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The costs of not supporting Ukraine



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Overview

- At 0.1% of GDP, German average annual military support for Ukraine since the beginning remains small relative to the size of the German economy and small also compared to previous German support during wars of self-defense (f.i., during the first Gulf War in 1990-1991).
- A Russian victory in Ukraine would lead to substantially higher costs for Germany via (i) increased military spending, (ii) additional refugees, and (iii) the loss of trade and investment with Ukraine. For Germany, we estimate costs of 1% to 2% of GDP annually, about 10-20 times higher than current military support levels.
- Given the costs, it is in the German economic self interest to maintain and even significantly increase support for Ukraine in order to avoid paying the much higher costs of a Russian victory.
- A path to peace opens up if the aggressor, Russia, recognizes that the war cannot be won by military means and the continued pursuit of military victory becomes too costly for the regime. Committed Western support will drive up the cost and shift the Kremlin's cost-benefit analysis.

Keywords: Ukraine, Defense, Security policy

- Mit 0,1% des BIP bleibt die durchschnittliche jährliche deutsche Militärunterstützung für die Ukraine im Verhältnis zur Größe der deutschen Wirtschaft klein und ist auch im Vergleich zu früheren deutschen Unterstützungsleistungen in Selbstverteidigungskriegen (z.B. während des ersten Golfkriegs 1990-1991) gering.
- Ein russischer Sieg in der Ukraine würde für Deutschland deutlich höhere Kosten bedeuten durch (i) erhöhte Militärausgaben, (ii) zusätzliche Geflüchtete und (iii) den Verlust von Handel und Investitionen mit der Ukraine. Für Deutschland schätzen wir jährliche Kosten von 1% bis 2% des BIP, etwa 10- bis 20-mal höher als die derzeitigen militärischen Unterstützungsleistungen.
- Angesichts dieser Kosten liegt es im wirtschaftlichen Eigeninteresse Deutschlands, die Unterstützung für die Ukraine aufrechtzuerhalten und sogar deutlich zu erhöhen, um die viel höheren Kosten eines russischen Sieges zu vermeiden.
- Ein Weg zum Frieden eröffnet sich, wenn der Aggressor Russland erkennt, dass der Krieg militärisch nicht zu gewinnen ist und die Verfolgung eines militärischen Sieges für das Regime zu teuer wird. Eine entschlossene westliche Unterstützung wird die Kosten erhöhen und die Kosten-Nutzen-Analyse des Kremls verschieben.

Schlüsselwörter: Ukraine, Verteidigung, Sicherheitspolitik

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1 Summary

In recent weeks, political voices advocating for the reduction or cessation of military support for Ukraine have gained ground in Germany and other nations. Proponents argue that funds allocated for military assistance prolong the war and should instead be directed toward domestic uses. This note compares the (so far modest) costs of military support for Ukraine with the expected costs of not supporting Ukraine. So far, average levels of German military support for Ukraine are equivalent to about 0.1% of German GDP. In our scenarios, we estimate that ending support for Ukraine would result in costs of 1-2% of annual GDP over the next five years. Halting aid to Ukraine would thus result in economic costs for Germany over the next years that are 10 to 20 times greater than those associated with maintaining current military support levels.

Limited economic burden of current military support. Contrary to populist claims, Germany's total military aid to Ukraine since 2022 has been small from a macroeconomic point of view. Since 2022, Germany has provided a total of around €10.6 billion in military aid, equivalent to 0.1% of GDP (according to the Kiel Institute's Ukraine Support Tracker¹). For context, during the First Gulf War in 1991, Germany allocated six times as much, namely 0.6% of GDP, equivalent to about 4% of the total federal budget to supporting the war. Even when including bilateral humanitarian and financial aid to Ukraine, Germany's cumulative contributions remain modest in relation to its economic output at 0.14% of GDP since 2022.

