THE IMPACT OF THE WAR ON UKRAINE'S M&A MARKET: EVIDENCE FROM PRE- AND POST-2022 TRANSACTIONS

by

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Kyiv School of Economics

Abstract

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This thesis assesses the effects of the large-scale Russian invasion of Ukraine on the Ukrainian mergers and acquisitions (M&A) market. It examines three aspects of M&A activity in Ukraine: foreign investor participation, deal value disclosure, and overall transaction activity. Analysis was conducted using a proprietary transaction-based dataset, which includes reported M&A transactions in Ukraine from 2019 to 2025.

Empirical methodologies used included logit and probit models at an individual transaction level and a Poisson model for analyzing aggregate monthly deal activities. The research found that overall M&A transactions were significantly impacted by the invasion, as well as the probability of foreign investors participating. However, no statistically significant relationship existed between the invasion of Ukraine and the reporting of deal values. Rather than being influenced by the conflict, it appears that the reporting of deal values is primarily determined by institutional and sector-specific characteristics.

Overall, these findings demonstrate that the conflict has had a significant influence on both the scope and composition of the Ukrainian M&A market, but there have been few changes in terms of reporting deal values.

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AI USE DECLARATION

During the preparation of this thesis, Generative AI (ChatGPT) was used as a supplementary tool to:

- Enhance grammatical correctness and improve clarity of sentences throughout the thesis.
- Assist with generating ideas and improving the framework of research, hypotheses, and econometric specifications.
- Support debugging and refinement of R code that is used for econometric estimation, formatting tables, and creating visualizations.
- Provide assistance on various formatting issues associated with presenting output from R in Microsoft Word.

All suggestions generated using the AI were thoroughly critiqued and greatly modified by the Author prior to their incorporation into the thesis.

Additionally, no part of the research conducted, including but not limited to developing research questions, theoretically defining research problems, methodological approaches, empirical analyses of data collected, interpretations of results, conclusions drawn, or recommendations made, was developed or influenced by ChatGPT. The author is fully responsible for ensuring that all research questions, theories, methodologies, empirical analyses of collected data, interpretations of results, conclusions drawn, and recommendations made are original, valid, and academically honest.

Chapter 1

INTRODUCTION

The full-scale russian invasion of Ukraine in February 2022 was an unprecedented shock to the whole World and for Ukraine especially. This was a huge shock for the country's economy, institutions, and investment environment. Along with the serious humanitarian and military consequences, the War changed how investors, governments, and firms make their decisions. One of the areas that would be affected by such changes is mergers and acquisitions (M&A). M&A plays a key role in the relocation of the capital in the finance market, driving the development of the overall market by creating opportunities for the firms to expand into new markets and to attract financing during periods of economic change. There is much international literature about the geopolitical risk and investment behavior. However, empirical evidence on how ongoing War affects M&A activity is very limited, especially in emerging transition economies. The task of this Thesis is to address this gap, examining how war changed the structure and dynamics of the Ukrainian M&A market.

M&A activity is very sensitive to uncertainty. Acquisitions involve high costs, long-term planning, and outcomes that are difficult to reverse. Such characteristics of the M&A market lead to investors postponing, reducing, or completely avoiding acquisitions in such volatile periods as ongoing full-scale War. Prior research shows that political instability and armed conflicts reduce investments. The most sensitive to such changes are transactions involving foreign investors. At the same time, a crisis may also be a time for new opportunities for restructuring, consolidation, and ownership change. Mainly, in sectors that are operating and considered to be strategically important. There is also a difference in effects across different sectors. In the context of Ukraine, some sectors experienced physical destruction and demand collapse,

while others, such as information and technology, remained active and became even more attractive to investors.

Foreign investment is very important for Ukraine, both during the war and right after the end of the war. Foreign investors bring not only the capital but also international expertise, access to the international markets, and new technologies. However, according to the existing literature, foreign investors are more sensitive to the political uncertainty than domestic investors. Higher risks, limited information, and weaker institutional guarantees can cause foreign investors to leave markets affected. It is important to understand how the war affected the probability that a Ukrainian firm will be acquired by foreign investors to assess the long-term consequences of the war for Ukraine's integration into the global economy.

The M&A market is a highly competitive market, and therefore, firms are trying to hide information about their intentions to enter M&A transactions or to disclose the values of the transactions conducted. However, disclosure plays a key role in the market functioning. Disclosure provides important information for the stakeholders, supports valuation, and strengthens trust among market participants. High uncertainty and weakening of the institutions may lead to a change in disclosure practices. To protect sensitive information, which may be considered strategically important in terms of war, investors and sellers may choose to hide information about the value of the transaction. On the other hand, greater disclosure can be a signal of stability for attracting foreign investors. Historically, the Ukrainian M&A market has been a market with a low level of transparency, and the war may further worsen the situation with disclosure. Or war could have the opposite effect and show greater transparency due to intentions to show stability and attract more capital, especially foreign. Investigation into how the probability of deal-value disclosure changed after the February 2022 event can provide important insights into how transparency evolves under extreme conditions.

Additionally, it is important to analyze how overall M&A activity changed over time. Change in the deal counts will provide insights if the war caused a serious decline in the number of M&A deals, which can be treated as a sign of a decrease in overall market activity. This also may show if the market has already stabilized after the initial shock caused by the war or we are still observing a reduction in the capital market activity. Analyzing time-series patterns allows to identify market shifts in market dynamics which may be observed at the level of individual transactions. Such an approach helps to assess if the war made a fundamental change in the functioning of the Ukrainian M&A market and provides useful information for interpreting changes in investor participation and deal transparency.

The reason for writing this thesis is to empirically assess how the full-scale war affected key aspects of the M&A market in Ukraine. Three specific research questions were constructed in order to address this. First, did the probability that a Ukrainian company will be acquired by a foreign investor decrease? Second, did the war change the likelihood that deal values are disclosed? Third, did February 2022 represent a structural break in total monthly M&A activity?

These research questions are then formalized in three hypotheses. The first hypothesis states that the war decreased the probability that an M&A deal involves a foreign acquirer (H1). This hypothesis is motivated by the literature. This literature shows that uncertainty and political instability reduce cross-border investment more strongly than domestic investment. The second hypothesis proposes that the war changed the probability of deal value disclosure (H2). This should reflect the changes in transparency and information-sharing behavior during wartime. The third hypothesis states that February 2022 represents a structural break in total monthly deal counts (H3). This should indicate a clear change in overall M&A dynamics after the invasion.

To test this hypotheses transaction-level dataset representing Ukrainian M&A activity from January 2019 to September 2025 was used. The initial dataset consisted of 395 transactions compiled by KPMG Ukraine as a part of the KPMG M&A Radar project from publicly available sources. Sources are presented by company disclosures, regulatory filings, and specialized financial databases. Some manipulation to the original dataset was applied, such as applying sample restrictions (excluding the outbound transactions from the sample) and data-cleaning. After simple manipulations, the final estimation sample consisted of 361 transactions. The dataset includes detailed information about acquirer nationality, sector classification, deal value, privatization status, and transaction timing.

