Exiting Russia

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Abstract

As of 24 February 2022, over forty thousand multinational corporations found themselves invested in Russia, a host state that had initiated a conventional interstate war – an exceptional shock in the modern era of economic globalization. Using company registration data, we document that after 18 months of war, 33.3% of those MNCs had undergone ownership changes or become inactive. We conceptualize exit as a transaction in which sellers, buyers, and terms are politicized. We find that MNCs in consumer-oriented industries, those already under Russian managerial control, and those not in strategic Russian industries were the most likely to exit, with other nuanced results that challenge literature on non-market determinants of firm behavior. While a coalition of states has imposed extraordinary economic sanctions to isolate Russia, and social backlash against doing business in Russia has surged, it is clear that profit-motivated MNCs remain non-state actors with agency over their investment decisions.

Keywords: foreign direct investment, multinational corporation, exit, Ukraine, Russia, war, political risk, economic statecraft

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1 Introduction

As of January 2022, the month prior to Russia's full-scale invasion of Ukraine, over forty thousand foreign-owned firms had investments in Russia, according to new data introduced in this article. These firms were of all sizes, from very small with presence only in two states, to very large with a worldwide network of subsidiaries. They cover the full spectrum of industries, with varying asset types and customer bases. They came from 132 home jurisdictions, including advanced industrialized countries, states that emerged from the former Soviet Union, non-sovereign territories, China, and so on. They did, however, have two things in common. First, these firms had at least one non-Russian owner with a 10 percent or higher stake, a threshold that signals meaningful managerial control by the foreign owner and thus a multinational corporation (MNC) engaged in foreign direct investment (FDI). Second, these MNCs experienced a common shock: although violent Russian aggression against Ukraine began with its 2014 occupation of Crimea and parts of Donbas, as of 24 February 2022 these MNCs were invested in a state that was the aggressor in a full-scale, conventional interstate war. What, if anything, were they going to do about it? Would they exit Russia?

Immediately, this question gripped observers around the world. In the first six months of the war, the English-language media published over 7,000 articles on the topic of whether MNCs were exiting Russia.[1] In addition to intense news coverage, an unprecedented data collection movement spread on the Internet. We count thirteen "name and shame" lists of MNCs, including lists by grassroots activists with titles like "Boycott Russia" and "Squeezing Putin," lists by normatively-motivated scholars at the Kyiv School of Economics and the Yale School of Management, and lists aimed at a Russian pro-war audience as well. All of this attention has been necessitated by the fact that MNCs are individual actors with decision-making autonomy over preexisting foreign investments. The extent of public interest in the foreign investment decisions of MNCs is remarkable, suggesting that non-market pressures on MNC behavior in times of war can be deep and multifaceted. Still, by our reckoning, "name and shame" lists mention only 16.3% of the population of MNCs in Russia at the time of the full-scale invasion of Ukraine.[2]

To measure exit from Russia and theorize its determinants, our study begins from the population of MNCs in Russia based on the best data available. We use firm registrations and official record-keeping to compile the population of MNCs pre-invasion (as of 31 December 2021), and we construct a cross-sectional dataset that documents their status after 18 months of conflict (as of 31 August 2023). All told, we find that 33.3% of MNCs in the pre-invasion population exited by this point, defined as becoming

[1] We compiled 7,492 articles across 104 sources, based on search functions on the topic provided by Factiva. The number published in other languages dwarfs this.

[2] Appendix 3.

inactive, becoming a domestic (Russian) firm, or transferring to different foreign ownership. Moreover, this represents a significant spike in comparison to historical exit rate data, which we also compile.

We approach exit not as a stay-or-go decision, but as a transaction in which the sellers of Russian assets and relative bargaining power over terms are endogenous to politics. Our top-line findings indicate that non-state backlash has effects, as MNCs in consumer-oriented industries are more likely to exit. Additionally, exposure to Russian interference in the terms of a sale matters: MNCs that are already under Russian managerial control in the pre-invasion period are more likely to exit, whereas MNCs operating in industries deemed strategic by Russia are less likely to do so. The intensity of fixed assets in an MNC's industry, which theory suggests decreases the credibility of the *threat* of exit, also reduces MNCs' likelihood of exit. Otherwise, we find little to no evidence that home state foreign policy or the actual "naming and shaming" of MNCs on lists are key determinants of exit.

In what follows, we situate our study in literatures on FDI and non-market strategy; operationalize exit; build out our theory of exit as a transaction; define variables, including a variety of novel measures; present results; and explore theoretically motivated heterogeneous effects and extensions. One point this article makes clear is that in the contemporary era of economic globalization, privately-owned MNCs are autonomous decision-makers making choices over whether to engage in voluntary transactions – and, at best, unstable tools of economic statecraft, even in the midst of interstate war.

2 Literature

Research on the political economy of FDI has been cultivating theories that are all the more salient in these unprecedented circumstances concerning a state deeply integrated into the contemporary global economy. A growing literature connects MNC decision-making and security, in contexts including territorial conflict, civil unrest, and war (e.g. Lee and Mitchell, 2012; Braithwaite, Kucik and Maves, 2014; Carter, Wellhausen and Huth, 2019; Pinto and Zhu, 2022). Much of this work examines the conditions under which MNCs make investments, although one must be circumspect over whether theories of MNC entry are informative over the lifecycle of an MNC's investment, particularly if and when the MNC chooses to exit (Barry, 2018; Johns and Wellhausen, 2021).

The concept of the *threat* of exit, and the determinants of its credibility, are core to our understanding of foreign firm-host state relations. While the conditions at entry can privilege MNCs in their bargains with host states, those bargains can obsolesce over time, such that power to break or renegotiate the deal shifts to the host (Vernon, 1971). In particular, MNCs that are reliant on fixed – alternatively known as immobile, site-specific, or non-redeployable – assets in the host state are expected to have little credibility should they threaten to exit (Frieden, 1994; Wright and Zhu, 2018). What has not happened in the modern era, and thus never been directly examined, is a mass of MNCs operating in many industries across a deeply integrated economy looking to make good on the threat of exit at the same time.[3] Crucially, MNCs' physical assets in Russia are not directly threatened by wartime violence, such that from a research design perspective we can avoid the confounding effects of war on physical assets, instead considering effects of the ex ante credibility of the threat of exit operating via a shock to political risk.[4]

A growing literature identifies MNC national origin as a key determinant of variation in political risk exposure. Empirical evidence suggests that dyadic political (dis)alignment between the MNC's home and host state can drive MNC decision-making at entry and, by implication, host government treatment over the life of the investment (Li and Vashchilko, 2010; Stone, Wang and Yu, 2022).[5] The institutional embeddedness literature suggests that emerging-market MNCs, most of which hail from poorly governed states, enjoy competitive advantages in weak institutional environments abroad (Cuervo-Cazurra and Genc, 2008), whereas MNCs from states with stronger institutions tend to favor destinations with similar legal environments (Beazer and Blake, 2018, 2021). MNC national origin also demarcates the resources on which an MNC can draw for political risk mitigation, given that diplomacy, international legal institutions, or more coercive means of investment protection are heterogeneous by national origin (Wellhausen, 2015; Polanco, 2019).

What might the literature predict regarding Russia's actions? The form of MNC exit that has received the most attention is expropriation – when exit is not voluntary at all, but the result of a forced ownership transfer without due compensation (e.g. Lipson, 1985; Jensen et al., 2020). Frankly, it came as a bit of a surprise to observers that Russia did not engage in blanket, economy-wide expropriations in the study period, with a couple headline-grabbing expropriations of large MNCs serving as the exception that proved the rule.[6] Instead, Russia has rolled out a highly legalized set of adverse policies interfering with MNCs' transactions, which may in fact be consistent with other legalized or legal-adjacent approaches in the Russian domestic political economy (Gans-Morse, 2017; Logvinenko, 2019, 2021; Szakonyi, 2023).[7] Further, the context here is novel: MNCs are the first-movers in seeking to exit, and Russia is discriminating against sales of their brownfield assets. From the Russian point of view, the closest analogue might be the use of capital controls to mitigate a sudden stop in capital markets (Bauerle Danzman, Winecoff and Oatley, 2017). The risk of a sudden stop in the context of FDI has never really been on

[3]On exit following sanctions on Myanmar, a considerably less economically-integrated state, see Meyer and Thein (2014).

[4]On asset immobility and direct exposure to violent conflict, see e.g. Osgood and Simonelli (2020); Dai, Eden and Beamish (2023).

[5]Although, muted within-relationship ebbs-and-flows may not have aggregate effects on market actors' behavior (Davis and Meunier, 2011).

[6]Those were: Carlsberg (Denmark), Uniper SE (Germany), Fortum (Sweden), and Danone (France). See H2b.

[7]Appendix 4.

the table; the longer-term nature of FDI was meant to preclude such concerns.[8]

Last, there are important literatures in the orbit of our study to which we cannot speak. Our focus is on the predictors of MNC exit, and not the effectiveness of sanctions or any potential peace (or conflict) dividend of economic (dis)integration. Scholars are also leveraging Russia to study the determinants of firms' announcements of their intentions and executives' attitudes toward exit (Balyuk and Fedyk, 2023; Gurkov, Filinov and Saidov, 2023; Davis, Li and Miyano, 2024; Pring, 2024). With our study's strong research design and comprehensive data, we are able to build on the scholarly literature and push further to understand how an exogenous shock to political risk of this magnitude has, or has not, resulted in changed MNC behavior.

3 Operationalizing exit

We draw the list of the population of MNCs in Russia as of the end of the calendar year 2021. In terms of research design, at that time MNCs in Russia were operating in a "pre-treatment" environment prior to the invasion which began on 24 February 2022.[9] Our sources are Bureau van Djik's Orbis Historical Databases available from Moody's Datahub. These are industry-leading products that compile company information from official as well as proprietary sources.[10] What we call an MNC is an enterprise with a unique Orbis identification number (BVD) that meets the international statistical standard for foreign direct investment (FDI). That is, foreign ownership in the enterprise meets or exceeds 10%, the agreed upon proxy to capture that foreign interests have meaningful managerial control over the enterprise. We look at shareholder information for each BVD operating in Russia on 31 December 2021, and we select those BVDs for which a foreign (non-Russian) shareholder has at least 10% ownership. We also select a BVD into our data if, up the corporate ladder, its controlling Global Ultimate Owner (GUO) is foreign (non-Russian). By our definition and these best-available data, there were 42,720 active foreign MNCs in Russia on 31 December 2021, which we refer to as the pre-invasion population.[11]

To document exit, we compare the pre-invasion population to its status 18 months into the war, as of 31 August 2023. Conceptually, FDI exit occurs when the foreign owner with meaningful managerial control over the enterprise at time t no longer exercises that control at time $t+1$. In practice, exit occurs when an MNC is dissolved or liquidated, such that its official status is "inactive" at $t+1$.[12] Exit also

[8] If and when "sudden stops" to FDI are possible, literature on why a state opens to FDI in the first place – to benefit from longer-term domestic access to increased productive capacity and capital – deserves reconsideration.

[9] Although classified CIA reports noted Russian military movements in December 2021 and January 2022, it was only in February when they became convinced; US President Biden publicized that intelligence on 18 February (Risen, March 2022).

[10] Appendix 2. For other studies of Russia using Orbis data, see Gonchar and Greve (2022) and Evenett and Pisani (2023).

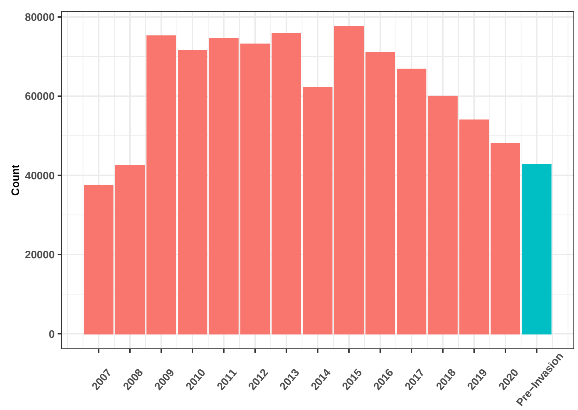
[11] See Appendix 2 for additional data processing information.

[12] Orbis defines "inactive" as indicating that the firm is dissolved, liquidated, in liquidation, or subject to a demerger,

occurs if and when the enterprise is active at $t+1$ but under new managerial control. Altogether, we find an aggregate exit rate of 33.3%, which is our primary dependent variable.[13]

Before proceeding further, we want to adjudicate whether this exit rate during the first 18 months of the war is high or low relative to typical levels of churning of ownership in the Russian context. If this exit rate is high relative to historical rates, we are more confident that the exogenous shock to political risk generated outcomes for which dedicated theorizing is required. Therefore, we repeat the previous steps to draw the list of MNCs in Russia on December 31 of year t, and we calculate the rate of exit as of December 31 of year $t+1$, for the years 2007 to 2021.[14] Figures 1 and 2 respectively summarize the annual number of MNCs and historical exit rates alongside quantities measured in our study period.

Figure 1. Population of Active MNCs in Russia, as of end of calendar year (2007-2021)



Notes: Bar values represent the number of active MNCs as of the end of each calendar year. The pre-invasion population under study, marked in a different color, corresponds to 2021.

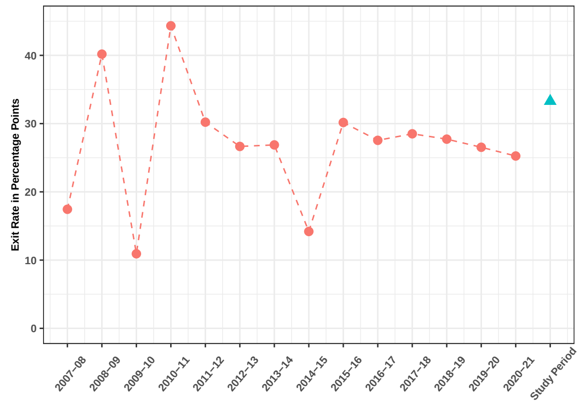
Figure 1 reveals that the pre-invasion population of MNCs in Russia was already relatively low, at a level last seen around the time of the 2008 Global Financial Crisis, mitigating the concern that there had been an unusually large population in the immediate pre-invasion period. Figure 2 demonstrates that the exit rate has settled into a steady decline, suggesting that the jump in the current period is notable. What about the beginning of the current Russian aggression, with the occupation of Crimea and parts of Donbas in March 2014? Although the population of MNCs in Russia did conspicuously drop as of the end of 2014, the 2013-2014 exit rate was on par with the previous year, and the subsequent year brought a new high MNC population and an outlier low exit rate. Taken together, the data suggest that not only was any "exiting Russia" phenomenon limited, but that Russia's new territorial claims may have generated strategic entry. While Figures 1 and 2 illustrate important puzzles, for our purposes these historical data support that something different, and worthy of study, has happened in our study

merger, or takeover, although "Inactive (no precision)" is the dominant code.

[13]See Appendix 2 for additional detail on coding exit.

[14]Orbis historical ownership data coverage starts in 2007. Note that we draw a new list of MNCs each year t to account for MNCs that may have entered in year $t-1$.

Figure 2. MNC Exit Rates from Russia (2007-August 2023)



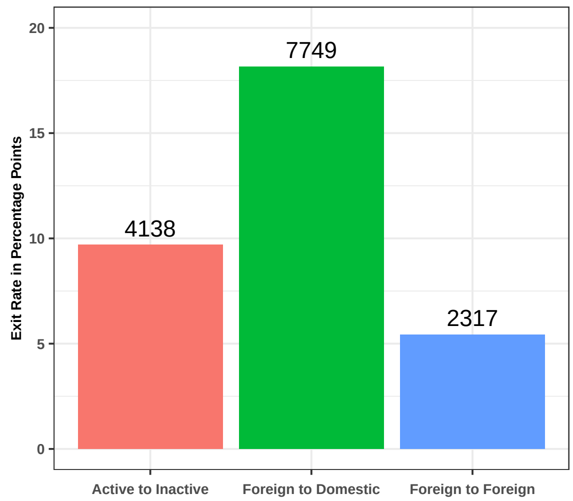
Notes: Circles correspond to exit rates for indicated annual periods. The triangle indicates the exit rate for the 18-month study period (2021-August 2023).

period.[15]

In theorizing, we approach exit as a transaction, which implies outcomes on both the "sell side" and the "buy side." Our focus is on explaining the "sell side" of exit, which makes for a more analytically tractable study, and is also driven by data considerations. Specifically, the dataset we build in this article is cross-sectional, as circumstances prevent us from building a time-series component. Moody's suspended all updates to Russian data in Orbis for 11 months of the 18-month study period, due to Russian policies that in Moody's judgement significantly reduced the availability and reliability of data.[16] What we are able to do is use "buy side" data to validate our conceptualization of exit as a transaction, which carries the observable implication that MNC exit does not categorically imply that businesses stop operating. Indeed, of the 33.3% of the pre-invasion population that exited, only 5.4% have become inactive. The other 27.9% have exited but remain active under new ownership. Figure 3 visualizes the distribution of outcomes on the "buy side" of the transaction. Altogether, over half of the exit rate is accounted for by one-time MNCs that have become active domestic (Russian) firms at the end of the study period. Assuming strategic non-reporting, this is a lower bound of Russian acquisitions.[17] We are also able to identify MNCs under new foreign ownership, which in the data often consist of complex consortia and likely holding companies. We intend these data to be leveraged in future research on not just whether, but how, MNCs exit. For our purposes, we probe the robustness of results on the aggregate exit rate to these different subcomponents (Section 6.3).

[15] See Section 6.1 and Appendix 11 for a placebo test leveraging pre-study period data.
[16] From 5 August 2022 to 2 June 2023 (Appendix 2).
[17] When restoring its data services, Moody's communicated that its Russian information providers had redacted many previously named Russian shareholders. (Appendix 2).

Figure 3. Subcomponents of the Exit Rate



Notes: Bars represent the exit rate in percentage points, and labels above the bars indicate the count. Our dependent variable is the aggregate exit rate summed across the three subcomponents (33.3%). See Section 6.3 for exploratory analyses of subcomponents.

4 Theory: Exit as a Transaction

As months passed after the Russian invasion, and real-time reporting increasingly questioned why MNCs that talked about exiting Russia were still operating there, it became clear that reducing "exit" to the choice to stay-or-go is misleading. Because they are profit-motivated, MNCs choosing to exit a given home state prefer to recover value from their brownfield assets located there and make those assets available to be redeployed elsewhere (Kim and Kung, 2017). With this in mind, a more generalizable way to think about exit is as a transaction, which occurs between a seller and buyer at some terms. Exit-as-transaction is able to account for instances in which an MNC quite literally moves physical assets abroad. In that case, the MNC is engaging in intra-firm trade as both seller and buyer, transacting at a transfer price.[18] An MNC could also liquidate assets by selling them to an external buyer. By approaching exit as a transaction, we can conceptualize host state interference in an MNC's ability to bargain over the terms of the sale. The transaction morphs into expropriation if the ownership transfer is coerced at terms to which the MNC would not voluntarily have agreed.

In the wake of a shock to political risk, exit is a transaction in which sellers, buyers, and terms are deeply politicized. Our approach is to theorize MNC incentives to select into seeking exit and pressures on the favorability of terms at which an MNC can conclude a sale. In so doing, we generate observable implications regarding the probability with which exit occurs, testable with our novel cross-sectional data. Importantly, this approach allows us to avoid generating some standardized measure of price, as

[18] Consider, for example, the relocation of human capital from an MNC's Russian offices to other branches.

observed prices for successful sales are not a suitable basis for inference. Acknowledging that pressure to sell and bargaining over terms are not mutually exclusive categories, Table 1 summarizes how we organize the theory and hypotheses developed in the next sections.

Table 1. Summary of Hypotheses: Likelihood of exit?

Variable of interest	Expected sign	Hypothesis
Pressure to sell		
Unfriendly home state	+	H1a
On name-shame list	+	H1b
Consumer-oriented industry	+	H1c
Bargaining over terms		
Russian managerial control	+	H2a
Russian strategic industry	-	H2b
High fixed assets	-	H2c

4.1 Pressure to sell

In terms of research design, one can consider every MNC invested in pre-invasion Russia as "treated" with the exogenous shock of economic disruption and turmoil caused by the full-scale invasion of Ukraine. However, MNCs from only some home states have been treated with a sharp increase in political risk operating via a shock to the relationship between their home and the host state. The coalition of states that have engaged in economic sanctions against Russia since the invasion is simple to identify: beginning on 5 March 2022, Russia published its "Unfriendly Countries" List, enumerating states and territories that "commit unfriendly actions against Russia, its companies, and citizens."[19] Broadly, "unfriendly" states have used their regulatory authority to engage in an unprecedented amount and variety of so-called economic statecraft, variously stopping capital and trade flows with Russian individuals, firms, and state organs. In the 18 months post-invasion that form our study period, the European Union announced eleven "waves" of sanctions that it, the United States, the United Kingdom, and a variety of other states have implemented with an unprecedented degree of coordination (Schott, 2023). As "unfriendly" states actively cut economic integration for foreign policy purposes, their MNCs faced pressure to reinforce home state efforts by exiting Russia of their own accord.

