - (\text{diversity score, e.g. } 1.175 \text{ in the example above}) = 0.82$ . While the actual value does not represent much valuable information, the comparison of the value across countries reveals useful and interesting differences in the mix of tools that China uses in each SCA country.

## A-5. Case Studies: Methods & Approach

### A-5.1. Case study approach

In addition to this quantitative analysis, we also conducted semi-structured interviews with 216 individuals from 145 organizations or agencies across six SCA countries: Bangladesh, Kazakhstan, Maldives, Nepal, Sri Lanka, and Uzbekistan (see Table A3). The expectation is that a combination of these six countries provide the study a representative sample of opinions across the SCA region.

For each country case study, interviewees were recruited by the Asia Society Policy Institute (ASPI) for South Asia and the Center for Strategic and International Studies (CSIS) using their organizational networks. This initial list for each country was supplemented with snowball sampling by each of the country teams once they were on the ground. Information gleaned from the interviews was vetted and contextualized using desk research.

**Table A3: Types of individuals interviewed in each country**

	Nepal	Sri Lanka	Bangladesh	Maldives	Uzbekistan	Kazakhstan
Academics/think tanks/Journalists	21	11	14	8	11	21
Government officials (former or current)	6	4	8	7	3	1
Foreign embassies	12	0	13	4	6	6
Social/cultural/private organizations	10	6	14	15	10	7

### A-5.2. Interview guide for semi-structured interviews

#### Overarching Questions to Answer with Interviews:

- **Extent of Chinese PD:** What are the motivations behind Chinese public diplomacy in [insert country]? What types of PD activities does China undertake with citizens vs. policymaking elites in [insert country]? To what degree do individuals in [insert country] attribute specific public diplomacy investments/interventions to China? How does this compare with the public diplomacy activities undertaken by the US or others in [insert country]?
- **Perceptions of Chinese PD:** How are China's public diplomacy efforts perceived at the country level in terms of motives and influence? To what extent do officials and citizens view their country as being aligned (or not aligned) with China in terms of economic, political, and security

preferences? What are the mechanisms by which PD efforts generate the desired attitude and behavior changes among citizens and policymakers in line with China's interests?

- **Results of Chinese PD:** What do officials and citizens see as the discrete downstream consequences (or ripple effects) of China's public diplomacy efforts in [insert country]? How does public diplomacy lead to a change in the perception of China in [insert country] or improved strategic ties? To what extent do PD overtures work in concert with, or are undercut by, China's other foreign policy tools?



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### **Introduction [2-3 min]**

[Insert formal name of interviewee], thank you very much for taking the time to talk with us.

My name is [say your name]. My colleague, [insert names of supporting interviewer], will be assisting me in taking notes today. Before we begin, I wanted to provide some additional background about our study and how we will be using the information you share with us in today's interview. Would that be okay?

As we mentioned in our previous correspondence, we work with AidData, a research and innovation lab based at the College of William and Mary in the U.S.

We are implementing a project to measure and analyze China's public diplomacy activities in South and Central Asia that we hope will facilitate new research, greater understanding, and increased dialogue regarding the role of public diplomacy as a tool of foreign policy.

As part of this project, we are conducting 5 country case studies in Uzbekistan, Kazakhstan, Nepal, Sri Lanka, Bangladesh, and the Maldives to explore, in depth, the drivers of China's public diplomacy activities and assess whether and how Chinese engagement and activities have impacted strategic ties with China. For the purpose of this study, we define public diplomacy as...*"activities undertaken by state or non-state actors from a 'sending' country with the intention to influence the perceptions, preferences, and actions of foreign citizens in a 'receiving' country in favor of the 'sending' country's values, culture, and worldview"*.

The information from this interview will provide us insights as we attempt to build greater understanding on the dynamics, methods and modalities of Chinese public diplomacy in South and Central Asia. To be clear, we will not directly quote or cite you at any point in our research without your explicit consent. We have prepared questions today to guide our conversation, but please also feel free to share additional insights as you feel appropriate.

To ensure that you fully understand the terms of our conversation, we would like you to read the following document [note to interviewer: give Informed Consent Statement to the person you are interviewing]. If you agree, please sign it at the bottom.

The interview itself should take approximately 45-60 minutes. Does this time frame still work for you?

With your consent, we would also like to record this interview. Is this agreeable to you? Only the interviewers will have access to the voice memos.

