Ukraine Support Tracker – Methodological Update & New Results on Aid "Allocation" (April 2024)

Pietro Bomprezzi, Ivan Kharitinov and Christoph Trebesch

This research note covers several important novelties of our Ukraine Support Tracker project. We focus on four main points:

1. Our <u>new "allocations" measure</u> to better track aid sent to Ukraine
   a. Definition and measurement of aid "allocations"
   b. Results from our "allocation" dataset (incl. comparison with "commitments")

2. <u>Multi-year aid packages</u> and how we deal with them in our dataset

3. <u>Data quality:</u>
   a. Improved sources: why the quality of our sources and data has improved
   b. A new data transparency index on weapon deliveries
   c. How good is our dataset? New benchmarking exercises using newly released reports by the Netherlands, the UK, France, and Germany

This update complements our last research paper of February 2023, which describes our general approach and methodology:

- Christoph Trebesch, Arianna Antezza, Katelyn Bushnell, Andrè Frank, Pascal Frank, Lukas Franz, Ivan Kharitonov, Bharath Kumar, Ekaterina Rebinskaya, Stefan Schramm (2023). "The Ukraine Support Tracker: Which countries help Ukraine and how?" Kiel Working Paper, No. 2218. Download here.

1. Introducing a new "allocations" measure of aid

2.1. Definition and measurement of aid "allocations"

Thus far, the best available data to analyze and compare aid to Ukraine was on commitments. This is because governments tend to be more transparent regarding commitments rather than on deliveries, e.g. on weapon transfers to the battlefield. Whenever the data allows, we also collect and compare aid delivery and disbursement, but this was thus far only possible for subset of the data, e.g. for certain heavy weapons and for budgetary support. Given the data constraints and lack of government transparency on deliveries, we thus focus on commitments as the baseline measure of Ukraine support. Over the past months, however, the quality and availability of official sources has improved, and European governments have become more transparent. As a result, we are able to expand our project and also measure the specific allocation of aid actually delivered or to be delivered to Ukraine.

Aid "allocations" are defined as aid that has already been delivered or is earmarked for delivery. Governments allocate aid through the implementation of specific aid packages to be sent to Ukraine. These announcements can be usually linked to previous government commitments of military, financial or humanitarian aid. In practice, the commitment is "drawn down" and specified through an allocation, thus moving closer to the actual delivery to Ukraine. For example, we code military aid as "allocated" if a government announces a new military aid package, including a list on which exact weapons are to be sent. We can then quantify the value of this package and code it as allocated.

In our dataset, almost all allocations we have coded have either been delivered or are intended for delivery in the short to medium term, meaning in a few, days, weeks or months. There are few exceptions in which governments allocate military aid that is to be sent only further in the future, e.g. because production takes until end-2024 or even 2025.[1] But these cases are very rare, and account for less than 1% of total allocated aid in our data.

The new allocation data allows us to present a much better picture on aid actually arriving in Ukraine, i.e. effectively available for the Ukrainian army and government. This is the case because our new allocation numbers consider only aid which has been earmarked for a specific purpose, therefore excluding potentially unfulfilled promises.

Distinguishing "commitments" from "allocations" is particularly important for multi-year aid programs and budgetary aid (e.g. the EU's MFA program), as we can distinguish between large but unused commitments and those parts of the program that have been used or allocated for Ukraine, e.g. for weapon delivery or financial aid disbursements. Tracking the allocation of specific aid packages also allows for a more precise assessment for what committed aid is ultimately used for (purpose coding) and helps us to control for double counting and erroneous

---

[1] Canada for example announced a weapon acquisition program for 50 armoured personal carriers that will be delivered only in a few years from now, from Belgium for reconstruction projects, and from Latvia for future NATO contributions.

entries. Aid packages which are standalone, i.e., allocations which are not part of commitments, are coded as independent entries.

Take the example of Norway's Nansen Support Programme, which budgeted NOK 7.5 billion (approx. EUR 1 billion) for military aid in 2023. In our new dataset update, we can now subdivide these 7.5 billion commitments into 15 military allocation packages, with exact dates and aid lists over the course of 2023, e.g. for the delivery of main battle tanks, anti-aircraft surface-to-air systems, and general military equipment. Another example is the Swedish Recovery and Reform cooperation program with commitments of EUR 0.5 billion to be disbursed between 2023 and 2027. For 2023 we tracked 2 separate winter packages that were financed from this fund, as allocations of specified infrastructure and further civilian support. Finally, there is the well-known case of the US Presidential Drawdown Authority, which we already discuss in detail in our working paper (see also Figure 1 on the depletion of US military aid below).[2]

2.2. Results from our new "allocations" dataset

In this section we show key insights from our new allocations data, in particular trends across donors and over time and on the large gap between commitments (generally promised aid) and allocations (specified aid for near term delivery).
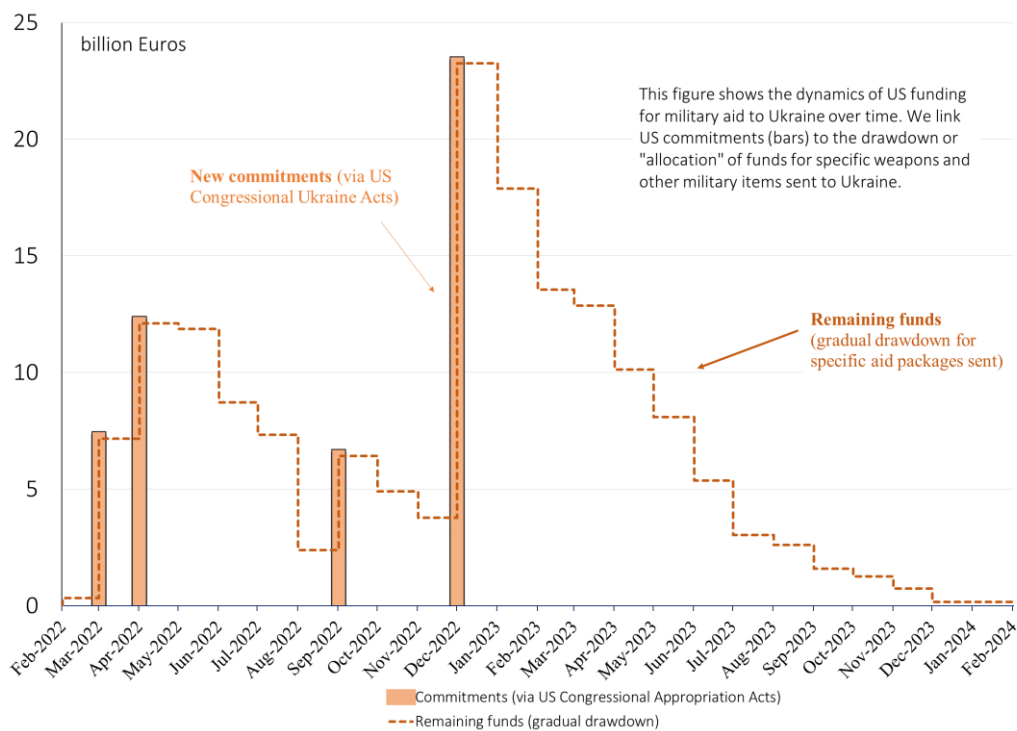
We start with Figure 1 on the allocation of US aid, since it nicely illustrates how US aid depleted over time and how our new allocation dataset is structured. The orange bars show the date and size of new military aid commitments for Ukraine that we coded from the various Ukraine appropriations acts by the US Congress since February 2022 (note: here we only show military commitments destined for delivery to Ukraine and not the total volume of these acts, see our main paper for details on US aid).