An empirical approach is presented by a combination of transaction-level and aggregate analyses. Logistic regression models are used to study changes in the probability of foreign acquirers and deal-value disclosure after the full-scale invasion. Monthly transaction counts are analyzed at the aggregate level. To test if February 2022 presented a significant shift in overall M&A dynamics, structural break techniques and count data models were used. Descriptive statistics presented in the data chapter show substantial changes in transaction volumes, investor composition, and sectoral allocation after the invasion. These results provide motivation for the formal econometric analysis.

The thesis contributes to the literature in the following ways. First, this is one of the first transaction-level empirical analyses of M&A activity during the ongoing war, not based on the post-conflict data. Second, Ukraine is a transaction economy with weak institutions and limited transparency. Such characteristics of Ukraine and its M&A market offer insights to complement existing studies, which are mainly based on the developed markets. Third, by combining the deal-level probability models and aggregate structural break analysis, this study provides a fuller picture of the effects on investor behavior because of geopolitical shocks. Finally, this study will be useful for the

policymakers and practitioners involved in post-war reconstruction, privatization programs, and efforts to again attract foreign capital to Ukraine.

Chapter 2

LITERATURE REVIEW

This part surveys major streams of research that have an influence on the study of foreign direct investment and cross-border mergers & acquisitions (M&As) when both geopolitical risks and institutional uncertainty are present. The review will be grouped into four categories. First, we consider how geopolitical risk influences foreign direct investment and cross-border M&As. Second, we discuss the roles that institutional quality, transparency, and good corporate governance play as determinants of merger & acquisition decisions. Next, we assess sector-specific characteristics and the varying impacts of economic shocks by sector. Fourth, we address studies of transition economies and the Ukrainian case. Literature surveyed here has served as a basis for the theoretical model used in the thesis's empirical work, hence, it also motivated the hypotheses developed in this thesis.

2.1. Geopolitical risk and its effects on M&A activity.

Many studies show that political and geopolitical risk significantly influence investment decisions. Mainly, this is the case for cross-border investments.

The most relevant to this topic analysis are done by Hao, Prapan, Gavriildis, Petmezas, and Vagnes-nanos (2022). They analyzed how Caldra-Iacoviello geopolitical risk (GPR) index influenced US M&A. Their results confirmed the hypothesis that with the rising uncertainty, firms are more likely to delay or avoid investing in projects that cannot be easily changed later. The examples of such projects can be acquisitions. They used a panel of US firms from 1986 to 2018. The authors showed that increased geopolitical risk significantly reduces the probability of the acquisition. Results of the analysis showed that a one standard deviation rise in GPR lowers the likelihood of mergers announcements by approximately by 9%. Such effects were observed

during two years. Such a finding suggests that geopolitical shocks have long-lasting consequences for corporate decision-making. Strong cross-sectional heterogeneity was observed as a result of the analysis. This means that firms with foreign exposure or constrained access to financing are reducing their acquisition projects more often. Overall, findings show that geopolitical uncertainty reduces M&A activity and affects foreign investments more strongly than domestic.

Additional research on the effects of political uncertainty and acquisitions made by foreign investors can be found in a paper by Boniame, Gulen, and ION (2016). Authors have shown that inbound cross-border M&A is reduced by an increase in political instability. However, these effects are much smaller for the domestic M&A activity. This difference is due to higher information costs which foreign investors face when invest into cross-boarder projects. Also, studies show that political uncertainty has a larger negative effect in countries with lower transparency, weaker requirements of financial reporting, or with limited disclosure practices. Similar things are observed in Ukraine, which is why this study is relevant to the thesis. The work also shows that sectors such as energy and finance experience sharper declines in foreign capital investment during uncertain periods. These results confirm different impacts throughout the market.

Li and Qian (2021) provide complementary evidence using a global panel of cross-border M&A flows. Their study shows that increases in geopolitical risk significantly reduce cross-border acquisitions, while domestic acquisitions are less affected. Authors find that a one-unit increase in the GPR index reduces cross-border M&A volumes by roughly 7%, with the effect being largest in countries exposed to interstate conflict or territorial instability. They also show that geopolitical shocks increase the required rate of return for foreign investors, effectively raising the minimum return required from investment. Their results strongly support the idea that full-scale war in Ukraine should

reduce the likelihood of foreign acquisitions, forming the theoretical basis for the first empirical model in this thesis.

Additional insights come from Shen et al. (2021), who examine how geopolitical risk affects acquisitions in the Chinese energy and electronic-power industry. They find that geopolitical risk can sometimes increase domestic M&A activity in strategically important industries as firms consolidate to manage risk. Their panel regression reveals that geopolitical shocks create incentives for strategic restructuring within countries, particularly in sectors critical to national security or supply chain stability. This mechanism suggests that in Ukraine, some domestic sectors may remain active or even increase consolidation during wartime, even as foreign investors withdraw. This heterogeneity motivates controlling for sector-specific differences when analyzing investor behavior in the Ukrainian M&A market.

Taken together, this literature establishes that geopolitical and political uncertainty reduce the probability of cross-border acquisitions, alter the composition of investors, and produce sector-specific patterns of restructuring. These insights directly support the empirical strategy of modeling the probability of foreign acquisitions as a function of post-war dummy variables and sector controls, and they provide a theoretical basis for investigating changes in transparency and sectoral M&A activity.

2.2. Cross-country determinants of M&A and role of institutions

The second major part of the literature focuses on how institutional quality, governance, and investor protection shape M&A flows. Rossi and Volpin (2004) demonstrate that M&A activity across countries is strongly influenced by institutional quality, investor protection, and accounting standards. Their analysis across 49 countries shows that investors prefer jurisdictions with higher transparency and stronger governance frameworks. Countries with

weak institutions attract fewer foreign acquirers, and the deals that take place involve lower premiums and lower transparency. They also find that cross-border acquisitions often involve targets from countries with weaker institutions than their own, suggesting a governance-improvement motive.

These insights are important to Ukraine because war weakens institutions and increases information risk, which may cause foreign acquirers to withdraw from the market, especially in sectors with low transparency. This supports the relevance of the thesis's disclosure model.

Bakeart et. al. (2016) studied how political risk affects firm valuation. Their results suggest that political risk mainly influences expected cash flows, not only discount rates. In many cases, analysts try to capture political risk using severe bond spreads. However, the authors say that such an approach can be wrong because these spreads also reflect other factors, such as economic conditions and liquidity. To deal with this issue, they developed a measure called Political Risk Sovereign Spread (PRSS). This indicator divides political risk from other sources of risk. Their analysis shows that higher political instability increases uncertainty of future business conditions and therefore lowers firm valuations. This insight is relevant for M&A transactions, where investors evaluate the long-term viability of a target company.

This mechanism is very relevant for Ukraine during the war. The invasion damaged infrastructure and disrupted supply chains. The regulatory environment also becomes more uncertain. Because of this, it is harder for firms to predict their future cash flows. The full-scale invasion can therefore be seen as an extreme case of political risk. It affects expectations about firm performance, survival, and access to financing. As a result, some foreign investors may have reduced their M&A activity in Ukraine after 2022. This may be explained not only by market disruptions but also by lower expected returns relative to risk.

These cross-country studies highlight the importance of institutions and transparency for M&A activity. Strong institutions and better information

help investors make decisions. This also explains why it is useful to study deal-value disclosure. Disclosure can signal credibility and good governance. It may also reflect compliance with regulations. This is especially important in environments with high uncertainty and risk. The link between institutional conditions and disclosure strengthens the theoretical basis for the second empirical model in this thesis.