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### **Extent and Drivers of PD Questions [10 mins]**

Interviewer: As I mentioned at the start of the interview, we are particularly interested in Chinese public diplomacy efforts in South and Central Asia. With that in mind, I'd like to ask some follow-up questions about how you view the reach and motivations behind Chinese public diplomacy in [insert country].

1. In your experience, what are the major types of activities China engages in as part of their public diplomacy in [insert country]?
    - a. *Optional drill-down:* In what ways does China use broad-based channels to "push" out information or cultural content about Chinese values, norms, and policy positions to the general public in [insert country]?
    - b. *Optional drill-down:* To what extent does China employ more targeted strategies to cultivate relational ties, generate goodwill, or facilitate the exchange of ideas between its citizens and those in [insert country]?
  2. What do you think is China's motivation for investing in these public diplomacy activities? What do they hope to gain or achieve?
  3. How would you compare the extent of China's public diplomacy activities to that of other foreign powers in [insert country]?
- 

### **Perceptions of the 'sending country' Questions [10 mins]**

Interviewer: We would like to ask you some questions about public perception as well as your own perception of the benefits and pitfalls of Chinese public diplomacy investments in your country.

4. Of the activities you mentioned, which do you think are most effective in increasing visibility and awareness of China, Chinese people, culture, and viewpoints in [insert country]?
  - a. *Optional drill-down:* Do you think most of China's public diplomacy investments in [insert country] are visible/quantifiable? Why?
5. To what extent do you think China's public diplomacy activities contribute to a greater understanding of, and interest in, China, Chinese people, culture, and viewpoints among citizens in [insert country]?
  - a. *Optional drill-down:* What specific examples have you observed in practice of this type of attitude change in [insert country]?

- b. *Optional drill-down:* Why do you think that these public diplomacy activities were able to bring about this change?
  - 6. How would you say that China is perceived by the general public in [insert country] and has this changed over the years?
    - a. *Optional drill-down:* Are there specific events that have reinforced or changed the dynamic between the two countries dramatically? If so, what might those be?
    - b. *Optional drill-down:* Is there a difference between how the Chinese government is perceived versus the view of Chinese people, culture, or society more broadly? If so, what do you see as the main differences? Why do you think that is?
    - c. *Optional drill-down:* Are there established/influential pro or anti China lobbies in [insert country]? How prominent or influential do you think these groups are in influencing the attitudes of citizens and policymakers?
  - 7. Do you think there is a difference in how the general public, policymakers and [insert stakeholder group of your interviewee] view China in your country? If so, why do you think that is?
  - 8. How would you compare perceptions of China in [insert country] to that of other foreign powers?
- 

### **Results of PD Questions [10 mins]**

Interviewer: Thank you very much for sharing these insights about China's public diplomacy activities and how China is perceived in [insert country]. Now, we would like to ask you some questions about your views on the effectiveness and some specific impacts of China's public diplomacy investments in [insert country].

- 9. To what extent do you feel that citizens (including the specific cohort the interviewee represents) and policymakers in [insert country] support China's specific foreign policy positions or more broadly have adopted China's values, norms, and viewpoints as their own?
  - a. *Optional drill-down:* Can you give us some specific examples that you've observed as to why you think this is the case?
- 10. What role, if any, do you see China's public diplomacy efforts playing in terms of influencing these attitudes in [insert country]?
  - a. *Optional drill-down:* Are there specific public diplomacy efforts that worked well for bolstering China's national image in your country? If so, how did these efforts change people's perception of China in your country?

11. In what ways do you think that exposure to, or participation in, Chinese public diplomacy activities has led to specific changes in the behavior of the general public in [insert country]?
  12. To what extent have you seen indications that policymakers in [insert country] are adopting Chinese viewpoints or foreign policy positions through their exposure to, or participation in, Chinese-sponsored public diplomacy activities?
    - a. *Optional drill down:* Are there specific public diplomacy efforts that were particularly influential in changing some of these behaviors or attitudes that you have observed in practice? If so, why were these activities so influential? What was the end result?
  13. How would you compare the relative effectiveness of China's public diplomacy activities to that of other foreign powers in [insert country]?
    - a. *Optional drill-down:* Do you see that China's public diplomacy efforts are generating a positive or negative response from citizens and policymakers in [insert country]?
    - b. *Optional drill-down:* To what extent do China's other interactions with [insert country] in terms of security, diplomacy, and development either reinforce or undercut the ability of its public diplomacy efforts to generate the desired results?
- 

### **Closing [1-2 minutes]**

Interviewer: We've come to the end of our prepared questions for you. Thank you very much for your time today and for sharing your thoughts with us. We appreciate your insights which will add great value to our study. Over the next few days, we will be interviewing other experts to discuss Chinese public diplomacy in your country.