Although we align our prior with the expectation that MNCs from "unfriendly" homes are more likely to exit, there are several reasons to temper expectations. First, over the study period Russia has rolled out a series of discriminatory policies targeting asset sales by MNCs from "unfriendly" states. As chronicled in Appendix 4, these have included: requiring authorization from a special government commission if transactions involve stocks, loans, or immobile "unfriendly" property; requiring non-residents

[19] "Список недружественных стран" (Appendix 1). It is worth noting that the list includes only dozens of polities, given the overwhelming early votes to condemn the Russian invasion in the UN General Assembly (Appendix 9).

from “unfriendly” states to open special ruble bank accounts to receive transfers from Russian residents, with strict limits on repatriation; requiring government approval for profit distributions to “unfriendly” non-residents; a requirement to sell “unfriendly” assets at a 50% discount from market value, as established by a government-approved appraiser; specific limits on “unfriendly” ownership structure changes in the energy and mining sectors; limits on “unfriendly” investors in their capacity as buyers; limits on transactions between Russian pension, insurance, and other investment funds and “unfriendly” investors; and a 10% windfall tax on the deal value of transactions resulting in companies leaving Russia. Taken as a whole, we can understand these “unfriendly”-targeted policies as a Russian effort to counteract the pressures motivating “unfriendly” MNCs to sell. Russia rolled out these discriminatory policies across the study period, which suggests that the severity of Russian targeting of “unfriendly” MNC sales is endogenous to any of a variety of dynamics – such as sanctions packages, progress in the war, increasingly scarce domestic capital, or examples of (un)successful MNC exits.

Second, the extent to which misalignment with home state foreign policy goals resulted in pressure on MNCs to sell is also endogenous and varies over the study period. Indeed, as MNCs are tied to home states and not to a supra-national “unfriendly” coalition, they have distinct nationalities likely to generate heterogeneous interests and obligations (Wellhausen, 2015; Polanco, 2019). Despite the unprecedented coordination among “unfriendly” states on sanctions packages, very few home state leaders provided clear, public advice as to what their MNCs with preexisting investments in Russia should (not) do. Of those that did, the advice varied: official statements from the US, UK, Canada, Estonia, and Ukraine encouraged exit, whereas France deferred to its companies’ judgement, and Japan made statements encouraging continued investment.[20]

In short, although we align our priors with “unfriendly” predicting exit, varying and endogenous Russian efforts to counteract home state-tied pressures on MNCs to sell, as well as varying and endogenous pressures to align with home state foreign policy goals, suggest the aggregate net effect may be an empirical question. In that way, the “Unfriendly Countries” List both presents an obvious first hypothesis and a jumping off point for theory-building.[21]

Hypothesis 1a *MNCs from home states on Russia’s “Unfriendly Countries” List are more likely to exit Russia, compared to MNCs from other home states.*

There is a fast-growing literature on corporate social responsibility (CSR), or firm actions that consider “the triple bottom line of economic, social, and environmental performance” (Aguinis, 2011, 855). The notion is that firms are expected to recognize and define their role in society and behave in

[20] See Appendix 8 for specific quotations and coding procedures.
[21] We explore heterogeneous effect by “unfriendly” status in Section 6.2.1.

accordance with social and ethical standards. In the event that firms' (in)actions are in conflict with interested stakeholders, backlash from those stakeholders could be sufficiently motivating to result in a change in firm behavior.

In the two weeks after the invasion, there was disagreement over the extent to which exiting Russia was in fact the behavior that aligned with CSR priorities. Some MNCs announced that they would stop production but continued to pay the salaries of their Russian workers as an ethical obligation, and pharmaceutical and consumer goods MNCs argued for the importance of continued production of essential medicines and goods in Russia. Uniqlo, a Japanese fashion company owned by Fast Retailing, announced that it would keep its 50 retail stores in Russia open, and its CEO stated that "Clothing is a necessity of life...The people of Russia have the same right to live as we do." In our view, the public backlash to that international headline-making statement – and Uniqlo's volte-face just days later, announcing that it would sell its Russian business – solidified the view among important audiences that there was little-to-no room for a CSR-based argument to stay.[22]

One such audience is encapsulated in a remarkable set of scholarly, journalistic, and grassroots research efforts to "name and shame" MNCs invested in Russia, publicizing their (in)action with the intent to persuade. These efforts have been an amplification of bottom-up "naming and shaming" efforts in the context of international political economy, documented and explored in a growing literature (Barry, Chad Clay and Flynn, 2013; Thrall, 2021). In Appendix 3 we summarize 13 "name and shame" lists that were available on the Internet, aimed at influencing the behavior of foreign businesses in Russia, and actively updated as of 6-months post-invasion.[23] These lists have served different audiences. For example, the Kyiv School of Economics list has been a ready reference point for many observers worldwide and of urgent value for the domestic Ukrainian audience.[24] In the United States, a team at the Yale School of Management hosts a list that has received the endorsement of Ukrainian President Zelensky; the team describes the list as having been "widely circulated across company boardrooms, government officials, and media outlets."[25] Various groups of activists took it upon themselves to collect and publish lists, including "Boycott Russia," "Exit Russia," "Leave Russia," "Squeezing Putin," "Stop Bloody Energy," and "Don't Fund War."[26]

It is also important to note that "name and shame" efforts have not been limited to audiences sympathetic to the goal of promoting exit. The Russian business newspaper of record, Kommersant, has hosted a list, and we document a grassroots list by Russians and aimed at a Russian pro-war/anti-exit

[22] Megan Cerullo. "Uniqlo Bows to Public Pressure to Close Stores in Russia." *CBS News.* March 10, 2022. `https://www.cbsnews.com/news/russia-ukraine-uniqlo-closes-stores/`.

[23] We scraped data as of the 8-month mark (24 October 2022).

[24] `https://kse.ua/selfsanctions-kse-institute/` Last accessed 20 October 2023.

[25] `https://www.yalerussianbusinessretreat.com/about` Last accessed 25 October 2023.

[26] Other lists in Appendix 3 include one titled "RUBusiness," one hosted on Wikipedia, and one hosted by the Ukrainian newspaper EPravda.

audience titled "#WeRememberEverything."[27] We also suspect that other less formalized "name and shame" efforts for which the intended goal was to oppose exit have been meaningful. In a notable case, Didi, a Chinese ride-share company, immediately announced its exit from Russia but then faced social media backlash in China and reversed course. Lenovo, too, was rumored to be exiting Russia and faced Chinese social media backlash; the company clarified that the report by the Belarusian news agency was mistaken and it too would stay.[28] Nonetheless, we note that pro-exit lists cover all MNCs mentioned in anti-exit efforts, and moreover that pro-exit lists are considerably more comprehensive; we presume MNCs implicated on lists are facing (net) pro-exit pressure.

In the pre-invasion population, 16.3% of MNCs are named, either directly or indirectly, in that another business under the same GUO was named. Recognizing that selection onto these lists is non-random by design, it is unsurprising that the "name and shame" subsample is non-representative of the pre-invasion population by national origin, industry, size, or other metrics.[29] Our intuition is that grassroots activists reasonably selected on MNCs for which information was more readily available. Such MNCs might also have relatively more resources – legal, public relations, learning-by-doing from prior scandals, or similar – to shield themselves from social pressure. Therefore, while we align our priors with "name and shame" lists motivating exit in the study period, we temper our expectations.

Hypothesis 1b *MNCs that have been named on public-facing "name and shame" lists are more likely to exit Russia, compared to MNCs that have not been named.*

Backlash through generalized social opprobrium might be a complement to or a substitute for a more direct pathway of consumer backlash (Sumner, 2022). It is also possible that a consumer-backlash channel is more important in determining MNC behavior, given the shorter causal chain linking public opinion and the risk of material costs to a firm that acts contrary to it (Pandya and Venkatesan, 2016; Vekasi, 2019). As the world's largest, richest consumer markets are in states on Russia's "Unfriendly Countries" List, MNCs in consumer-oriented industries may be motivated to exit Russia so as to protect access to those markets, further reinforcing the importance of consumer-orientation in predicting exit.

To code consumer-orientation we use advertising intensity as a proxy, a novel approach that has applicability to a variety of research settings (Peterson and Su, 2017). Because of the importance of the US as a consumer market and data quality, we construct the variable using US industrial advertising expenditure data.[30] We normalize advertising expenditures by total income to measure intensity by industry, at a highly disaggregated level (NAICS 4-digit). The resulting measure makes sense intuitively;

[27] "#ВСЕЗАПОМНИМ."
[28] We thank Victoria Liu for discussion. Zhou, Cissy. 6 March 2022. "China's Didi cancels exit from Russia under public pressure." *Financial Times.* https://www.ft.com/content/c876cf4c-e91c-4a42-9f16-c424743eca71
[29] See Appendix 3 for matching procedures and descriptive statistics.
[30] Source: IRS Corporation Source Book (2012 [latest available]).

for example, the most advertising-intensive industries include footwear manufacturing (3162) and electronics and appliance retailers (4492), whereas the least advertising-intensive industries include metal ore mining (2122) and coal mining (2121). In analyses, we use a dichotomous measure of consumer-oriented industry, coded as 1 if the advertising intensity of an MNC's industry is above the mean of all industries and 0 otherwise.[31]

Hypothesis 1c *MNCs operating in consumer-oriented industries are more likely to exit Russia, compared to MNCs in other industries.*

4.2 Bargaining over terms

We now elaborate on mechanisms expected to have an effect on the ability of an MNC to come to terms in concluding a voluntary exit transaction. Whatever their motivations to sell, we assume that all MNCs are interested in maximizing the terms at which they exit. Anecdotally, this assumption is at the core of news reporting in the study period: myriad spokespeople affirmed and reaffirmed corporations' intentions to exit while also explaining the difficulty of quickly finding buyers and closing deals.[32]

First, an MNC's ownership structure constrains who represents the firm at the bargaining table. Large literatures have considered how ownership affects bargaining power at entry and during the lifetime of a firm's operations. In particular, choosing to share ownership with a domestic partner carries implications for political risk (Zhu and Shi, 2019). On the one hand, foreign investors in businesses controlled by domestic partners may be shielded from host state interference. On the other, this corporate structure exposes the foreign investor to conflicts with the domestic partner, including takeover attempts by the domestic partner (Henisz, 2000). If, however, the foreign shareholder is motivated to exit, then the ease of takeover may be a blessing – drastically minimizing the search costs required to find a buyer.[33] In fact, a rich literature has considered relationships between foreign and domestic shareholders in the Russian context (Markus, 2015), including the consequences of foreign minority ownership and foreign financing (Logvinenko, 2019, 2021). This scholarship emphasizes the importance of political capital to commercial success in the Russian context, reinforcing that foreign shareholders looking to sell would likely find it easier to do so with the involvement of preexisting Russian majority owners.

Hypothesis 2a *MNCs that are majority-owned by Russian shareholders are more likely to exit Russia, compared to MNCs that are not.*

[31] Of MNCs coded as consumer-oriented, 48.3% are matched to "name and shame" lists.

[32] As just one example, the bank Raiffeisen (Austria) reportedly had 2600 corporate customers, 4 million local account holders, and 10,000 staff in Russia. Commenting on the situation, a spokesperson for the Austrian finance ministry said, "A bank cannot leave a country like that overnight." (O'Donnell, John and Alexandra Schwarz-Goerlich. 6 July 2023. Reuters.)

[33] Probably, the preexisting controlling domestic partner is the most attractive, lowest transaction-cost buyer, although "buy-side" limitations of our data caused by strategic wartime Russian data reporting preclude us from verifying this conjecture.

Next, we take seriously the Russian state's interest in interfering with the terms of an exit. In the study period, Russia engaged in targeted interference with sales via added transaction costs for MNCs from "unfriendly" home states (H1a, Appendix 4). This nationality-tied interference is endogenous to the current political situation. However, scholars have much to say about industry as an exogenous determinant of host state political interference. States have heterogeneous interests in outcomes across industries, and risks of host state interference are higher for firms operating in those considered strategic (Lipson, 1985). In our setting, this implies that MNCs operating in industries considered strategic by the Russian state have less bargaining power, making them less likely to be able to come to terms sufficient to motivate their voluntary exit.

To test whether Russian strategic state interests shape exit in different industry contexts, we need to devise a strategy to generate a strategic industry list that is exogenous to the conflict with Ukraine. While some states, like China, maintain lists of officially recognized strategic industries, Russia does not. Although, in 2008 amid the Global Financial Crisis, the Russian government released a list of 295 "systemically important organizations," indicating that it would prioritize economic stabilization efforts for firms on the list if the need were to arise. The 295 firms are in 84 different disaggregated industries (4-digit NAICS), which we take as the industries considered strategic by Russia.[34] We infer that MNCs operating in these industries are exposed to higher political risk both before and after the invasion, as they are in competition with important domestic actors and/or providing goods and services consistent with what the Russian state views as strategic. If these MNCs were to seek to divest, we expect the Russian government would be more likely to interfere in the terms at which they do so, making their voluntary exit less likely.

As validation, we consider the large MNCs that Russia did directly expropriate in the study period. Notably, each of these MNCs had been seeking voluntary sales of their Russian assets and were publicly negotiating terms when Russia interfered and expropriated. These are Uniper SE (Germany, operating in the industry NAICS 2211); Fortum (Sweden, NAICS 5416); Carlsberg (Denmark, NAICS 3121); and Danone (France, NAICS 3115). The first three of these NAICS codes are indeed on the strategic industry list we devise. While Danone's code is not on the list, all other 4-digit NAICS under the 3-digit 311, "Food manufacturing," are on our list.[35] These facts give us confidence in our approach, and further that our list is an under-count.

[34]See Appendix 5 for sources and coding procedures. On the origins of "systemically important" businesses in post-Soviet Russia, see Johnson (1997).

[35]In the pre-invasion period, the MNCs Danone and PepsiCo (US) dominated the milk processing market in Russia. The absence of a "strategically important" domestic firm operating in NAICS 3115 on the 2008 list may mean there simply was not one. After our study period concluded, Danone negotiated a distressed sale at a price of 17.7 billion rubles ($191.5 million), which represented a 56% percent discount off its market value. ("Pro-War Russian Businessman to Take over Danone's Russian Assets."21 February 2024. Reuters.)

Hypothesis 2b *MNCs operating in industries considered strategic by Russia are less likely to exit Russia, compared to MNCs operating in other industries.*

Another reason industry plays such a large role in political economy theory is because of its impact on a firm's exit options. Industries vary in fixed asset intensity, or the fixed assets like physical property, plant, and equipment required to produce each unit of output. By definition, fixed assets are those that cannot be quickly converted into cash. So, for an MNC considering voluntary exit, more fixed assets implies lower recoverable value and worse bargaining power over terms.

The current setting makes it crucial for us to innovate a means of testing the fixed asset intensity mechanism in isolation, distinguishing it from other characteristics associated with industry. For example, mining and oil and gas are the go-to archetypes of highly fixed-asset intensive industries (Vernon, 1971), but in resource-rich Russia these are also among Russia's strategic industries (H2b). Therefore, it was perhaps theoretically overdetermined that the Putin administration severely restricted assets sales of MNCs in mining, oil and gas, in a decree issued six-months post-invasion.[36]

We hone in on the fact that industry characteristics are largely determined by technology, and certain industries are always more fixed-asset intensive than others across different states (Nunn and Trefler, 2014, p 274). However, it would be naive to take fixed asset intensity as fully exogenous; MNCs in Russia have surely strategically adjusted their investments in fixed assets in response to issues of political risk and uncertainty, both pre- and post-invasion. We therefore use US data, as the US market is arguably the most competitive in the world, leaving its industry characteristics primarily shaped by technology rather than non-market factors (Wright and Zhu, 2018; Zhu and Deng, 2022). We scale industry fixed asset stocks by gross output, and we additionally average over the 5-year span prior to our study period (2017-2021), which ensures the measure is pre-treatment and mitigates bias that could be introduced by relying on any particular, potentially abnormal year.[37] The resulting measure makes sense intuitively; for example, oil and gas (NAICS 211) and mining (NAICS 212) are among the most fixed asset-intensive. Additionally, the measure reveals variation within 2-digit industries in line with our identification strategy. For example, within transportation and warehousing (NAICS 48), pipeline transportation (NAICS 486) is fixed asset-intensive, whereas support activities (NAICS 488) are not. In analyses, we use a dichotomous measure of high fixed assets, coded as 1 if the value associated with the industry is above the mean of all industries and 0 otherwise.

Hypothesis 2c *MNCs operating in industries intensive in fixed assets are less likely to exit Russia, compared to MNCs in other industries.*

[36]Decree No. 520, 5 August 2022; Appendix 4.

[37]Source: US Bureau of Economic Analysis. Unfortunately, data are only available at the 3-digit NAICS level.

5 Empirics

5.1 Nationality

In the data, MNCs originate from 132 unique home jurisdictions, which we take as their nationality.[38] To provide insight into the distribution of foreign ownership, we adopt the Russian terminology and distinguish between MNC homes that are "unfriendly" or "friendly." In the data, 52 unique home jurisdictions are "unfriendly," which account for 75.5% of the pre-invasion population. The remaining 24.5% of the pre-invasion population comes from 80 unique "friendly" home jurisdictions. Table 2 reports the top 20 "unfriendly" and "friendly" homes.

Table 2. Top 20 "Unfriendly" and "Friendly" MNC Homes

Unfriendly	**Friendly**
Cyprus	Belarus
Germany	Seychelles
United Kingdom	China
Netherlands	Turkey
Ukraine	Armenia
British Virgin Islands	Kazakhstan
United States	Azerbaijan
France	Uzbekistan
Italy	Belize
Switzerland	Hong Kong
Finland	Kyrgyz Republic
Austria	Vietnam
Luxembourg	India
Czechia	Israel
Spain	Tajikistan
Sweden	Serbia
Japan	United Arab Emirates
Latvia	Moldova
Denmark	Marshall Islands
Lithuania	Panama

Of 52 "unfriendly" and 80 "friendly" homes (Appendix 1).

5.2 Control variables

Table 3 summarizes control variables categorized by level of analysis. For additional details on coding, see Appendix 2.

With Table 2 in mind, the prominence of certain likely strategic jurisdictions in the pre-invasion population suggest important control variables. Because "tax haven" is not an objective term, we follow best practices in defining Tax haven by the European Union's list of non-cooperative tax jurisdictions.[39]

[38] For coding rules, see Appendix 2.

[39] Appendix 6. In the data, MNCs come from 14 "unfriendly" and 31 "friendly" tax havens.

Table 3. Summary of control variables

Category	Variables
Home	Tax haven, EU member, Cyprus, Ukraine, Trade with Russia, IIA, PTA, DTT
Firm (substantive)	Size, Years in Russia, Russian subsidiary presence, State-owned, Listed outside Russia
Firm (data-related)	MNC home $\neq$ GUO home, >1 qualifying foreign owner, Classification via GUO
Industry	Aggregate industry fixed effects (2-digit NAICS)

The trade-off in using the EU list is that no EU member state is classified as a Tax haven, which adds to the importance of controlling for whether the home is an EU member. As Cyprus is an EU member state, it is party to EU sanctions packages and is on Russia's "Unfriendly Countries" List. Simultaneously, it is well-known that Russian capital is commonly "round-tripped" through Cyprus, in what is sometimes called the "Cyp-Rus corridor." This means Russian investors incorporate MNCs in Cyprus and invest as FDI into Russia (Logvinenko, 2019; Gonchar and Greve, 2022).[40] Russian round-tripping through Cyprus has been of central concern regarding money laundering and financial crime (Repousis, Lois and Kougioumtsidis, 2019). Our data only concern legally-incorporated firms and can offer no insight into the substance or intent of capital flows associated with those firms. Regardless, the special complications around Cyprus in the Russian context motivates us to include a Cyprus dummy. We also include a dummy for Ukraine.

Given that we aim to test theoretical expectations about shocks to home-Russian relationships, we need to control for baseline characteristics of those relationships. Trade with Russia is the 5-year average over the immediate pre-invasion period (2017-2021). We also include dummies of economic treaties in force between the home and Russia as of the day of the invasion: International Investment Agreement (IIA), Preferential Trade Agreement (PTA), and Double Taxation Treaty (DTT). If legal protections under economic treaties can promote bilateral integration by providing dispute resolution mechanisms and/or other incentives to avoid disruptions to economic integration, then MNCs from states with ex ante treaty protections may face a different post-invasion shock than others (Peinhardt and Zhang, 2024). On the other hand, if the credibility of the post-invasion Russian commitment to economic treaties is endogenous, these formal institutions are likely less meaningful in influencing MNC decision-making. Inter alia, in May 2023 (15 months post-invasion), Russia officially suspended DTTs with a wide swath of "unfriendly" states.[41]

At the firm level, we control for Size with a four-category variable provided by Orbis.[42] Of

[40] Round-tripping corridors appear worldwide, and the impact of this phenomenon on FDI data is receiving increasing attention (Linsi and Mügge, 2019).