High costs of ending support. The main reasons for the high costs of ending support are the following: (i) Germany would have to increase its contributions to NATO and the security of the Baltic states substantially beyond the levels currently envisaged; (ii) it would have to cope with an influx of additional refugees, and (iii) face costs from trade disruptions and the partial loss of investments in Ukraine. In addition, there will be indirect costs resulting from the loss of Western deterrence, making future conflicts around the world more likely and leading to substantial costs in terms of lost trade and growth (Federle et al.: 2024). Overall, the economic and geopolitical instability resulting from a Russian victory would impose far greater costs on the German economy

¹Allocated military aid up to 31th of August 2024, Source: Trebesch et al.: 2024: Ukraine Support Tracker, 19th release

and society than maintaining or even significantly increasing the support for Ukraine. In light of the substantial costs of a Ukrainian defeat, it is in the German economic self-interest to maintain and even substantially increase military support.

The road to peace. For the regime in Moscow, the incentive to cease the hostilities and to engage in serious peace negotiations arises only when it is clear that the war cannot be won by military means and that speculating on the exhaustion of Ukraine or the collapse of Western support is pointless. Russia will seriously engage in diplomacy only if the chances of winning militarily at an acceptable cost are close to zero. A credible and robust commitment by Western democracies to the defense of Ukraine would send this signal. With an economy nine times the size of Russia's, Europe alone should have the capacity to implement such a deterrence strategy, if it gets serious about increasing defense production and musters the political will and intellectual mindset to become a geopolitical actor. This could become even more important in the case of a Trump victory in the upcoming US elections.

2 German and international assistance for Ukraine in context

Germany's military assistance to Ukraine remains modest compared to the country's economic capacity. Since 2022, Germany has provided a cumulative amount of around €10.6 billion in military aid², which is about 0.1% of cumulative GDP over the period³. Several European countries, including Denmark (0,65%), Estonia (0,57%) and Latvia (0,43%) have devoted substantially larger shares of their economic output to military support for Ukraine, putting Germany in the 16th place, according to the Kiel Institute's Ukraine Support Tracker (Figure 1). When we take into account other forms of bilateral⁴ aid to Ukraine, namely humanitarian and financial aid, the picture doesn't change much, with Germany's total bilateral contributions reaching 0.14% of GDP, being surpassed e.g. by those from Canada (0.15%), the UK (0.17%) or Poland (0.24%).

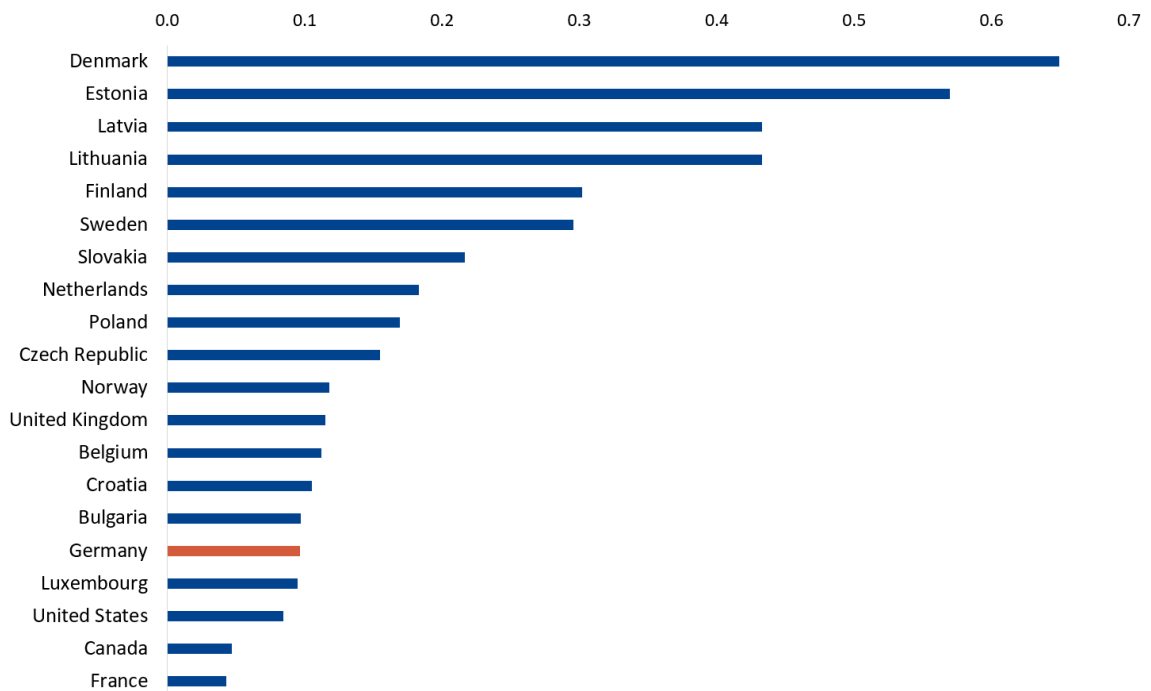
Germany's level of military assistance to Ukraine is far below historical military commitments. During the First Gulf War, Germany allocated 0.6% of its GDP in a single year to support the