- Are there any other individuals with whom we should speak to address one or more of the questions that we asked you during this interview?
- Additionally, do you have any relevant documents to share with us that may be helpful to us in this study?

Please don't hesitate to be in touch if you have any questions or additional insights. We will be analyzing the input from our interviews and producing an assessment report over the next couple of months. We will be in touch with you as soon as we have a final product to share.

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## A-6. Statistical Models: Methods & Results

As part of the research design for this study, we ran four series of statistical models to test (1) the factors that affect where China deploys its public diplomacy tools (A-6.1), (2) the association between Chinese public diplomacy tools and SCA public perceptions of China (A-6.2), (3) the association between Chinese public diplomacy and greater alignment in foreign policy voting (A-6.3), and the association between Chinese public diplomacy tools and China's trade balance with SCA countries (A-6.4). For details on these statistical models, please see the sections below.

### A-6.1 - Determinants of Chinese Public Diplomacy

#### A-6.1.1 Model Specifications

In explaining the distribution of Chinese public diplomacy investments, we focus on five outcome indicators: (i) an index of informational diplomacy activity (op-eds written by Chinese heads of state, interviews by Chinese leaders to SCA media, press briefings involving Chinese heads of state and SCA media, op-eds written by Chinese ambassador(s) to SCA countries, visits by journalists from SCA countries to China), (ii) financial diplomacy (budget support, infrastructure financing, humanitarian assistance, and debt relief), (iii) the cumulative number of "Sister Cities" in a given country during a given year (this includes sister cities established in the SCA region between 1984 and 1999), (iv) the cumulative number of Confucius Institutes in a given country during a given year, and (v) elite-to-elite diplomacy (government visits).

To create the informational diplomacy index, for each informational diplomacy variable, we subtract the mean of the variable from each observation and divide the result by the variable's standard deviation. We then add these new, standardized variables to create our index. The formula used to create this index is:

$$\sum_{i=1}^5 \left( \frac{x_i - \bar{x}}{s_i} \right)$$

Our models use the following potential political and economic drivers to identify how they correlate with Chinese diplomacy.

**Economic.** We include a number of factors capturing the economic environment in the host country. First, we include a measure of GDP to understand how the size of a country's economy correlates with Chinese public diplomacy. The data are continuous in US dollars (2010), and we pull them from the World Development Indicators (World Bank 2019). Second, we include a measure of resource rents as a percent of gross domestic product (GDP) also from the World Development Indicators (World Bank 2019). Next, we include a measure counting the number of new Chinese firm entries in a given country

during a given year to understand how Chinese employs public diplomacy in contexts where Chinese firms are investing (China's Ministry of Commerce). Finally, we include the logged total of imports by China from the country in question to help determine whether Chinese public diplomacy efforts tend to concentrate in contexts that are more valuable export markets for China (WITS 2019).

Domestic conditions and context (openness to influence). To understand how extreme forms of political insecurity might affect how China allocates public diplomacy, we include a variable that measures the total number of major episodes of political violence (Marshall 2019). Examples of these events are ethnic violence between Kyrgyz and Uzbek factions in Kyrgyzstan in 2010 and the 2005 conflict relating to the Balochistan insurgency in Pakistan. The data are counts of such events taken from the dataset of the Center for Systemic Peace.

To capture the domestic political context, we use two measures. First, we include Varieties of Democracy's (V-Dem) electoral democracy variable (Coppedge et al., 2019). This variable measures leaders' responsiveness to citizens through electoral competition where the ability to vote is extensive in the country. This measure is continuous and runs between 0 and 1 with higher values indicating higher electoral democracy. Second, we include a measure of domestic coalition turnover from the Change in Source of Leader Support (CHISOLS) dataset (Mattes et. al., 2016). This dataset examines instances of leadership turnover in all countries with a population of at least 500,000 and determines whether new leaders represent societal groups that differ from their predecessors (e.g., leaders that represent different political parties). The original dataset covers the period of 1919-2008, we use DiLorenzo and Cheng's (2017) extended version of the data which extends coverage to 2014 but then follow their approach to extend the data even further to 2018.<sup>2</sup>

From the World Bank development indicators (World Bank 2019), we pull the percentage of the population with access to the internet, as well as a measure of corruption perceptions in the country (higher scores indicate less corruption).<sup>3</sup> Finally, we include a variable on Chinese migrants from the World Bank.<sup>4</sup> Data are only available for the years 2000, 2010, 2013, and 2017. When data for certain years are missing, we insert the previous year's value until data become available.