The dotted lines show the level of residual funds, which decline with each allocation made, i.e. with each US military aid package that is earmarked for delivery. These military allocations consist mostly of drawdowns under the Presidential Drawdown Authority, an instrument that was very effective in rapidly delivering military assistance to Ukraine. The graph shows the importance of distinguishing between commitments and allocations to understand the dynamics of aid over time.

---

[2] In most cases, the sums of commitments and subsequent allocations or "drawdowns" match perfectly. However, in the US case there have been rounding or revaluation issues, leading to a small divergence of committed and allocated funds in aggregate. For details see the detailed congressional reports here: https://www.congress.gov/118/meeting/house/116204/documents/HHRG-118-GO06-20230713-SD003.pdf; and here https://crsreports.congress.gov/product/pdf/IF/IF12040

Figure 1: US military commitments and allocations over time

Note: This figure shows the dynamics of US funding for military aid to Ukraine over time. We link US commitments (bars) to the drawdown or "allocation" of funds for specific weapons and other military items sent to Ukraine.

Figure 2 expands on Figure 1 by showing the dynamics of commitments vs. allocations for the three types of US aid to Ukraine we track, namely military, financial and humanitarian aid. The dotted line represents total commitments per month, while the shaded areas represent total allocations per month, for each of these aid types. US commitments peaked at EUR 70.38 billion after the US appropriations bill of late 2022. Since then, the committed funds have been gradually used up by allocating military and financial aid to Ukraine. Because no new Ukraine appropriation act has passed US congress, lines of both commitments and allocations have flattened, meaning that US aid flows have all but come to a halt. For example, U.S. military allocations averaged EUR 2.9 billion per month in the first half of 2023 (January through July), but they dropped to an average of just EUR 0.57 per month from August through December 2023. Given the recent passing of the latest Ukraine Security Supplemental Appropriations Act 2024, we can expect new aid allocations as commitments will first spike and then be drawn down over time. The figure also illustrates the dominance of military aid in US aid. For illustration, total US humanitarian aid allocations amount to EUR 2.5 billion (over 2 years), comparable to what the US allocated for military aid in a single month.

Figure 2: US aid over time- committed vs. allocated
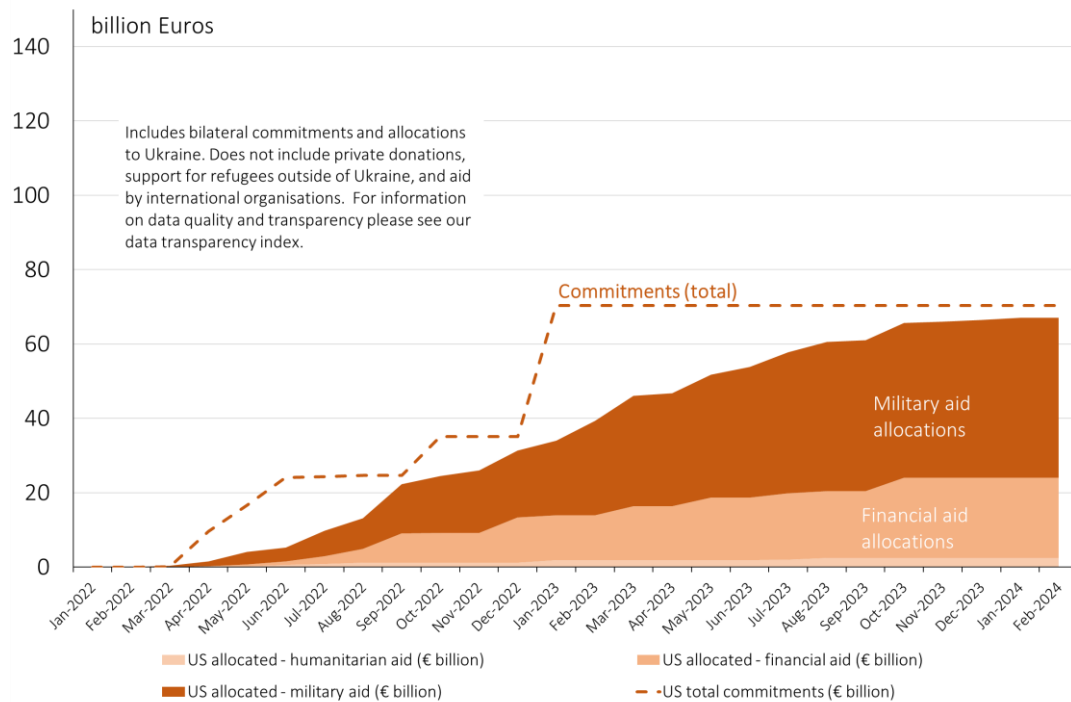
Includes bilateral commitments and allocations to Ukraine. Does not include private donations, support for refugees outside of Ukraine, and aid by international organisations. For information on data quality and transparency please see our data transparency index.