²The German government announced €7.1 billion in military aid in 2024 (<https://www.bundesregierung.de/breg-en/news/chancellor-zelensky-security-agreement-2260300>). We take into account allocated bilateral military aid as recorded in the Ukraine Support Tracker. Differences may arise because parts of the sum that the government announced is financial assistance to other countries or has not yet been allocated or budgeted.

³We calculate the ratio of aid relative to the cumulative GDP for the years 2022, 2023 and (pro-rata) 2024 based on the IMF's World Economic Outlook, October 2024

⁴Even when including its share of multilateral support provided through European institutions (Council, Commission, and European Investment Bank), Germany's support for Ukraine has reached only about 0.23% of its GDP since the beginning of the war.

Figure 1: Cumulative bilateral military allocations since February 2022 in % of donor country GDP



Source: Calculations based on Ukraine Support Tracker (2024) and IMF WEO Data (2024). We divide the cumulative aid by the cumulative GDP of the years 2022, 2023 and (pro rata) 2024.

international coalition. At the time, this amount represented more than 4% of the German federal budget, underscoring the government’s capacity to respond robustly to global security threats when the political will is there. The war in Ukraine is geographically much closer, has stronger security implications for Europe and its outcome depends crucially on international support. So far, average German military support for Ukraine each year has reached only one-sixth of the German contribution during the First Gulf War.

This modest allocation of resources to Ukraine becomes even more striking when compared to Germany’s willingness to provide significant sums to domestic sectors and policies with small public benefits. For instance, the energy tax credit for diesel fuel (“Dieselprivileg”) reduces tax revenues by an estimated €9.6 billion each year (Plötz et al.: 2024). Ongoing subsidies for internal combustion company cars (€13.7 billion, Dalder, Pearce-Higgins, and Harland (2024)) each year exceed the cumulative German military aid to Ukraine since the Russian invasion.

3 The cost of a Russian victory

The cost of supporting Ukraine must be weighed against the cost of allowing Russia to achieve a military victory. We assume that an end of western support for Ukraine would lead to a Russian military victory in which Russia can dictate the terms of a settlement, possibly leading to the occupation of additional territories and the installation of a puppet government in Kyiv so that Ukraine would end up under Russian sphere of influence, dashing hopes for EU accession and westward orientation. Note that this is not a foregone conclusion as the strength of the Ukrainian military has repeatedly surprised observers. But note also that more extreme outcomes such as an outright annexation of large swaths of Ukraine would be consistent with Russian propaganda. In such a scenario, the costs calculated here would likely be a lower bound. The following outlines the economic and security costs of a Russian victory.