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<sup>2</sup> Because Maldives has less than 500,000 inhabitants, we collect these data ourselves throughout the entire time period.

<sup>3</sup> World Bank does not provide data for 2001. To include this year, we take the average of 2000 and 2003.

<sup>4</sup> Data pulled from World Bank's Migration and Remittance Data (source: <https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data>).

Table A4: Drivers of Beijing's public diplomacy in SCA

	(1)	(2)	(3)	(4)	(5)
	Info Dip	Financial Dip	Sister Cities, cmltv	Confucius, cmltv	Political Visits
GDP, lg (t-1)	-0.757 (4.466)	-13.104 (11.571)	2.047 (4.022)	2.969 (1.797)	-3.111 (8.482)
Internet (% access) (t-1)	0.057 (0.049)	-0.338*** (0.084)	-0.012 (0.026)	-0.045 (0.071)	-0.226*** (0.070)
Resources rents, lg (t-1)	0.608 (0.480)	2.224 (1.618)	-0.954 (0.580)	-0.412 (0.461)	0.140 (1.561)
Corruption index (t-1)	-2.078 (2.671)	2.080 (7.208)	-0.013 (0.789)	1.977 (1.918)	0.493 (2.755)
Chinese migrants (t-1)	-0.000 (0.000)	0.000*** (0.000)	-0.000** (0.000)	-0.000** (0.000)	0.000 (0.000)
Episodes Pol. Violence (t-1)	0.021 (0.272)	0.438 (0.469)	0.094 (0.099)	0.046 (0.138)	-0.439 (0.501)
Electoral Dem. (V-Dem) (t-1)	3.558 (2.381)	-3.208 (6.253)	0.093 (1.537)	0.097 (2.819)	1.442 (3.868)
New firm entries (t-1)	-0.013 (0.023)	0.146** (0.062)	0.020 (0.013)	0.006 (0.009)	0.070 (0.049)
Chinese imports, lg (t-1)	-0.222** (0.085)	-0.019 (0.722)	-0.178 (0.125)	0.029 (0.092)	0.022 (0.350)
Dom. coalition turnover (t-1)	0.789 (0.595)	1.050 (1.630)	0.128 (0.388)	0.155 (0.228)	0.756 (1.205)
<i>N</i>	190	210	210	167	210
<i>R</i> <sup>2</sup>	0.33	0.40	0.89	0.92	0.38
adj. <i>R</i> <sup>2</sup>	0.169	0.262	0.862	0.898	0.240
Country	12	12	12	12	12

Standard errors in parentheses

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

In explaining China's public diplomacy investments, we fit OLS, panel regression models to estimate the relationship between various country-year-level factors and Chinese public diplomacy inputs in SCA (see Table A4). Our unit of analysis is country-year and our samples run from 2000 to 2017 for financial

diplomacy, sister cities, and government visits. Due to data availability, the samples for the informational diplomacy model run from 2002 to 2017 and Confucius institutes/classrooms run from 2004 to 2017. Since we are interested in looking at how conditions in (potential) recipient countries influence China's public diplomacy investments (and not the other way around), we lag all of our explanatory variables by one year to ensure that the measurement of those factors is temporally prior to the measure of our dependent variables. Also, to account for correlated errors within countries, we use country-clustered standard errors. Finally, we then include an interaction between the country and time variables to test if country-specific trends affect the results.

### A-6.1.2 Model and Data Limitations

The model includes 12 of 13 SCA countries as Maldives gets dropped from the analyses. Also, some models only begin in 2002 and 2004 (determinants of informational diplomacy and Confucius Institutes and Classroom models, respectively). In addition, all five models only feature samples that are relatively small (between 167 to 210). While this does not preclude us from performing the analyses, a larger sample will give us a better idea of these relationships. Much larger samples might yield more interesting findings, and we can pursue this in future iterations of these analyses once more data are available.

Finally, fixed effects (FE) models have limitations. For instance, FE only address unobserved heterogeneity resulting from unobserved variables that do not change over time. FE does not address time varying unobserved heterogeneity. We are also unable to examine the effects of time invariant covariates with FE models. This prevents us from examining the effects of other covariates that we may think are important to the theory and the model specification. Hill et al. (2017) discusses these limitations further. These limitations of FE models apply to all our models that utilize the FE specification.