Commitments (total)

Military aid allocations

Financial aid allocations

- US allocated - humanitarian aid (€ billion)
- US allocated - financial aid (€ billion)
- US allocated - military aid (€ billion)
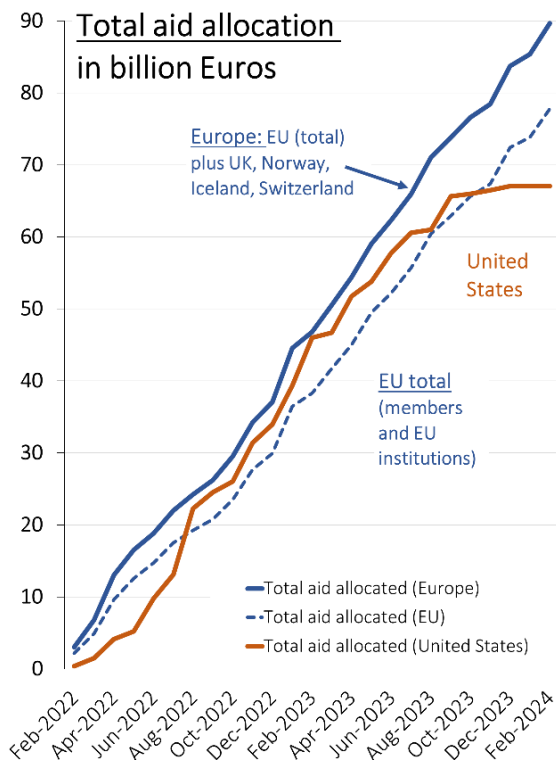- US total commitments (€ billion)

Note: Allocations are defined as aid which has been delivered or specified for delivery. Data does not include private donations, support for refugees outside of Ukraine, and aid by international organizations. For information on data quality and transparency please see our data transparency index.

Figure 3: EU aid over time- committed vs. allocated
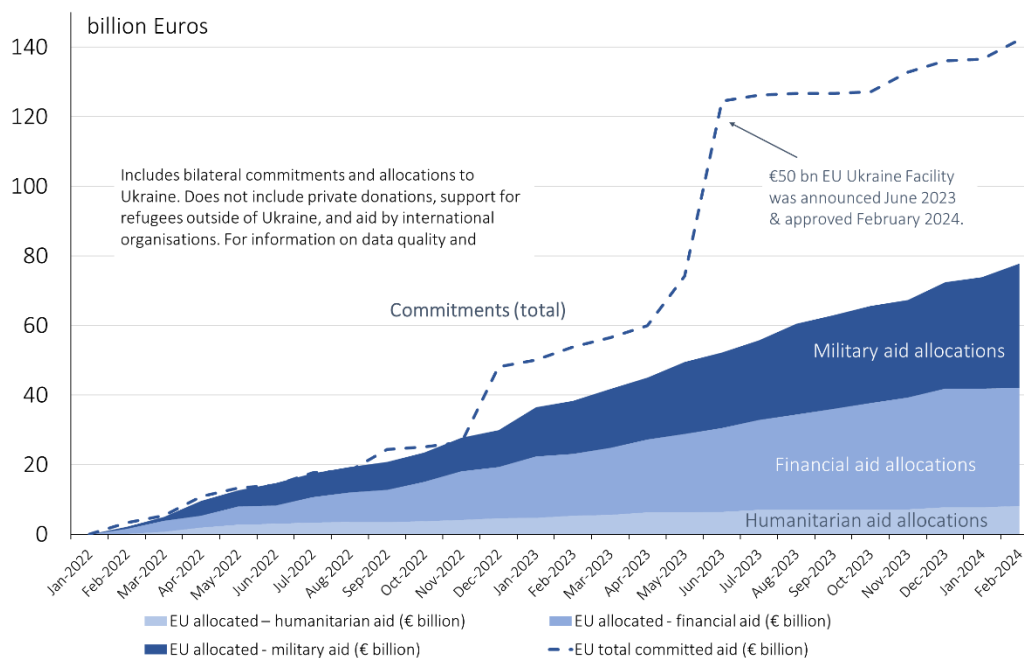
Includes bilateral commitments and allocations to Ukraine. Does not include private donations, support for refugees outside of Ukraine, and aid by international organisations. For information on data quality and

€50 bn EU Ukraine Facility was announced June 2023 & approved February 2024.

Commitments (total)

Military aid allocations

Financial aid allocations

Humanitarian aid allocations

- EU allocated – humanitarian aid (€ billion)
- EU allocated - financial aid (€ billion)
- EU allocated - military aid (€ billion)
- EU total committed aid (€ billion)

Note: Allocations are defined as aid which has been delivered or specified for delivery. Data does not include private donations, support for refugees outside of Ukraine, and aid by international organizations. For information on data quality and transparency please see our data transparency index.

Figure 3 shows the same graph for the EU as a whole, thus summing up EU-level aid through the EU Commission and Council and all aid by EU member states. This repeats the scheme of Figure 2, but for EU aid. Unlike for the US, EU commitments have continued to grow, reaching over EUR 146 billion as of February 29th, 2024. In terms of allocations, EU aid totals EUR 78 billion. There is thus a major gap between commitments and allocations, as only about 50% of promised aid has been delivered or allocated for delivery or disbursement. This means that aid arriving to Ukraine is far smaller than what commitment numbers suggest, and it also means that the EU still has a lot of financial room to allocate future aid to Ukraine.

Figure 4 combines the above graphs to make a more direct comparison of US and European aid allocations over time. On European aid we now also look beyond EU member states and institutions and add all European donors including Iceland, Norway, Switzerland, and the United Kingdom. Panel A shows total allocations, including military, financial, and humanitarian. Since February 2022, Europe has consistently outpaced the United States in terms of allocated aid packages (those designated for near term delivery). Europe's initial lead is a novel result, since in all previous releases we used commitments only and always found the US to be ahead from the start. Two years later, as of February 29th, 2024, Europe's lead in allocating aid to Ukraine has grown further, with EUR 89.69 billion in allocations by European donor countries and institutions compared to EUR 67.1 billion of US allocations (about 25% less). The US, however, is still ahead in military aid allocations, although the gap is shrinking due to the slowdown in U.S. aid dynamics. As of February 29th, 2024, the US had allocated EUR 43.1 billion in military aid, which is just over EUR 1 billion more than European countries.

