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**Bridge Over Troubled Water?
German Foreign Direct Investment in Times of Geopolitical Tensions***

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Abstract

Evidence of geoeconomic fragmentation does not necessarily apply to all types of cross-border business activities alike. For foreign direct investment, for instance, an increase in trade costs due to heightened geopolitical risk may actually make production abroad relatively more attractive. This paper examines the geographic pattern of German foreign direct investment over the period from 2002 to 2022. Using a variety of models and specifications, we find no consistent evidence that a host country's geopolitical position has a measurable impact on German investment once traditional gravity factors are accounted for.

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1. Motivation

After decades of expansion, cross-border economic activity has been recently hit by a series of negative global events. Shocks like the global financial crisis and a global pandemic have eroded confidence and introduced significant uncertainty, leading to a widespread reassessment of risks involved in doing international business. Generally, as business relationships became more vulnerable, activities were expanded more cautiously or even scaled back.

In principle, changes in country risk can be expected to apply to all types of commercial activities alike. For the emergence of geopolitical tensions, for instance, Gopinath, Gourinchas, Presbitero, and Topalova (2025) find significant declines in trade, foreign direct investment and portfolio flows between countries in geopolitically distant blocs. Similarly, for sanctions, Besedeš, Goldbach, and Nitsch (2024) show that financial restrictions reduce not only inflows and outflows of financial assets, but also imports and exports of goods and services.

At least for foreign direct investment, however, a case can also be made for movements in directions different from or even opposite to other types of cross-border activities. For one thing, it is probably more difficult (and costly) to open or close a foreign affiliate than to enter or exit a trade relationship, meaning that barriers to adjustment in commercial presence abroad are likely to be different. More importantly, when trade is costly, foreign direct investment may provide a useful alternative to serve foreign customers, allowing firms to substitute exports by foreign production (Brainard [1997]; Helpman, Melitz, and Yeaple [2004]).

In this short paper, we examine the effect of a major negative shock, the increase in geopolitical risk, on German foreign direct investment. In particular, it has been argued that intensified political rivalries between countries, along with growing ignorance towards long-established international rules, have led to greater uncertainty in cross-border business activities. Consequently, in order to reduce risk and strengthen resilience, business relationships have been increasingly realigned along political preferences. As risky linkages are cut ('decoupling') and partially replaced by more stable connections with trusted partners ('friendshoring'), the global economy would be characterized by growing geopolitical fragmentation.¹

To analyze the impact of geopolitics, therefore, we examine the geographic pattern of German foreign direct investment in more detail. Specifically, we are interested in any politically-motivated adjustments in Germany's outward investment flows in times of geopolitical instability.

At least in aggregate data, there is no clear evidence of a redirection in foreign direct investment towards specific host countries. Figure 1 plots the stock of German foreign direct investment, the number of German parent companies with holdings abroad (i.e., multinational enterprises) and the average number of countries in which German parents

¹ Our work complements studies examining the impact of geopolitical risk on merchandise trade; see, for instance, Khalil, Osten, and Strobel (2025).

operate with affiliates over the period from 2002 to 2022. As shown, according to these indicators, German firms seem to have continuously expanded their activities abroad, despite the emergence of geopolitical tensions. In particular, it is interesting to note that the firms' foreign presence has become, if anything, geographically more diversified instead of being focused on selected partners, as illustrated by the increase in the average number of host countries per parent shown in the right-most panel of Figure 1. Still, for a thorough assessment of changes in the geographic composition of foreign direct investment, regression analysis is needed to which we now turn.

2. Data and Methodology

Our main source of data is the Microdatabase Direct Investment (MiDi) of the Deutsche Bundesbank. This database provides detailed information on German outward foreign direct investment at the level of the firm, identifying both the German parent and the foreign affiliate, in anonymized form.

For enterprises and private individuals in Germany, it is mandatory to report direct or indirect ownership of foreign companies, exceeding certain threshold levels. As a result, MiDi covers the universe of German outward investment. However, reporting requirements have also been adjusted over time, such that there are structural breaks in the data; see Blank, Lipponer, Schild, and Scholz (2020) for a detailed description of the database. The data is available in annual frequency. Our sample covers the period from 2002 to 2022.