## A-6.2. Association between Chinese Public Diplomacy and Public Perceptions

### A-6.2.1 Gallup World Poll: Overview

In estimating the relationship between country-level measures of public diplomacy inputs and public attitudes at the individual level, we use data from the Gallup World Poll (GWP) survey. Due to data availability, we use the years 2009 to 2017. Each year essentially represents one wave of questions that were administered at various times throughout the year in each country. For details on the sampling methodology (nationally representative surveys with standardized questionnaire instruments), see GWP's detailed description on their website at <https://www.gallup.com/services/177797/country-data-set-details.aspx>. In our sample, the following South Asian countries and years appear: Afghanistan (2009-2017), Bangladesh (2009-2017), Bhutan (2013; 2015), India (2009-2017), Nepal (2010-2017), Pakistan (2009-2017), and Sri Lanka (2009-2017). The following Central Asian countries and years appear: Kazakhstan (2009; 2015-2017), Kyrgyzstan (2009; 2015-2017), Tajikistan (2009; 2015-2017), Turkmenistan



(2015-2017), and Uzbekistan (2009; 2015-2017). We note that while GWP has data for Maldives in 2019, data availability does not allow us to include these observations.

### A-6.2.2 Gallup World Poll: Relevant Question

We used the following question that appears in every year of GWP's survey: "Do you approve or disapprove of the job performance of the leadership of China?" Respondents could select *approve*, *disapprove*, *don't know*, or *refuse to answer*. From here, we constructed two separate variables for analysis. For the first, we coded an answer as '1' if the respondent replied *approve* and '0' otherwise. For the second, we coded an answer as '1' if the respondent replied *disapprove* and '0' otherwise. We dropped all *don't know* responses (see A-6.2.4 for further explanation on this decision).

### A-6.2.3 Model Specifications

To examine the relationship between Chinese public diplomacy efforts and perceptions of China, we estimate a set of probit models based on our two dependent variables where the outcome variable is an individual survey respondent's response to approval or disapproval of Chinese leadership (see Table A5). We construct models that feature four Chinese public diplomacy variables described above as our independent variables: an index of informational diplomacy activities, financial diplomacy, the cumulative number of Confucius Institutes and Classrooms, and elite-to-elite diplomacy. We remove *Sister Cities* from this analysis to avoid introducing multicollinearity to the model—it highly correlates with *Confucius Institutes/Classrooms*.

In addition, we include a battery of both respondent- and country-level controls. For individual-level variables, we include binary variables indicating when the respondent is female (*female*), lives in an urban setting (*urban*), and has employment to some capacity (*employed*).<sup>5</sup> We also include continuous variables for the respondent's age (*age*) and household income (*income*). Due to income's right-skewed distribution, we take the variable's natural log for the models. Finally, we include an ordinal variable indicating the respondent's education level (*education*).<sup>6</sup> We pull all of these variables from the GWP (Gallup, 2019).

We also include several country-level variables. From the World Bank (World Bank, 2019), we include a measure of the size of the economy (*GDP*), and perceptions of the country's corruption (*corruption*). Due to GDP's right-skewed distribution, we take the variable's natural log for the models. Next, we include a measure for electoral democracy taken from the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2019). We prefer this to the often-used polity dataset because V-Dem's measures more closely reflect citizens' participation in electing leaders, while *Polity* focuses more on the institutional makeup of

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<sup>5</sup> Specifically, we take Gallup World Poll's Employment Status (*EMP\_2010*) variable and create a binary indicator where 1 indicates the following responses: Employed full time for an employer, Employed full time for self, Employed part time do not want full time, and Employed part time want full time. We assign a 0 for all remaining answers: Unemployed and Out of workforce.

<sup>6</sup> For this variable, 1 indicates 'Completed elementary education or less', 2 indicates 'Secondary through 3 year Tertiary education', and 3 indicates 'Completed four years of Tertiary education and beyond'.

a country's government such as executive constraint. This is a key distinction given that we seek to model public perceptions data.<sup>7</sup> We also include a variable for domestic coalition turnover (see A.6.1.1 above). Finally, we include a count of new Chinese firm entries in the SCA country for a given year (new firm entries).