Figure 4: US vs European aid allocations over time

Panel A: Total aid allocations – US vs Europe

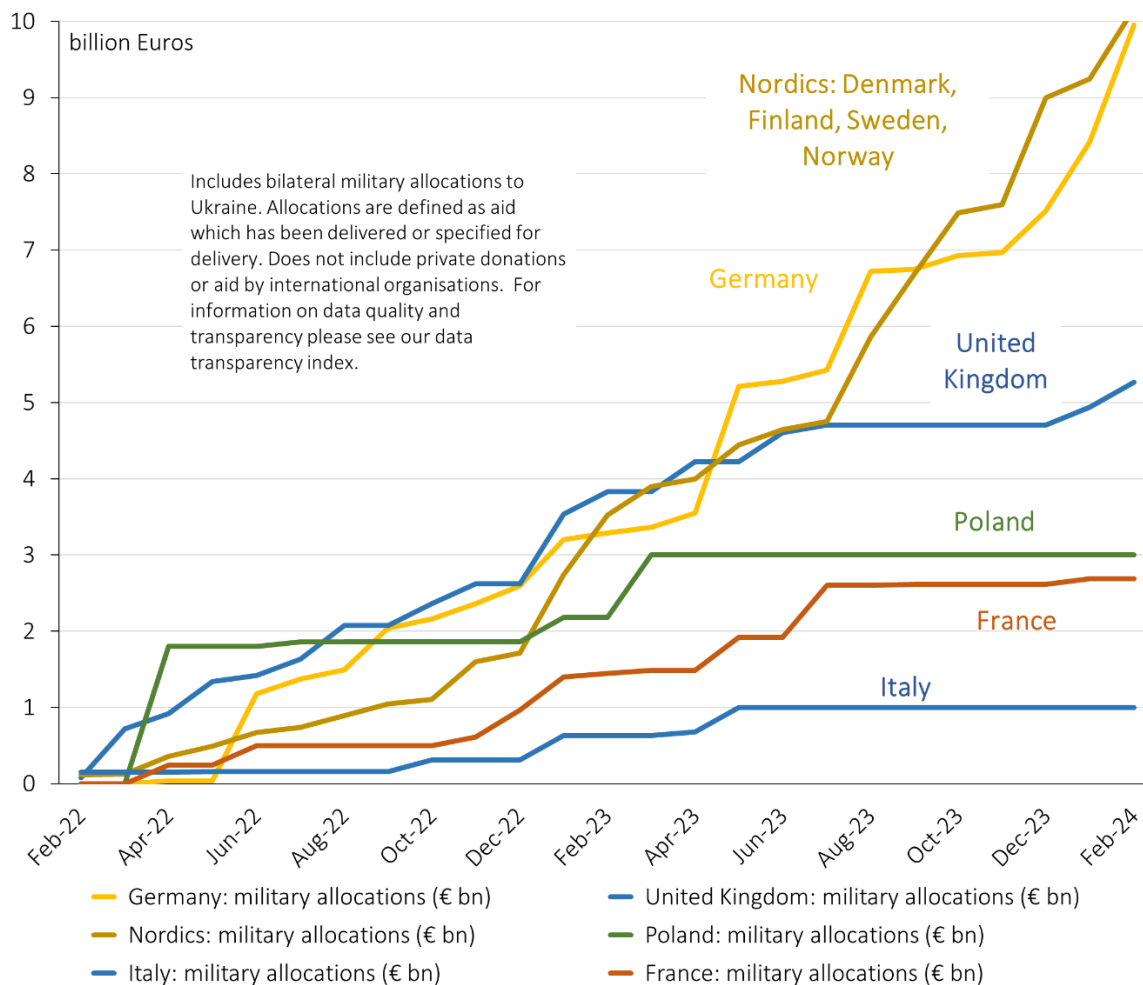Panel B: military aid allocations – US vs Europe
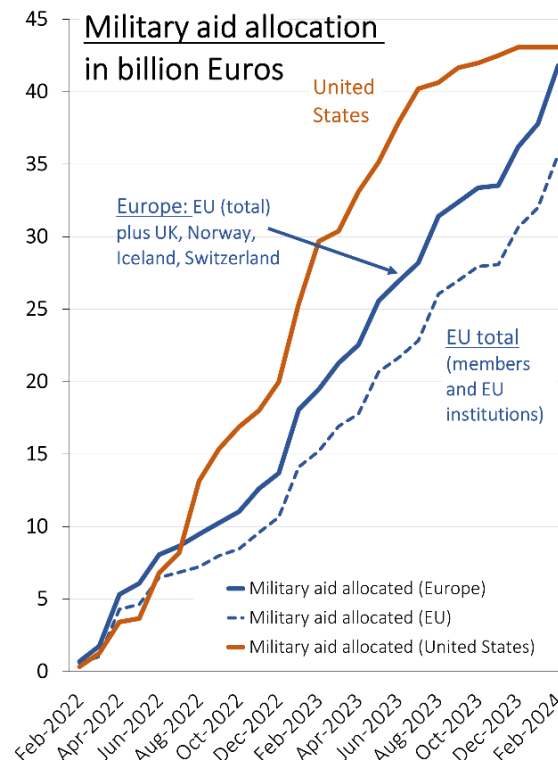
Note: Allocations are specific aid packages have been delivered or earmarked for delivery to Ukraine. Data does not include private donations, support for refugees outside of Ukraine, and aid by international organizations. For information on data quality and transparency please see our data transparency index.

Figure 5 looks at the trends of military allocations for the largest European donors over time. In the initial months after Russia's invasion, we find the United Kingdom and Poland to have allocated the largest amounts of weaponry and military support to Ukraine. Today, as of February 29th, 2024, the Nordic countries (Denmark, Finland, Sweden and Norway) and Germany are the two most important donors in terms of allocated military aid, with a total value of EUR 10.2 (Nordics) and EUR 9.95 billion (Germany). UK aid allocations have plateaued at around EUR 5 billion since mid-2023 and we also find little evidence that Poland has sent large amounts of military aid over the past year.

Compared to the Nordics, the UK or Germany, we find much smaller military aid allocated by Italy, whose total military allocations are below EUR 2 billion in our dataset. However, it should be emphasized that Italy and Poland are still not very transparent in their aid to Ukraine, so we are likely to underestimate total allocations. The most recent update of official French figures (discussed below) brings the reported amount of delivered military aid to EUR 2.6 billion as of our data collection extending to February 29th, 2024. This has roughly doubled the line for France in Figure 5, but still places France's military allocations far below the UK, for example.

