FSD4005 KIINAN COVID-19 -TUKIKAMPANJA 2020 (CHINESE COVID-19 AID CAMPAIGN 2020)

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Chinese Covid-19 Aid 2020 Dataset

Appendix 1: Methodology

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1 Overview

This dataset tracks the humanitarian aid campaign that the People's Republic of China launched soon after the eruption of the Covid-19 pandemic in December 2019 (hereafter the Chinese Covid-19 Aid, or CCA campaign). Specifically, the dataset tracks donations aimed at treating, containing, and alleviating the effects of the Covid-19 pandemic. General foreign and development aid are not included. The dataset records donations of both protective and medical equipment, along with cash donations and some non-medical items. In total, the dataset covers donations delivered to some 180 countries, non-state entities and international/regional organisations mainly during 2020. The data was collected between spring 2021 and summer 2022.

The dataset consists of 2,624 rows, where each row represents a single donation or a contribution to a collective (donation by many donors) or lump-sum donation (donation to many recipients). Each observation comprises the donation data (cash, items) and relevant metadata (date, donor, recipient, source(s)), totalling 35 variables. Furthermore, for almost every recorded donation, the dataset includes an estimated monetary value in United States dollars. The sources are listed in Appendix 2.

The dataset was used in the analyses presented in two research articles:

1. Aubié, Hermann, Lauri Paltemaa, and Tommi Sookari. 2025. 'China's Covid-19 Aid Diplomacy in 2020: Patterns and Motivations'. *The Hague Journal of Diplomacy* 20 (1): 69–100. https://doi.org/10.1163/1871191x-bja10200.
2. Paltemaa, Lauri, Hermann Aubié, and Tommi Sookari. 2025. 'Building the Image of China as a "Responsible Major Country" in Advanced Economies: Did Beijing's Covid-19 Aid Campaign Work?' *European Journal of East Asian Studies* 24 (1): 26–50. https://doi.org/10.1163/15700615-02401006.

The reminder of this document describes the data collection process, its methodological choices and problems. The second section presents the variables that comprise the dataset. The third section discusses the general principles of data collection. Fourth, the primary sources are described. The final section details the procedure of calculating the monetary value of donations.

2 Dataset variables

The variables of the dataset are presented in Table 1. There are variables containing the details of target country of the donation, the donor and the recipient, time of donation, items donated, their value, sources used, and additional remarks.

Nota bene there are three variables estimating the value of a donation: one for medical items and equipment and cash, second for non-medical items, and third for total value. The primary variable of donation value is `value_medicalaid_usd` that contains value estimate for medical items and cash donations (variables 15–27, in Table 1). Another variable, `value_nonmedicalaid_usd`, is for non-medical items – such as food supplies, agricultural equipment and machinery, electronic devices (detailed in variable #28, Table 1) – which were also part of the CCA campaign but are not generally considered humanitarian aid. The third variable, `total_value_usd`, contains the combined value of both. Due to the variety of non-medical items included in the Chinese Covid-19 aid, the monetary values of non-medical donations are not completely estimated. Thus, the variables `value_nonmedicalaid_usd` and `total_value_usd` should be used with caution.

The research articles used `value_medicalaid_usd` in the analyses.

Table 1. CCA 2020 dataset variables.

#	Variable	Description
1	country	Recipient country
2	iso_code	Recipient country ISO 3166-1 alpha-3 code
3	region	Region of the recipient country based on the UN Standard country or area codes for statistical use (M49).
4	subregion	Subregion of the recipient country based on the UN Standard country or area codes for statistical use (M49).
5	donor	Donor name
6	donor_type	1 = party-state (ministries, state agencies, party organs/extensions, PLA, PAP, State-owned enterprises); 2 = provincial level public/party entities; 3 = municipal level public/party entities; 4 = university; 5 = (non-state owned) enterprise; 6 = foundation; 7 = other.*
7	region_origin	Indicates the region of origin of provincial and municipal level donors in the PR of China. Marked only for donor types 2 and 3.
8	recipient	Recipient name. 0 = unknown.
9	recipient_type	1 = central/federal government; 2 = state/provincial government; 3 = municipal government; 4 = university; 5 = enterprise; 6 = individual; 7 = foundation; 8 = other; 9 = international/regional organization; 0 = unknown.
10	year	Donation year. 0 = unknown.
11	month	Donation month. 0 = unknown.
12	day	Donation day. If more than one, first one is entered. 0 = unknown.
13	date	Donation date, d/m/y. Donation date may refer f. ex. to the day when the donation is dispatched from the donor, arrived to the country of destination or received by the recipient, depending on the information available.
14	week	Donation week. Counting from Monday.
15	masks	The number of masks donated, surgical and other non-N95 types of masks.
16	money	The number of money donation.
17	n95_masks	The number of N95/KN95 masks donated.
18	protective_clothing	The number of protective clothing donated.