Due to the potential for multicollinearity among the controls, we opt to reduce them to two variables using principal components analysis (PCA). PCA is a data reduction technique that linearly transforms intercorrelated variables into smaller sets of uncorrelated, orthogonal variables that contain most of the original dataset's information (Dunteman, 1989, p. 7). Researchers can use PCA to reduce multicollinearity among highly correlated variables or examine data structure. We aim to do the former and expect to create new variables based on our theoretically chosen controls.

We first select our controls to include in the PCA (see above). After running the PCA, we select the number of components and their resulting scores to include in the model using the Kaiser criterion where an eigenvalues over 1 from the resulting PCA suggests a single component (Kaiser, 1958). We therefore keep all components with an eigenvalue over 1, which is two components in this case.

**Table A5: Public perceptions of favorability and Beijing's public diplomacy**

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	(1)		(2)
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<sup>7</sup> While the two variables correlate at 0.9 in the SCA region, we prefer to use the V-Dem's measure because it more closely aligns theoretically with our public opinion data.

	Approve	Disapprove
Info. Diplomacy (t-1)	0.013*** (0.002)	-0.028*** (0.002)
Financial Dip., lg (t-1)	-0.007*** (0.001)	-0.009*** (0.002)
Confucius, cmltv (t-1)	0.017*** (0.003)	-0.008* (0.004)
Political Visits (t-1)	-0.006** (0.002)	-0.005** (0.002)
Female	-0.291*** (0.012)	-0.081*** (0.012)
Urban	0.128*** (0.012)	-0.034** (0.012)
Employed	0.020 (0.012)	-0.012 (0.012)
Age	-0.004*** (0.000)	-0.003*** (0.000)
Income, lg	0.059*** (0.005)	-0.004 (0.005)
Education	0.267*** (0.010)	0.074*** (0.010)
PCA Score 1 (t-1)	-0.051*** (0.015)	0.140*** (0.015)
PCA Score 2 (t-1)	-0.070*** (0.015)	-0.016 (0.017)
N	100,975	100,975
Countries	12	12

Standard errors in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Given our dependent variables' binary structure, we estimate probit regression models to estimate the probability that a respondent chooses approve (disapprove). We lag all country-level, right-hand-side variables one year so that the previous year's covariate regresses on our dependent variable. The models also include year- and country-fixed effects, as well as country-clustered standard errors. We then include an interaction between the country and time variables to test if country-specific trends affect the results. Finally, we include the weights variable that GWP provides. After pairwise deletion, our sample totals 100,975 observations for 12 countries across 9 years from 2009-2017.

#### A-6.2.4 Model and Data Limitations

While the models provide evidence to support our theory, we do wish to note a few limitations. First, the GWP only offers data from 2006 to 2018. Further pairwise deletion reduces the final sample to cover 2009 to 2017. We also note that some countries have missing years throughout this sample, such as Nepal in 2009.

Generally, the sample provides better country-year coverage for South Asia than for Central Asia. Of the years from 2009 to 2017, the eight countries in South Asia have data for 55 of 73 country-years (about 75%) versus the five Central Asian countries with 20 of 45 available country-years (about 44%). However, some data from all Central Asia countries are present, while no data from the South Asian Maldives is available for our sample.

Next, our use of the results from the PCA does not allow us to see the effects of the individual variables used to create them. However, we note that they contain the same information that these individual variables carry.

In addition, fixed effects (FE) models have limitations. For instance, FE only address unobserved heterogeneity resulting from unobserved variables that do not change over time. FE does not address time varying unobserved heterogeneity. We are also unable to examine the effects of time invariant covariates with FE models. This prevents us from examining the effects of other covariates that we may think are important to the theory and the model specification. Hill et al. (2017) discusses these limitations further.

Finally, we note that a whole swath of respondents do not make the samples because they replied "don't know" to the question in which we are interested. Scholars tend to disagree about how to treat these types of responses (Turner and Michael, 1996), including some that argue that the option should be eliminated from surveys on political knowledge at the research design phase (Miller and Orr, 2008). While we suspect that there may be some value in these responses, we erred on the side of caution and dropped them. Some scholars have tried to analyze what are the determinants of selecting "don't know" to better understand them (Edwards, 2018). While this is an interesting line of inquiry, we think it is beyond the scope of our study.

## A-6.3. Association between Chinese Public Diplomacy and Foreign Policy Alignment

### A-6.3.1 Model Specifications

To measure whether and how Chinese public diplomacy investments correlate with greater foreign policy alignment with China, we use data on voting patterns in the United Nations General Assembly (UNGA). Bailey et. al. (2017) estimate a country's foreign policy "ideal point" on a common scale in a given year based on its voting record in the United Nations. This variable is widely used in the foreign policy literature to study foreign policy change and similarity (e.g. Dreher et. al., 2018).