As we are interested in the geography of German foreign direct investment, we typically aggregate data by host country. The data set is then augmented with a number of country-specific variables. For one thing, we add controls to account for standard determinants of investment activity, like a host's economic size and its geographic distance from Germany, taken from the CEPII database. More notably, however, we include a proxy for a host country's geopolitical alignment with Germany. In our baseline model, following the literature (Aiyar, Malacrino, and Presbitero [2024], Gopinath, Gourinchas, Presbitero, and Topalova [2025]), we make use of Bailey, Strezhnev, and Voeten's (2017) ideal point distance measure which captures the similarity in the countries' voting patterns in the United Nations General Assembly.² In extensive robustness checks, we also experiment with other measures of geopolitical alignment.

Formally, we estimate regression equations of the form:

$$(1) \quad FDI_{ct} = \exp\{\alpha IPD_{ct-1} + \beta Controls_{ct} + \zeta_c + \eta_t + \theta_{rt}\} \varepsilon_{ct},$$

where FDI_{ct} is the stock of Germany's foreign direct investment in country c at time t (in euros), IPD is c 's ideal point distance from Germany, $Controls_{ct}$ is a vector of auxiliary control variables taken from the gravity literature, ζ_c is a set of country-specific fixed effects which absorbs any time-invariant differences in Germany's investment position across countries, η_t is a set of time fixed effects that capture investment activities common across all host countries, and θ_{rt} is a set of region $\times$ year fixed effects which may account for important

² See Airaudo, de Soyres, Richards, and Santacreu (2025) for a discussion of this measure.

unobserved (time-variant and region-specific) factors affecting German investment holdings abroad.³ We estimate the model using Poisson pseudo-maximum likelihood (PPML), computing standard errors that are robust to clustering by host countries.

3. Empirical Results

Table 1 reports our baseline results. We proceed stepwise, beginning with the most parsimonious specification of equation (1) and then become gradually more demanding as we move to the right of the table. In column 1, we only include our measure of interest, a country's ideal point distance from Germany, along with year fixed effects. As shown, for this specification, the estimate of α is negative and statistically significant at the 5 percent level, indicating that German foreign direct investment is indeed systematically larger in countries with foreign policy orientations similar to those of Germany. As it turns out, however, a sizable portion of this effect is explained by German investment activities in nearby countries. In column 2, we add a control for a host country's geographic distance from Germany. While the estimated coefficient on this variable is negative and (weakly) significant, the point estimate of α drops by more than half in magnitude. The effect of geopolitical alignment is further reduced when we additionally include other standard gravity controls. In column 3, we augment our specification with a host country's economic size and its language similarity with Germany. Similar to our finding for geographic distance, the coefficients on these variables take the expected (in this case positive) sign and are statistically significant, indicating that German outward foreign direct investment follows a strong gravity pattern.⁴ More notably, with this extension, the α estimate gets close to zero and loses statistical significance. As a result, there is no conclusive evidence that geopolitical considerations measurably affect German investment decisions, once standard gravity effects have been taken into account. In columns 4 and 5, we further saturate the model, to the fullest extent possible, by subsequently adding country and region $\times$ year fixed effects. The country fixed effects, for instance, control for all observed and unobserved host-specific (and, in our sample with only one source country, also all pair-specific) heterogeneity in German investment positions that is fixed over time, including, for instance, features of long-term political relationships such as common membership in international institutions. Consequently, parameters of interest are identified solely from variation over time. Still, none of these extensions has a significant impact on our findings. Finally, we examine whether geostrategic conditions have perhaps only recently emerged as a factor influencing investment decisions. To do so, we interact our geopolitical alignment measure with an indicator that takes the value of one after Russia's annexation of Crimea in 2014. As illustrated in Figure 2, Russia's breach of international law was a major geopolitical shock for Germany which led to a massive and sustained increase in geopolitical risk, long before Russia's invasion of Ukraine provided another shock in 2022.⁵ Again, there is no evidence of

³ The regions are Africa, Asia, Australia and Oceania, Europe, North America, and South America.

⁴ Adding other commonly used control variables, such as capital market openness, does not affect our results.

⁵ Goldbach, Nitsch, and Suprunenko (2026) provide a more detailed analysis of this episode.

geopolitical fragmentation in investment patterns, as the estimated coefficients on our variables of interest are statistically indistinguishable from zero.