19	protective_clothing_type	General category. Includes protective clothing such as suits and gowns.
20	goggles	The number of goggles donated.
21	gloves	The number of gloves donated.
22	shoecovers	The number of disposable shoe covers donated.
23	thermometers	The number of thermometers donated.
24	visors	The number of visors donated.
25	tests	The number of tests (/ test kits) donated.
26	ventilators	The number of ventilators donated.
27	other_medical	Variable for other medical items.
28	other_non_medical	Variable for other non-medical items, such as food donations and agricultural supplies.
29	value_medicalaid_usd	Estimated value of the medical items and cash in US$.
30	value_nonmedicalaid_usd	Estimated value of non-medical items in US$.
31	total_value_usd	The combined value of medical and non-medical aid.
32	value_source	Indicates the source of the value estimate. 0 = calculation based on number of donated items and the reference prices. 1 = calculation based on box volumes and reference prices; 2 = value indicated by the source; 3 = combination of 0 and 2.
33	aid_type	Categorical variable dividing donations into medical, non-medical and mixed aid. 0 = medical aid, 1 = non-medical aid, 2 = both kinds of aid.
34	source	All the sources from which the information for the given donation comes.
35	notes	Additional remarks.

3 General Principles of Data Collection

The dataset focuses explicitly to Chinese humanitarian aid during the first year of the CCA campaign. Therefore, to be included in the dataset, the donation would have to be explicitly made in the name of preventing or mitigating the damage of the Covid-19 pandemic. General foreign/development aid is not included in the dataset. Besides donations, China sold the same items and equipment across the globe. Because the focus of the dataset is humanitarian aid, commercial exports of medical equipment and PPE are not included in the dataset. Finally, China sought to assist its citizens abroad, especially in the first stages of the pandemic. Donations to the Chinese diaspora were not included in the dataset.

The data collection process relied on open online sources and followed a country-by-country approach. It began with a review of the news archives of the official websites of all Chinese embassies. News items referencing a donation by a Chinese actor for the purpose of containing or alleviating the pandemic were inspected and the relevant details recorded into the dataset according to the variables in Table 1. If an embassy news archive did not yield data, the search was expanded to other sources (Chinese state agencies' news archives, Chinese state media, and local media – see next section) and the same recording process was repeated.

Often donations made under the rubric of the CCA campaign were either collective or lump-donations with multiple donors and/or recipients. These donations were disaggregated at least at the level of donor/recipient types, or at the level of individual donors/recipients if possible. If the number of donated items by donor/recipient (groups) was known, that was recorded to the dataset, otherwise the number of donated items was divided equally between donors/recipients. This was done so that no donor/recipient group would be over-/under-represented in downstream analyses.

In case a donation included both medical and non-medical items, their values were calculated separately in accordance with the two variables estimating donation value. If a donation included both medical and non-medical items and the total value was given, but the donation was not itemized, the values of medical and non-medical items were assumed to be even.

4 Data Sources

The dataset is based on publicly available information regarding donations made by Chinese state and non-state actors. The donations are based on circa 2,000 individual sources in more than twenty languages. Full references of sources indicated in variable #34 of Table 1 are included in Appendix 2. The sources can roughly be categorized into the following groups:

- Official websites and social media accounts (Facebook and Twitter) of Chinese embassies.
- Chinese state media outlets, such as Xinhua and Xinhua Silk Road Information Service, CGTN, Global Times, and People's Daily.
- Chinese state agencies, including the Ministry of Foreign Affairs and the China International Development Cooperation Agency (CIDCA).
- Other news outlets.