2.3. Industry-specific shocks and dynamics of M&A

A separate body of literature focuses on how industry-level shocks, technological disruptions, and sector-specific risks influence M&A activity. Danzon, Epstain and Nicholson (2007) analyze M&A behavior in the pharmaceutical and biotech industries and show that acquisitions are often motivated by pipeline shocks, such as anticipated declines in revenue due to patent expirations. Their multinomial logit model demonstrates that large pharmaceutical firms are more likely to acquire when facing expected future shortages in innovation output. Meanwhile, financially constrained or distressed small firms are more likely to become targets. Using propensity score matching, the authors also show that mergers do not necessarily improve long-term performance, but they do help firms smooth revenue volatility. The study demonstrates that M&A can serve as a strategic response to sector-specific shocks and that industries differ in their sensitivity to disruptions. This idea is central to the thesis's argument that wartime shocks influence Ukrainian sectors differently, creating variation in M&A activity across industries.

Gugler et.al. (2023) analyze the occurrence of merger waves across the United States, the United Kingdom, and the European Union. They show that merger waves primarily occur among listed firms and are driven by stock-market optimism and valuation cycles rather than real economic fundamentals. Their use of regime-switching models highlights that shocks can create abrupt structural changes in M&A activity. Although the Ukrainian

M&A market consists primarily of private firms, the concept of structural breaks remains relevant. The regime-switching logic justifies applying a structural break test to Ukrainian monthly M&A data, as the 2022 invasion constitutes a large exogenous shock capable of alerting the underlying process that generates deal activity.

Together, these industry-specific studies demonstrate that shocks do not affect all sectors uniformly.

2.4. Privatization, ownership, and transition economies

The literature on privatization in transition economies provides another important theoretical foundation. Estrin et al. (2009) provide the definitive synthesis on privatization and ownership forms in transition economies. Their review of more than 140 empirical studies concludes that privatization improves firm performance when institutions are strong, but results are mixed in environments with weak enforcement, corruption, or political instability. They also find that foreign-owned firms tend to overperform domestically owned firms due to better management practices, stronger governance, and greater access to capital. Foreign investors usually react more strongly to political risk than domestic investors. When political conditions are unstable, they may avoid entering such markets or delay investment decisions. Transparency can also influence the results of privatization. In particular, ownership concentration and the availability of information may affect how these transactions develop.

This issue is relevant for Ukraine, too. During the war, a new wave of privatization was started by the government. Privatization deals may differ from private transactions in several ways. For example, disclosure practices may vary, and the types of investors involved may also change. Because of this, privatization is included as a variable in the empirical models that analyze foreign acquirers and deal-value disclosure.

2.5 Ukraine M&A and wartime investment climate

Finally, there have been studies on Ukraine that investigate the M&A market in detail. Travkina and Shuba (2021) investigate the M&A market in Ukraine from 2013 to 2020. The study by Travkina and Shuba (2021) finds low disclosure levels. The study states that transaction values were not disclosed in more than 40 percent of all transactions. A lot of M&A activity took place in areas like IT, agriculture, and finance. According to Travkina and Shuba (2021), other institutional risks affect investments in Ukraine. Raider attacks and weak legal enforcement were cited by Travkina and Shuba (2021). The study of Travkina and Shuba (2021) describes the structure of the market before the full-scale invasion of Ukraine, thus providing a base to compare the structure of the market with after the full-scale invasion.

Panchenko et al. (2023) investigate how the full-scale invasion has negatively impacted the investment climate in Ukraine. Panchenko et al. (2023) find that the war has negatively impacted economic activities in various ways. Infrastructure was destroyed, logistics networks were disrupted, and domestic demand decreased. Institutional risk was increased due to the uncertainty of the conflict. Although it seems unlikely, Ukraine could have long-term investment potential. It is likely that the long-term investment potential of Ukraine will be based on the country's high level of human capital, the strength of its agricultural sector, and the need for investment to reconstruct Ukraine after the end of the war.

Paper predicts that sectors such as IT, agriculture, renewable energy and infrastructure will attract post-war investment, while heavily damaged sectors may require prolonged recovery. These findings highlight that the war altered investment conditions unevenly and provide important context for interpreting changes in investor behavior and M&A activity.

The literature consistently shows that geopolitical risk reduces cross-border acquisitions, increases uncertainty and alters sector-specific investment behavior. It also emphasizes the role of institutions and transparency in shaping M&A flows as well as the importance of industry-specific shocks. However, none of the reviewed studies examine M&A behavior during an active large-scale war nor do they use transaction-level Ukrainian data that spans both pre-war and wartime periods. No study analyzes war-induced changes in deal-value disclosure and the sectoral evaluation of M&A over time using a unique dataset covering 2019- H1 2025. The literature provides clear theoretical justification for these empirical models and suggests signs for the coefficients, particularly regarding the negative impact of war on foreign acquisitions and heterogeneous sectoral responses to wartime disruptions.

Chapter 3

METHODOLOGY

Based on the research questions and the way that data were organized within the dataset, an array of quantitative approaches was utilized to assess both transactional dynamics and total or aggregate dynamics. Specifically, at the transactional level, logit specifications (binary outcome models) are employed to provide estimates of the probability of foreign participation and deal-value disclosure. Logit specifications were used because they directly test the first and second research questions, while also accounting for the fact that the dependent variables in these analyses are dichotomously coded.

For assessing overall M&A activity, the methodology involves a time series count model that will be estimated using monthly aggregate data. Each observation in the data set includes the total number of deals completed during each respective month. In addition to allowing researchers to capture fluctuations in total M&A market activity over time, this methodology will enable researchers to identify whether February 2022 constituted a structural break (the third research question).

In assessing M&A activity during the relevant time frame, the study identifies two distinct periods: before the invasion of Ukraine (prior to February 2022) and after the invasion (from February 2022 forward). To establish the boundary between these two time frames, a binary indicator variable called Post2022 is defined. Post2022 is the primary independent variable across all model specifications. The use of this variable enables consistent identification of the effects of the full-scale invasion of Ukraine during both micro- and macro-level assessments.

3.1. Probability of a foreign acquirer

The first model investigates whether the probability that a Ukrainian company is acquired by a foreign investor changed after the start of the full-scale invasion. The dependent variable is a binary indicator defined as $Foreign_i = 1$ if the acquirer in transaction i is a foreign company and $Foreign_i = 0$ if the acquirer is domestic.

The main explanatory variable is the post-invasion period dummy $Post2022_i$, which captures the effect of the invasion on foreign investor participation. To account for the structural differences across industries, the model includes a set of sector dummy variables based on KPMG's sector classification. In addition, a privatization dummy $Privatization_i$ is included and equals one if the transaction involves the sale of state-owned assets and zero otherwise. Privatization deals are treated separately because they may attract a different group of investors and follow different institutional rules.

Because the dependent variable is binary, the model is established using a logistic regression:

$$P(Foreign_i = 1) = \Lambda(\alpha + \beta_1 Post2022_i + \beta_2 Sector_i + \\ + \beta_3 Privatization_i) \quad (1)$$

Where $\Lambda(\cdot)$ denotes the logistic cumulative distribution function. The coefficient β_1 measures the change in the likelihood of the foreign acquisition after the invasion, holding sector affiliation and privatization status constant. A negative and statistically significant estimate of β_1 would support the hypothesis that the war reduced foreign participation in Ukraine M&A.