Figure 5: Top European donors - military aid allocated over time

Note: Allocations are specific aid packages have been delivered or earmarked for delivery to Ukraine. Data does not include private donations or aid by international organizations. For information on data quality and transparency please see our data transparency index.

2. Multi-year aid packages

Our baseline data tracks bilateral, government-to-government, commitments in military, financial, and humanitarian aid. Over the first year of the war, we did not differentiate between short and long-term aid, because most aid flows in the initial months came in the form of ad-hoc, short-term promises and deliveries.

More and more countries, however, have announced multi-year aid packages. These multi-year commitments often come in the form of special "funds" that are designed to gradually allocate a pot of donor money for specific aid packages. Over time, the committed funds are then used up (or earmarked) for specific weapon deliveries or budgetary support. Multi-year commitments tend to be very large and allow both Ukraine and donor countries to better plan

aid allocation and delivery over the medium term. Against this backdrop we now make a distinction between short-term and multi-year commitments, as follows:

- A *short-term commitment* is defined as aid that is to be allocated or delivered within the next fiscal year. This is mostly the calendar year with some exceptions (In Canada or the UK the fiscal year runs from April to March so short-term aid is referred to financing within this period). Examples include the one-off transfer of weapons from own military stocks or the announcement of emergency aid. The majority of aid packages in the first year of the war were of this short-term nature.
- A *multi-year* commitment is defined as a spending plan announced over a horizon of two or more years, with funds pledged but not yet allocated over time or for specific purposes. Examples include the Norwegian Nansen Support Programme, the Danish Ukraine Fund, or the German security capacity building initiative ("Ertüchtigungshilfe"). These programs may earmark funds for the current and future fiscal year, as well as extend authorizations to enter into additional commitments in the future.

We now provide a brief overview of the main multi-year aid programs, which is summarized in Table 1 at the end of the section.

Denmark

In March 2023, Denmark announced its intention to establish a Ukraine fund dedicated to financing future aid for Ukraine. The fund has been expanded several times since then. As of February 29th 2024, the committed funds under the scheme amounted to DKK 59.6 billion (EUR 8 billion) –unevenly spread over 6 years (2023-2028), as follows: 2023: DKK 16.4 billion; 2024: 13.2 billion, 2025: 12.8 billion 2026: 9.2 billion; 2027: 7 billion; 2028: 1 billion.

European Union

In June 2023, the EU Commission proposed a major EU support package of up to EUR 50 billion to be allocated between 2024 and 2027 (EUR 12.5 billion yearly). This so-called "Ukraine Facility" was set up for short- and medium-term assistance under 3 pillars: 1) resilience and reconstruction, 2) budgetary and financial support, and 3) EU accession support, including funds to improve the rule of law and democracy as well as administrative expenses. The finalization of this program was long in the making but it was finally approved on Feb. 1st, 2024.

Germany

In May 2023, the German government originally announced commitments of EUR 10.5 billion in military support for funding future industry purchases through the "Ertüchtigungshilfe" to be allocated between 2024 and 2027. The sum of this funding was increased to around EUR 12 billion since then. Section 3 benchmarking on Germany explains these future commitments in the case of Germany in greater detail.

Lithuania

On July 24th, 2023, the government of Lithuania announced a new aid fund of EUR 200 million to support and finance the Ukrainian military. The program will span a timeframe from 2024 through 2026. As of February 29th, 2024, around 20 million in military aid had been allocated under this fund.

Norway

On February 16th, 2023, Norway was one of the first donors to establish a multi-year strategy under the so-called Nansen Support Program in February 2023, worth a total of NOK 75 billion (EUR 6.6 billion). The program covers both military and humanitarian assistance, including reconstruction and maintenance of civil infrastructure. Specifically, the fund is currently designed to provide NOK 15 billion (EUR 1.3 billion) per year for both humanitarian and military assistance, with an equal split between the two (NOK 7.5 billion each).

Sweden

On the 17th of July, 2023, the Swedish government adopted a new strategy to support Ukraine. The so-called Recovery and Reform cooperation agreement commits approximately EUR 500 million (SEK 6 billion) from 2023 until 2027, focusing on a wide range of aid purposes, including for critical infrastructure, essential social services, the green transition, entrepreneurship and trade, security and stabilisation, and human rights and democracy. Until further information is provided, we consider the financing as evenly split into 5 equal parts.

Switzerland

On April 12th, 2023, the Swiss federal council reserved funding of CHF 1.5 billion for the next international cooperation strategy period from 2025 to 2028 for Ukraine. The fund will be used for humanitarian aid and development cooperation.

Table 1: Main multi-year aid programs

Country	Announcement Date	Disbursement Period	Total Commitment (billion EUR, Feb 29, 2024)	Allocated (billion EUR, Feb 29, 2024)	Outstanding (billion EUR, Feb 29, 2024)
Denmark	May 2023	2023-2028	8	4	4
EU	June 2023	2024-2027	50	0	50
Germany	May 2023	2024-2027	12	4.1	7.9
Lithuania	July 2023	2024-2026	0.2	.02	0.18
Norway	Feb 2023	2023-2027	6.6	1.2	5.4
Sweden	July 2023	2023-2027	0.52	0.08	0.44
Switzerland	April 2023	2025-2028	1.6	0	1.6

3. Data quality

3.1. Improved sources: why the quality of our sources and data has improved

There are several reasons why the quality of our sources and, therefore, of our dataset has increased considerably over the course of the past year.

- First, there is a general trend towards a formalization of aid schemes by donor governments. Rather than ad-hoc announcement or rushed parliamentary bills, as during 2022, governments now incorporate Ukraine aid into their current and medium-term budgetary planning and have launched designated Ukraine support funds backed by laws. This allows us to track both commitments and aid package allocation in a more precise way.

- Second, most governments have become much more transparent over time (with a few exceptions like France or Italy). 93% of tracked aid commitments in our dataset are now backed up by at least one official government document, a significant jump with respect to the number of tracked aid packages as of January 2023, where only 78% were backed by at least one official government source. The entries backed by official sources cover 99% of total aid captured in our dataset. Only in rare cases do we continue to rely on non-official documents, such as newspaper interviews with or tweets by a defense minister announcing the delivery of an important weapon. These quasi-official sources have become almost insignificant in recent updates.