To test the association between China's public diplomacy and UNGA voting alignment in the SCA region, we include the same four proxies for China's public diplomacy (see Table A6). For this model, we utilize several controls. From the World Bank (World Bank, 2019), we include a measure of the size of the economy (*GDP*), and perceptions of the country's corruption (*corruption*). Due to GDP's right-skewed distribution, we take the variable's natural log for the models. Next, we include a measure for electoral democracy taken from the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2019). In addition, we include the total count of major episodes of political violence from the Integrated Network for Societal Conflict Research's (INSCR) Armed Conflict and Intervention (ACI) Datasets. We also include a variable for domestic coalition turnover (see A-6.1.1). Finally, we include a count of new Chinese firm entries in the SCA country for a given year (*new firm entries*). We then run a PCA (see A-6.2.3) to reduce these data into two variables that are orthogonal but retain much of the same information as the controls we describe above.

**Table A6: UNGA Voting Patterns and Beijing's public diplomacy**

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(1) (2) (3) (4) (5)

	Info Dip	Financial	Confucius	E-to-E	Full
Info. Diplomacy (t-1)	-0.012** (0.005)				-0.009 (0.005)
Financial Dip., lg (t-1)		-0.002 (0.002)			0.002 (0.002)
Confucius, cmltv (t-1)			-0.001 (0.008)		0.001 (0.008)
Political Visits (t-1)				-0.006** (0.003)	-0.004 (0.004)
PCA Score 1 (t-1)	-0.037 (0.039)	-0.050 (0.049)	-0.049 (0.037)	-0.059 (0.046)	-0.042 (0.039)
PCA Score 2 (t-1)	0.006 (0.039)	0.017 (0.037)	0.020 (0.046)	0.016 (0.038)	0.022 (0.044)
Lagged DV	-0.055*** (0.013)	-0.039** (0.013)	-0.047*** (0.012)	-0.037** (0.013)	-0.046*** (0.012)
<i>N</i>	180	196	156	196	156
<i>R</i> <sup>2</sup>	0.63	0.64	0.47	0.64	0.49
adj. <i>R</i> <sup>2</sup>	0.557	0.571	0.361	0.575	0.366
Countries	12	12	12	12	12

Standard errors in parentheses

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

We calculate the absolute difference between a given SCA country's ideal point and China's ideal point in a given year as our dependent variable. In interpreting the coefficients from the models, negative coefficients indicate that as a given covariate increases, the distance between a country's ideal point and China's ideal point becomes smaller, i.e., they have more similar foreign policy interests. So that we can interpret these changes in terms of convergence/divergence, we control for a country's similarity to China in the previous year and include country- and year-fixed effects in our estimation. We lag all explanatory variables one year. To account for correlated errors within countries, we use country-clustered standard errors. Finally, we then include an interaction between the country and time variables to test if country-specific trends affect the results.

### A-6.3.2 Model and Data Limitations

Data on our dependent variable, ideal point distance in UNGA, covers all 13 SCA countries. However, coverage for our covariates limits the sample to 12 countries for our time-period of analysis (Maldives

drops due to pairwise deletion once we include our covariates). In addition, the model features a relatively small sample size (n=156). While this does not preclude us from performing the analyses, a larger sample will give us a better idea of this relationship. A much larger sample might yield more interesting findings, and we can pursue this in future iterations once more data are available. In addition, our use of the resulting variables from the PCA do not allow us to see the effects of these individual controls.

Finally, fixed effects (FE) models have limitations. For instance, FE only address unobserved heterogeneity resulting from unobserved variables that do not change over time. FE does not address time varying unobserved heterogeneity. We are also unable to examine the effects of time invariant covariates with FE models. This prevents us from examining the effects of other covariates that we may think are important to the theory and the model specification. Hill et al. (2017) discusses these limitations further.