The CCA campaign did not go unnoticed elsewhere in the world and similar datasets and CCA trackers had been published during and after the pandemic. The present dataset benefitted from many of these. Notably, a dataset focusing on CCA in the Latin America and the Caribbean during the first half of 2020 was incorporated into the present one. The dataset was compiled by Telias & Urdinez (2022)[1] and published in the public domain. Their work is acknowledged where appropriate in the dataset. Further data was collected to cover the latter half of 2020 in the region.

[1] Telias, Diego, and Francisco Urdinez. 2022. 'China's Foreign Aid Political Drivers: Lessons from a Novel Dataset of Mask Diplomacy in Latin America during the COVID-19 Pandemic'. *Journal of Current Chinese Affairs* 51 (1): 108–36. https://doi.org/10.1177/18681026211020763.

5 Estimating the value of donations

To facilitate the analyses undertaken in the two research articles, the monetary value of the CCA campaign had to be established. All estimates of monetary value are in United States dollars (USD). Chinese donors did not systematically report the value of donations or the number of donated items. Consequently, circa 15 percent of the data were missing the value estimate after the initial round of data collection.

To estimate the value of donation thus required different approaches depending on the accuracy of the source. The approaches can be divided into three categories: 1) If the source explicitly stated the value of a donation, that value was recorded. If the value of a donation was given in a currency other than USD, it was converted using historical exchange rates from the OANDA currency converter.[2] 2) If the value was not provided but the number of donated items was, an estimate was calculated by multiplying the number of items by a reference price. 3) If the source did not itemize what had been donated, we used, where possible, a method of visual inspection of photographs taken from donation ceremonies to estimate what was donated and how much. This estimated number of items was then multiplied by corresponding reference price(s). This last method is detailed further below.

The list of reference prices used in approaches 2 and 3 was compiled by Telias and Urdinez (2022). They had compiled the list for their own analyses on the basis of average prices of medical items and equipment indicated Alibaba.com as in May 2020. They validated the reference prices by recalculating the product values in January 2021 to control for prices varying in time. The prices had remained the same (ibid., p. 116). We supplemented this list of reference prices by consulting the Hospital District of Southwest Finland. Our list of reference prices is presented in Table 2.

[2] https://www.oanda.com/currency-converter/en/

Table 2. Reference prices for Chinese Covid-19 Aid (US$).

	Product	Price	Price per	Unit
Medical items	Masks, surgical	0,40		
	Masks, N95, KN-95, FFP2	2,00		
	Quick Covid-19 tests	60,00		
	Ventilators	45000,00		
	Military hospital	20000000,00		
	Defibrillator	2000,00		
	Doppler ultrasound	2500,00		
	Ambulance	30000,00		
	Multiparameter monitor	450,00		
	Latex gloves	20,00	1000	pcs
	Protective suits	15,00		
	Goggles	1,50		
	Infrared thermometer	15,00		
	Alcohol gel (100ml)	0,80	100	ml
	Alcohol gel (1000ml)	2,50	1000	ml
	Disposable shoe cover	1,00	50	pairs
	Electric bed (Fowler)	200,00		
	Thermic bed	1000,00		
	Temperature monitoring camera (Dahua)	720,00		
	Huawei artificial intelligence Diagnostic aid system	150000,00		
	Visor	0,80		
	PCR machine*	32400,00		
	Infusion pump**	1180,00		
	MGISP-960***	6440,00		
Non-medical items	Cleaning products kit	20,00		
	Food basket	20,00		
	Food box	30,00		
	Huawei media pad t3	150,00		
	Lunch kit	6,00		
	Rice	2,00	kg	

* Price range during Covid-19 pandemic according to Hospital District of Southwest Finland: €25k - 35k. We use €30k converted to US$ as it was valued in mid-May 2020 to follow the reference prices of Telias and Urdinez.

** Price range during Covid-19 pandemic according to Hospital District of Southwest Finland: €1k-1,2k. We use €1,1k converted to US$ and then rounded down to the nearest decimal as it was valued in mid-May 2020 to follow the reference prices of Telias and Urdinez.

*** Average price (rounded down to the nearest ten) of 21 automated virus nucleic acid extraction systems on the online platform for Chinese wholesalers/suppliers made-in-china.com. The price was calculated on 29 August 2022.

As mentioned above, about 15 percent of the donations in the dataset was missing either the value or the number of donated items. To estimate the value of these donations, we developed an alternative method to first assess what was donated and how much, and then to estimate the monetary value. This method was based on the inspection of the photographs of donation ceremonies where the donated items were often prominently featured. We calculated the number of boxes containing the donated items and then estimated the monetary value. By doing so we were able to reduce the number of missing estimates of monetary value to about 6 percent.