- Third, governments make much more of an effort to publish their aid numbers and in-kind donations systematically. When this project started in April 2022, almost no country provided systematic information. As of February 2024, 25 of the 42 donor governments now maintain a regularly updated overview website on their military, humanitarian, or financial assistance to Ukraine. In our dataset, those donors with a detailed website account for 96% of total aid commitments tracked (EUR 243 billion).

- Fourth, we improve the overall quality of our price data that we use to estimate in-kind donations in the case we do not have credible official data on the value of weapons or humanitarian goods. Especially for heavy weapons, we spent additional weeks to gather new price data from the most reliable sources, namely from (i) official statements by the manufacturer, (ii) official government procurement reports, or (iii) bilateral contracts between governments. It should be emphasized, however, that we use the officially announced package and item values as a primary source when coding aid values. Only in the case where these are not reported or seem clearly biased, do we rely on our own estimated values based on our prices and registered item numbers. In total, only 23% of all commitment entries (corresponding to 2% of total aid) rely on our own evaluation using prices instead of donor reported values. The same holds for allocations, where the values are 26% (items coded) and 6% (shared of total aid), respectively.

3.2. A new data transparency index on weapon deliveries

The transparency on military deliveries to Ukraine is far from ideal. Out of security concerns, governments are unwilling to provide real-time information on when which military items are transferred across the border. However, some governments reveal these deliveries a few weeks later, which allows us to code deliveries reasonably well, at least for a few countries.

We define weapon delivery as an item that has been confirmed as having been transferred to Ukraine through an official statement or an official document. Our main source for heavy weapon deliveries are thus official reports. For cross-checking purposes, we also draw on the Ukraine-related reports by the United Nations Register of Conventional Arms (UNROCA). UNROCA focuses on major conventional arms, and delivery data is collected on a voluntary reporting basis by donor and recipient countries, including both government-to-government transfers as well as private transactions.

Unlike other sources, such as Oryx, we do not on rely photographic or second-hand evidence, such as reports on the ground or open-source intelligence channels.[3] Furthermore, we focus explicitly on key military items, namely heavy weapons (see our long research paper for a definition and discussion). This means that we do not prioritize tracking the delivery of small caliber conventional arms or other smaller, in-kind military assistance items, also because these are of lower monetary value and are often not even properly captured by the donors themselves.[4]

Given the growing relevance of heavy weapons in the conflict, we seek to track their delivery as well as possible, but strive to be clear about the data and transparency constraints we face for our coding. For this purpose, we developed a second transparency index that focuses specifically on the transparency and data available on heavy weapon deliveries. This more specific index complements the general transparency index that we regularly update on our website and that is described in detail in our main research paper.

Our new heavy weapon transparency index is based on three subcomponents, the first being binary (yes/no) and the other two being continuous. These sub-indices on weapon transparency can be described as follows:

1. Centralized website: Is there a designated government website on Ukraine support with detailed heavy weapon delivery information (1 = Yes, 0 = No)
2. Official source on deliveries (share of heavy weapon entries in percent): Share of heavy weapon delivery entries in our dataset for which we have an *official* source, meaning a government report or official statement. The shares for each country are computed across all listed heavy weapon entries by that respective donor government.

---

[3] The Ukraine Weapons Tracker or Oryx are two one examples of open-source intelligence platforms that rely on video and photographic evidence on military equipment delivery https://twitter.com/uaweapons?lang=en.
[4] See NYT article on "U.S. Military Aid to Ukraine Was Poorly Tracked, Pentagon Report Says." https://www.nytimes.com/2024/01/11/world/europe/us-military-aid-ukraine.html

3. Any delivery source (share of heavy weapon entries in percent): Share of heavy weapon entries in our dataset for which we have *any* kind of source on weapon deliveries, including quasi-official ones (e.g. a tweet by a minister). The shares for each country are computed across all listed heavy weapon entries by that respective donor government.

The final index score per country is the sum of these three sub-indices. A score of 3 is the highest possible and suggests full delivery transparency, while 0 is the lowest possible score. Figure 6 shows the resulting index value by country. The average index score is 1.38 points, indicating a rather low degree of transparency with regards to heavy weapon deliveries on average. Among the most transparent are Germany and Canada, as they provide updated numbers on delivered weapons. The US instead does not provide centralized information on deliveries, and we are able to provide information on deliveries for only 37% of committed US heavy weapons.

Figure 6. Transparency index on heavy weapon deliveries
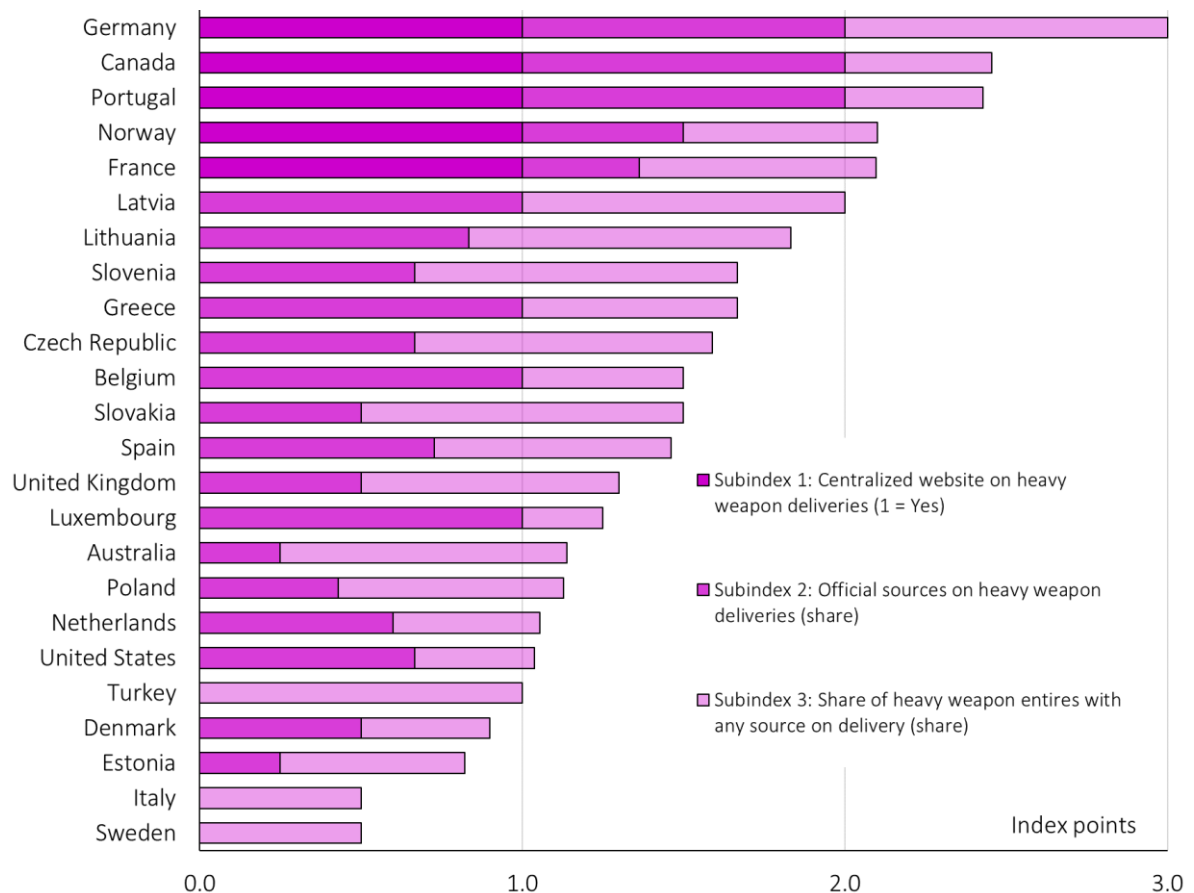
Note: Index shows the information quality and transparency regarding the deliveries of heavy weapons. The total index score is calculated as the sum of three subcomponents: 1 if the donor maintains a centralized website otherwise 0, 1 if there is an official source where heavy weapon deliveries are available otherwise 0, share of heavy weapon entries in our database for which we have any kind of delivery source.