[41] Appendix 7. On the operation of IIAs during the extended Russia-Ukraine conflict, see Wellhausen and Peinhardt (2024).

[42] Unfortunately, we cannot confidently create continuous variables with available historical firm-level financial data. See Appendix 2 for category definitions. We explore heterogeneous effects by size in Section 6.2.2.

pre-invasion MNCs, 4.1% are VERY LARGE, 11.2% are LARGE, and 20.0% are MEDIUM. The remaining 64.8% of MNCs are SMALL, defined as having fewer than 15 employees, less than EUR 2 million in assets, and/or less than EUR 1 million in operating revenue. Empirically, this skewed distribution highlights the importance of our approach in drawing the full pre-invasion population to avoid ecological inference problems. Additionally, we control for the MNC's YEARS IN RUSSIA. To capture the relevance of the Russian market within the MNC's corporate family, we control for RUSSIAN SUBSIDIARY PRESENCE, or the proportion of MNCs in the corporate family that are present in Russia.[43] STATE-OWNED is a dummy indicating that the MNC has at least one non-Russian state shareholder, expecting that these MNCs are more likely to act in alignment with their political principals (Stone, Wang and Yu, 2022). LISTED OUTSIDE OF RUSSIA marks those MNCs that are part of an entity that is publicly traded on a (non-Russian) stock exchange, suggesting they could be especially exposed to pressures to sell if shareholders worry that remaining in Russia would hurt stock values or if shareholders take activist positions themselves. We also include firm-level indicator variables linked to data issues. MNC HOME $\neq$ GUO HOME equals 1 if the nationality of the MNC and its GUO is not the same; > 1 QUALIFYING FOREIGN OWNER equals 1 if there is more than one foreign shareholder at the first level that passes the FDI qualification threshold; and CLASSIFICATION VIA GUO equals 1 if an MNC enters the dataset based on information about its global ultimate owner.

As industry-level variation is of theoretical interest, the most conservative approach to hypothesis testing is to specify explanatory variables at disaggregated levels and control for more aggregated categories. Our primary approach is to use NAICS 2-digit industries as fixed effects; we consider another industry classification in Section 6.2.3.[44]

6 Results

We fit simple linear probability models (LPMs) to provide an easy and straightforward interpretation of substantive effects (Ai and Norton, 2003); results are robust to estimating nonlinear probit models (Beck, 2020).[45] We cluster standard errors at the 2-digit NAICS industry level to adjust for heteroskedasticity and within-group dependence. In the following, we report our main results; explore theoretically-motivated heterogeneous effects; and consider an extension in which the dependent variable takes into account "buy side" variation.

[43]The measure equals 1 for 9.5% of MNCs, indicating that while they are FDI, all related subsidiaries are in Russia.
[44]We use the 19 unique 2-digit NAICS industries; results are robust to using the 23 category alternative.
[45]Appendix 11.

6.1 Main results

Table 4 reports our main results. First, we evaluate results on hypotheses regarding pressure to sell. In almost all specifications, Unfriendly home state is negative – opposite to expectations – but always insignificant, which supports the intuition that MNC behavior has been about more than economic statecraft as encapsulated in Russia's "Unfriendly Countries" List (contra H1a). In what the authors of "name and shame" lists might see as disappointing, the coefficient On name-shame list is consistently negative and significant (contra H1b). Does this mean that social backlash backfired? We do not think that is a fair interpretation. First, "name and shame" lists are non-representative of the estimation sample on myriad dimensions; it could be that authors of lists selected especially difficult cases.[46] Second, our results cannot speak to the potentially negative consequences felt by named MNCs that did not exit, for example in terms of reputation (Balyuk and Fedyk, 2023; Davis, Li and Miyano, 2024; Pring, 2024). Third, the absence of the expected aggregate-level, average effect does not mean that "name and shame" efforts never worked; case-study process tracing might uncover specific instances in which lists motivated exit. However, our results do throw cold water on the strongest defenders of "name and shame" lists as having robust causal effects on MNC exit or the Russian political economy writ large (Sonnenfeld et al., 2022; Sonnenfeld and Tian, 2022). In contrast, Consumer-oriented industry is positive and significant as expected (H1c). In sum, we have the most confidence that consumer-orientation meaningfully differentiates which MNCs actually complete exit within the 18 months following the invasion.

On our hypotheses concerning MNC bargaining power over the terms of exit, results on Russian managerial control are positive and significant as expected across specifications (H2a). Russian strategic industry is negative and significant as expected across specifications (H2b). Substantively, take results in the fully specified Model 8 as an example of the importance of these factors. All else being equal, MNCs under preexisting Russian managerial control are 5.0 percentage points more likely to exit, while MNCs in Russian strategic industries are 4.5 percentage points less likely to exit. Regarding H2c, the coefficient for High fixed assets is negative as expected, but statistically insignificant. These results suggest that when controlling for 2-digit NAICS via fixed effects, relative levels of fixed asset intensity at the 3-digit NAICS level are not meaningful predictors of exit. This is important information on the limits of data disaggregation and measurement in applications of the classic obsolescing bargaining literature. We revisit industry in Section 6.2.3 below and find support for H2c when adjusting our fixed effects strategy.

Regarding control variables, results in Table 4 are sensible and in most cases stable across model

[46] See again descriptive statistics in Appendix 3.

Table 4. Determinants of MNC Exit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Unfriendly home state	0.004	-0.016	-0.014	-0.011				-0.008
	(0.017)	(0.020)	(0.021)	(0.020)				(0.020)
On Name-Shame list			-0.047***	-0.046***				-0.046***
			(0.016)	(0.016)				(0.015)
Consumer-oriented industry				0.009*				0.014**
				(0.005)				(0.006)
Russian managerial control					0.052***	0.055***	0.056***	0.050**
					(0.018)	(0.018)	(0.019)	(0.019)
Russian strategic industry						-0.044***	-0.044***	-0.045***
						(0.012)	(0.012)	(0.013)
High fixed assets							-0.019	-0.021
							(0.032)	(0.031)
Home level								
Tax haven	-0.043***	-0.022	-0.023	-0.022	-0.012	-0.012	-0.013	-0.015
	(0.010)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)
EU member		0.031	0.031	0.031	0.033	0.034	0.035*	0.036*
		(0.020)	(0.020)	(0.021)	(0.021)	(0.020)	(0.020)	(0.019)
Cyprus		0.042**	0.037*	0.035*	0.044**	0.045**	0.042**	0.037*
		(0.018)	(0.019)	(0.019)	(0.018)	(0.018)	(0.018)	(0.019)
Ukraine		0.043	0.041	0.040	0.029	0.031	0.032	0.041
		(0.028)	(0.028)	(0.028)	(0.023)	(0.023)	(0.023)	(0.028)
Trade with Russia	-0.017**	-0.011	-0.011	-0.011	-0.010	-0.010	-0.011	-0.010
	(0.007)	(0.007)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)
IIA	-0.068**	-0.083***	-0.087***	-0.084***	-0.089***	-0.090***	-0.090***	-0.087***
	(0.024)	(0.023)	(0.023)	(0.023)	(0.023)	(0.024)	(0.023)	(0.023)
PTA	0.014	0.021	0.020	0.022	0.033*	0.033*	0.033*	0.027
	(0.017)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
DTT	-0.025	-0.058	-0.056	-0.059	-0.059*	-0.059*	-0.060*	-0.059
	(0.027)	(0.034)	(0.035)	(0.035)	(0.031)	(0.032)	(0.032)	(0.035)
Firm level								
Medium	-0.054***	-0.055***	-0.055***	-0.057***	-0.055***	-0.054***	-0.055***	-0.055***
	(0.017)	(0.016)	(0.017)	(0.017)	(0.016)	(0.017)	(0.017)	(0.017)
Large	-0.012	-0.016	-0.011	-0.012	-0.016	-0.014	-0.014	-0.011
	(0.017)	(0.016)	(0.017)	(0.018)	(0.016)	(0.017)	(0.017)	(0.018)
Very Large	0.016	0.012	0.020	0.020	0.008	0.010	0.010	0.019
	(0.019)	(0.020)	(0.021)	(0.022)	(0.019)	(0.020)	(0.020)	(0.022)
Years in Russia	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001**	-0.001**	-0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Russian subsidiary presence	0.118***	0.107***	0.089**	0.087**	0.101***	0.102***	0.099**	0.082**
	(0.034)	(0.034)	(0.034)	(0.035)	(0.034)	(0.034)	(0.035)	(0.034)
State-owned	0.034	0.039	0.049	0.071*	0.041	0.041	0.066	0.068*
	(0.053)	(0.053)	(0.051)	(0.038)	(0.054)	(0.053)	(0.040)	(0.037)
Listed outside of Russia	0.013	0.009	0.010	0.009	0.006	0.009	0.008	0.011
	(0.020)	(0.023)	(0.023)	(0.023)	(0.022)	(0.023)	(0.023)	(0.024)
MNC home $\neq$ GUO home	0.002	-0.003	-0.000	0.001	-0.031**	-0.033**	-0.033**	-0.026**
	(0.009)	(0.008)	(0.008)	(0.007)	(0.013)	(0.013)	(0.013)	(0.012)
>1 qualifying foreign owner	-0.034***	-0.031***	-0.027**	-0.026**	-0.029***	-0.029***	-0.029***	-0.024**
	(0.011)	(0.010)	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)
Classification via GUO	0.142***	0.143***	0.151***	0.151***	0.090**	0.089**	0.087**	0.102**
	(0.025)	(0.024)	(0.025)	(0.025)	(0.039)	(0.040)	(0.041)	(0.041)
Constant	0.598***	0.546***	0.554***	0.550***	0.533***	0.553***	0.559***	0.562***
	(0.080)	(0.081)	(0.084)	(0.086)	(0.077)	(0.076)	(0.076)	(0.084)
N	39367	39367	39367	38571	39367	39367	38973	38453
Number of Industries	19	19	19	19	19	19	19	19
R^2	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level;
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

specifications. On home-level controls, note especially the consistent negative and significant sign on IIA, which corresponds to the underlying intentions of these treaties: MNCs covered by IIAs are meant to be assured that their property rights will be protected, and that they have legal recourse in the case that their property rights are violated, both factors that would lower their motivations to voluntarily exit due to political risk.[47] At the firm level, size is relevant: relative to the excluded category of Small, Medium MNCs are less likely to exit; the coefficient size shrinks and turns positive as size categories increase although results are not significant. MNCs that have spent more Years in Russia are consistently significantly less likely to exit, whereas MNCs that are part of a corporate family with a higher Russian subsidiary presence are more likely to exit, although we caution against over-interpretation of this result.[48] Covariates indicating complexities in the data and firm ownership are generally significant.

To probe robustness, we adjust the fully specified Model 8 in Table 4 in several ways.[49] First, we replace home-level covariates with home fixed effects; results are consistent, except that Consumer-oriented industry loses significance. Second, we include a slate of additional home state variables: GDP per capita, Liberal democracy (V-Dem), and UNGA voting similarity capturing foreign policy alignment between the MNC's home state and Russia using votes from 2017-2021 (Bailey, Strezhnev and Voeten, 2017).[50] MNCs from home states that had been more politically aligned with Russia at the UNGA are less likely to exit, which is interesting in light of the overwhelming condemnation of Russia at the UNGA in the immediate aftermath of the invasion.[51] Results are robust, except that Consumer-oriented industry loses significance. Last, we drop rather than control for MNCs registered in tax havens and Cyprus, which reduces our sample size by more than 40%. The coefficient on Russian managerial control lose significance, which makes sense given the concentration of Russian round-tripping in the "Cyp-Rus" corridor (Repousis, Lois and Kougioumtsidis, 2019). The coefficient on Consumer-oriented industry also loses significance. Overall, this exercise suggests that results on consumer-orientation (H1c) are sensitive to model specification, which underscores the importance of Section 6.2.3 in which we replicate results on consumer-orientation while treating industry differently.

We also return to the historical data presented in Figure 2 to conduct a placebo test: do the dynamics of MNC exit in the study period differ from those in earlier years? We select the last observed pre-invasion period (2020-2021) as the placebo, presuming that MNCs operated in a most-similar environment, except for factors related to Russia's escalation to a full-scale invasion of Ukraine. As reported in Table I in Appendix 11, placebo test results are different in a variety of ways, reinforcing the overall premise that distinct theoretical mechanisms have been in operation in the study period. We are cautious about interpreting differences between the placebo and Table 4, as in the placebo period

[47] Carlsberg, one of the four large MNCs expropriated in the study period, sued Russia in 2023 under the three IIAs to which it has access (Denmark-Russia, Sweden-Russia, and Germany-Russia) (Wellhausen and Peinhardt, 2024).

[48] On one hand, these MNCs are more dependent on Russia, making a positive coefficient perhaps surprising. On the other, it might simply be easier for these corporate families to consolidate operations into fewer Russian subsidiaries, a conjecture we cannot validate with our data.

[49] See Appendix 11 for all results.

[50] We exclude these variables from our main specifications because of missing data on the many home states in our sample that are non-sovereign territories and not UN members (Appendix 1).

[51] Appendix 9.

several covariates are by definition anachronistic. Still, we note that MNCs under Russian managerial control are *less* (rather than more) likely to exit in the placebo period, a result that gives us confidence as it aligns with literature on the strategic usefulness of engaging in joint ventures with domestic firms – in normal circumstances at least (Henisz, 2000).

6.2 Exploring heterogeneous effects

We now turn to a series of theoretically informed subsample analyses, probing whether and to what extent aggregate results in Table 4 are masking heterogeneous effects. We focus on MNC national origin, size, and industry.

6.2.1 National origin: "unfriendly" v. "friendly" homes

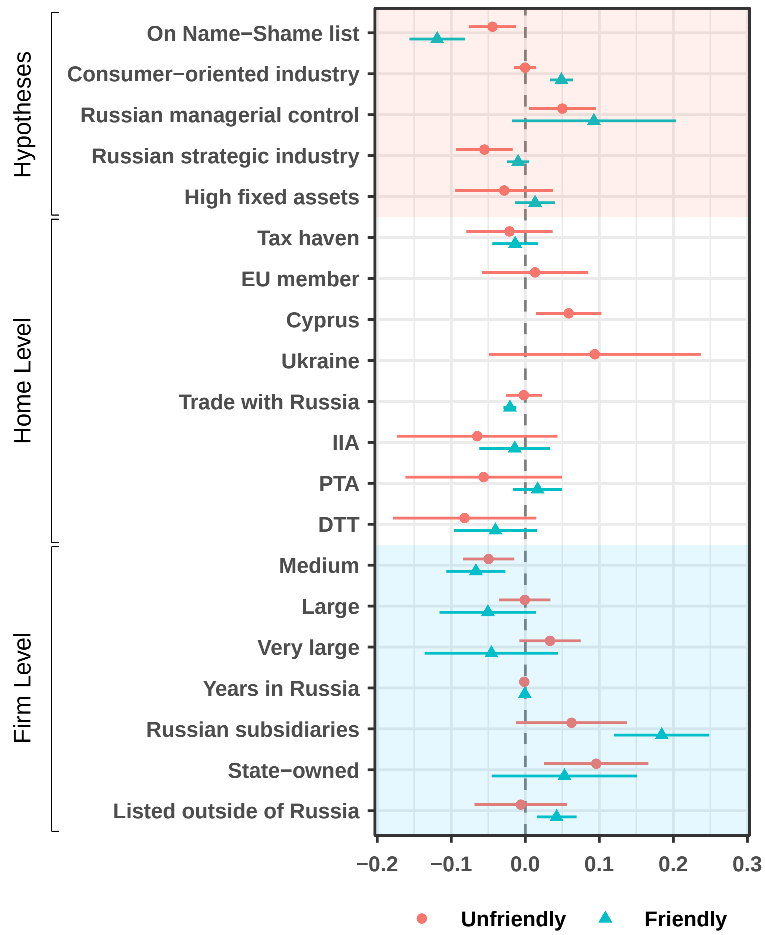
To examine potential heterogeneity between MNCs from "unfriendly" and "friendly" home states, we divide the sample and re-estimate models. Overall, the results visualized in Figure 4 provide little evidence that the unprecedented economic statecraft from "unfriendly" states has played a central role in differentiating the decisions of their privately-owned MNCs regarding exiting Russia. The heterogeneous effects around State-owned provide perhaps the strongest result consistent with statecraft: in the "unfriendly" subsample, MNCs with state ownership are more likely to exit Russia. On our hypotheses, results are heterogeneous for Consumer-oriented industry: it is the point estimate for "friendly" on consumer-orientation that is positive and significant, suggestive that exposure to consumer pressure can meaningfully impact MNC behavior absent concurrent home state foreign policy pressure (H1c).[52] Other interesting differences on control variables reinforce literature highlighting heterogeneity in the kinds of firms that become MNCs from the Global North v. the Global South, which has some albeit imperfect overlap with the "unfriendly" v. "friendly" distinction (e.g. Beazer and Blake, 2021).

6.2.2 Heterogeneity by size

One advantage of our data is that we are able to account for the huge proportion of MNCs (64.8%) in pre-invasion Russia that are small, with less than EUR 1 million in revenue, less than EUR 2 million in assets, and/or less than 15 employees. Such MNCs may receive little public attention; for example, only 14.6% of small MNCs in our sample are on "name and shame" lists, compared to 35.1% of very large ones. And yet, investments by small- and medium-sized enterprises have long been a darling of public policy. For example, in the 1990s and 2000s many of what are today's "unfriendly" states put resources into promoting FDI by small and medium enterprises into Russia and the broader post-Soviet

[52] For MNCs from "friendly" homes High fixed assets has a *positive* sign (contra H2c), but it is statistically indistinguishable from zero.

Figure 4. Determinants of MNC Exit: Comparing "unfriendly" v. "friendly" home states



Notes: Plot of point estimates and 95% confidence intervals for Models 1 and 2, Table J in Appendix G.

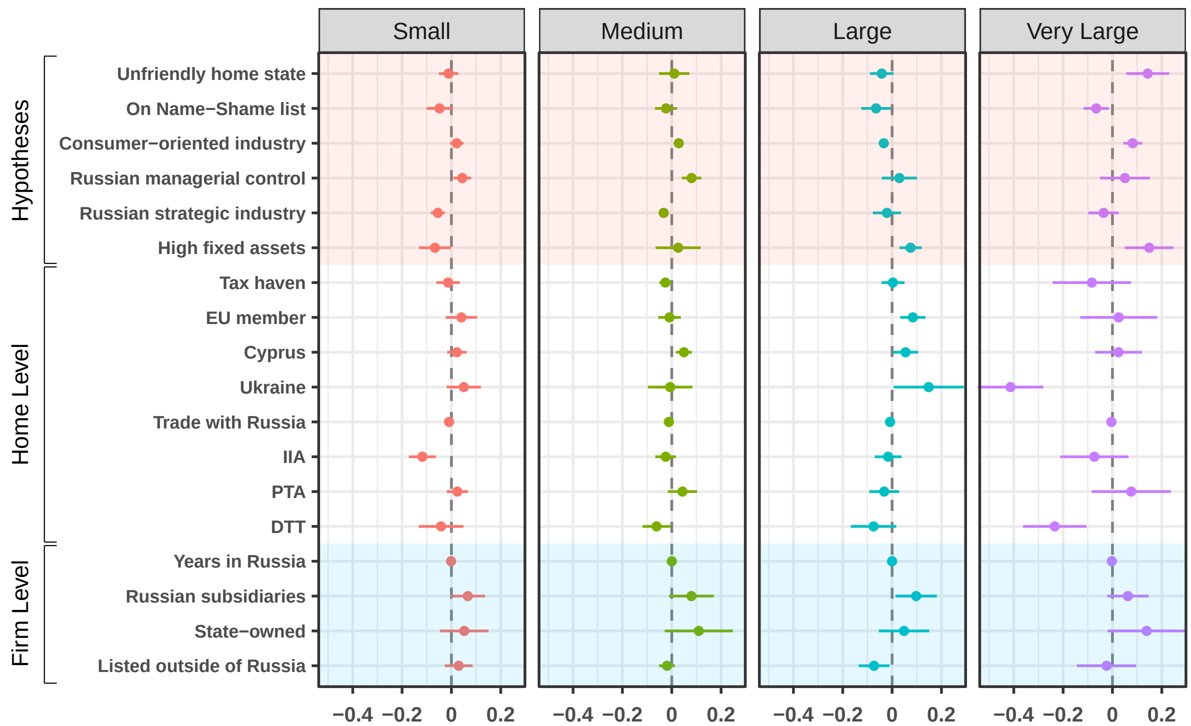
region, short-handed by some Western ex pats as the "Wild East."[53] While testing the effectiveness of early Western investment promotion efforts is outside our scope, it is notable that 55.6% of small MNCs in the pre-invasion population are from "unfriendly" states.[54]

To examine potential heterogeneity between MNCs with Russian operations of different sizes, we divide the sample and re-estimate models. The results, visualized in Figure 5, reveal some interesting nuances, especially for very large MNCs – those with greater than EUR 100 million in operating revenue, greater than EUR 200 million in assets, and/or greater than 1,000 employees. Very large MNCs from "unfriendly" home states have a positive and significant point estimate on exit, the closest evidence we find in support of H1a. Very large MNCs also appear particularly responsive to consumer pressure (H1c) but particularly non-responsive to "name and shame" lists (contra H1b), which reinforces that financial

[53]For more on this phenomenon and the consequences of early post-Soviet business-government relations for outcomes today, see for example Grittersová (2014); Gans-Morse (2017); Szakonyi (2020).