We examine the sensitivity of our findings along various lines. Selected robustness checks are tabulated in Table 2. In a first set of exercises, we replace ideal point distance as our measure of geopolitical alignment with an indicator that is equal to one if the host country is, similar to Germany, member of the North Atlantic Treaty Organization (NATO), a military alliance. Next, we make use of the granular nature of our raw data. Specifically, we compute the number of new German investment projects in a country and year and use this measure as our dependent variable, thereby allowing for better comparison with studies that analyze fDi Markets data. Finally, we reduce our sample period to analyze the short-run impact of geopolitical tensions. Reassuringly, our results turn out to be reasonably robust to these perturbations. We do not find evidence of growing geopolitical fragmentation in German foreign direct investment.

4. Summary

As cross-border business becomes more challenging, producing abroad may become relatively more attractive. In this brief note, we examine the geographic pattern of German outward foreign direct investment over the period from 2002 to 2022. Despite a considerable increase in geopolitical risk, we find that geopolitical tensions have no measurable impact on foreign direct investment. We conclude that we currently do not have strong empirical evidence of geoeconomic fragmentation in foreign direct investment.

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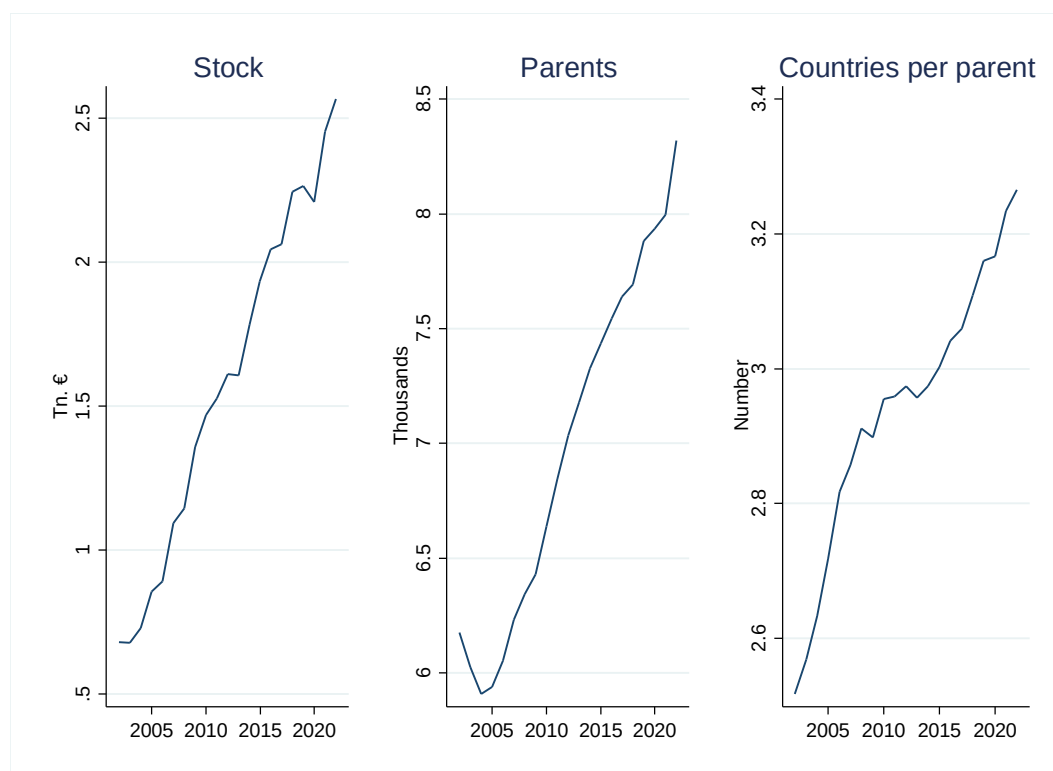
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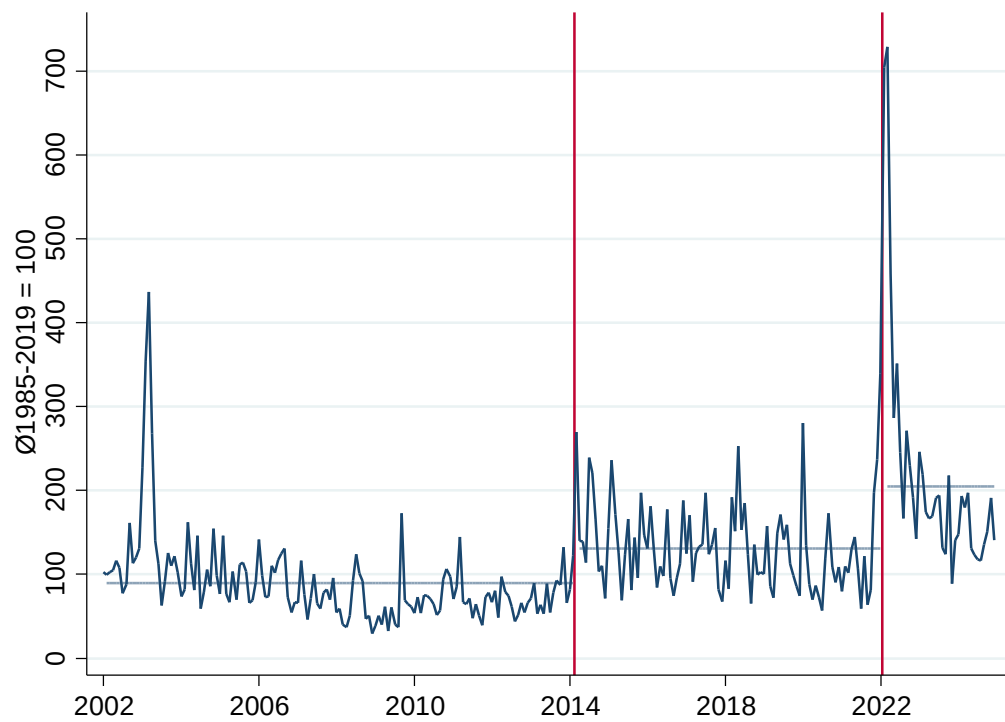
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Figure 1: German Outward Foreign Direct Investment, 2002-2022



Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi), 2002-2022, own computations.

Figure 2: Geopolitical Risk Index for Germany, 2002-2024



Source: Caldara and Iacoviello (2022), own computations.

Table 1: The Effect of Geopolitical Alignment on German Foreign Direct Investment, 2002-22

	(1)	(2)	(3)	(4)	(5)	(6)
Lagged Ideal Point Distance	-1.070* (0.443)	-0.482* (0.215)	-0.030 (0.253)	-0.005 (0.113)	-0.014 (0.115)	0.047 (0.119)
Lagged Ideal Point Distance × Post 2014						-0.219 (0.135)
Log Distance		-0.539# (0.293)	-0.841** (0.238)			
Log GDP			1.143** (0.146)	0.742** (0.151)	0.637** (0.177)	0.681** (0.183)
Language			0.813# (0.485)			
Year Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects?	No	No	No	Yes	Yes	Yes
Region × Year Fixed Effects?	No	No	No	No	Yes	Yes
Obs.	3707	3644	3487	3370	3267	3267
R²	0.16	0.19	0.83	0.99	0.99	0.99

Notes: PPML estimation. The dependent variable is the stock of Germany's foreign direct investment in country (in euros). Robust standard errors (clustered by country) are in parentheses. **, * and # denote significance at the 1 %, 5 % and 10 % level, respectively.

Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi), 2002-2022, own estimates.

Table 2: Robustness Checks

	Geopolitical Alignment Variable: NATO Membership			Dependent Variable: Number of New Affiliates			Sample Period: 2012-2015		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Lagged Ideal Point Distance				-0.195 (0.140)	-0.027 (0.057)	-0.026 (0.065)	-0.088 (0.278)	0.054 (0.065)	0.069 (0.064)
Lagged Ideal Point Distance × Post 2014						-0.006 (0.084)			-0.058 (0.070)
Lagged NATO Membership	1.078** (0.353)	-0.051 (0.187)	-0.049 (0.184)						
Lagged NATO Membership × Post 2014			0.009 (0.104)						
Log Distance	-0.529* (0.232)			-0.521** (0.100)			-0.919** (0.297)		
Log GDP	0.970** (0.132)	0.637** (0.180)	0.634** (0.166)	0.782** (0.037)	0.337** (0.090)	0.339** (0.102)	1.208** (0.167)	0.537** (0.181)	0.585** (0.191)
Language	1.251* (0.572)			0.569* (0.257)			0.724 (0.485)		
Year Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects?	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Region × Year Fixed Effects?	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Obs.	3586	3324	3324	3803	3658	3658	668	544	544
R²	0.86	0.99	0.99	0.85	0.94	0.94	0.83	0.99	0.99

Notes: PPML estimation. The dependent variable is the stock of Germany's foreign direct investment in country (in euros), except in columns (4)-(6). Robust standard errors (clustered by country) are in parentheses. **, * and # denote significance at the 1 %, 5 % and 10 % level, respectively.

Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi), 2002-2022, own estimates.