3.3. How good is our dataset? New benchmarking exercises using newly released data from the Netherlands, the UK, France, and Germany

To check the quality and reliability of our data collection and aid valuation, we regularly conduct a series of benchmarking exercises. We do this whenever donor governments release rich new information on their aid to Ukraine. Specifically, whenever possible, we compare our own aid estimates (using imperfect information available pre-release) against the newly released information by the donor. Here we summarize the most important cases since our last working paper update:

April 2023 – The Netherlands publishes a military aid overview page:

In April 2023, the government of the Netherlands made a big step towards transparency and launched a new version of their overview page on Ukraine aid, which now included detailed lists of all military items earmarked for Ukraine, including details on weapon types and the numbers of weapons or other items committed. This rich new data release by the Dutch allowed us to assess coverage gaps and bias in our own data collection approach. Specifically, we compare the full list of Dutch military aid items we had tracked in our dataset (version February 24, 2023) with the new Dutch list.

Overall, we had identified almost all of the relevant Dutch military aid items committed to Ukraine as of Q1 2023. Specifically, our dataset had correctly listed all heavy weapons committed, including 2 Patriot air defense systems, 45 overhauled T-72 main battle tanks, and 8 Panzerhaubitze 2000. What was new to us was the exact number of 196 YPR-765 infantry fighting vehicles committed by the Netherlands in 2022. In terms of estimated values, we were also pretty close. Our value estimates of Dutch military aid as of February 24th 2023 was EUR 2.35 billion. This compares to the newly released official Dutch estimate of EUR 2.5 billion on their overview page – a deviation of less than 10%.

July 2023 – The UK releases a rich new update on military support for Ukraine:

On July 20th, 2023, the Secretary of State for Defence of the UK provided the House of commons with an update on the military support for Ukraine. The report contains both estimates of the total value of military support as well as a detailed list of in-kind military assistance. As in the Dutch case, we had identified all the main military aid items listed as aid to Ukraine in our last dataset before the UK report (using release 13 covering commitments until July 31, 2023). Most importantly, we had correctly coded all 100 anti-air and 100 anti-tank weapons committed as of July 2023, as well as all 120 artillery items and 14 main battle tanks. Also, the estimated aid amounts closely match. Our dataset listed a total of value of EUR 2.8 billion in UK military aid commitments, compared to GBP 2.3 billion (or EUR 2.6 billion) in the UK report (both aggregated at the fiscal year 2022/2023). The difference is small and driven by exchange rate fluctuations and minor discrepancies in smaller aid items which cannot be realistically tracked (such as individual military equipment).

On February 26th, 2024, the officially reported numbers regarding German military assistance to Ukraine were revised upwards to 28 billion EUR.[5] Declared German military aid has oftentimes been contradictory or unclear. Table 2 reports these newly declared numbers along with our corresponding estimates for Release 16 which covers through February 2024.

In more detail, the main aid items reported include EUR 1.6 billion in 2022, EUR 5 billion in 2023, EUR 7.1 billion in 2024 for capacity building initiatives, and EUR 6 billion in future commitment appropriations for 2025-2028. The list additionally includes EUR 2.9 billion earmarked for "deliveries to be made between 2025 and 2028" and EUR 5.2 billion as replacement costs for the weapons provided from Bundeswehr stocks.

The main challenges with this update we see are the lack of detail and the potential for double counting. For example, the new government figures value the total value of Bundeswehr stocks sent to Ukraine at EUR 5.2 billion. At the same time, the descriptions on the website give reason to assume that all or part of these costs will be funded through the capacity building initiative or from future aid authorizations. This would mean that the same aid flow is counted twice. There is similar confusion around the EUR 2.9 billion earmarked for "deliveries to be made between 2025 and 2028". It is not clear to what degree these deliveries will be financed from the corresponding financing vehicle for the same time period ("Verpflichtungsermächtigungen 2025+"). For consistency across donor countries and to avoid double counting, we excluded in-kind deliveries that are likely to be financed through those funds already counted in the "Ertüchtigungsinitiative" or "Verpflichtungsermächtigungen" (see Table 2 below).