3.2. Probability of deal-value disclosure

The second model examines whether deal transparency changed after the invasion. Transparency is measured using a binary indicator $Disclosed_i$, which equals one if the transaction value is publicly disclosed and zero if the value is undisclosed.

The probability of disclosure is modeled as a function of the post-invasion period indicator, the nationality of the acquirer, sector affiliation, and privatization status. Including the foreign-acquirer variable allows the analysis to assess whether foreign and domestic investors differ in their disclosure behavior, while sector controls capture industry-specific norms related to transparency.

The model is estimated using a logistic regression of the following form:

$$P(Disclosed_i = 1) = \Lambda(\alpha + \beta_1 Post20222_i + \beta_2 Foreign_i + \\ + \beta_3 Sector_i + \beta_4 Privatization_i) \quad (2)$$

The coefficient β_1 captures whether the probability of disclosure changed after February 2022, while β_2 measures the difference in disclosure behavior between foreign and domestic acquirers. The privatization coefficient β_4 reflects whether transactions involving state assets are more or less transparent than private deals. The results are interpreted using marginal effects to express changes in predicted probabilities.

To ensure the internal validity and robustness of the deal-level estimations, a series of diagnostic and specification tests is constructed. These procedures apply uniformly to both models and are designed to verify the stability of the coefficient estimates, the reliability of inference, and the adequacy of the chosen functional form.

First, multicollinearity among explanatory variables is assessed using the Variance Inflation Factor (VIF). Given the inclusion of the sector fixed effects alongside the post-invasion indicator, the foreign-acquirer dummy, and the

privatization variable, verifying that explanatory variables are not excessively correlated is essential.

Second, heteroskedasticity-consistent (robust) standard errors are employed. Although logistic regression is estimated via maximum likelihood, model misspecification or unobserved heterogeneity may affect inference. Therefore, robust covariance estimators are applied, and statistical significance is evaluated using robust z-statistics.

Third, average marginal effects (AMEs) are computed to facilitate economic interpretation. Logit coefficients are reported in log-odds units, which are not easy to interpret. Marginal effects translate these results into changes in predicted probabilities. This makes the results easier to understand and compare across different model specifications.

Fourth, a probit specification is estimated as a robustness check to verify that the results are not sensitive to the choice of link function. The main difference between logit and probit models is the distribution assumed for the latent error term. Estimating both models helps check whether the results are robust. Similar results across the two specifications strengthen the credibility of the findings.

Beyond the baseline specification, further analysis is undertaken to examine whether the impact of the invasion on foreign investor participation differs across industries.

An extended specification including interaction terms between the post-invasion indicator and sector dummies is estimated to examine whether the effect of the invasion differs across industries. The extended model takes the form:

$$P(Foreign_i = 1) = \Lambda(\alpha + \beta_1 Post2022_i + \beta_2 Sector_i + \\ + \beta_3 Privatization_i + \gamma(Post2022_i * Sector_i)) \quad (3)$$

This specification allows the marginal effect of the invasion to vary by sector. To see whether the more complex model is necessary, the interaction specification is compared with the baseline model. To compare the models, a likelihood ratio test and the Akaike Information Criterion (AIC) are used. The likelihood ratio test evaluates whether the interaction terms are jointly significant. AIC helps compare models by penalizing unnecessary complexity.

If the extended model does not significantly improve the fit of the model, the baseline specification is kept. The same applies if the information criteria increase. In such cases, the simpler model is preferred because it remains easier to interpret and more stable.

A similar approach is adopted for the disclosure model in order to assess whether the invasion affected transparency differently depending on the investor nationality specification between the post-invasion indicator and the foreign-acquirer dummy is estimated. The extended model takes the following form:

$$P(Disclosed_i = 1) = \Lambda(\alpha + \beta_1 Post2022_i + \beta_2 Foreign_i + \\ + \beta_3(Post2022_i * Foreign_i) + \delta Sector_i + \beta_4 Privatization_i) \quad (4)$$

Where the interaction term $(Post2022_i * Foreign_i)$ allows the post-invasion effect to differ between foreign and domestic transactions. A likelihood-ratio test is conducted to compare the baseline and interaction models. The test checks whether allowing different post-invasion effects leads to a better model fit. Information criteria, including the Akaike Information Criterion (AIC), are also used to compare the models and avoid unnecessary complexity.

3.3. Structural break in aggregate M&A activity

The final model examines whether the outbreak of the war constitutes a structural break in overall M&A activity. The dependent variable in this

specification is $Deals_t$ the total number of M&A transactions per month aggregated across all sectors. As an initial step, the structural break is examined within a linear regression framework. This baseline specification allows for direct comparison of average deal activity before and after the invasion and provides a simple benchmark model. The relationship between deal activity and time is modeled as:

$$Deals_t = a + \beta_1 Post2022_t + \beta_2 Trend_t + u_t \quad (5)$$

To formally test for a structural break since February 2022, a Chow test is applied. The test compares the fit of the model estimated over the entire sample with the fit of separate models estimated for the pre-invasion and post-invasion periods. Rejection of the null hypothesis indicates that the parameter governing M&A activity changed significantly after the invasion, providing evidence of a structural shift in the Ukrainian M&A market.

However, further consideration of the dependent variable suggests that a linear specification may not be fully appropriate. Monthly deal counts represent non-negative integer outcomes and therefore constitute count data. Estimating such outcomes using ordinary least squares may lead to inefficient estimates and violations of the distributional assumptions, particularly when the conditional variance depends on the mean.

For this reason, the structural break specification is subsequently re-estimated within a count-data framework. Specifically, a Poisson regression model with a log-link function is employed:

$$E(Deals_t|X_t) = \exp(\alpha + \beta_1 Post2022_t + Trend_t) \quad (6)$$

Where $E(Deals_t|X_t)$ denotes the expected number of transactions in the month t. In this specification, the coefficient β_1 captures the proportional change in expected deal activity after the start of the full-scale invasion. Unlike

the linear model, coefficients in the Poisson regression are interpreted multiplicatively. The percentage change in the expected monthly deal counts associated with the invasion period is captured as $\left(e^{\beta_1} - 1\right) * 100$.

Transaction counts are modeled with a Poisson specification. This approach allows us to test whether the invasion represents a structural change in the underlying data-generating process. An overdispersion test is then used to verify that the Poisson model is appropriate. The key assumption of the Poisson distribution is that the conditional mean equals the conditional variance. A negative binomial model would be preferable if this assumption were violated. In the estimation results, however, the dispersion parameter stays close to one. This indicates that the Poisson model is appropriate for the data. A negative binomial specification is nevertheless estimated as a robustness check to ensure that the results do not depend on the distributional assumption.

In addition, given the time-series nature of the monthly data, serial correlation in residuals from the linear specification is examined using the Durbin-Watson test. Heteroskedasticity and autocorrelation consistent standard errors based on the Newey-West estimator are reported for the OLS model to ensure inference.

Both ordinary OLS regressions using heteroscedasticity-robust standard errors as well as Poisson regression models yield consistent results that further confirm there is an identifiable structural break in M&A activity post February 2022.

In addition to examining statistical significance via tests for structural breaks and goodness-of-fit, information-based criteria will be employed to evaluate which competing specification of each model best balances the trade-off between model parsimony and model fit.