More specifically, the method of inspecting source photographs proceeded by the following steps:

1. We inspected the photographs of donation ceremonies in sources and counted the number of boxes containing donations.
2. By using the help of nursing science expert and web sites of online retailers of medical items, we identified the size of containers in one category in which the medical items were typically transported.
3. To estimate the size of each box in each source would have been impossible. Thus, for each item type, we generalized the box sizes to three categories: small, regular, large. The container size identified in the previous step served as the baseline.
4. We calculated how many items approximately fitted in each category.
5. We calculated how many items fitted in the boxes of each donation. For simplicity, we assumed the items were evenly distributed to the boxes.
6. With the estimated number of each item type per donation, we calculated the value with the list of reference prices in Table 1.
7. As a precaution, we adjusted the value estimates produced by this method toward the median value of donations where the value was known by adjusting the size of each box category. This way, the value of donations obtained by this method should be in the same region as those where the value is indicated by the source.

Table 3 presents our estimate of how many items each box size of each item type contains. We used expert-help and online sources to estimate how much one box category can contain items for each item type, and used that as a baseline, together with the photographs of donation ceremonies, to calculate how many items the remaining two box categories can contain.

Table 3. Number of items per box category.

Product	Size category	Quantity	Source
Masks, surgical	Small	2000	[1]
	Regular	4650	
	Large	6750	
Masks, N95, KN-95, FFP2	Small	500	Consultation with nursing science expert
	Regular	1170	
	Large	1690	
Protective clothing	Small	100	Consultation with nursing science expert
	Regular	580	
	Large	840	
Goggles	Small	100	[2]
	Regular	184	
	Large	266	
Gloves	Small	1000	Consultation with nursing science expert
	Regular	7500	
	Large	10800	
Disposable shoe covers	Small	2000	[3]
	Regular	9800	
	Large	14200	
Thermometers	Small	65	
	Regular	100	[4]
	Large	212	
Visors	Small	220	[5]
	Regular	500	
	Large	740	
Test kits	Small	1000	[6]
	Regular	1850	
	Large	2675	
Ventilators	Large	1	[7]

[1] http://shuangma-china.com/en/Product.asp?Action=View&ProductID=295&Catalog=35
[2] https://www.alibaba.com/product-detail/Reusable-medical-goggles-protective-goggles-anti_1600156346516.html?spm=a2700.galleryofferlist.topad_classic.d_image.5e572818F7bBkU
[3] https://www.alibaba.com/product-detail/Medical-100-Factory-Hot-Sale-Non_1600082234697.html?spm=a2700.galleryofferlist.normal_offer.d_image.6bec24eeDac4WH&s=p
[4] https://www.globalsources.com/Medical-infrared/infrared-thermometer-1188090925p.htm
[5] https://pro-health.en.made-in-china.com/product/XwgmCYjyrQWD/China-In-USA-Stock-Safety-Protective-Face-Shield-Medical-Face-Shield-Visor.html
[6] https://www.globalsources.com/ELISA-kit/Assay-Kit-1188548023p.htm
[7] https://gdhymed.en.made-in-china.com/product/BZItEfsHhlcr/China-Hospital-Clinics-ICU-Medical-Surgical-Equipment-Ventilator-Machine-with-Touch-Screen-for-Operation-Room-Instrument.html

These estimates come with caveats. For example, because the information provided by donors about the price, manufacturers and models was often vague or even absent, we had to generalise the reference prices over each item type regardless of differences in pricing between manufacturers and models. Furthermore, our reference prices are fixed; they do not reflect currency or price fluctuation over time. As with the reference prices, we had to simplify the estimation of the box sizes. We did so by classifying container boxes into three fixed-size categories (small, regular, large). This came at the expense of reality but allowed us to quantify the box contents in a systematic fashion.

Moreover, additional limitations affected the dataset's accuracy:

- The reference prices used for valuation were fixed, whereas actual market prices fluctuated over time.
- Chinese donors rarely disclosed detailed information about the make and model of donated items. As a result, estimates were based on averages of product categories.
- Differences in terminology across languages and ambiguous terminology by donors made the recording of data difficult.