[54]This figure excludes Cyprus, given its complications. With Cyprus, the figure is 70.7%.

Figure 5. Determinants of MNC Exit: Examining heterogeneity by MNC size category



Notes: Plot of point estimates and 95% confidence intervals for Models 1–4, Table K in Appendix G. Data-related firm level covariates omitted for presentation. For size category definitions, see Appendix 2.

costs like lost sales have different effects on exit than more intangible reputational costs. Additionally, small MNCs characterized by high fixed assets are less likely to exit, as expected (H2c), whereas results for other subsamples are not consistent with expectations; we revisit fixed assets when reconsidering industry in Section 6.2.3. Other interesting differences remind us of the relevance of firm financials to firm behavior, something of course at the center of management literature but that can be obscured in political science work that does not consider the firm as the unit of analysis (Cefis et al., 2022).

6.2.3 Alternative industry classifications

So far, our fixed effects approach means we have identified off of variation within 19 unique 2-digit NAICS industries. Now, we leverage an alternative 12-industry classification commonly employed in the finance literature, developed by Fama and French (1996) and based on characteristics like size and profitability as captured in stock market outcomes.[55] We use the FF industries to create alternative measures for consumer-orientation (H1c) and high fixed assets (H2c), and we include remaining FF industries as dummies, with manufacturing as the excluded reference category.[56]

[55] Appendix 10.

[56] Manufacturing is an important industry, an archetype of an industry that is not consumer-oriented, and commonly understood as having relatively mobile assets, making it a suitable excluded category for interpreting results.

Table 5. Determinants of MNC Exit: Alternative industry classifications

	(1)	(2)
Consumer-oriented (alt)	-0.003	
	(0.007)	
Consumer durables		0.027***
		(0.007)
Consumer nondurables		-0.008
		(0.007)
High fixed assets (alt)	-0.074***	
	(0.023)	
Oil, gas & coal		-0.035***
		(0.006)
Utilities		-0.093***
		(0.008)
Telecommunications		-0.113***
		(0.012)
Chemicals & allied products	-0.015***	-0.015***
	(0.002)	(0.002)
Business equipment	0.001	0.000
	(0.005)	(0.005)
Finance	-0.014	-0.014
	(0.010)	(0.010)
Healthcare	-0.003	-0.004
	(0.010)	(0.010)
Shops	-0.012**	-0.012**
	(0.005)	(0.005)
Other industries	0.007	0.006
	(0.012)	(0.012)
Constant	0.570***	0.571***
	(0.083)	(0.083)
Hypothesis variables	Yes	Yes
Home- & Firm-level controls	Yes	Yes
N	39368	39368
R^2	0.05	0.05

Notes: Robust standard errors in parentheses, clustered by industry; industry reference category = manufacturing;
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

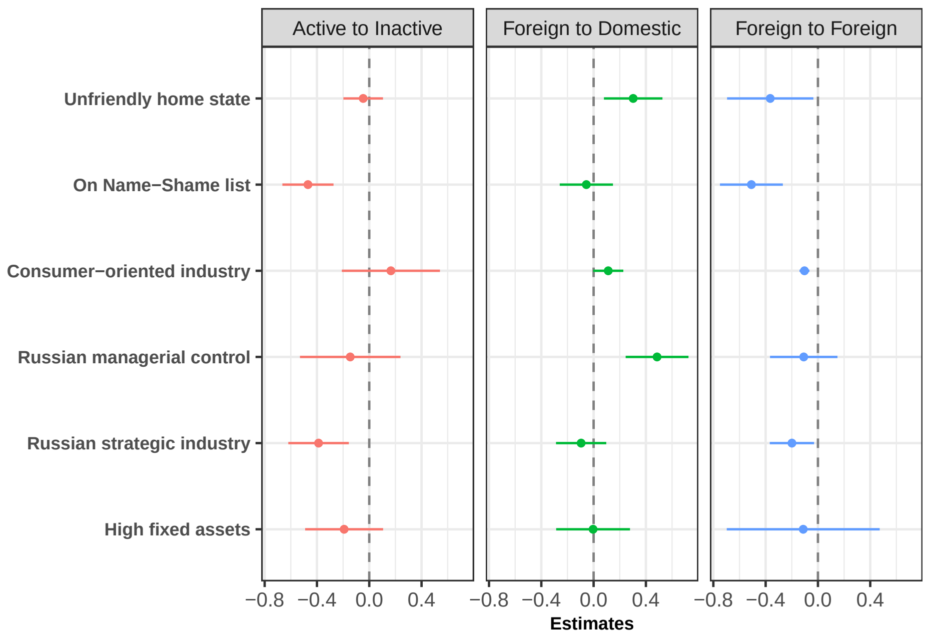
Table 5 reports results, with control variables suppressed for presentation. Results are robust for the unchanged hypothesis variables, which are also suppressed for presentation. In Model 1 the coefficient for Consumer oriented (alt) is insignificant. When the measure is broken into its constituent parts in Model 2, Consumer durables has a positive and significant coefficient while Consumer nondurables has a small and insignificant coefficient.[57] These results provide further support for consumer-orientation as a predictor of exit (H1c) while also suggesting heterogeneity worthy of further study. Importantly, results in Table 5 provide support for expectations regarding fixed asset intensity (H2c). In Model 1, the aggregated measure High fixed assets (alt) is negative and significant, and coefficients remains so when the measure is broken into its constituent parts in Model 2, Oil, gas, & coal, Utilities, and Telecommunications. As our main results using more nuanced, disaggregated measures of asset intensity were signed as expected but not significant, results here suggest that the relationship between fixed assets and exit is better understood at an aggregated cross-industry level.

[57]Durables are understood as goods that do not need to be purchased often and last for at least three years, such as cars, TVs, furniture, and household appliances.

6.3 Extension: Subcomponents of exit rate

As an extension, we explore whether results are different if the dependent variable takes into account the three subcomponents of the exit rate: whether an MNC becomes inactive, whether we can confirm that it has become a domestic (Russian) firm, or whether it remains a foreign-owned firm but under new ownership (see again Figure 2). These categories are mutually exclusive, although recall that endogenous data issues suggest that we underestimate the foreign-to-domestic category and thus overestimate one or both of the other categories (see again Section 3). We estimate a multinomial logit model and visualize results on hypotheses in Figure 6.

Figure 6. Extension: Considering different "buy side" outcomes within the aggregate exit rate



Plot of point estimates and 95% confidence intervals from multinomial logit results on a 3-category dependent variable, Table L in Appendix 11.

Several results in Figure 6 parallel our intuitions about "buy side" heterogeneity. First, it makes sense that foreign-to-foreign exits are not as common in a Consumer-oriented industry, presuming that the fear of lost sales in foreign (non-Russian) markets motivates these exits (H1c). Second, it is sensible that Russian managerial control is a strong predictor of exit that takes the form of an ownership transfer to a domestic (Russian) firm (H2a). Third, MNCs operating in a Strategic Russian industry should indeed be unlikely to become inactive, as such an outcome would be counter to the Russian state's interests (H2b). Point estimates across all three outcomes are consistently signed for On name-shame list (negative, contra H1b), and High fixed assets (null results, H2c).

What we want to emphasize from Figure 6 is the positive and significant coefficient on Un-

FRIENDLY HOME STATE for the foreign-to-domestic exit outcome. Put differently, MNCs originating from "unfriendly" home states that did exit were especially likely to do so by transferring ownership to a domestic Russian firm. For actors pushing MNCs to exit Russia, that doing so would punish Russia has been front of mind, reflected in the titles of "name and shame" lists like "Squeezing Putin" and "Don't Fund War," for example.[58] Is selling businesses to Russian buyers – at fire sale prices – the kind of punishment such actors had in mind? As time has gone on and the war has continued, questions have arisen over whether and to what extent packages of economic sanctions from "unfriendly" states have in fact had punishing effects (Schott, 2023). Our data suggest the same questions be asked of the outcomes of MNCs exiting Russia since the full-scale invasion. Specifically, what does exit mean for productivity going forward? Have foreign-to-domestic changes in ownership generated so much of a hit to productivity that newly domestic Russian firms are flailing? This question is circulating among scholars, in the international business press, in domestic Russian business circles and, certainly, within the Russian state.[59] At the time of writing, changes in MNC decision-making in concert with economic sanctions have not exerted so much stress on the Russian economy as to undermine its ability to wage war, as the war drags on. Overall, we hope results in Figure 6 motivate future analyses of "buy side" outcomes.[60]

7 Conclusion

In this setting of an exceptional, host state-wide shock to political risk, sellers, buyers, and prices of brownfield MNC assets have been deeply politicized. We document that 33.3% of MNCs present in pre-invasion Russia had exited as of 18 months into the war, with most continuing operations as either domestic Russian or other-foreign firms and a smaller percentage becoming inactive. To explain exit patterns, we approach exit as a transaction and theorize how MNCs vary in their motivations to sell and the ease with which they can find and come to terms with buyers. We find mixed evidence on our hypotheses, themselves closely linked to the literature, which open up a variety of new lines of inquiry. On pressures to sell, our findings are strongest on consumer pressure as a motivation for MNCs to exit, with little to no evidence of home state foreign policy or prominent social backlash as significant

[58] Appendix 3.

[59] Gaur, Settles and Väätänen (2023) examine sanctions against Russia from 2014-2020 and find no persistent negative effect on Russian firms' economic performance.

[60] There is interesting "buy side" variation that our registry-based dataset cannot capture. For example: Renault's (French) sale for one ruble to a Russian entity, with the option to buy back within six years, was an early example of a formal buyback option in an exit transaction. Our data can be used as the basis for tracing any future actual buybacks. "Renault sells Russia's Avtovaz stake, but leaves room for return." 16 May 2022. Reuters. `https://www.reuters.com/markets/deals/renault-sells-its-stake-russias-avtovaz-option-buy-it-back-2022-05-16/` For more on buy-side outcomes, see videos on the YouTube channel "Travelling with Russell," in which Russell documents MNC changes by doing things like walking around malls and supermarkets in the Moscow region (114,000 subscribers as of 26 October 2023). `https://www.youtube.com/c/TravellingwithRussell`.

predictors of exit. On the ease of coming to terms in voluntary exit transactions, we find that MNCs with Russian majority ownership were significantly more likely to exit, and were especially likely to become domestic Russian firms instead. MNCs operating in strategic Russian industries were significantly less likely to exit, consistent with the presumption that their political risk is high both pre-and post-invasion. Last, we find evidence that MNCs operating in industries intensive in fixed assets are indeed less likely to exit, although that support is nuanced and suggests revisiting the centrality of asset immobility in vast literatures on foreign investor-host state relations. Overall, results suggest that privately-owned, profit-maximizing MNCs possess substantial autonomy even when facing an unprecedented amount and variety of statecraft from their home states.

In coming to these results, we analyze a novel database of the effective population of MNCs in Russia, a highly globalized state, and we use a variety of registration records to document ownership and its complex changes. We also perform additional data collection and processing to put this population in historical context. We establish that, indeed, something different was happening around trends in MNCs exiting Russia in the 18 months following its full-scale invasion of Ukraine. We also develop a variety of novel measures, derived from close analysis of the unfolding situation in the Russian political economy, as well as by compiling the efforts of untold activists around the world engaging in efforts to "name and shame" companies doing business with Russia. Moreover, we introduce several measures of key firm- and industry-level political economic phenomena with immediate external applicability to other settings. In our view, our nuanced results, data, and general approach to exit as a transaction point to and enable examination of a rich set of timely open questions on the non-market determinants of firm behavior.

Our study also raises important questions at the nexus of international political economy and security. What is the nature of the game home state principals are playing with MNCs, if and when home states hope to leverage them for so-called economic statecraft purposes? We have little theoretical understanding of how encouraging FDI exit fits in a portfolio of economic sanctions tools. We see it as an open question whether it is on net beneficial to geostrategic goals to encourage quick exit, especially as exit is actually a transaction – and identities of buyers might disrupt other geostrategic goals. Further, what are the long term strategic implications of a flip in economic statecraft policy, from allowing and even encouraging FDI in a host state to exerting pressure on FDI to exit? According to our data, at the time of the invasion 75.5% of MNCs in Russia originated from "unfriendly" states, which shows home state acceptance if not support of economic integration with Russia – even as violent Russian aggression against Ukraine had been ongoing since 2014. Given this consequential, real-world example of a volte-face in home state economic statecraft priorities, scholars would do well to consider the potentially disorienting effect of uncertainty and risk around home state foreign policy on MNC investment decisions and forward-planning.

For now, we conclude by considering what all this exit means for Russia or, indeed, other states that are host to FDI. For a state deeply integrated into the global economy, we know that capital flight can spark any of a multitude of politically and economically destabilizing effects. For decades, such detrimental outcomes have been clearly, repeatedly demonstrated by "hot money," or short-term portfolio investment. The possibility of a "sudden stop" in FDI is new. FDI has been thought to be something different – investments by foreign owners with managerial control, reliably long-term enough to further industrial and economic development goals. We wonder whether FDI flight from Russia has brought to light risks relevant to other host states relying on FDI as a pillar of development strategies. Our findings throw cold water on presumptions that MNCs' choices over investment destinations are readily swayed by home state foreign policy preferences or acute social backlash, suggesting that FDI is at best an imperfect tool of so-called economic statecraft. Nevertheless, economic statecraft approaches that incentivize MNCs to become more "footloose" and capable of quick exit could reduce host states' perceptions of FDI as a reliable tool for employment and economic growth. The potential consequences of the exiting Russia phenomenon for development strategies and attitudes toward economic integration, especially in politically risky host states, is an open question.

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Exiting Russia: Appendix

Table of Contents

1 Russia's "Unfriendly Countries" List

Russia began publishing the "Unfriendly Countries" List ("Список недружественных стран") on 5 March 2022, days after the invasion and the initial wave of sanctions and condemnation.

Andorra	Australia	Austria
Bahamas[1]	Belgium	Bulgaria
Canada	Croatia	Cyprus
Czechia	Denmark	Estonia
Finland	France[2]	Germany
Greece	Hungary	Iceland
Ireland	Italy	Japan
Latvia	Liechtenstein	Lithuania
Luxembourg	Malta	Micronesia
Monaco	Montenegro	Netherlands[3]
New Zealand	North Macedonia	Norway
Poland	Portugal	Romania
San Marino	Singapore	Slovakia
Slovenia	South Korea	Spain
Sweden	Switzerland	Taiwan
Ukraine	United Kingdom[4]	United States
(European Union[5])		

Note that the Putin administration had used "unfriendly" lists previously. On 13 May 2021, the Russian state published its "List of Foreign Countries Engaging in Unfriendly Actions Against the Russian Federation, Russian Citizens, or Russian Legal Entities." The List was understood as a reaction to expulsions of Russian diplomats. At that time, it contained only two countries: the United States and Czechia. Diplomatic missions of "unfriendly" countries were banned from hiring "individuals based in Russia." This List has been expanded and still exists at the time of writing, but it is smaller and different from the one relevant here.

[1] Added 23 July 2022.

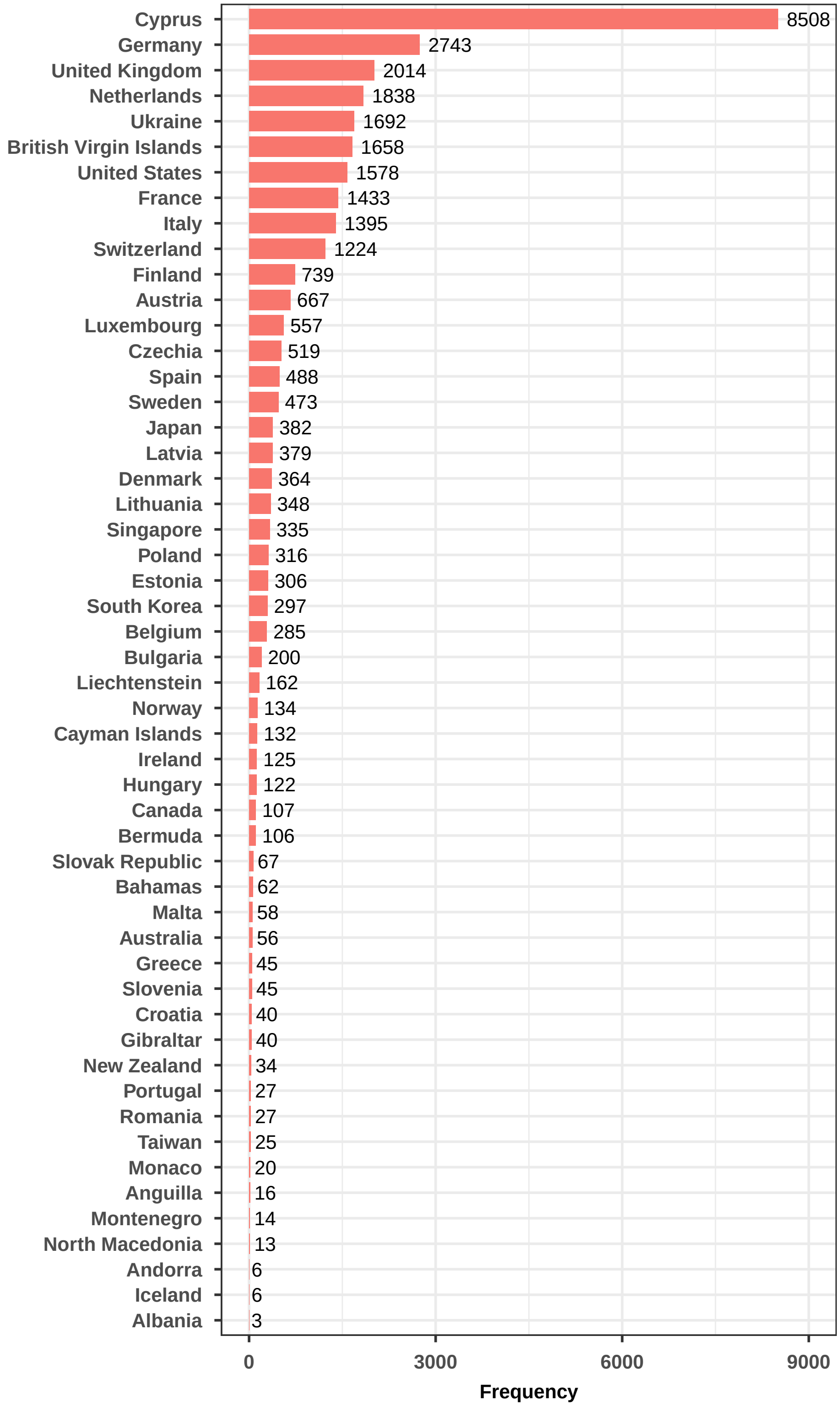
[2] We interpret the list as applicable to all Overseas Territories of France.

[3] The Netherlands has explicitly stated that EU sanctions apply in its constituent countries; we code them as also on the list (Aruba, Curaçao, Sint Maarten).

[4] All Crown Dependencies and Overseas Territories are on the list as of 29 October 2022. Added on 23 July 2022: Guernsey, Isle of Man. On the original list: Jersey, Anguilla, British Virgin Islands, and Gibraltar.