Collectively, the empirical approach takes advantage of both transaction-specific, binary models and aggregated, count models of M&A transactions

to assess comprehensively how the full-scale invasion affected foreign investor involvement, transparency associated with deals, and general levels of market activity.

Together, these different empirical methodologies provide a unified research design for empirically testing the influence of the full-scale invasion on various aspects of M&A activity, including foreign investor involvement, transparency related to M&A deals, and general trends in deal-level behavior.

Chapter 4

DATA

The database that has been used in this study contains all the details about each merger and acquisition that involved Ukrainian businesses from January 2019 to September 2025 (as per 9M 2025). The source of the data base has been KPMG Ukraine's M&A Radar Project which has been compiled internally at KPMG Ukraine.

The database contains publicly available information from open sources such as company statements, regulatory documents, official registers, company press releases, and media articles. The database is not available to the public, but permission has been formally granted to use it for academic purposes.

In terms of what type of data is recorded in the M&A Radar database, the database records those M&A deals that have a publicly disclosed deal value of greater than $5m. However, in reality, most deals with a publicly disclosed deal value in excess of $10m will be recorded more frequently since there is a higher probability that larger deals will be made publicly known. The M&A Radar database contains deals that involve cross-border transactions with Ukrainian companies. Thus, it captures both inbound deals by foreign investors and outbound deals by Ukrainian companies. The M&A Radar database uses information provided by various sources, including Refinitiv, Mergermarket, and various media outlets. Therefore, it is possible that smaller or unreported deals may not be included in the database, as there is a lack of transparency in the Ukrainian M&A Market.

The M&A Radar database also provides additional information on the specific characteristics of the transaction. These include announcement date, industry classification of the target, nationality of the acquirer, deal value (if reported), level of equity stake acquired by the acquirer, deal size category, and whether or not the transaction represents the privatization of an asset

owned by the State. The database uses an internal KPMG classification system to classify the target into an industry group, and therefore, there are 12 different industry classifications.

Initial data base contained 395 deals and 20 variables. To ensure consistency with the focus of the research, all transactions in which the target company is located in Ukraine were selected. After removing duplicates, there were 361 transactions left in the final dataset.

The dataset includes several key variables constructed for the empirical analysis. The following variables are used consistently across all model specifications.

The variable "Foreign" is a dummy variable that takes the value of 1 if the acquiring entity is foreign and 0 if the acquiring entity is a domestic business.

A second dummy variable called "Disclosed" was created to determine deal transparency. The variable "Disclosed" takes the value of 1 if the transaction value has been disclosed and 0 if no disclosure has occurred.

A Post-invasion indicator was created to capture the period beginning in February 2022, when the full-scale invasion of Ukraine started. The dummy equals one for transactions announced from February 2022 onward and zero for transactions announced before that date.

A Privatization dummy equals one if the transaction involves the sale of the state-owned assets and zero otherwise.

Sector labels from different sources were standardized across the dataset. The cleaned sector variable was then included as a categorical factor in the regression models.

For the time-series specification, monthly deal counts were constructed by aggregating transactions by announcement month. To construct the monthly time-series dataset used in the aggregate model, additional transformations were performed. Each transaction was then assigned to a corresponding year-

month period using the month of announcement. Transactions were grouped by month, and the total number of deals per month was calculated. This procedure resulted in an imbalanced monthly time series covering the period from 2019 to Q3 2025. It should be noted that the time-series dataset is characterized by an imbalance between the pre-invasion and post-invasion periods, with a larger number of observations in the pre-2022 period. This reflects the longer time span covered before the full-scale invasion. Such an imbalance may affect the precision of the estimated post-invasion effects, as the number of observations in the post-period is relatively limited. As a result, there could potentially be an effect on the accuracy of our estimates of the post-invasion effects because of the smaller number of observations in the post-invasion period. Nonetheless, using a structural break indicator and conducting robustness tests across different model specifications helps to reduce or eliminate concerns related to sample size discrepancies and ensure that the major conclusions from the study are not dependent upon sample length disparities. The time-series specification uses $Deals_t$ as the dependent variable. It represents the total number of M&A transactions announced in the month t.

The time-series model is also equipped with a linear time trend, which will help identify the trend in M&A activities (deal activity) over time that have no direct connection to the russian invasion. The trend variable simply increases from one month to the next during the sample period and helps explain general trends in deal activity over time.

Additionally, an additional post-invasion indicator (Post2022) was added to account for the discrete impact of the full-scale invasion. Post2022 will equal one for every month starting with February 2022, and zero for each month prior to this. The monthly indicator was constructed for each month, allowing it to be compatible with either the transaction-level data or the monthly aggregate data.

Although this dataset is more complete than most publicly available datasets, there may be some small deals/transactions missing from the dataset, as well as some deals that may have been completed but were not made public. The main reason for this is due to low levels of transparency within the Ukrainian M&A market.

Table 1 defines the key variables used in the empirical analysis.

Table 1. Description of key variables

Variable	Defenition
Foreign	Dummy equal to 1 if the acquirer is foreign
Disclosed	Dummy equal to 1 if the transaction value is disclosed
Post2022	Dummy equal to 1 for transaction announced from February 2022 onward
Privatization	Dummy equal to 1 if the transaction involves privatization
Sector clean	Stndardized sector classification used in regressions
Deals	Monthly number of M&A transactions
Trend	Linear monthly time trend

The binary variables are then summarized in Table 2, where their means can be interpreted as sample proportions.

Table 2. Descriptive statistics of primary variables

Variable	N	Mean	SD	Min	Max
Disclosed	361	0.607	0.489	0	1
Foreign	361	0.385	0.487	0	1
Post2022	361	0.380	0.486	0	1
Privatization	361	0.061	0.240	0	1

Table 2 provides summary statistics for the principal binary variables included in the empirical analysis. The unconditional sample mean of Foreign is 0.385, which suggests that approximately 38.5% of the transactions in the sample involved foreign bidders. The mean of the Disclosed variable is 0.607, implying that about 61% of transactions have a publicly disclosed deal value.

In comparison, privatization transactions represent a very small portion of the sample, with a mean of 0.061 (6.1% of transactions), as well as the Post2022 indicator mean of 0.380; this reflects the percentage of the sample observations that occurred after the outbreak of the full-scale russian invasion.

Since all primary variables were binary, the standard deviations provided reflect the variability generated from each of their respective percentages. As such, these summary statistics provide a general view of the distribution of the data, establishing baseline frequencies before any formal econometric estimates are made.

Collectively, these summary statistics also demonstrate evidence of changes in the composition of the data and decreases in overall aggregate activity, providing further justification for conducting the formal econometric analysis in the next section.

To further explore the structure of the dataset, Table 3 presents the distribution of M&A transactions across sectors before and after the full-scale invasion. This breakdown provides initial descriptive evidence on how deal activity is distributed across industries and how it may have changed following the onset of the war.

Table 3. Sectoral deal counts before and after the invasion

Sector	Deals (Pre-invasion)	Deals (Post-invasion)
Innovation and technology	53	43
Agriculture	38	17
Real estate and construction	33	31
Consumer markets	18	9
Metal and mining	14	5
Power and utilities	13	4
Banking and insurance	12	6
Oil and gas	11	4
Healthcare and pharmaceuticals	10	2
Industrial products	8	5
Transportation and infrastructure	8	8
Communications and media	6	3

Table 3 shows that M&A activity in Ukraine is concentrated in a limited number of sectors. Innovations and technology, agriculture, and real estate and construction account for the largest number of transactions in both periods. Following the full-scale invasion, a decline in deal activity can be observed across most sectors, although the magnitude of this decline varies.