Increased military expenditures. A victorious revisionist Russia, emboldened by military success, would pose a direct threat to European security, particularly in vulnerable regions like the Suwałki Gap. This land corridor between Kaliningrad and Belarus, if exploited by Russia, could isolate the Baltic states (Estonia, Latvia, and Lithuania) from the rest of Europe. To prevent this, NATO and the European Union would need to significantly bolster their conventional military capabilities. Germany's future defense strategy would require large-scale investments in tanks, air defense systems (such as IRIS-T), maritime defense systems, unmanned aerial vehicles (UAVs), electronic countermeasures, cyber defense systems, and indigenous hypersonic missile systems. The necessary increase in military expenditure from a direct Russian threat is estimated⁵ to range between 0.5% and 1% of Germany's GDP per year, far surpassing the current level of military aid to Ukraine. We use the lower value for our baseline scenario.

Additional refugees. A Russian victory would likely trigger a massive forced migration of Ukrainians. Currently, approximately 31 million people reside in Ukrainian government-controlled territory. Based on estimated shares of displaced population in Russian-occupied regions, ranging from 37% (Donetsk oblast) to 67% (Kherson oblast), between 9.4 million and 19.1 million Ukrainians could seek refuge abroad (Düvell: 2024). The scale of this migration movement would be unprecedented in Europe since the end of World War II. Assuming that current migration patterns persist, up to 20%

⁵We assume substantial additional costs in the following 4 categories: 1) deployment of additional brigades to the Baltic states, 2) expansion of the maritime defense capabilities in the Baltic Sea, 3) investment in and upgrade of air defense and deterring hypersonic missile defense systems, 4) development and provision of electronic countermeasures, UAVs, cyber security.

(1.9 million to 3.8 million) could migrate to Germany. The influx of refugees would impose significant costs on Germany's social infrastructure, including housing, healthcare, and education, with refugee-related expenditures, as Germany already hosts more than 1 million refugees from Ukraine. For our baseline estimate, we use the lower bound of 1.9 million additional refugees coming to Germany. Given the OECD estimates on refugee costs⁶, the additional refugees would increase the cost by up to €24 billion (€49 billion in the negative scenario) per year, or 0.57% (1.14%) of GDP, decreasing gradually as refugees integrate into the labor market. So far, integration has been slow, with roughly 18% of working age Ukrainian refugees employed subject to social security contributions, 2.5 years after the onset of the war. We calculate an integration rate of 10% per year, although a large-scale additional influx would likely create congestion in language classes, administration etc. thus reducing integration speed and increasing the costs.

Loss of trade and investment. A Russian victory with Ukraine falling into the Russian sphere of influence would sharply reduce trade between Ukraine and the West and lead to a loss of German foreign direct investments. This could lead to a €7 billion reduction in German exports (Destatis: 2024a). Similarly, a significant part of German direct investment in Ukraine of around €2 billion would likely have to be written off (Destatis: 2024b). The loss of the investment would be a one-off event. We assume that the permanent trade stop would result into a GDP loss of 1/3 of the value of exports, before trade is fully re-routed. Losses in trade and investment thus add up to a one-off loss of less than 0.1% of GDP (€4.4 billion) in the first year, although we consider this to be a lower bound as trade adjustments may take more time.

Loss of deterrence. The geopolitical consequences of a Russian victory would extend far beyond Europe. A successful Russian invasion of Ukraine would signal to other countries that military aggression can be a winning strategy. This would erode the norm of peaceful conflict resolution and increase the frequency of international conflicts, further destabilizing the global order. However, a Russian victory would provide not only the example and strategy for successful military aggression, but also the means. With its war economy focused on the production of arms and military hardware, Russia would likely become the armory of warlords and dictators from around the world, as it would seek to boost its exports and to undermine global stability in order to weaken the West. A world in which North Korea, Iran, Huthi Rebels and the like have easy access to cheap tanks and missiles may turn the world more multipolar, but surely not safer. And military conflicts in the Gulf of Aden, the Middle East or Taiwan would have serious consequences for the global economy.