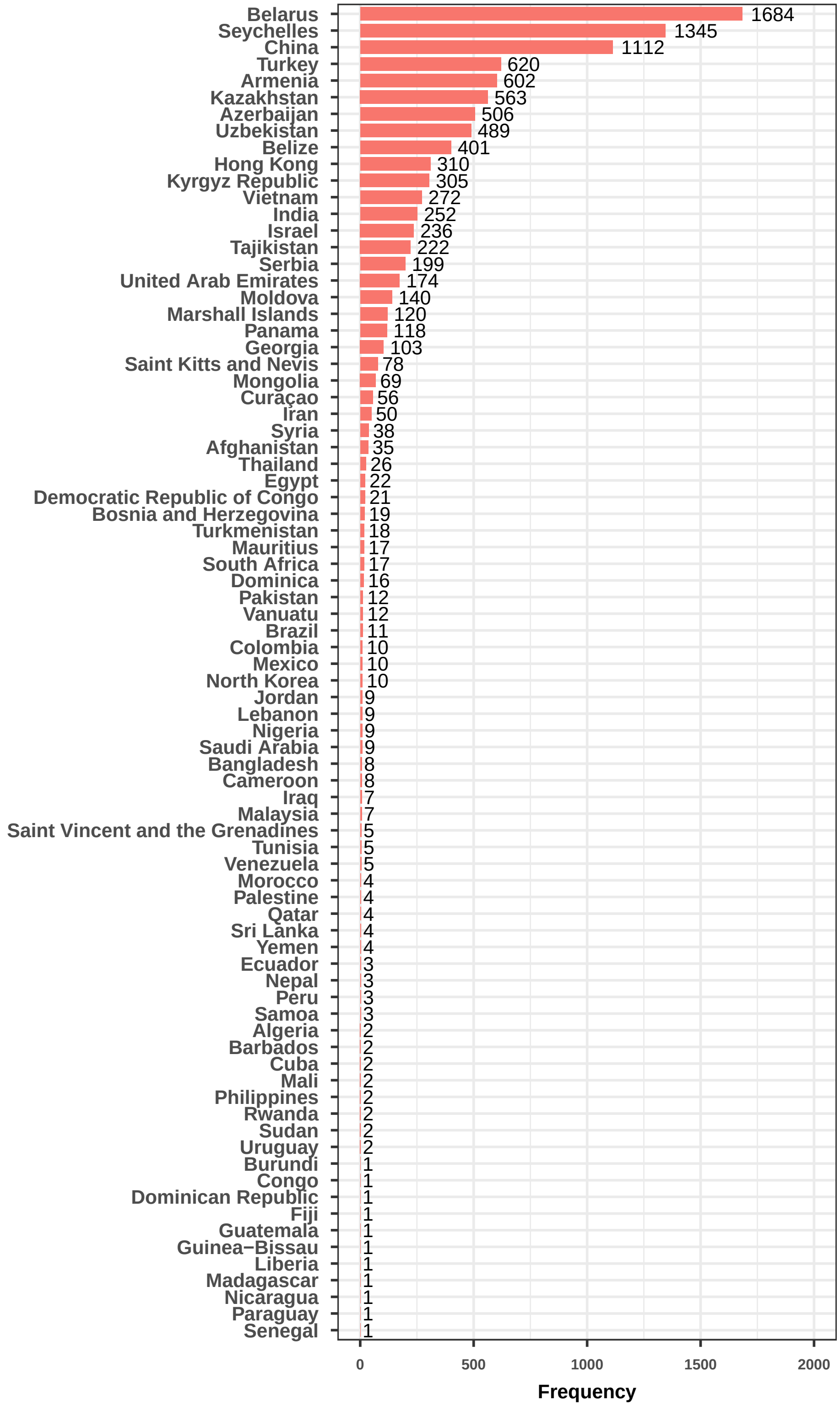
[5] All constituent states of the European Union are on the list.

Figure A. MNCs in pre-invasion Russia, by home: "Unfriendly" states in sanctioning coalition



Notes: Bar labels are frequencies. Defined as states on Russian "Unfriendly Countries" List in study period (Appendix 1).

Figure B. MNCs in pre-invasion Russia, by home: "Friendly" states not in the sanctioning coalition



Notes: Bar labels are frequencies. Defined as states not on Russian "Unfriendly Countries" List in study period (Appendix 1).

2 Orbis data and processing information

The Orbis database, owned by Bureau van Dijk (at the time of writing a Moody's Analytics company), is an industry leader that provides comprehensive ownership data for firms, as well as financial information. At the time of data collection, the Orbis database was reported to cover 65 million companies worldwide. Each company and its shareholders in the database are assigned a unique BVD number, allowing users to track ownership changes and other information by identifying these numbers. Orbis sources information from various vendors for different countries in addition to its proprietary, in-house efforts. Table A summarizes the information providers that account for the Russian data in our study.

Table A. Information Providers

Information Provider	Count	Percentage
CredInform	44,968	93.66
BvD Ownership database	3,024	6.30
BvD Research	11	0.02
World'Vest Base Inc.	3	0.01
A.M. Best	2	0.00
LEI	2	0.00
BvD Research Bank Regulatory Feeds	1	0.00

Disruptions to Russian data collection in study period

In response to conversations about data disruption issues, Moody's shared with the authors a memo (received via email on 28 August 2023). We quote relevant sections here:

> Last year, we communicated that due to legislation passed by the government of Russia which significantly reduced the availability of data on companies, their shareholders, and individuals, as well as disruptions to company data collection in Ukraine, we had taken steps to pause all updates to Russian, Ukrainian and Kazakh entities in Ruslana and Orbis by 5th August 2022. ... We paused all updates in order to prevent disruptions to our clients due to these significant data losses. Since that time, we developed a solution which will update Ruslana and Orbis to include the most up-to-date information available, while also enabling clients to access a new dataset that provides historical data through a separate product which we made available on 20th June 2023. We resumed publishing updated data for these countries in Orbis and Catalysts products on 2nd June 2023.
>
> **Data Changes: Changes to Russian Statutory Data Disclosure Requirements**
>
> - The names of some, but not all, Russian individuals who are shareholders of company equity have been removed from data we receive and have been replaced by labels such as "Other person" or "Other natural person" or "Other legal person," which masks the shareholder's identity.
> - This change includes individuals or companies that may be sanctioned by compliance authorities, and may limit our ability to detect when a company is owned by a sanctioned Russian entity. This may also impact our ability to detect companies which have been sanctioned by extension.

- All ownership data that depends on identifying a shareholder may be affected as the relationship between shareholder and their controlling interest is no longer visible for persons or companies that are now reported as "Other person" or "Other natural person" or "Other legal person."
- Russian companies can choose to no longer publicly disclose their financial reporting statements. We will retain all historical financials, but may not receive updated financials for some companies in the future.

Further information on firm data processing and coding

Further details on firm selection into the dataset

In constructing the dataset of what we take as the pre-invasion population of MNCs, we make several choices in processing the Orbis data. In addition to those explained in the text, we make the choices documented here.

- We exclude 16 observations of Public administration (NAICS 92) from our pre-invasion MNC population, as this is an unusual industry for FDI. Upon examination, we judge that these BVDs are not associated with profit-motivated entities and instead with entities like consulates.
- It is not relevant for our purposes whether ownership is established via direct or total channels, so our decisions are not influenced by these factors. For example, to enter the dataset a single non-Russian shareholder can meet the ownership threshold via direct or total ownership.
- Our use of "GUO" always indicates the controlling GUO, which is the GUO with greater than 50% ownership. In Orbis nomenclature, this is GUO50.
- BVDs with completely missing ownership information are excluded from our dataset, as we cannot have confidence in whether they are foreign or not.
- Of the foreign MNCs registered in Russia as of 31 December 2021, several thousand were classified by Orbis as "inactive" (indicating that the firm is dissolved, liquidated, in liquidation, or subject to a demerger, merger, or takeover, although the lion's share of codings are "Inactive [no precision]"). Per our definition of exit, these MNCs had already exited and are thus excluded from the population. We also confirm that none of these had re-entered by the end of the study period.

Further details on coding exit

In coding exit, we make several choices in processing the Orbis data. In addition to those explained in the text, we make the choices documented here.

- If there is only one foreign owner at time t, we code exit if at time $t+1$ that foreign owner does not meet the FDI threshold.
- If there are multiple foreign owners that meet the FDI threshold at time t, then the indicator variable > 1 QUALIFYING FOREIGN OWNER turns on. We define exit based on the largest foreign shareholder, assuming that is the foreign owner exercising the greatest managerial control.
- In a handful of cases, ownership is split among multiple shareholders and there is no unique largest foreign shareholder. In those cases, we implement a lottery to draw the largest foreign shareholder.
- For MNCs defined via the GUO pathway, exit occurs if the GUO50 is different at time $t+1$.

- The foreign shareholder that serves as the basis for calculating exit is also the shareholder that serves as the basis for calculating other firm-level covariates: Russian subsidiaries.
- *Defining exit-to-domestic:* Exit-to-domestic means that the BVDs remained active and no longer had foreign shareholders passing the threshold for FDI, or, for MNCs defined based on the identity of their GUO50, the GUO50 changed to Russian.
- *Defining exit-to-foreign:* Exit-to-foreign means the BVDs are foreign at time $t + 1$ but have a different largest foreign shareholder or (non-Russian) GUO50. There are cases where the largest foreign shareholder changes, but the GUO50 remains the same. We do not code such cases as an exit.

Further details on coding nationality

It is important for us to identify the nationality of each MNC in our data. The first decision rule is that the nationality of each MNC is equivalent to the nationality of the largest foreign shareholder that serves as the basis for calculating exit (see above). In our coding, each BVD's largest foreign shareholder is uniquely identified.

In some instances, one MNC has ties to more than one nationality. This can happen when the GUO50's home state is different from the home state of the largest foreign shareholder. If this is the case, the variable MNC home $\neq$ GUO home turns on. Our goal is to capture all the home states to which a given MNC is exposed, to the extent it is sensible and possible with our data. Practically, we implement this rule by coding variables based on the home state of the largest foreign shareholder, and updating those codes if and when different information at the GUO level merits doing so. These coding choices to account for multiple nationalities apply to the following explanatory and control variables: Unfriendly home state, On Name-Shame list, Tax haven, EU member, Cyprus, Ukraine, Economic treaties (IIA, PTA, DTT).

The situation is more complicated for continuous variables – Trade with Russia, as well as robustness variables GDP per capita, Liberal democracy (V-Dem), and UNGA voting similarity. For these, we implement the following decision rule: The nationality of the largest foreign shareholder determines the home state.

Further details on coding control variables

- Years in Russia: The year of incorporation on which this measure is based is capped at 1992 so that all firms are incorporated in Russia and not the USSR.
- State-owned equals one if the BVD has an Orbis type "S" shareholder (i.e., non-Russian state, governmental agency, governmental department, and/or local authority as a shareholder). This variable turns on whether or not the type "S" shareholder is the largest foreign shareholder.
- Russian subsidiary presence is calculated as follows: the proportion of the MNC's largest foreign shareholder's or GUO50's Russian subsidiaries (BVDs) relative to its global total. For each MNC, we use the higher of the two proportions.

- Listed outside of Russia: Equals 1 if the MNC's largest foreign shareholder or GUO50 is listed on any stock exchange outside of Russia.

- Size: Orbis classifies each BVD into one of four size categories: very large, large, medium, and small, if they meet *at least one of the conditions* listed in each cell for each category in Table K.

Table B. Orbis firm size criteria

Very Large	(1) Operating Revenue >= 100 million EUR (130 million USD); (2) Total assets >= 200 million EUR (260 million USD); (3) Employees >= 1,000; (4) Listed.
Large	(1) Operating Revenue >= 10 million EUR (13 million USD); (2) Total assets >= 20 million EUR (26 million USD); (3) Employees >= 150; (4) Not Very Large.
Medium	(1) Operating Revenue >= 1 million EUR (1.3 million USD); (2) Total assets >= 2 million EUR (2.6 million USD); (3) Employees >= 15; (4) Not Very Large or Large.
Small	(1) Not included in another category.

- MNC home $\neq$ GUO home equals 1 if the home country of an MNC's largest foreign shareholder differs from that of the MNC's GUO. In theory, an MNC's largest foreign shareholder is ultimately owned by the GUO. In practice, the largest foreign shareholder and the GUO may be located in different jurisdictions for various reasons. For example, the parent company may strategically register an intermediate holding company in a tax haven; subsidiaries may be controlled by a regional office; or mergers and acquisitions (M&As) may result in a complex corporate structure spanning multiple jurisdictions.

- $>$ 1 qualifying foreign owners equals 1 if there are multiple foreign shareholders who each exceed the 10% ownership threshold.

3 "Name and Shame" Lists

As of eight months following the full-scale Russian invasion of Ukraine (24 October 2022), the 13 "name and shame" lists reported in Table C were (a) available on the Internet at the indicated URL, (b) aimed at influencing the behavior of foreign businesses in Russia, and (c) and actively updated. The origins, methodology, aims, and trajectory of these lists vary considerably. Overall, the data collected in these various lists have been used in myriad journalistic, advocacy, and research efforts as the war has progressed. Our aim in this article is to recognize the contents of these lists as a non-random sample of the true population of MNCs in Russia, and in doing so evaluate the potential impact of being named on a list as an explanatory variable in predicting MNC exit behavior.[6] We take the contents of the lists as of the eight-month post-invasion mark as an appropriate snapshot of MNCs that we can credibly code as having faced grassroots, social pressure from consumers and/or activists in this way, and early in the conflict. As ours is a study of MNCs conducting FDI in Russia, we merge the contents of the lists and then match entities named on the lists to our master list of MNCs in Russia as of the end of calendar year 2021.[7]

Table C. "Name and Shame" lists of foreign business operations in Russia

List	URL
Boycott Russia	`https://boycottrussia.info/#list-of-shame`
Exit Russia [a]	`https://www.exitrussia.info/#form1`
Leave Russia	`https://leave-russia.org/`
Squeezing Putin	`https://squeezingputin.com/`
Stop Bloody Energy	`https://bloody.energy/`
Don't Fund War	`https://dontfundwar.com/`
RUBusiness	`http://rubusiness.org/`
Wikipedia	`https://en.wikipedia.org/wiki/Corporate_responses_to_the_2022_Russian_invasion_of_Ukraine`
Kyiv School of Economics	`https://kse.ua/selfsanctions-kse-institute/`
Yale School of Management	[b] `https://www.yalerussianbusinessretreat.com/`
EPravda (Ukrainian newspaper)	`https://www.epravda)com.ua/publications/2023/03/19/684328/`
Kommersant (Russian newspaper)	`https://www.kommersant.ru/doc/5240137`
#ВСЕЗАПОМНИМ [c]	`https://xn--80adjigxbghjs.xn--p1ai/`

Notes: URLs and constituent data accurate as of 24 October 2022 and active as of October 2023, with the exception of [a] (archive available upon request). [b] This dedicated URL was created later in study period. [c] Translation: "#WeRememberEverything." This pro-war list originally circulated in Russia via the social media app Telegram. All matched MNCs on this list are also named on at least one other list.

It is well known that firm-name matching is a difficult task. Our overall strategy was to standardize names (with special characters, punctuation, and corporate designations stripped), engage in repeated rounds of probabilistic automated matching using the Stata package *matchit* (by token and by various

[6] For the interested reader, replication data make possible tests comparing between lists.

[7] When compiled, the 13 "name and shame" lists (scraped as of 24 October 2022) include roughly 3,700 entries. This is an estimate, as it was not necessary to our task to eliminate all duplicates.

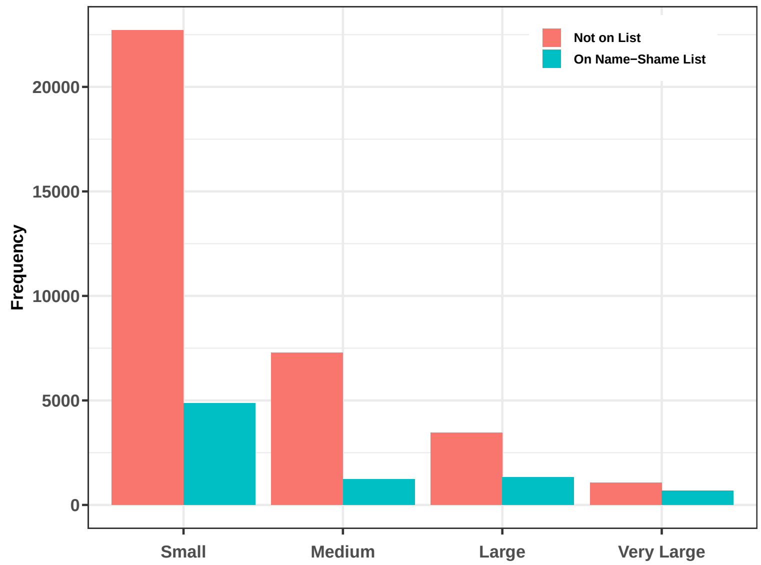
n-gram combinations), and iterate with human coders to confirm accurate matches. One issue we encountered was the coexistence of various translations of names and transliteration issues between Cyrillic and Latin alphabets. To address this, we used Google Translate, ChatGPT-4, and Russian speakers to generate different translations of names to feed into the matching process. German, Chinese, and a familiarity with the spelling of various corporate designations worldwide also proved important. Ultimately, we went through eight rounds of coding, with one PI (Wellhausen) and a mixture of four additional coders evaluating each potential match. A (non-student) expert in business in the region independently verified the final list of confirmed matches. Per this process, we were able to successfully match "name and shame" list entries to 6,942 Orbis BVDs in the pre-invasion population, or 16.3%.[8]

Several of the "name and shame" lists attempted not only to name, but also to document what firms had or had not done with regard to their investments in Russia. In general, various teams' research methodologies leveraged scholarly resources and connections (at the Kyiv School of Economics and Yale School of Management, in particular), journalistic resources, outreach to firms directly, official company statements, and searches of secondary journalistic and related sources. It is beyond the scope of this article to evaluate the accuracy of those efforts in documenting actual MNC behavior. We therefore do not consider these components of the lists and use only our novel dependent variable derived from Orbis. Additionally, in our evaluation, the main reason we could not successfully match more entries is that those entries were not referring to MNCs engaged in FDI, and thus fall outside the scope of this study. For example, many entries named the behaviors of firms that engage in trade in services with Russia, or non-firm entities such as international organizations, clubs, and associations.

The following figures report selected descriptive statistics comparing MNCs matched with "name and shame" lists to the full population of pre-invasion MNCs in Russia. With very few exceptions, the name-shame list covers significantly less than 100% of the relevant population.

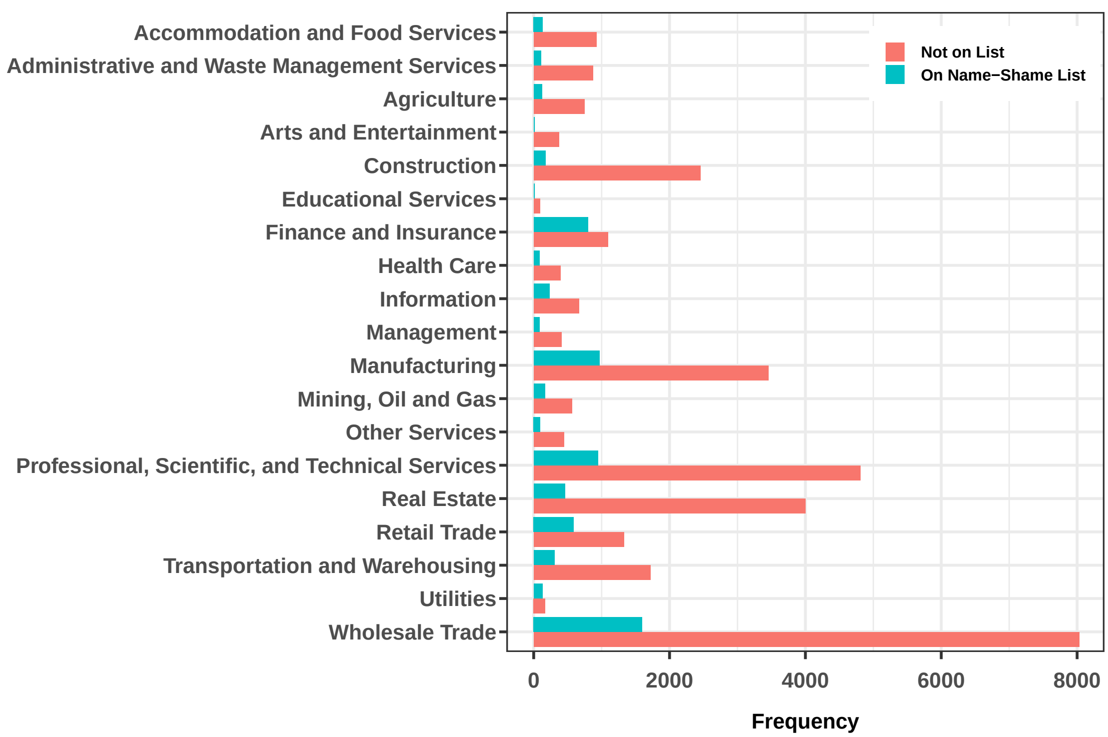
[8] These BVDs are linked to 2,201 of the 20,270 unique Global Ultimate Owners in the dataset (10.9%).