The same patterns are illustrated in Figure 1, which presents the sectoral distribution of deals in relative terms.

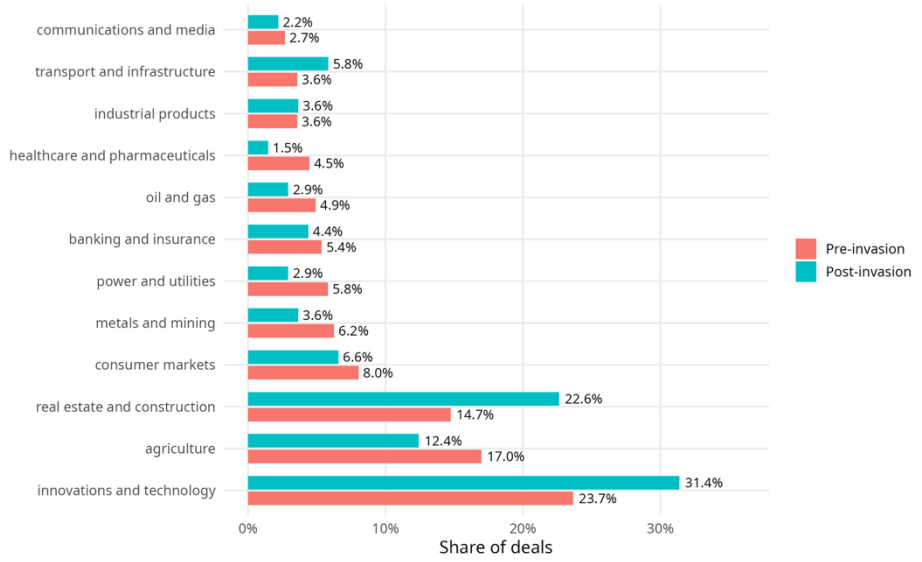


Figure 1. Sector distribution of deals (Pre vs Post)

There are obvious trends in how companies have moved their operations or changed what they are doing in response to the war.

The most evident trend is that there has been an increase in the amount of deals related to innovation and technologies. The percentage of all deals related to these areas went up by about 7.7% (from 23.7% to 31.4%).

Another trend is that there has been an increase in the number of deals related to real estate and construction. In terms of percentages, it went up by about 53.7%.

The one sector that remained somewhat consistent with the number of deals was real estate/construction. It had 33 deals in the pre-invasion period and 31 deals in the post-invasion period.

The sector that experienced the largest decline was agriculture. It decreased by almost 27.1% (from 17% to 12.4%).

The three other sectors that were significantly impacted were metals/mining, power/energy, and oil/gas. Metals and mining decreased from 6.2% to 3.6%, power and energy decreased from 11.9% to 10.2%, and oil/gas decreased from 10.1% to 6.1%.

There were two other sectors that experienced declines, which were healthcare/pharmaceuticals and retail. Healthcare/pharmaceuticals declined by 66.7% (from 4.5% to 1.5%), and retail declined by 30% (from 18.4% to 12.9%).

Two sectors did not appear to be significantly affected by the war in terms of the proportion of deals. These sectors were industrial products and transportation/infrastructure. Industrial products comprised approximately 3.6% of all deals in both time periods, and transportation/infrastructure increased by about 61.1% (from 3.6% to 5.8%).

Figure 2 presents the evolution of monthly M&A activity over the sample period, together with a six-month moving average to smooth short-term volatility. The dashed vertical line marks February 2022, corresponding to the full-scale invasion.

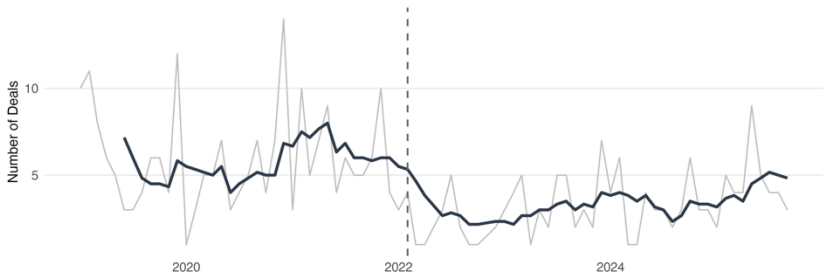


Figure 2. Monthly M&A Activity (6-month moving average)

There appears to be a drop in deal volume in the immediate aftermath of the invasion. In addition, there has been a dramatic decrease in moving averages from pre-2022 levels, which would suggest that the overall level of market activity has contracted structurally. While it is possible to see a moderate rebound in subsequent months, both periods remain below the pre-invasion baseline with regard to the average number of deals completed per month and are more volatile than prior to the invasion.

Therefore, the clear shift in patterns between the pre- and post-invasion periods supports an initial structural break assumption in terms of the time series in aggregate counts. However, this can only be confirmed as statistically significant through structural break tests in the empirical section.

Chapter 5

ESTIMATION RESULTS

The empirical results of this research focus on how the full-scale invasion impacted Ukrainian M&A activities, foreign investor involvement, and deal value transparency. To obtain these results, we utilized a series of regression models that included both individual transactions and aggregate-level analyses. At the individual transaction level, we used binary choice models to determine the likelihood of a foreign investor participating in the transaction or to disclose deal value. We also used a count data model to analyze changes in total M&A activity. These results will be provided in sections below, with each section providing the results of one of the empirical models discussed in the Methodology Section.

Our first model estimates whether the likelihood of a foreign investor being involved in an M&A transaction changed as a result of the full-scale invasion. This is estimated using a logit model, with our dependent variable representing a binary indicator that equals 1 when the acquiring firm is foreign. Our model includes an indicator for post-invasion periods, sectoral controls, and a dummy for privatized firms to account for the unique aspects of each transaction.

Table 4 reports the estimation results.

The coefficient for the post-invasion indicator (Post2022) is negative and marginally statistically significant at the 10% level. As such, our results suggest that, following the full-scale invasion, the likelihood of foreign investment in Ukraine M&A transactions declined. From an economic perspective, our results suggest that the decline in foreign acquisitions was moderately sized and weakly statistically supported.

Table 4. Logit estimation results: Probability of foreign acquirer participation (robust standard errors)

Variable	Model (1): Foreign acquirer
(Intercept)	-0.924**
	(0.327)
Post2022	-0.476+
	(0.289)
Banking and insurance	0.625
	(0.598)
Comunication and media	0.381
	(0.829)
Consumer markets	0.324
	(0.540)
Healthcare and pharmaceuticals	0.664
	(0.686)
Industrial products	0.052
	(0.755)
Innovation and technology	2.366***
	(0.404)
Metals and mining	0.612
	(0.612)
Oil and gas	-0.348
	(0.721)
Power and utilities	0.805
	(0.594)
Real estate and construction	-1.771**
	(0.683)
Transport and infrastructure	0.583
	(0.636)
Privatization	-1.748
	(1.085)
Observations	361
Log-Likelihood	-181.525

Note: The dependent variable equals 1 if the acquirer is foreign and 0 otherwise. Robust standard errors (HC1) are reported in parentheses. The base category for sector dummies is agriculture. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Looking at the industry effects, we find considerable heterogeneity in terms of industry effects. Relative to the base category, the innovation and technology sector had a much higher and highly statistically significant coefficient for having a foreign acquirer. This result supports the idea that technology-related sectors continue to attract foreign capital regardless of the increased political risks associated with investing in Ukraine.