## A-6.4 Association between Chinese Public Diplomacy and Trade

### A-6.4.1 Model Specifications

In our analysis of the effects of Chinese public diplomacy on trade with SCA countries, we examine trade for different product groups (i.e., capital goods, consumer goods, intermediate goods, and raw materials) to explore how China might be targeting its public diplomacy efforts to meet the trade needs of its economy. While it is desirable from a Chinese perspective to have an overall positive balance of trade (i.e., greater value of exports than imports), China has needs in each of the product groups that its economy cannot fully meet. We expected these needs to be greatest for raw materials and intermediate goods, due to limited availability of those resources in China. This may especially be true for fuels, mineral resources, and agricultural resources. On the other hand, China can readily produce large volumes of capital and consumer goods driving trade surpluses for those product groups. The reality of trade is not as simple as domination for higher-level capital and consumer goods and dependence on lower level intermediate goods and raw materials. China both exports and imports goods and resources for all of these product groups, but may find the largest gaps in the intermediate and raw material product groups.

To analyze the effects of Chinese public diplomacy on trade with SCA countries, we modelled net exports for each product group (see Table A7). We ran panel, OLS regression models with country- and year-fixed effects for each of our four dependent variables on public diplomacy variables and a set of controls. We also include country-clustered standard errors, and all our explanatory variables were lagged by one year. In order to address multicollinearity between the control variables, we ran a PCA on these variables and included the scores of the first two principal components as controls. These controls include *internet penetration*, *new Chinese firm entries*, *unemployment*, and *resource rents*.

We ran multiple models to examine how adding factors to the model improved the model. We started with bivariate models with each public diplomacy variable as the only independent variable. Subsequent

models incorporated all public diplomacy variables and added country fixed effects, year fixed effects, controls, and year trends by country.

**Table A7: China's Net Exports with SCA Countries by Product Group and Beijing's public diplomacy**

	(1)	(2)	(3)	(4)
	Net Exports Capital Goods	Net Exports Consumer Goods	Net Exports Intermediate Goods	Net Exports Raw Materials
Informational Diplomacy (t-1)	3.37e-04 (2.42e-04)	-2.30e-03 (1.83e-03)	-3.10e-04 (5.48e-04)	-6.42e-05 (2.60e-04)
Financial Diplomacy (lg) (t-1)	1.10e-04 (8.99e-05)	-3.22e-03 (2.80e-03)	-1.71e-04 (2.14e-04)	-1.32e-04 (1.10e-04)
Confucius Institutes, cmltv (t-1)	-1.53e-03** (5.86e-04)	-3.75e-02*** (9.06e-03)	-1.09e-02*** (2.66e-03)	-1.96e-03** (8.71e-04)
Traditional Diplomacy (t-1)	2.27e-04 (2.02e-04)	1.17e-03 (1.76e-03)	4.21e-04 (4.84e-04)	4.62e-04 (4.74e-04)
Controls: PCA 1 (t-1)	-9.03e-04 (1.18e-03)	2.01e-02 (1.63e-02)	8.32e-05 (1.50e-03)	7.94e-04 (1.86e-03)
Controls: PCA 2 (t-1)	-2.61e-03 (5.75e-03)	-1.87e-01 (1.07e-01)	9.56e-03 (1.65e-02)	7.54e-03 (6.51e-03)
<i>N</i>	167	167	167	167
<i>Countries</i>	13	13	13	13
<i>R</i> <sup>2</sup>	0.89	0.85	0.93	0.75
adj. <i>R</i> <sup>2</sup>	0.847	0.790	0.900	0.664
<i>AIC</i>	-1.26e+03	-3.51e+02	-9.41e+02	-1.24e+03

Standard errors in parentheses

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

#### A-6.4.2 Model and Data Limitations

As net exports is the difference between the import and export values, this variable shrouds the changes in the imports and export levels individually. In other words, one cannot tell whether changes observed in net exports are due to changes in imports or changes in exports or both.

In an attempt to resolve this issue, we ran models by product group for imports and exports, but abandoned that effort to avoid the issue of multiple comparisons. To run models of imports and exports separately increases the number of significance tests substantially, leading to the possibility that some tests are significant simply due to the large number of tests.



The high correlation between imports and exports, however, makes it possible to suggest the likely scenario of how changes in imports and exports affect net exports. Because imports and exports are highly positively correlated, when exports increase, imports will also tend to increase. An increase in net exports would tend to be the result of a higher increase in exports than imports, rather than an increase in exports without a corresponding increase in imports.

Finally, fixed effects (FE) models have limitations. For instance, FE only address unobserved heterogeneity resulting from unobserved variables that do not change over time. FE does not address time varying unobserved heterogeneity. We are also unable to examine the effects of time invariant covariates with FE models. This prevents us from examining the effects of other covariates that we may think are important to the theory and the model specification. Hill et al. (2017) discusses these limitations further.

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