Figure C. "Name and Shame" Sample v. Population: By size



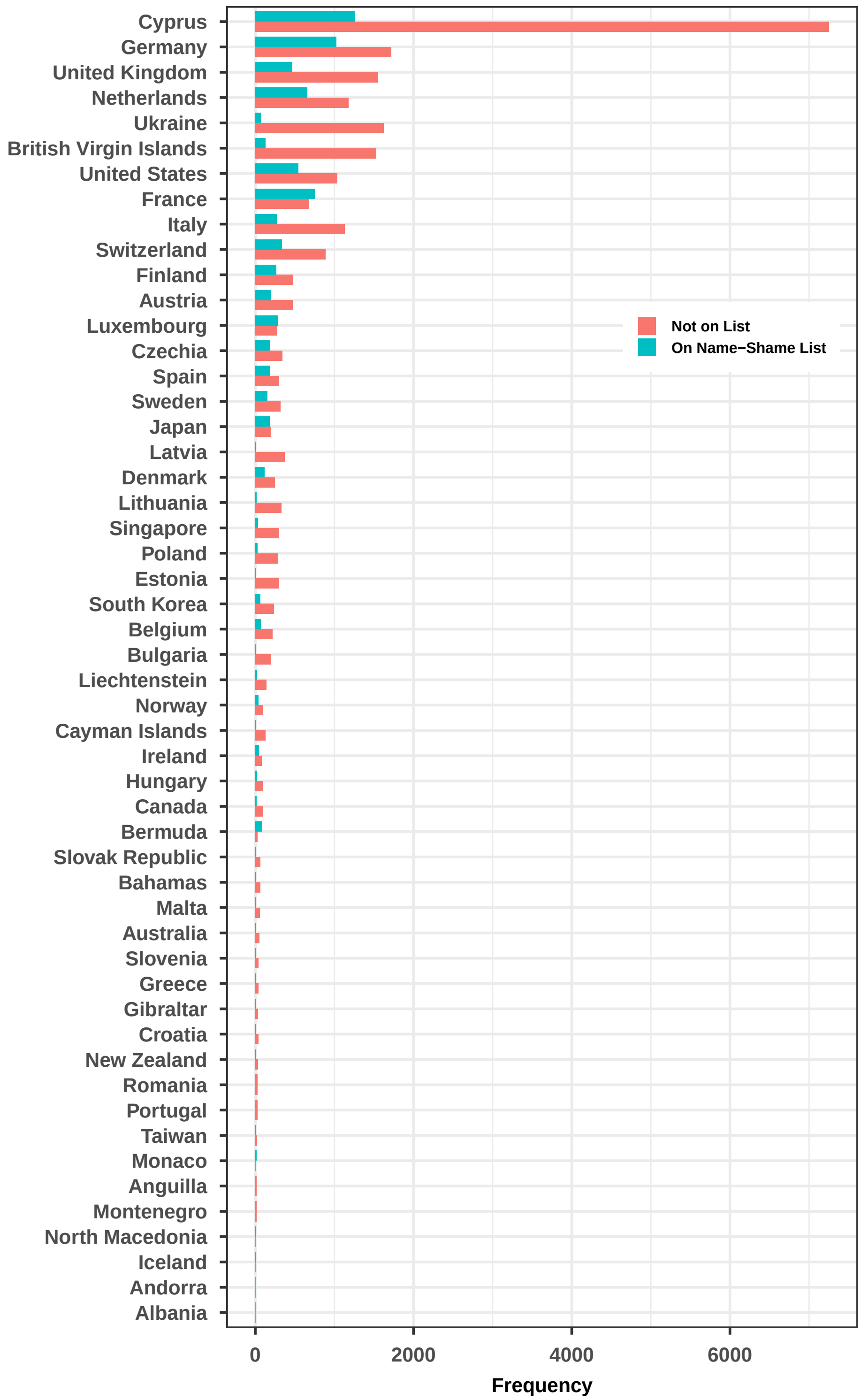
Notes: For definitions of firm size, see Appendix 2.

Figure D. "Name and Shame" Sample v. Population: By industry



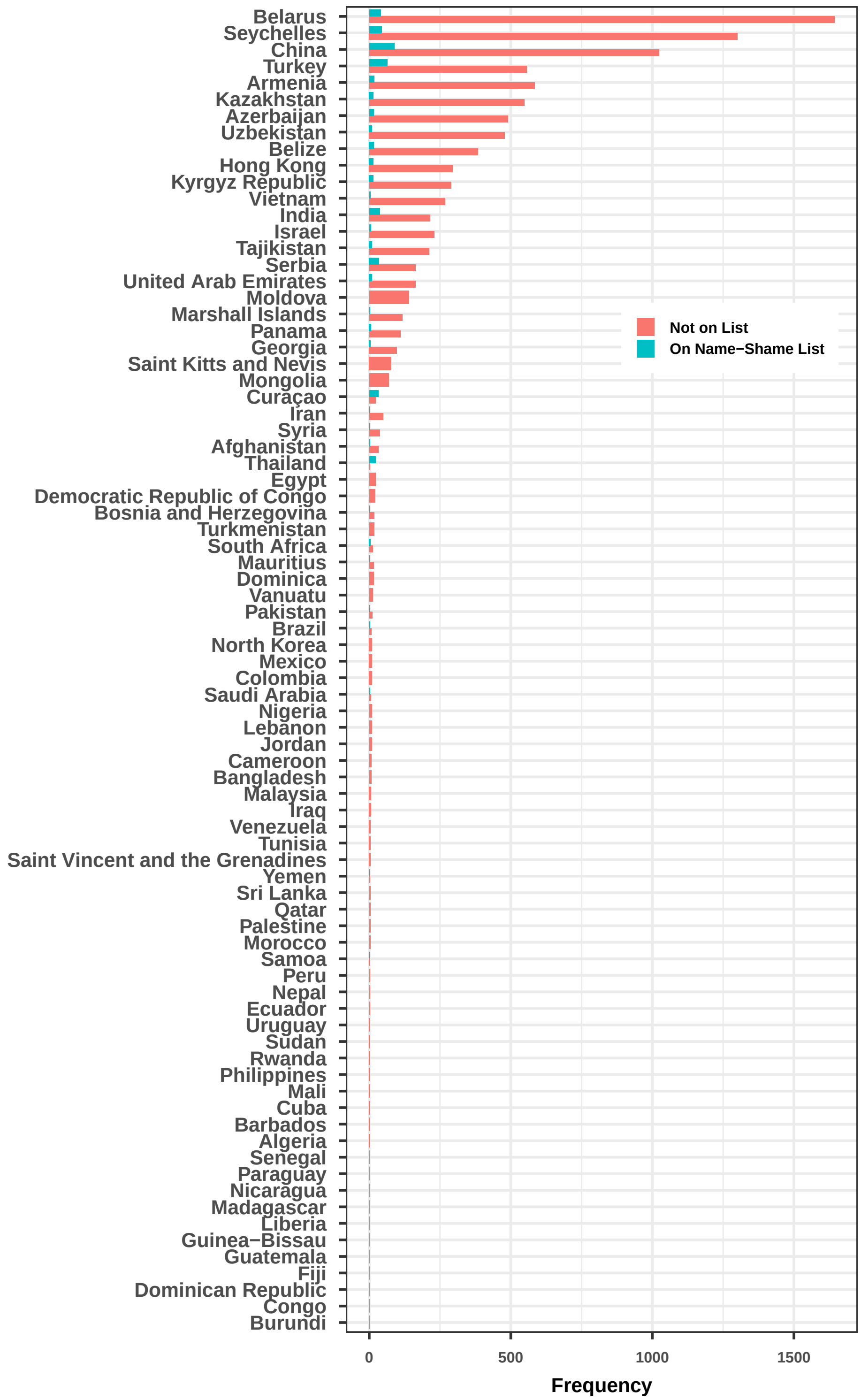
Notes: 2-digit NAICS industries, with similar industries collapsed for presentation.

Figure E. “Name and Shame” Sample v. Population: By “Unfriendly” Home



Notes: For information on the “Unfriendly Countries” List, see Appendix 1.

Figure F. "Name and Shame" Sample v. Population: By "Friendly" Home



Notes: For information on the "Unfriendly Countries" List, see Appendix 1.

4 Changes in Russia's official policy pertaining to FDI

The following is a compilation of official Russian policies pertaining to FDI in the study period (24 February 2022–31 August 2024), which resulted from a multilingual qualitative research effort. Summaries are our own. Links last accessed 1 Sept 2023.

Event name in English	Event name in Russian	Date	Source and event meaning

Decree of the President of the Russian Federation dated March 1, 2022, No. 81 "On Additional Temporary Economic Measures to Ensure the Financial Stability of the Russian Federation"
 	
Resolution of the Government of the Russian Federation dated March 6, 2022, No. 295 "On the Approval of the Rules for Issuing Permits by the Government Commission on the Control of Foreign Investments in the Russian Federation for Residents to Execute Transactions (Operations) with Foreign Entities for the Purpose of Implementing Additional Temporary Economic Measures to Ensure the Financial Stability of the Russian Federation and Amending the Regulations on the Government Commission on the Control of Foreign Investments in the Russian Federation"
	Указ Президента Российской Федерации от 01.03.2022 № 81 "О дополнительных временных мерах экономического характера по обеспечению финансовой стабильности Российской Федерации"
	
	Постановление Правительства Российской Федерации от 06.03.2022 № 295 "Об утверждении Правил выдачи Правительственной комиссией по контролю за осуществлением иностранных инвестиций в Российской Федерации разрешений на осуществление (исполнение) резидентами сделок (операций) с иностранными лицами в целях реализации дополнительных временных мер экономического характера по обеспечению финансовой стабильности Российской Федерации и внесении изменения в Положение о Правительственной комиссии по контролю за осуществлением иностранных инвестиций в Российской Федерации"
		Presidential Decree:
		March 1, 2022
		
		New rules come into force:
		March 2, 2022
		
		Government Resolution:
		March 6, 2022
			`http://publication.pravo.gov.ru/Document/View/0001202203010083`
			
			`https://cbr.ru/explan/app_decrees_president_aimed_ensuring_financial_stability/`
			
			Transactions with entities from unfriendly nations must be authorized by a special governmental commission whenever they involve stocks, loans, or immovable property.

Decree of the President of the Russian Federation dated March 5, 2022, No. 95 "On the Temporary Procedure for Fulfilling Obligations to Certain Foreign Creditors."
 	
Decision of the Board of Directors of the Bank of Russia on establishing an account type "C"regime for the purpose of fulfilling a resident's obligations to a non-resident, as stipulated in the decree of the President of the Russian Federation dated March 5, 2022, No. 95, "On the Temporary Procedure for Fulfilling Obligations to Certain Foreign Creditors"
 	
The decision of the Board of Directors of the Bank of Russia regarding the establishment of the "C"account regime for conducting settlements and executing transactions on which the procedure for fulfilling obligations specified in the Decree of the President of the Russian Federation dated March 5, 2022, No. 95, "On the Temporary Procedure for Fulfilling Obligations to Certain Foreign Creditors"applies.
	Указ Президента Российской Федерации от 05.03.2022 № 95 "О временном порядке исполнения обязательств перед некоторыми иностранными кредиторами"
	
	Решение Совета директоров Банка России об установлении режима счета типа «С» для целей исполнения обязательств резидента перед нерезидентом, установленных в указе Президента Российской Федерации от 5 марта 2022 года № 95 «О временном порядке исполнения обязательств перед некоторыми иностранными кредиторами»
	
	Решение Совета директоров Банка России об установлении режима счетов типа «С» для проведения расчетов и осуществления (исполнения) сделок (операций), на которые распространяется порядок исполнения обязательств, предусмотренный Указом Президента Российской Федерации от 5 марта 2022 года № 95 «О временном порядке исполнения обязательств перед некоторыми иностранными кредиторами»
		Presidential Decree:
		March 5, 2022
		
		Decision of the Central Bank:
		March 8, 2022
		
		New rules come into force:
		March 9, 2022
		
		Updated Decision of the Central Bank:
		June 24, 2022
			`https://cbr.ru/about_br/dir/rsd_2022-03-08/`
			
			`https://cbr.ru/about_br/dir/rsd_2022-06-24_31_01/`
			
			`http://publication.pravo.gov.ru/Document/View/0001202203050062`
			
			New rules for nonresidents from "unfriendly nations" pertaining to transactions exceeding RUB 10 million monthly (or equivalent amount in a foreign currency). The rules force nonresidents to open a special RUB account in Russia to be able to receive transfers from Russian residents. Funds in the account can only be used or invested in Russia.
			
			The updated decision on June 24, 2022, introduced minor changes, such as allowing nonresidents to buy Russian federal loan bonds from the market. Funds in Type "C" accounts still cannot be withdrawn from Russia.

Decree of the President of the Russian Federation dated May 4, 2022, No. 254 "On the Temporary Procedure for Fulfilling Financial Obligations in the Field of Corporate Relations to Certain Foreign Creditors"	Указ Президента Российской Федерации от 04.05.2022 № 254 "О временном порядке исполнения финансовых обязательств в сфере корпоративных отношений перед некоторыми иностранными кредиторами"	Presidential Decree: **May 4, 2022**	http://publication.pravo.gov.ru/Document/View/0001202205040017 The decree established temporary procedures for fulfilling profit distribution obligations. From then on companies must transfer dividend payments to investors from unfriendly nations to Type "C" accounts. The Central Bank and the Finance Ministry can grant permissions for circumventing this rule. Also, the rules do not apply to transactions under RUB 10 million monthly.
Requirement to sell assets at a discount of no less than 50% of the market value of the respective assets as indicated in the independent appraisal report.	Требование о продаже активов с дисконтом в размере не менее 50 % от рыночной стоимости соответствующих активов, указанной в отчете о независимой оценке	**No later than June 29, 2022**	https://ria.ru/20220629/biznes-1798948308.html The existence of this requirement was informally confirmed by senior Russian officials at a conference in June 2022. However, the date when the requirement was set is unknown. The requirement was later restated in an official document released by the commission of the Finance Ministry. https://minfin.gov.ru/ru/document?id_4=302853-vypiska_iz_resheniya_podkomissii_pravitelstvennoi_komissii_po_kontrolyu_za_osushchestvleniem_inostrannykh_investitsii_v_rossiiskoi_federatsii_ot_7_iyulya_2023_goda__1715
Decree of the President of the Russian Federation dated August 5, 2022, No. 520 "On the Application of Special Economic Measures in the Financial and Energy Sectors in Connection with Unfriendly Actions by Certain Foreign States and International Organizations"	Указ Президента Российской Федерации от 05.08.2022 № 520 "О применении специальных экономических мер в финансовой и топливно-энергетической сферах в связи с недружественными действиями некоторых иностранных государств и международных организаций"	Presidential Decree: **August 5, 2022**	http://publication.pravo.gov.ru/Document/View/0001202208050002?index=1 https://docs.cntd.ru/document/1300138660 New rules prohibit transactions with foreigners from unfriendly nations that involve changes in the ownership structure for the following types of arrangements: • Production sharing agreements (рус. соглашения о разделе продукции, СРП) • Agreements on joint operations (рус. договоры о совместной деятельности) • Other agreements regulating investment projects in Russia. Rules apply to the energy and mining sectors and to strategic enterprises listed in Presidential Decree No. 1009. The President of the Russian Federation may grant special permissions to carry out such transactions despite the ban.

Decree of the President of the Russian Federation dated September 8, 2022, No. 618 "On the Special Procedure for Conducting (Executing) Certain Types of Transactions (Operations) between Certain Entities"	Указ Президента Российской Федерации от 08.09.2022 № 618 "Об особом порядке осуществления (исполнения) отдельных видов сделок (операций) между некоторыми лицами"	Presidential Decree: **September 8, 2022**	http://publication.pravo.gov.ru/Document/View/0001202209080027 While the decree of March 1, 2022, required a special permission to conduct transactions involving stocks and property, the new decree also requires a special permission to conduct transactions with entities from unfriendly nations involving shares of the authorized capital of limited liability companies.
Decree of the President of the Russian Federation dated October 15, 2022, No. 737 "On Certain Matters Regarding the Execution of Certain Types of Transactions (Operations)"	Указ Президента Российской Федерации от 15.10.2022 № 737 "О некоторых вопросах осуществления (исполнения) отдельных видов сделок (операций)"	Presidential Decree: **October 15, 2022**	http://publication.pravo.gov.ru/Document/View/0001202210150002 Transactions involving more than 1 percent of the shares, stakes (contributions) constituting the authorized capital of a Russian credit organization, insurance organization, non-governmental pension fund, microfinance company, or the management company of a shareholder investment fund, unit investment fund, or non-governmental pension fund, or more than 1 percent of the votes attributed to such shares or stakes. Transactions listed above and involving entities from unfriendly nations must be authorized by a special governmental commission. Funds must be transferred to a Type "C" account. The Central Bank or the Finance Ministry can grant permissions to carry out transactions without using a Type "C" account.
Requirement to make a voluntary contribution to the federal budget in an amount not less than 10% of the transaction value.	Требование об уплате добровольного взноса в федеральный бюджет в размере не менее 10% от суммы осуществляемой сделки	**December 12, 2022**	https://www.rbc.ru/economics/21/12/2022/63a1ae3d9a79479cb3d0b5fc RBC cites sources in the commission and mentions December 12 as the date when the new requirement was introduced. The Finance Ministry's press office confirmed the change. An official document citing this rule became available later: https://minfin.gov.ru/ru/document?id_4=302853-vypiska_iz_resheniya_podkomissii_pravitelstvennoi_komissii_po_kontrolyu_za_osushchestvleniem_inostrannykh_investitsii_v_rossiiskoi_federatsii_ot_7_iyulya_2023_goda__1715 Companies leaving Russia are now required to pay 10% of the deal value to Russia's federal budget. Alternatively, the seller may choose to offer an installment plan of 1 to 2 years and thus avoid the additional tax.

5 Defining Russian strategic industries

The list of strategic companies that we used to indirectly identify strategic industries was released by the Russian government in 2008 as part of economic stabilization efforts amid the financial crisis. The document is available from the Internet Archive.[9] The list of 295 "systemically important organizations" is explained as those "regarded as priority objects of government support in the event of a crisis." A 2008 post with the original link can still be found on a reputable Russian financial news website as of October 2023.[10] Our goal was to recover the 4-digit NAICS industry code associated with each entry on the list, which we then redeploy as our list of Russian strategic industries.

To do this, we matched companies on the 2008 list to Orbis in order to retrieve NAICS 4-digit primary industry codes. When not listed in Orbis, we used three Russian databases to fill missing data: List-Org,[11] Rusprofile,[12] and RBC Companies.[13] Sometimes, we were able to recover OKVED codes (Russian National Classifier of Economic Acivities); we used ChatGPT to crosswalk between OKVED and NAICS codes where necessary. For companies on the 2008 list that had been dissolved or taken over, we used the industry code indicated in the latest profile of the dissolved company. For companies that were reorganized, we used the industry code indicated in the current company profile. Some of the individual entries on the list are company groups that match to multiple legally independent entities; we select the industry code that is the best match to the company group's activities, based on our expertise. In a limited number of cases, industry codes recorded in Orbis and/or other databases were misleading. For example, Russia's state-controlled operator of nuclear power stations Rosatom is recorded in various databases with "general public administration activities" as its primary industry. For situations like this, we determined a more accurate code by using secondary industry codes associated with the firm, or using industry codes reported by competitors, again informed by our expertise. Decisions are documented in replication data, as well as other issues we faced in the data collection and matching process, such as spelling/transliteration errors.

Table D lists the resulting 84 industries (NAICS 4-digit), with codes corresponding to the 2017 revision. (Note that in analyses, we update codes to correspond to the 2022 revision to match our other covariates.)

[9] `https://web.archive.org/web/20090117082516/http:/government.ru/content/governmentactivity/mainnews/33281de212bf49fdbf39d611cadbae95.doc`. Last accessed 23 October 2023.
[10] `https://www.banki.ru/news/lenta/?id=772891`. Last accessed 23 October 2023.
[11] `https://list-org.com/`. Last accessed 23 October 2023.
[12] `https://www.rusprofile.ru/`. Last accessed 23 October 2023.
[13] `https://companies.rbc.ru/`. Last accessed 23 October 2023.