In contrast, the real estate and construction sector exhibited a negative and statistically significant coefficient, suggesting that this sector experienced a very low likelihood of attracting foreign investors compared to the base category. The high degree of physical damage, ongoing uncertainty, and future risks faced by this sector may have contributed to its lower attractiveness for foreign investors.

While many coefficients are positive among the remaining categories, none are statistically significant at traditional confidence intervals. Thus, we see little evidence of strong systematic differences in foreign investor attraction, beyond what is already captured through control variables.

The coefficient for the privatization dummy is negative and not statistically significant. As such, we cannot reject the null hypothesis that privatized firms experience a similar likelihood of attracting foreign investors as non-privatized firms.

Overall, our results provide limited support for the hypothesis that foreign investor participation in Ukrainian M&A activities decreased as a result of the full-scale invasion. However, it is clear that there are significant differences in how various sectors respond to wartime conditions. For example, certain sectors continued to attract foreign capital despite the challenging conditions associated with warfare.

To provide a more intuitive interpretation of our estimated impacts, average marginal effects were calculated based on a logit specification. While reported coefficients represent the impact on log odds associated with each explanatory variable, marginal effects represent the impact on probabilities associated with a one-unit increase in each explanatory variable. The results may be seen in Table 5.

Table 5. Average marginal effects (selected variables)

Variable	Average marginal effect	Std. Error	p-value
Post-invasion period	-0.080	0.047	0.093

Privatization deal	-0.292	0.177	0.099
Innovation and technology	0.511	0.071	0.000
Real estate and construction	-0.189	0.063	0.003

Consistent with logit model results, marginal effects also reveal that foreign investor participation decreased by approximately 8 percent as a result of the invasion. Although this effect is only weakly statistically significant at the 10 percent level, it provides further insight into previous results.

Similarly, sectoral differences remained substantial. On average, participation in innovation and technology transactions is approximately 51 percent more likely than participation in base category transactions. Consistent with the previously mentioned logic regarding exposure to physical and economic risks during conflict, transactions in real estate and construction are approximately 19 percent less likely to include foreign participants.

We also calculated marginal effects for privatized transactions. These showed that, on average, privatized transactions were approximately 29 percent less likely to include foreign participants. However, this effect was not statistically significant at traditional confidence intervals.

Taken together, our marginal effects provide a more interpretable summary of our model results and reinforce the notion that the invasion's effect on foreign participation is small in magnitude but heterogeneous across sectors.

In addition to conducting an alternative probit model, additional specifications and diagnostic tests to assess the robustness of prior results were completed. First, an alternative probit model was estimated. The prior results were qualitatively consistent with those produced via logit model specification in terms of signs, statistical significance, and overall conclusions. Thus, it was concluded that our results are not sensitive to our choice of link function.

Second, multicollinearity diagnostics using the generalized variance inflation factor (GVIF) were conducted.

All adjusted GVIF values are close to 1, indicating that multicollinearity was not present and therefore our estimated coefficients should be considered reliable.

Third, we estimated an extended version of model 1, including interaction terms between the post-invasion indicator and sector dummies to capture potential heterogeneous effects of war across sectors. These interaction terms were not statistically significant and did not enhance model fit according to likelihood ratio tests and information criteria. Thus, the original baseline specification for interpretation purposes was retained. The results may be seen in Table 6.

Table 6. AIC comparison for Model 1: Baseline vs. interaction specification.

Model	df	AIC
Model 1	14.000	391.050
Model 1 interaction	25.000	400.948

AIC comparisons favored retaining the original baseline specification over extending it to include interactions between post-invasion indicators and sector dummies, as it had a lower AIC. Thus, the simpler baseline specification for purposes of interpreting the prior results was retained.

Overall, robustness tests support the validity of the model and demonstrate that our primary results are not derived from specification choices.

The second model examines the determinants of deal value disclosure in Ukrainian M&A transactions. The analysis is based on a logit specification, where the dependent variable is a binary indicator equal to one if the transaction value is disclosed and zero otherwise. The model includes the post-invasion indicator, a dummy for foreign acquirer participation, sectoral controls, and a privatization indicator to capture institutional and transaction-specific factors influencing disclosure behavior.

Table 7. Logit estimation results: Probability of deal value disclosure (robust standard errors)

Variable	Model (1): Deal value disclosure
(Intercept)	0.233
	(0.299)
Post2022	-0.245
	(0.258)
Foreign	-0.321
	(0.299)
Banking and insurance	-0.483
	(0.574)
Comunication and media	0.657
	(0.833)
Consumer markets	-0.541
	(0.510)
Healthcare and pharmaceuticals	-0.398
	(0.644)
Industrial products	-1.434*
	(0.724)
Innovation and technology	1.744***
	(0.440)
Metals and mining	-0.173
	(0.589)
Oil and gas	0.593
	(0.613)
Power and utilities	-0.707
	(0.603)
Real estate and construction	-0.050
	(0.396)
Transport and infrastructure	0.834
	(0.697)
Privatization	3.360**
	(1.112)
Observations	361
Log-Likelihood	-208.020

Note: The dependent variable equals 1 if the transaction value is disclosed and 0 otherwise. Robust standard errors (HC1) are reported in parentheses. The base category for sector dummies is agriculture. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The logit results reported in Table 7 examine the relationship between the independent variables and the dependent variable of deal value disclosure. Although the coefficient for the post-invasion indicator is negative it is not statistically significant at conventional levels. This finding implies that the full

scale invasion has had no systematic impact on disclosure behavior in Ukraine M&A transactions.

Also, the coefficient for the foreign acquirer indicator is negative and is not statistically significant, indicating that foreign investor involvement does not systematically increase or decrease the likelihood of disclosing deal values relative to domestic investor involvement. Thus, there is evidence that the disclosure behavior of Ukrainian M&A firms is not influenced to a great extent by their association with foreign investors.

In sharp contrast, the privatization variable has a very large and statistically significant positive coefficient. As a consequence, privatization transactions have a much greater likelihood of involving deal value disclosure. The empirical support for this result is consistent with higher transparency expectations in connection with state asset sales and public oversight.

Sectoral results show heterogeneity across industry segments. Firms in the innovation and technology segment have a significantly larger likelihood of disclosure, whereas those in the industrial products segment show a negative and statistically significant effect, implying lower probabilities of disclosure relative to the base sector. Most other sector coefficients do not have sufficient statistical power to reject the null hypothesis that they differ from zero. Consequently, these results suggest that there are few systematic differences in disclosure behaviors among Ukrainian M&A firms beyond the control of other explanatory variables.

On balance, the overall findings suggest that, unlike foreign investor involvement, deal value disclosure appears to have been unaffected to a material degree by the war itself. Rather, disclosure behavior is more directly related to institutional influences (i.e., privatization) and/or sector-specific attributes.