In sum, the Ukraine Support Tracker figures as of April 25th, 2024, can be summarized as follows:

- "Allocations" is our main metric to measure Germany's military aid and measuring them is straightforward and comparable to the case of other countries. Our numbers build on the full range of individual reported military items sent, which we value using our standardized set of market prices (item by item), as described in the previous section and our main research paper. The resulting total German military aid allocation reported in Release 16 corresponds to about EUR 10 billion.
- The commitment numbers are more confusing, also because the new German homepage update is hard to compare to previous reporting updates and previous numbers. Fortunately, commitments are no longer our main aid measure, but we nevertheless try to make sense of the new commitment data based on the available information. An overview is listed in Table 2. We count items 1,2,3, and 4, which add up to total military pledges of EUR 18.5 billion approximately. Item 2 indicates up to EUR 6 billion in commitment authorizations, of which we include only those up to 2027, based on spending lines from the German federal budget, thus counting a total of EUR 4.93. Items 5 and 6 are not counted, as discussed above.

---

[5] Latest version of German military assistance overview page

Table 2: Commitment data confusion - Bundesregierung Feb. 26th update and our dataset

Item number	Bundesregierung item line	Bundesregierung value (bn Euro)	UST Release 16 (bn Euro)	Reason for discrepancy
1	Ertüchtigungsinitiative 2024	7.1	7.1	*No discrepancy*
2	Verpflichtungsermächtigungen 2025+	6	4.93	We exclude commitment authorizations for "future years" beyond 2027
3	Ertüchtigungsinitiative 2022	1.6	1.6	*No discrepancy*
4	Ertüchtigungsinitiative 2023	5	4.75	Different valuation of weapons and other military aid delivered
5	Commitments for deliveries in 2025-2028	2.9	uncounted	Dropped due to double counting (likely financed by item nr. 2)
6	From Bundeswehr stocks	5.2	uncounted	Dropped due to double counting (likely financed by item nrs. 1-4)
Summary:		27.8	18.38	

March 2024 – Publication by French Armed Forces of delivered weapons to Ukraine:

On March 4th, 2024, the French Armed Forces released for the first time a systematic overview of French military equipment delivered to Ukraine as of December 31st, 2023, similar to those of other important donors.[6] We use this list to conduct a benchmarking exercise in two steps. We first compare the unit number of heavy weapons in this new overview list with the number picked up through our data collection efforts prior to its publication. We then compare the total estimated value of French military aid, as reported by the French Armed Forces, with the alternative valuation method based on prices as used in our data.

A first main insight is that our data captured the majority of heavy weapon items revealed in the new French list. Table 3 gives a summary of this comparison for all of the main heavy weapon types. Only in the case of Mistral air defense launchers did we fail to code the true amount, given the paucity of available information and lack of previous reporting by French sources. For similar reasons, we had included only 60 out of the 250 VAB armored personnel carriers and missed data on AMX10 RC's. On the other hand, our data also covers items not covered by the French Armed Forces' list. This is particularly true for missiles, which are officially classified by France but whose delivery we can partially track from additional sources.[7] Specifically, we track several hundred MILAN, SCALP, Crotale, Mistral missiles.

---

[6] https://www.defense.gouv.fr/en/news/french-military-equipment-delivered-ukraine
[7] We use data from the Stockholm International Peace Research Institute and the UN Register of Conventional Arms, as well as previous official donor information.

We did a worse job in capturing light weapons and other smaller items. The updated official figures contain many lower-value items that we did not include, such as personal equipment, transport vehicles, small-caliber weapons and ammunition, and support equipment. This is no surprise, as smaller items are usually hard to track and often not discussed in detail in public sources.

Table 3: Comparing our dataset to the French Armed Forces weapons list – heavy weapons

Type	French armed forces list (March 4th, 2024)	UST data collection (before March 4th)	Explanation for discrepancy
Artillery and MLRS			
TRF1 howitzers	6 units	Yes, 6 units	.
CAESAR howitzers	30 units	Yes, 30 units	.
LRUs (M270 MLRS)	4 units	Yes, 4 units	.
120mm mortars	10	Yes, 10	.
Air-Defense			
Crotale NG	2	Yes, 2 units	.
MISTRAL systems	6	No number	Unreported numbers before March update
CM200 Radar	1 item	Yes, 1 item	.
Armored vehicles			
VAB Armored Personnel Carrier	250	Yes, 60 units	60 latest official numbers before March update
AMX10 RC	38	No number	Unreported numbers before March update

Turning to the valuation of military aid, France now assigns a total value of EUR 2.615 billion for all the weapons and military equipment sent to Ukraine since February 2022. To benchmark this number we again value each item using our set of standardized prices as contained in detail in our database. One challenge, in this regard, is lack of information. The French list is rather complete, but missile numbers (Aster, MILAN, Crotale, SCALP, and Mistral) are missing. We thus benchmark the reported number by the French government with our own numbers (as of February 16, 2024- our last update prior to the French list update) and assuming different scenarios (upper and lower bound estimates of missiles delivered).

In a first scenario, we ignore missiles altogether (given that no numbers are revealed) and just consider the known set of reported French weapons and military items from the official list multiplied by our standardized prices. The result is a total of EUR 0.85 billion, which slightly

above our original estimates before the publication of the list, but far from the EUR 2.6 billion reported by France. In a second step, we assume that 100 missiles were delivered each for the SCALP, Crotale, MISTRAL types, plus around 700 Milan missiles. These estimated number of missiles sent to Ukraine are based on numbers from the Stockholm International Peace Research Institute and from the UN Register of Conventional Arms, as well as from previous official donor source numbers. The resulting estimated value of total in-kind French military aid then jumps to EUR 1.47 billion, which is still far below the officially reported estimate. Finally, we double the amount of assumed missiles (200 SCALP etc…) as an upper bound estimate, but this only gets us to around EUR 2 billion, still clearly below the official French figure. We conclude that the French official estimate is a rather high number, likely suffering from overvaluation. Nevertheless, to be consistent with other countries, we ultimately use the official French government estimate of EUR 2.6 billion in military deliveries as our baseline for French military aid "allocation" in Release 16 of the dataset (issued on the 25th of April 2024). The value of France's total military commitments is straightforward, and we see no major tension between our data and France's official numbers.[8]

---

[8] The French government reports EUR 300 million for Ukrainian military training, which we do not count as military training as it does not constitute a cross-border aid flows into Ukraine (the focus of our project). A new EUR 0.2 billion "special support fund" for future arms purchases for Ukraine and EUR 1.2 billion contribution to the European Peace Facility (EPF) are both accounted for. Finally, the EUR 3 billion commitment made by the French government on February 16 in the context of bilateral security agreement is considered.