Table D. Russian strategic industries: NAICS codes and descriptions (2017 revision)

NAICS	Description
1111	Oilseed and Grain Farming
1119	Other Crop Farming
1121	Cattle Ranching and Farming
1122	Hog and Pig Farming
1123	Poultry and Egg Production
1125	Aquaculture
2111	Oil and Gas Extraction
2121	Coal Mining
2122	Metal Ore Mining
2123	Nonmetallic Mineral Mining and Quarrying
2131	Support Activities for Mining
2211	Electric Power Generation, Transmission and Distribution
2213	Water, Sewage and Other Systems
2361	Residential Building Construction
2362	Nonresidential Building Construction
2371	Utility System Construction
3112	Grain and Oilseed Milling
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing
3116	Animal Slaughtering and Processing
3121	Beverage Manufacturing
3221	Pulp, Paper, and Paperboard Mills
3241	Petroleum and Coal Products Manufacturing
3251	Basic Chemical Manufacturing
3252	Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
3254	Pharmaceutical and Medicine Manufacturing
3262	Rubber Product Manufacturing
3271	Clay Product and Refractory Manufacturing
3273	Cement and Concrete Product Manufacturing
3279	Other Nonmetallic Mineral Product Manufacturing
3311	Iron and Steel Mills and Ferroalloy Manufacturing
3312	Steel Product Manufacturing from Purchased Steel
3313	Alumina and Aluminum Production and Processing
3314	Nonferrous Metal (except Aluminum) Production and Processing
3315	Foundries
3323	Architectural and Structural Metals Manufacturing
3329	Other Fabricated Metal Product Manufacturing
3331	Agriculture, Construction, and Mining Machinery Manufacturing
3333	Commercial and Service Industry Machinery Manufacturing
3335	Metalworking Machinery Manufacturing
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing
3339	Other General Purpose Machinery Manufacturing
3344	Semiconductor and Other Electronic Component Manufacturing
3353	Electrical Equipment Manufacturing
3359	Other Electrical Equipment and Component Manufacturing
3361	Motor Vehicle Manufacturing
3362	Motor Vehicle Body and Trailer Manufacturing
3363	Motor Vehicle Parts Manufacturing
3364	Aerospace Product and Parts Manufacturing
3365	Railroad Rolling Stock Manufacturing
3366	Ship and Boat Building
3369	Other Transportation Equipment Manufacturing
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers
4238	Machinery, Equipment, and Supplies Merchant Wholesalers
4239	Miscellaneous Durable Goods Merchant Wholesalers
4242	Drugs and Druggists' Sundries Merchant Wholesalers
4244	Grocery and Related Product Merchant Wholesalers
4245	Farm Product Raw Material Merchant Wholesalers
4247	Petroleum and Petroleum Products Merchant Wholesalers
4249	Miscellaneous Nondurable Goods Merchant Wholesalers
4451	Grocery and Convenience Retailers
4811	Scheduled Air Transportation
4821	Rail Transportation
4831	Deep Sea, Coastal, and Great Lakes Water Transportation
4832	Inland Water Transportation
4869	Other Pipeline Transportation
4881	Support Activities for Air Transportation
4883	Support Activities for Water Transportation
4889	Other Support Activities for Transportation
4911	Postal Service
5174	Satellite Telecommunications
5222	Nondepository Credit Intermediation
5311	Lessors of Real Estate
5312	Offices of Real Estate Agents and Brokers
5313	Activities Related to Real Estate
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
5411	Legal Services
5413	Architectural, Engineering, and Related Services
5415	Computer Systems Design and Related Services
5416	Management, Scientific, and Technical Consulting Services
5417	Scientific Research and Development Services
5511	Management of Companies and Enterprises
7139	Other Amusement and Recreation Industries
9211	Executive, Legislative, and Other General Government Support

6 Tax havens

We use the European Union's list of non-cooperative tax jurisdictions, which was adopted in 2017 and since 2020 has been revised twice per year.[14] The EU uses an ordinal coding system: (1) Cooperates with the EU and has no pending commitments; (2) Cooperates with the EU and has pending commitments; (3) Listed: Does not cooperate with the EU or has not fully met its commitments.[15] Our primary coding is an indicator that equals 1 if the state has ever been on the EU list from its inception to the end of our study period, which includes all states listed in Table **??**. Results of interest are robust to replacing the indicator variable with the ordinal values in Table **??**.

Table E. EU List of Non-Cooperative Tax Jurisdictions, with codes as of August 2023

Jurisdiction	Code	Jurisdiction	Code
Albania	2	Marshall Islands	3
American Samoa	3	Mauritius	1
Andorra	1	Mongolia	1
Anguilla	3	Montenegro	1
Antigua and Barbuda	1	Montserrat	2
Armenia	2	Morocco	1
Aruba	2	Namibia	1
Australia	1	Nauru	1
Bahamas	3	New Caledonia	1
Bahrain	1	Niue	1
Barbados	1	North Macedonia	1
Belize	2	Oman	1
Bermuda	1	Palau	3
Bosnia and Herzegovina	1	Panama	3
Botswana	2	Peru	1
British Virgin Islands	3	Qatar	2
Cabo Verde	1	Russia	3
Cayman Islands	1	Saint Kitts and Nevis	1
Cook Islands	1	Saint Lucia	1
Costa Rica	3	Saint Vincent and the Grenadines	1
Curacao	2	Samoa	3
Dominica	2	San Marino	1
Eswatini	2	Serbia	1
Faroe Islands	1	Seychelles	2
Fiji	3	Switzerland	1
Greenland	1	Taiwan	1
Grenada	1	Thailand	2
Guam	3	Trinidad and Tobago	3
Guernsey	1	Tunisia	1
Hong Kong	2	Turkey	2
Isle of Man	1	Turks and Caicos Islands	3
Israel	2	United Arab Emirates	1
Jamaica	1	Uruguay	1
Jersey	1	US Virgin Islands	3
Jordan	2	Vanuatu	3
Korea	1	Vietnam	2
Labuan Island	1		
Liechtenstein	1		
Macao	1		
Malaysia	2		
Maldives	1		

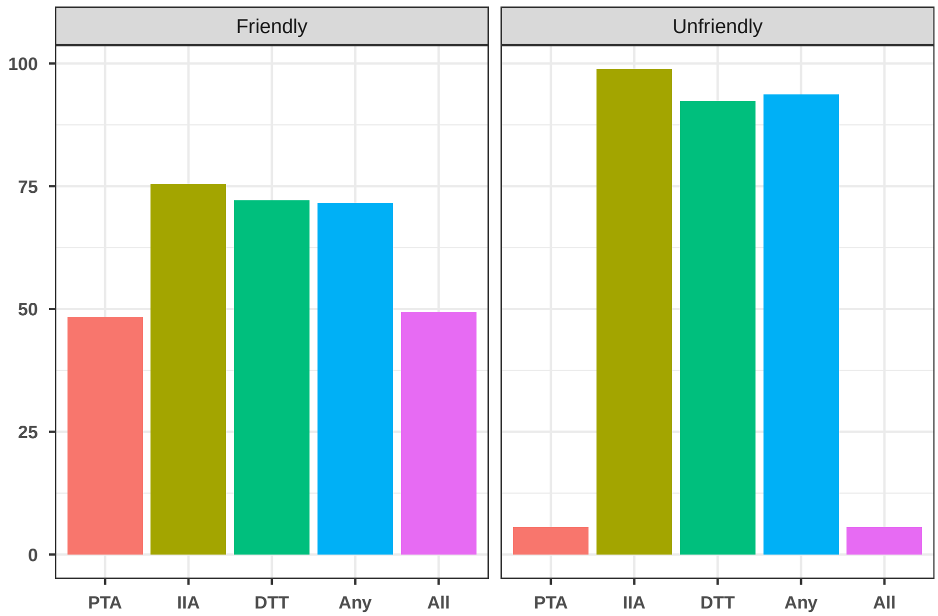
[14] `https://www.consilium.europa.eu/en/policies/eu-list-of-non-cooperative-jurisdictions/`. Last accessed 20 October 2023. A consequence of coding tax havens based on this list is that no EU member state is a tax haven, although some EU states are sometimes considered as such. We control for EU membership in analyses.

[15] Upgraded to 3 during the study period: 4 Oct 2022: Anguilla, Bahamas, and Turks and Caicos. 13 February 2023: British Virgin Islands, Costa Rica, Marshall Islands, and Russia.

7 Russian economic treaties

Of the unique homes in the data, 66 are covered by International Investment Agreements (IIAs), the most directly relevant to FDI and political risk. Preferential Trade Agreements (PTAs) cover 14 homes, mostly "friendly" homes in the post-Soviet space. Double Taxation Treaties (DTTs) cover 74 homes. Figure G summarizes the data by (un)friendly status.

Figure G. MNCs in pre-invasion Russia: Percent covered by economic treaties



Notes: Treaties in force as of 24 February 2022. PTA = Preferential Trade Agreement, IIA = International Investment Agreement, DTT = Double Taxation Treaty.

In May 2023 (15 months post-invasion), Russia officially suspended DTTs with a wide swath of "unfriendly" states. These include DTTs with Australia, Austria, Albania, Belgium, Bulgaria, United Kingdom, Hungary, Germany, Greece, Denmark, Ireland, Italy, Iceland, Spain, Canada, Cyprus, South Korea, Latvia, Lithuania, Luxembourg, Malta, North Macedonia, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, United States, Sweden, Switzerland, Finland, France, Japan, Croatia, Czech Republic, and Montenegro.

8 Guidance from home state leaders

To examine potential heterogeneity in domestic political pressure within the coalition of sanctioning states, we code statements in which home state leaders commented on what MNCs from their country should do regarding their investments in Russia. For each state on the "Unfriendly Countries" List, we researched official government documents, news reports, and similar to find what if anything incumbent leaders had commented on this issue. For eight home states (Canada, Estonia,[16] France, Japan, Lithuania, Ukraine, United Kingdom, and United States), we found statements that we see as sufficiently explicit to be interpreted as offering public guidance to MNCs above and beyond that implied by being on the "Unfriendly Countries List" per se.[17] In the table below, we list our coding of the resulting guidance, where 1 indicates guidance to exit Russia, and 0 indicates a statement that on balance does not encourage exit from Russia. The illustrative quotation on which our coding is based and source are included. For other states not listed, we could not identify a public statement on the issue in the study period.

Home	Guidance	Quotation	Source
Canada	1	"The Government of Canada recommends that companies assess their operations, take any appropriate action to comply with Canadian sanctions measures and export and brokering controls, and uphold high standards of human rights and responsible business conduct." (2 March 2022)	https://www.thenarwhal.ca/canadian-companies-russia-sanctions/
Estonia	1	"There will be no business as usual with Mr. Putin's Russia. In fact, there can be no business at all." - Prime Minister (2 March 2022)	https://www.nytimes.com/2022/03/24/opinion/nato-russia-putin-estonia.html
France	0	"I have asked companies active in the sectors concerned by the sanctions to follow the rules set out by France...But my position is that companies should decide by themselves [whether they should maintain their activities in Russia]." - President (29 March 2022)	https://www.dw.com/en/ukraine-war-french-companies-in-russia-under-pressure-to-leave/a-61289441
Japan	0	"The Japanese government asked the companies to 'positively consider' continuing their investments...A senior official of a major trading company said, 'The government showed us a direction, which made it easier for us to make a decision [to stay].''' - Reporting in Asahi Shimbun newspaper (24 February 2023)	https://www.asahi.com/ajw/articles/14847256
Lithuania	0	"Overall, Russia accounts for only one percent of Lithuania's total investment in other countries, which is certainly a small proportion." - Deputy Minister of Economy, commenting on (unsuccessful) proposed ban on Lithuanian business in Russia (2 August 2022)	https://www.lrt.lt/en/news-in-english/19/1751994/as-lithuania-considers-total-ban-on-business-with-russia-firms-fear-unintended-consequences
Ukraine	1	"I am asking to make sure that the Russians do not receive a single penny that they use to destroy people in Ukraine." - President (16 March 2022)	https://www.wsj.com/articles/ukraines-zelensky-urges-businesses-to-leave-russia-in-speech-to-congress-11647448370
United Kingdom	1	"While I recognize it may be challenging to wind down existing investments, I believe there is no argument for new investment in the Russian economy...I am urging asset owners and managers to think very carefully about any investment that would in any sense support Putin and his regime." - Finance Minister (later Prime Minister) (12 March 2022)	https://www.reuters.com/markets/deals/uks-sunak-urges-firms-leave-russia-2022-03-13/
United States	1	"The United States welcomes the decisions of companies to exit Russia because they want no part of Putin's war of choice against Ukraine." - President (22 May 2023)	https://www.state.gov/holding-russia-and-belarus-to-account/

[16]The Estonian Prime Minister became embroiled in scandal when it came to light that her husband's businesses had not exited Russia. Musaddique, Shafi. 28 August 2023. "Estonia PM under pressure over husband's alleged Russia business links." The Guardian. https://www.theguardian.com/world/2023/aug/28/estonia-pm-under-pressure-husband-russian-alleged-business-links-kaja-kallas

[17]The coding also applies to polities associated with the home state as explained in Appendix 1.

9 UN General Assembly votes

- United Nations General Assembly Resolution ES-11/1 was the original UN vote against the Russian Invasion. It was adopted on March 2, 2022. These are the votes other than "approved":[18]
  - Against (5): Belarus, Democratic People's Republic of Korea, Eritrea, Russia, Syria
  - Abstention (35): Algeria, Angola, Armenia, Bangladesh, Bolivia, Burundi, Central Africa Republic, China, Congo, Cuba, El Salvador, Equatorial Guinea, India, Iran, Iraq, Kazakhstan, Kyrgyzstan, Laos, Madagascar, Mali, Mongolia, Mozambique, Namibia, Nicaragua, Pakistan, Senegal, South Africa, South Sudan, Sri Lanka, Sudan, Tajikistan, Uganda, Tanzania, Vietnam, Zimbabwe
  - Absent (12): Azerbaijan, Burkina Faso, Cameroon, Eswatini, Ethiopia, Guinea, Guinea-Bissau, Morocco, Togo, Turkmenistan, Uzbekistan, Venezuela
- United Nations General Assembly Resolution ES-11/2 was the second vote taken against the Russian invasion. It was adopted on March 24th, 2022. These are the votes other than "approved":[19]
  - Against (5): Belarus, Democratic People's Republic of Korea, Eritrea, Russia, Syria
  - Abstention (38): Algeria, Angola, Armenia, Bolivia, Botswana, Brunei, Burundi, Central Africa Republic, China, Congo, Cuba, El Salvador, Equatorial Guinea, Eswatini, Ethiopia, Guinea-Bissau, India, Iran, Kazakhstan, Kyrgyzstan, Laos, Madagascar, Mali, Mongolia, Mozambique, Namibia, Nicaragua, Pakistan, South Africa, Sri Lanka, Sudan, Tajikistan, Togo, Uganda, Tanzania, Uzbekistan, Vietnam, Zimbabwe
  - Absent (10): Azerbaijan, Burkina Faso, Cameroon, Comoros, Dominica, Guinea, Morocco, Somalia, Turkmenistan, Venezuela
- United Nations General Assembly Resolution ES-11/3 was the third vote taken against the Russian invasion. It was adopted on April 7th, 2022. These are the votes other than "approved":[20]
  - Against (24): Algeria, Belarus, Bolivia, Burundi, Central Africa Republic, China, Congo, Cuba, Democratic People's Republic of Korea, Eritrea, Ethiopia, Gabon, Iran, Kazakhstan, Kyrgyzstan, Laos, Mali, Nicaragua, Russia, Syria, Tajikistan, Uzbekistan, Vietnam, Zimbabwe
  - Abstention (58): Angola, Bahrain, Bangladesh, Barbados, Belize, Bhutan, Botswana, Brazil, Brunei, Cabo Verde, Cambodia, Cameroon, Egypt, El Salvador, Eswatini, Gambia, Ghana, Guinea-Bissau, Guyana, India, Indonesia, Iraq, Jordan, Kenya, Kuwait, Lesotho, Madagascar, Malaysia, Maldives, Mexico, Mongolia, Mozambique, Namibia, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Saint Kitts-Nevis, Saint Vincent and the Grenadines, Saudi Arabia, Senegal, Singapore, South Africa, South Sudan, Sri Lanka, Sudan, Suriname, Thailand, Togo, Trinidad-Tobago, Tunisia, Uganda, UAE, Tanzania, Vanuatu, Yemen
  - Absent (18): Afghanistan, Armenia, Azerbaijan, Benin, Burkina Faso, Djibouti, Equatorial Guinea, Guinea, Lebanon, Mauritania, Morocco, Rwanda, Sao Tome-Principe, Solomon Islands, Somalia, Turkmenistan, Venezuela, Zambia
- United Nations General Assembly Resolution ES-11/4 was the fourth vote taken against the Russian invasion. It was adopted on October 12th, 2022. These are the results other than "approved":[21]
  - Against (5): Belarus, Democratic People's Republic of Korea, Nicaragua, Russia, Syria
  - Abstention (35): Algeria, Armenia, Bolivia, Burundi, Central Africa Republic, China, Congo, Cuba, Eritrea, Eswatini, Ethiopia, Guinea, Honduras, India, Kazakhstan, Kyrgyzstan, Laos, Lesotho, Mali, Mongolia, Mozambique, Namibia, Pakistan, South Africa, South Sudan, Sri Lanka, Sudan, Tajikistan, Thailand, Togo, Uganda, Tanzania, Uzbekistan, Vietnam, Zimbabwe
  - Absent (10): Azerbaijan, Burkina Faso, Cameroon, Djibouti, El Salvador, Equatorial Guinea, Iran, Sao Tome-Principe, Turkmenistan, Venezuela
- United Nations General Assembly Resolution ES-11/5 was the fifth vote taken against the Russian invasion. It was adopted on November 14th, 2022. These are the results other than "approved":[22]
  - Against (14): Bahamas, Belarus, Central African Republic, China, Cuba, North Korea, Eritrea, Ethiopia, Iran, Mali, Nicaragua, Russian Federation, Syria, Zimbabwe
  - Abstention (73): Algeria, Angola, Antigua and Barbuda, Armenia, Bahrain, Bangladesh, Barbados, Belize, Bhutan, Bolivia, Botswana, Brazil, Brunei, Burundi, Cambodia, Congo, Egypt, El Salvador, Equatorial Guinea, Eswatini, Gabon, Gambia, Grenada, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iraq, Israel, Jamaica, Jordan, Kazakhstan, Kyrgyzstan, Laos, Lebanon, Lesotho, Libya, Madagascar, Malaysia, Mauritania, Mauritius, Mongolia, Mozambique, Namibia, Nepal, Nigeria, Oman, Pakistan, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Saudi Arabia, Serbia, Sierra Leone, South Africa, South Sudan, Sri Lanka, Sudan, Suriname, Tajikistan, Thailand, Timor-Leste, Trinidad and Tobago, Tunisia, Uganda, United Arab Emirates, Uzbekistan, Vietnam, Yemen

[18] Source: `https://www.aljazeera.com/news/2022/3/3/unga-resolution-against-ukraine-invasion-full-text`
[19] Source: `https://news.un.org/en/story/2022/03/1114632`
[20] Source: `https://news.un.org/en/story/2022/04/1115782`
[21] Source: `https://news.un.org/en/story/2022/10/1129492`
[22] Source `https://digitallibrary.un.org/record/3994052?ln=en`

- Absent (12): Azerbaijan, Burkina Faso, Cameroon, Democratic Republic of the Congo, Dominica, Morocco, São Tomé and Príncipe, Senegal, Tonga, Tanzania, Turkmenistan, Venezuela

- United Nations General Assembly Resolution ES-11/6 was the sixth vote taken against the Russian invasion. It was adopted on February 23, 2023. These are the results other than "approved":[23]
  - Against (7): Belarus, Democratic People's Republic of Korea, Eritrea, Mali, Nicaragua, Russia, Syria
  - Abstention (32): Algeria, Angola, Armenia, Bangladesh, Bolivia, Burundi, Central African Republic, China, Congo, Cuba, El Salvador, Ethiopia, Gabon, Guinea, India, Iran, Kazakhstan, Kyrgyzstan, Laos, Mongolia, Mozambique, Namibia, Pakistan, South Africa, Sri Lanka, Sudan, Tajikistan, Togo, Uganda, Uzbekistan, Vietnam, Zimbabwe
  - Absent (13): Azerbaijan, Burkina Faso, Cameroon, Dominica, Equatorial Guinea, Eswatini, Grenada, Guinea-Bissau, Lebanon, Senegal, Turkmenistan, Tanzania, Venezuela

[23] Source `https://www.aljazeera.com/news/2023/2/24/un-tells-russia-to-leave-ukraine-how-did-countries-vote`

10 Alternative industry classification

Table F. Fama-French 12-category industries and associated SIC codes

No.	Category	Description and Codes
1	NoDur	Consumer NonDurables – Food, Tobacco, Textiles, Apparel, Leather, Toys
		0100-0999, 2000-2399, 2700-2749, 2770-2799, 3100-3199, 3940-3989
2	Durbl	Consumer Durables – Cars, TV's, Furniture, Household Appliances
		2500-2519, 2590-2599, 3630-3659, 3710-3711, 3714-3714, 3716-3716, 3750-3751, 3792-3792, 3900-3939, 3990-3999
3	Manuf	Manufacturing – Machinery, Trucks, Planes, Off Furn, Paper, Com Printing
		2520-2589, 2600-2699, 2750-2769, 3000-3099, 3200-3569, 3580-3629, 3700-3709, 3712-3713, 3715-3715, 3717-3749, 3752-3791, 3793-3799, 3830-3839, 3860-3899
4	Enrgy	Oil, Gas, and Coal Extraction and Products
		1200-1399, 2900-2999
5	Chems	Chemicals and Allied Products
		2800-2829, 2840-2899
6	BusEq	Business Equipment – Computers, Software, and Electronic Equipment
		3570-3579, 3660-3692, 3694-3699, 3810-3829, 7370-7379
7	Telcm	Telephone and Television Transmission
		4800-4899
8	Utils	Utilities
		4900-4949
9	Shops	Wholesale, Retail, and Some Services (Laundries, Repair Shops)
		5000-5999, 7200-7299, 7600-7699
10	Hlth	Healthcare, Medical Equipment, and Drugs
		2830-2839, 3693-3693, 3840-3859, 8000-8099
11	Money	Finance
		6000-6999
12	Other	Other – Mines, Constr, BldMt, Trans, Hotels, Bus Serv, Entertainment