⁶OECD *International Migration Outlook 2022*: €12,784 per refugee per year in 2024

We do not calculate the changes in the probability of conflicts, but the potential economic costs are large, even for countries not directly involved. For the Ukraine war, Federle et al. (2024) estimate a GDP loss for Germany between €14 and €18 billion over 5 years. The expected economic costs of a higher risk of military conflicts around the globe could be severe. For example, a 10% increase of war risk between China and Taiwan would lead to an expected loss of 0.5% in GDP of Germany as a result of cutting trade ties in response to a Chinese invasion⁷. The loss of supply of Taiwanese semiconductors to the world could be even more costly.

Table 1 shows that the combined annual costs of increased military spending, refugee management, lost investment and trade disruption are in the range of 0.9% to 1.2% of German GDP in the baseline scenario. We consider this to be a lower bound, as costs in the high-cost scenarios could easily reach 1.5% to 2% per year. Over a five-year period, the cost of a Russian victory would be 10 to 20 times greater than the average annual financial outlay for military aid to Ukraine so far. This calculation does not include the expected costs from global deterrence failure and increased risk of conflicts.

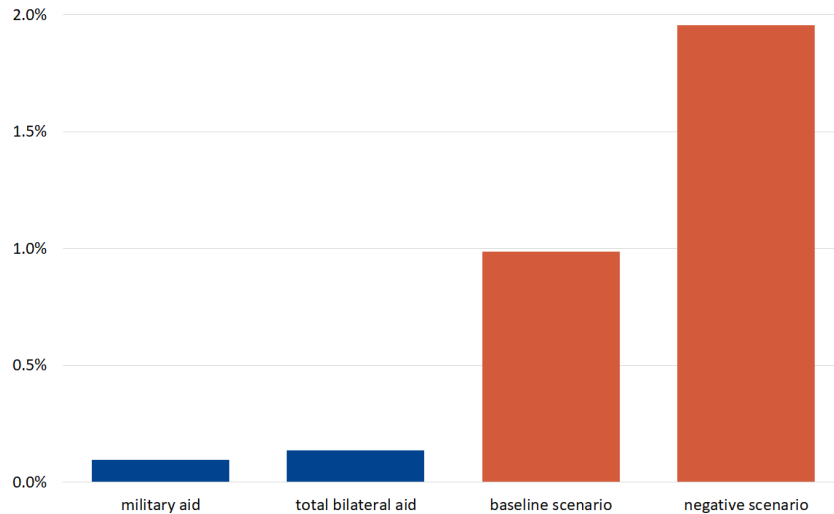
Figure 2 shows the average bilateral support (military and overall) for Ukraine with the expected costs for Germany in the baseline and negative scenarios.

Table 1: Approximated costs of a Russian victory for Germany in percent of GDP

Baseline costs	Year 1	Year 2	Year 3	Year 4	Year 5
Additional military spending	0.5%	0.5%	0.5%	0.5%	0.5%
Additional refugees	0.57%	0.51%	0.46%	0.42%	0.37%
Trade and investment	0.1%				
Sum	1.17%	1.01%	0.96%	0.92%	0.85%
Negative scenario	Year 1	Year 2	Year 3	Year 4	Year 5
Additional military spending	1%	1%	1%	1%	1%
Additional refugees	1.14%	1.03%	0.92%	0.83%	0.75%
Trade and investment	0.1%				
Sum	2.24%	2.03%	1.92%	1.83%	1.75%

⁷We assume that a Chinese invasion of Taiwan would result in a trade stop between the West and China, similar to the economic sanctions imposed on Russia after its 2022 invasion of Ukraine. Based on the hard de-coupling scenario of Baqaee et al.: 2024, this would result in a loss of 5% in GDP in the first year, and decline over time to a value of 1.26% of GDP

Figure 2: Bilateral support and costs of a Russian victory for Germany in percent of GDP



Notes: Average annual support according to the Ukraine Support Tracker (2024), 5 year averages of the costs in the baseline and negative scenario

4 The path to peace: game theory and credible deterrence

The cold war era was an important time for academics to study international conflicts and their resolutions. One of the major contributions of the field of economics to this debate was the application of game theory to international relations in the form of rational deterrence theory. At its core, deterrence theory posits that an adversary's decisions are shaped by a rational cost-benefit analysis, and that changing the adversary's calculus by increasing the costs of aggression and reducing the chances of success will set the incentives for a non-violent conflict resolution. It assumes that political leaders make rational decisions, in the sense that they weigh the costs versus the benefits of their political actions, including drastic decisions about war and peace (Schelling: 1966)⁸.