11 Robustness and Full Results

Table G. Determinants of MNC Exit (Additional Robustness Checks)

	Home FEs	Add. Home Controls	Drop Cyprus & Tax Havens
	(1)	(2)	(3)
Unfriendly home state		-0.053	0.013
		(0.038)	(0.050)
On Name-Shame list	-0.054***	-0.051***	-0.054**
	(0.012)	(0.015)	(0.019)
Consumer-oriented industry	0.014	0.001	0.005
	(0.008)	(0.007)	(0.013)
Russian managerial control	0.041**	0.057***	0.037
	(0.017)	(0.020)	(0.032)
Russian strategic industry	-0.040***	-0.042***	-0.042**
	(0.013)	(0.013)	(0.016)
High fixed assets	-0.002	-0.003	0.036
	(0.020)	(0.018)	(0.039)
Home level			
Tax haven		-0.012	
		(0.016)	
EU member		0.051**	0.022
		(0.019)	(0.040)
Cyprus		0.019	
		(0.016)	
Ukraine		0.039	0.013
		(0.039)	(0.045)
Trade with Russia		-0.012	-0.005
		(0.011)	(0.014)
IIA		-0.034*	-0.088*
		(0.019)	(0.043)
PTA		0.023	0.050**
		(0.017)	(0.020)
DTT		-0.104***	-0.021
		(0.036)	(0.045)
UNGA Voting Similarity		-0.309***	
		(0.056)	
GDP PC (log)		-0.004	
		(0.014)	
Liberal Democracy		-0.019	
		(0.071)	
Firm level			
Medium	-0.051***	-0.059***	-0.062***
	(0.016)	(0.016)	(0.020)
Large	-0.008	-0.011	-0.025
	(0.017)	(0.019)	(0.018)
Very Large	0.023	0.012	0.027
	(0.022)	(0.022)	(0.032)
Years in Russia	-0.001**	-0.001	-0.001
	(0.000)	(0.001)	(0.000)
Russian subsidiary presence	0.056*	0.066*	0.072**
	(0.031)	(0.035)	(0.030)
State-owned	0.059*	0.074*	0.060
	(0.031)	(0.038)	(0.038)
Listed outside of Russia	-0.018	0.009	0.020
	(0.016)	(0.020)	(0.029)
MNC home $\neq$ GUO home	-0.018	-0.025*	-0.032
	(0.011)	(0.014)	(0.021)
$>$ 1 qualifying foreign owner	-0.021*	-0.022*	-0.028*
	(0.011)	(0.011)	(0.014)
Classification via GUO	0.122***	0.093*	0.132
	(0.032)	(0.045)	(0.086)
Constant	0.476***	0.855***	0.435**
	(0.152)	(0.151)	(0.205)
N	38611	35560	22106
Number of Industries	19	19	19
R^2	0.07	0.05	0.04
Industry FEs	Yes	Yes	Yes
Home FEs	Yes	No	No

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table H. Determinants of MNC Exit (Probit)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Unfriendly home state	0.013	-0.038	-0.032	-0.024				-0.016
	(0.046)	(0.057)	(0.058)	(0.055)				(0.054)
On Name-Shame list			-0.138***	-0.135***				-0.134***
			(0.046)	(0.045)				(0.044)
Consumer-oriented industry				0.026*				0.041**
				(0.014)				(0.017)
Russian managerial control					0.158***	0.165***	0.169***	0.153***
					(0.055)	(0.055)	(0.058)	(0.058)
Russian strategic industry						-0.124***	-0.124***	-0.126***
						(0.035)	(0.035)	(0.038)
High fixed assets							-0.050	-0.055
							(0.089)	(0.086)
Home level								
Tax haven	-0.126***	-0.066	-0.068*	-0.067	-0.036	-0.036	-0.037	-0.044
	(0.028)	(0.041)	(0.041)	(0.041)	(0.041)	(0.040)	(0.040)	(0.043)
EU member		0.086	0.086	0.084	0.094	0.096*	0.099*	0.100*
		(0.058)	(0.058)	(0.059)	(0.060)	(0.057)	(0.056)	(0.055)
Cyprus		0.115**	0.102**	0.097*	0.122**	0.125**	0.119**	0.103**
		(0.050)	(0.051)	(0.052)	(0.051)	(0.049)	(0.049)	(0.052)
Ukraine		0.110	0.105	0.101	0.078	0.083	0.089	0.106
		(0.075)	(0.076)	(0.076)	(0.061)	(0.061)	(0.061)	(0.076)
Trade with Russia	-0.047**	-0.030	-0.029	-0.029	-0.029	-0.029	-0.029	-0.028
	(0.019)	(0.021)	(0.021)	(0.022)	(0.020)	(0.020)	(0.020)	(0.022)
IIA	-0.184***	-0.227***	-0.239***	-0.231***	-0.241***	-0.245***	-0.244***	-0.240***
	(0.063)	(0.063)	(0.062)	(0.062)	(0.063)	(0.064)	(0.063)	(0.064)
PTA	0.047	0.070	0.066	0.072	0.101*	0.101*	0.100*	0.087*
	(0.048)	(0.051)	(0.051)	(0.052)	(0.052)	(0.053)	(0.053)	(0.051)
DTT	-0.065	-0.159*	-0.151	-0.162*	-0.157*	-0.159*	-0.161*	-0.159*
	(0.074)	(0.093)	(0.097)	(0.095)	(0.087)	(0.089)	(0.089)	(0.096)
Firm level								
Medium	-0.159***	-0.163***	-0.162***	-0.169***	-0.163***	-0.159***	-0.161***	-0.163***
	(0.052)	(0.051)	(0.053)	(0.054)	(0.052)	(0.053)	(0.054)	(0.055)
Large	-0.037	-0.048	-0.037	-0.040	-0.047	-0.044	-0.044	-0.036
	(0.049)	(0.047)	(0.049)	(0.052)	(0.048)	(0.050)	(0.051)	(0.053)
Very Large	0.043	0.029	0.050	0.051	0.019	0.026	0.025	0.048
	(0.054)	(0.055)	(0.060)	(0.061)	(0.055)	(0.056)	(0.056)	(0.061)
Years in Russia	-0.003*	-0.003*	-0.003*	-0.003*	-0.003*	-0.003**	-0.003**	-0.003*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Russian subsidiary presence	0.336***	0.304***	0.254**	0.247**	0.287***	0.292***	0.283***	0.234**
	(0.100)	(0.101)	(0.101)	(0.102)	(0.100)	(0.101)	(0.102)	(0.099)
State-owned	0.102	0.115	0.146	0.206*	0.120	0.121	0.188	0.197*
	(0.154)	(0.155)	(0.149)	(0.112)	(0.157)	(0.154)	(0.116)	(0.108)
Listed outside of Russia	0.031	0.020	0.022	0.019	0.013	0.021	0.018	0.027
	(0.053)	(0.063)	(0.061)	(0.062)	(0.060)	(0.061)	(0.062)	(0.064)
MNC home $\neq$ GUO home	0.004	-0.010	-0.001	0.003	-0.099**	-0.104**	-0.104**	-0.083**
	(0.027)	(0.022)	(0.022)	(0.020)	(0.044)	(0.044)	(0.044)	(0.041)
>1 qualifying foreign owner	-0.113***	-0.106***	-0.093***	-0.092***	-0.100***	-0.100***	-0.099***	-0.085***
	(0.033)	(0.033)	(0.033)	(0.033)	(0.031)	(0.031)	(0.030)	(0.032)
Classification via GUO	0.382***	0.383***	0.406***	0.406***	0.224**	0.221**	0.215*	0.258**
	(0.060)	(0.060)	(0.062)	(0.063)	(0.108)	(0.109)	(0.113)	(0.113)
Constant	0.302	0.158	0.173	0.154	0.118	0.170	0.235	0.240
	(0.222)	(0.222)	(0.232)	(0.233)	(0.212)	(0.211)	(0.213)	(0.237)
N	39367	39367	39367	38571	39367	39367	38973	38453
Number of Industries	19	19	19	19	19	19	19	19
Pseudo R^2	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level;
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table I. Determinants of MNC Exit (2020–2021)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Unfriendly home state	0.094***	0.089***	0.094***	0.094***				0.094***
	(0.020)	(0.010)	(0.011)	(0.011)				(0.010)
On Name-Shame list			-0.131***	-0.131***				-0.132***
			(0.013)	(0.012)				(0.012)
Consumer-oriented industry				0.013				0.013
				(0.017)				(0.017)
Russian managerial control					-0.040***	-0.040***	-0.041***	-0.050***
					(0.009)	(0.009)	(0.010)	(0.010)
Russian strategic industry						0.008	0.008	0.005
						(0.017)	(0.016)	(0.017)
High fixed assets							-0.042	-0.046
							(0.030)	(0.031)
Home level								
Tax haven	-0.016	0.024**	0.021*	0.020*	0.011	0.010	0.010	0.012
	(0.010)	(0.011)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.010)
EU member		0.053***	0.052***	0.052***	0.070***	0.070***	0.070***	0.046***
		(0.011)	(0.012)	(0.013)	(0.014)	(0.014)	(0.014)	(0.013)
Cyprus		0.074***	0.062***	0.060***	0.070***	0.070***	0.067***	0.058***
		(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.013)
Ukraine		-0.019	-0.028	-0.028	0.065	0.065	0.054	-0.038
		(0.053)	(0.050)	(0.051)	(0.053)	(0.053)	(0.052)	(0.049)
Trade with Russia	-0.021***	-0.009***	-0.008***	-0.008***	-0.010***	-0.010***	-0.010***	-0.008***
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)
IIA	-0.072***	-0.109***	-0.121***	-0.119***	-0.084***	-0.084***	-0.083***	-0.117***
	(0.014)	(0.015)	(0.016)	(0.016)	(0.012)	(0.012)	(0.012)	(0.016)
PTA	-0.196***	-0.141***	-0.142***	-0.143***	-0.197***	-0.197***	-0.197***	-0.146***
	(0.025)	(0.035)	(0.033)	(0.034)	(0.032)	(0.032)	(0.033)	(0.034)
DTT	-0.008	-0.079***	-0.073***	-0.074***	-0.068***	-0.067***	-0.068***	-0.076***
	(0.018)	(0.018)	(0.018)	(0.019)	(0.018)	(0.017)	(0.018)	(0.018)
Firm level								
Medium	-0.053***	-0.056***	-0.056***	-0.057***	-0.053***	-0.054***	-0.054***	-0.057***
	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Large	-0.039***	-0.048***	-0.037***	-0.038***	-0.045***	-0.045***	-0.046***	-0.038***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.006)
Very Large	-0.029**	-0.038***	-0.018	-0.018	-0.033**	-0.033***	-0.033***	-0.014
	(0.011)	(0.012)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Years in Russia	0.002**	0.002**	0.002***	0.002***	0.002***	0.002***	0.002***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Russian subsidiary presence	0.089***	0.068**	0.021	0.021	0.067**	0.067**	0.065**	0.025
	(0.024)	(0.025)	(0.022)	(0.022)	(0.024)	(0.024)	(0.025)	(0.023)
State-owned	0.204***	0.210***	0.217***	0.231***	0.203***	0.203***	0.213***	0.230***
	(0.039)	(0.039)	(0.036)	(0.037)	(0.039)	(0.039)	(0.039)	(0.036)
Listed outside of Russia	-0.500***	-0.506***	-0.498***	-0.498***	-0.497***	-0.497***	-0.497***	-0.499***
	(0.034)	(0.033)	(0.031)	(0.032)	(0.033)	(0.033)	(0.033)	(0.032)
MNC home $\neq$ GUO home	0.002	-0.008	-0.001	0.000	0.015*	0.015*	0.016**	0.025***
	(0.007)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
$>$ 1 qualifying foreign owner	-0.020**	-0.017*	-0.002	-0.002	-0.017*	-0.017*	-0.018*	-0.005
	(0.009)	(0.009)	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)
Classification via GUO	0.069***	0.067**	0.089***	0.088***	0.114***	0.114***	0.115***	0.138***
	(0.022)	(0.023)	(0.022)	(0.023)	(0.026)	(0.026)	(0.027)	(0.026)
Constant	0.843***	0.728***	0.743***	0.736***	0.768***	0.765***	0.769***	0.744***
	(0.032)	(0.030)	(0.027)	(0.031)	(0.028)	(0.030)	(0.030)	(0.031)
N	44453	44453	44453	43380	44453	44453	43882	43218
Number of Industries	19	19	19	19	19	19	19	19
R^2	0.27	0.27	0.28	0.28	0.27	0.27	0.27	0.28
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level;
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table J. Unfriendly vs. Friendly Home

	(1) Unfriendly	(2) Friendly
On Name-Shame list	-0.044**	-0.119***
	(0.016)	(0.019)
Consumer-oriented industry	-0.000	0.049***
	(0.007)	(0.008)
Russian managerial control	0.050**	0.093
	(0.023)	(0.057)
Russian strategic industry	-0.055**	-0.010
	(0.019)	(0.008)
High fixed assets	-0.028	0.013
	(0.034)	(0.014)
Home level		
Tax haven	-0.021	-0.014
	(0.030)	(0.016)
EU member	0.013	
	(0.037)	
Cyprus	0.059**	
	(0.023)	
Ukraine	0.094	
	(0.073)	
Trade with Russia	-0.002	-0.021***
	(0.012)	(0.004)
IIA	-0.065	-0.014
	(0.055)	(0.024)
PTA	-0.056	0.017
	(0.054)	(0.017)
DTT	-0.082	-0.040
	(0.049)	(0.029)
Firm level		
Medium	-0.050**	-0.067***
	(0.018)	(0.020)
Large	-0.001	-0.050
	(0.018)	(0.033)
Very Large	0.034	-0.046
	(0.021)	(0.046)
Years in Russia	-0.001*	-0.001
	(0.001)	(0.001)
Russian subsidiary presence	0.063	0.184***
	(0.038)	(0.033)
State-owned	0.096**	0.053
	(0.036)	(0.050)
Listed outside of Russia	-0.006	0.042***
	(0.032)	(0.014)
MNC home $\neq$ GUO home	-0.020	-0.114**
	(0.015)	(0.047)
$>$ 1 qualifying foreign owner	-0.033***	0.004
	(0.011)	(0.028)
Classification via GUO	0.108**	0.048
	(0.042)	(0.082)
Constant	0.480***	0.538***
	(0.157)	(0.071)
N	28511	9942
Number of Industries	19	19
R^2	0.04	0.06
Industry FEs	Yes	Yes

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table K. Determinants of MNC Exit (Heterogeneity by Size)

	(1) Small	(2) Medium	(3) Large	(4) Vary Large
Unfriendly home state	-0.011	0.010	-0.042	0.143***
	(0.020)	(0.031)	(0.024)	(0.044)
On Name-Shame list	-0.048*	-0.023	-0.065**	-0.066**
	(0.027)	(0.023)	(0.031)	(0.026)
Consumer-oriented industry	0.022	0.028**	-0.034***	0.082***
	(0.014)	(0.010)	(0.009)	(0.020)
Russian managerial control	0.044**	0.080***	0.030	0.051
	(0.018)	(0.020)	(0.036)	(0.052)
Russian strategic industry	-0.055***	-0.033***	-0.021	-0.036
	(0.014)	(0.008)	(0.029)	(0.032)
High fixed assets	-0.067*	0.026	0.075***	0.149***
	(0.033)	(0.047)	(0.023)	(0.050)
Home level				
Tax haven	-0.014	-0.026*	0.003	-0.084
	(0.024)	(0.013)	(0.024)	(0.081)
EU member	0.040	-0.009	0.084***	0.026
	(0.032)	(0.023)	(0.026)	(0.079)
Cyprus	0.022	0.049***	0.054*	0.025
	(0.020)	(0.017)	(0.026)	(0.048)
Ukraine	0.050	-0.006	0.148*	-0.413***
	(0.035)	(0.046)	(0.072)	(0.068)
Trade with Russia	-0.010	-0.012**	-0.008	-0.004
	(0.011)	(0.005)	(0.005)	(0.010)
IIA	-0.118***	-0.025	-0.016	-0.073
	(0.028)	(0.021)	(0.028)	(0.071)
PTA	0.024	0.043	-0.032	0.076
	(0.022)	(0.030)	(0.031)	(0.082)
DTT	-0.042	-0.062**	-0.075	-0.234***
	(0.046)	(0.029)	(0.047)	(0.066)
Years in Russia	-0.001*	0.000	-0.000	-0.003*
	(0.001)	(0.001)	(0.001)	(0.001)
Russian subsidiary presence	0.067*	0.080	0.098**	0.063
	(0.036)	(0.046)	(0.043)	(0.043)
State-owned	0.052	0.109	0.048	0.139
	(0.050)	(0.071)	(0.052)	(0.081)
Listed outside of Russia	0.030	-0.019	-0.073**	-0.024
	(0.029)	(0.016)	(0.032)	(0.061)
MNC home $\neq$ GUO home	-0.038**	-0.016	-0.026	-0.013
	(0.015)	(0.013)	(0.029)	(0.039)
$>$ 1 qualifying foreign owner	-0.006	-0.033*	-0.017	-0.063**
	(0.013)	(0.018)	(0.021)	(0.027)
Classification via GUO	0.103*	0.102***	0.126**	0.007
	(0.054)	(0.031)	(0.044)	(0.058)
Constant	0.577***	0.468***	0.520***	0.562***
	(0.117)	(0.053)	(0.086)	(0.138)
N	23810	8281	4667	1695
Number of Industries	19	19	19	18
R^2	0.04	0.05	0.07	0.06
Industry FEs	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table L. Determinants of MNC Exit (Multinominal Logit)

	Active to Inactive	Foreign to Domestic	Foreign to Foreign
Unfriendly home state	-0.046	0.303***	-0.365**
	(0.077)	(0.114)	(0.168)
On Name-Shame list	-0.469***	-0.056	-0.509***
	(0.100)	(0.104)	(0.123)
Consumer-oriented industry	0.166	0.112*	-0.103***
	(0.191)	(0.059)	(0.019)
Russian managerial control	-0.146	0.485***	-0.109
	(0.196)	(0.123)	(0.132)
Russian strategic industry	-0.388***	-0.095	-0.199**
	(0.118)	(0.098)	(0.086)
High fixed assets	-0.192	-0.004	-0.113
	(0.152)	(0.144)	(0.298)
Home level			
Tax haven	-0.202*	0.022	-0.147
	(0.112)	(0.087)	(0.188)
EU member	0.343***	0.112	-0.199
	(0.120)	(0.101)	(0.287)
Cyprus	-0.316***	0.629***	-0.299***
	(0.104)	(0.103)	(0.114)
Ukraine	0.199	0.051	-0.526*
	(0.255)	(0.135)	(0.279)
Trade with Russia	-0.098***	0.004	-0.027
	(0.036)	(0.040)	(0.030)
IIA	-0.703***	-0.275**	0.286
	(0.083)	(0.134)	(0.234)
PTA	0.286**	0.435***	-0.453*
	(0.114)	(0.096)	(0.242)
DTT	-0.115	-0.621***	0.342*
	(0.195)	(0.194)	(0.196)
Firm level			
Medium	-1.337***	0.127	0.167*
	(0.087)	(0.078)	(0.092)
Large	-1.510***	0.323***	0.461***
	(0.175)	(0.078)	(0.117)
Very Large	-2.274***	0.484***	0.550***
	(0.426)	(0.133)	(0.183)
Years in Russia	-0.031***	0.003	0.013**
	(0.007)	(0.003)	(0.005)
Russian subsidiary presence	1.238***	0.209	-0.370**
	(0.290)	(0.161)	(0.184)
State-owned	0.541***	0.345	-0.013
	(0.196)	(0.241)	(0.208)
Listed outside of Russia	0.746***	-0.407***	0.158
	(0.103)	(0.091)	(0.231)
MNC home $\neq$ GUO home	-0.258*	0.040	-0.325***
	(0.140)	(0.057)	(0.089)
$>$ 1 qualifying foreign owner	-0.463***	-0.368***	0.486***
	(0.099)	(0.084)	(0.101)
Classification via GUO	-0.913**	0.744***	0.942***
	(0.392)	(0.121)	(0.241)
Constant	-0.072	-1.332***	-2.078***
	(0.329)	(0.423)	(0.426)
N	38453		
Number of Industries	19		
Pseudo R^2	0.10		
Industry FEs	Yes		

Notes: Robust standard errors in parentheses, clustered at the two-digit NAICS level;
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.