The application of game theory to the conflict in Ukraine demonstrates that the path to peace lies in credible deterrence – a strategic tool for influencing the adversary's behavior. The way to incentivize Russia to engage seriously in peace negotiations, is to make evident that the pursuit of military victory is too costly. In this logic, changing the cost-benefit calculus for Putin is key for Russia to come to the negotiating table.

Such deterrence can only be achieved through unwavering and sustained support for Ukraine from

⁸To claim that political leaders act rationally may sound problematic, given that dictators seem to have no problem sending their own population out to die in the battle fields, and bring about carnage and destruction. It is, however, important to note that personal costs and benefits may deviate from public ones, especially for dictators who are not held accountable by citizens in free elections.

Western democracies, ensuring that the costs of continued aggression become too big to sustain. Such support needs to come mainly in the form of military aid, but could be supported by stronger and more comprehensive economic sanctions.

A united coalition of the European Union and other western democracies would underscore the credibility of this deterrent. Populist claims that stopping military support would enable serious peace talks are misguided. Most likely, they would encourage further Russian aggression, by lowering the costs and increasing the chances of success. Russia would rationally respond with continued warfare as the chances of success have risen.

How credible can Europe's deterrent be? European economic and technological capacities by far exceed those of Russia. The European Union's economic output is nine times larger than Russia's, and its industrial output is five times greater (see Table 2). Even without U.S. support, Europe's military capabilities, if mobilized, would be sufficient to credibly deter further Russian aggression. Currently, the resource in shortest supply is political leadership. It is required to mobilize Europe's economic and military potential and demonstrate to Russia that continued conflict and violating the European peace order is a losing proposition.

Table 2: Economic power of the EU and Russia

Indicator	EU	Russia	Relation
GDP (Trillion USD, 2022)	18.977	2.056	9.1
Industrial production (Value added, trillion USD, 2022)	3.931	0.735	5.4
Steel production (Billion tons, 2023)	195	86	2.3

Source: World Bank, Global Energy Monitor

A key aspect of Russia's cost-benefit calculus is its expectations about the political will and the commitment of Western states to provide long-term assistance to Ukraine. It is therefore crucial that the West credibly commits to comprehensive and unwavering support. Any delay, reduction or limitation of military aid would send a signal to Russia that the support by the West can be outlasted, and that the war will ultimately pay off for the aggressor. By adhering to the principles of deterrence, Western democracies can make the conflict unwinnable for Russia, and thereby create the conditions necessary for peace negotiations. A substantial increase in military support, along with credible commitments to continue and expand them, would not only help Ukraine on the battlefield today, but would send a strong signal to Russia that the costs of continuing the war — whether in terms of military losses, economic sanctions, or international isolation — will continue to increase. Ultimately, more, rather than less, military support for Ukraine will shorten the war and set the right incentives for promising, serious peace negotiations.

5 Conclusion

Germany's military support for Ukraine is not only in the country's political and security interest. It is also in Germany's economic interest. The economic repercussions of a Russian victory would by far outweigh the current support for Ukraine. Our estimates suggest that the costs associated with a Russian victory could be 10 to 20 times greater than Germany's annual military aid to Ukraine. From an economic perspective, it would be prudent to maintain and even increase our support by significant amounts. By maintaining credible deterrence and increasing military assistance, Germany can help convince the Kremlin that the war cannot be one at an acceptable cost. This would shift the cost-benefit analysis of the Kremlin and open up the path for peace negotiations.

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