To better understand these findings, average marginal effects are calculated using the results from the logit estimation procedure. The results may be seen in Table 8.

Table 8. Average marginal effects for deal value disclosure

Variable	Average marginal effect	Std. Error	p-value
Foreign acquirer	-0.063	0.057	0.263
Post-invasion period	-0.048	0.051	0.338
Privatization deal	0.665	0.202	0.001
Industrial products	-0.294	0.128	0.021
Innovation and technology	0.328	0.075	0.000

These marginal effects are useful because they provide insight into how each unit change in the independent variables will affect the dependent variable (deal value disclosure). Specifically, these estimates imply that during the post-invasion period, the likelihood of deal value disclosure decreases by about 4.8% relative to pre-war times. However, this effect is not statistically significant, supporting our previous conclusion that the war had little or no systematic effect on the extent of deal value disclosure.

Additionally, it can be observed from these estimates that firm involvement of foreign acquirers reduces the likelihood of disclosing deal values by approximately 6.3%, but, like before, this effect is not statistically significant. Hence, we find little evidence that foreign participation plays a crucial role in whether deal values are publicly disclosed.

On the contrary, results show that privatized transactions greatly enhance the likelihood of deal value disclosure. Specifically, it is estimated that deals completed through privatizations increase the likelihood of deal value disclosure by almost 67%. This large effect illustrates just how important institutions are when attempting to explain why some Ukrainian M&A firms choose to publicly report information regarding their deal values, while others do not. Additionally, this large effect supports the contention that

transactions involving state-owned assets have higher expected transparency standards.

As illustrated above, sectoral effects continue to illustrate diversity across industry segments. Deals within the industrial products segment are characterized by an increased probability of non-disclosure, specifically a decline in probability of approximately 29.4% relative to the reference group. On the other hand, deals within the innovation and technology segment experience an enhanced probability of disclosure, an increase of approximately 33% relative to the reference group.

Overall, findings from marginal effects provide additional reinforcement for major findings from the logit model and illustrate that disclosure behavior is largely influenced by institutional and sector-specific factors rather than by direct war-related impacts.

To evaluate the robustness of empirical findings, several additional models and diagnostics were conducted:

Firstly, an alternate probit model was estimated and provided analogous qualitative results concerning the sign and statistical significance of parameter estimates. This implies that the findings are insensitive to the use of different link functions.

Secondly, multi-collinearity diagnostics using Generalized Variance Inflation Factors (GVIFs)

The GVIF diagnostics indicated no issues since all adjusted values are near 1 and therefore imply stability of our estimates.

Lastly, an extended version of the model 2 incorporating interactions between post-invasion indicator and foreign acquirer dummy was estimated to identify potential differential effects.

Both likelihood-ratio tests and AIC statistics confirm that including interaction terms improves model fit, thus providing additional insights into possible differential effects. The results may be seen in Table 9.

Table 9. AIC comparison for Model 2: Baseline vs. interaction specification.

Model	df	AIC
Model 2	15.000	446.039
Model 2 interaction	16.000	443.896

Nevertheless, adding interaction terms adds substantial complexity to model interpretation, and therefore, we retain our original model as our primary model for reporting our empirical results.

The third model focuses on how the full-scale invasion affected all Mergers & Acquisitions (M&A) activity in Ukraine. This model is different from the others because, instead of looking at individual deals, it looks at the total amount of M&A activity by using aggregated data (the total number of M&A deals completed in each month), while also creating a measure for each month by using a post-invasion dummy variable. Given that the dependent variable is a count measure (number of deals per month), a Poisson Regression Model is used. The model includes both a post-invasion dummy variable to account for structural change in Ukraine after 22nd February 2022 and a linear time trend to account for any trends that may exist in the deal-making process over time.

Table 10. Poisson estimation results: Monthly M&A activity.

Variable	Model (1): Monthly M&A activity
(Intercept)	1.667***
	(0.142)
Post2022	-0.809***
	(0.225)
Trend	-0.006
	(0.005)
Observations	79
Log-Likelihood	-170.350

Note: The dependent variable is the monthly number of announced M&A transactions. Robust standard errors (HC1) are reported in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

As seen in Table 10 above, the estimates of the Poisson Regression model show the effect of the full-scale invasion on the average monthly number of M&A deals. The post-invasion dummy has a negative sign and is statistically significant. Thus, this shows that there was a large drop-off in the number of deals done after the full-scale invasion began. Therefore, this suggests that the war had a very large and rapid impact on deal-making in Ukraine.

In terms of percent changes, the post-invasion period indicates approximately 55 percent fewer M&A transactions that occurred per month compared to before. As you would expect, due to increased levels of uncertainty and disruptions caused by the war, this represents a large drop-off in deal-making as the economy contracted.

The time trend is statistically insignificant. No evidence that there was an upward or downward trend in deal activity over time (in addition to the structural break due to the war). The results clearly indicate that M&A activity declined significantly after February 2022.

One way to verify whether or not the Poisson model was properly specified was through conducting an overdispersion test. In essence, the overdispersion test checks to see if the assumed distribution of errors around our mean is correct.

The results of the overdispersion test showed that we could not reject the null hypothesis of equidispersion (p-value = 0.246). Furthermore, the estimated dispersion parameter was very close to 1. Since no signs of overdispersion, the Poisson model was correctly specified and thus does not need to consider more complex count distributions (such as Negative Binomial) when modeling these data.

Finally, additional model specification considerations were tested for. To do so, three alternative model specifications: OLS, Negative Binomial, and Poisson, were run. Each model was ranked according to their Akaike Information Criterion (AIC). The results may be seen in Table 11.

Table 11. AIC comparison of alternative specifications for Model 3

Model	df	AIC
OLS	4.000	364.987
Poisson	3.000	346.700
Negative Binominal	4.000	347.743

The AIC values indicated that the Poisson model provided the best fit amongst alternatives since it yielded the lowest AIC score. Although OLS regression provided similar results, OLS is not the most suitable choice since it does not account for the fact that the dependent variable is measured as a count variable. Lastly, the Negative Binomial regression model did not provide a better fit than the Poisson model, which confirms the lack of overdispersion in these data.

Chapter 6

CONCLUSIONS AND POLICY RECOMMENDATIONS

To better understand the war's effect on Ukrainian M&A markets, this paper studies three ways that the invasion of Ukraine has impacted M&A: namely, foreign participation, deal value disclosure, and total volume of M&A.

The results of statistical work give a consistent view of how the war has impacted Ukraine's M&A markets, with some nuances.

Firstly, it was found that there was a decrease in the probability of foreign acquirers participating in deals post-invasion. The size of this effect is moderately sized, which implies that increased uncertainty and political risk associated with investing in Ukraine have made acquiring Ukrainian companies less attractive to foreign investors.

Secondly, we cannot reject the null hypothesis that the war did not affect the propensity of disclosing deal values (i.e., the level of transparency) during the post-invasion period. As such, we can infer that institutional and transaction-specific characteristics appear to dominate firms' decisions about levels of disclosure. Specifically, we find that privatization transactions are more likely to result in disclosed deals than non-privatization transactions, suggesting that formal transparency requirements have a positive effect on disclosure. Additionally, sectoral effects also play an important role in determining the level of disclosure, with many sectors exhibiting heterogeneity in their reporting practices.

Thirdly, evidence of a very large and statistically significant decline in overall M&A activity following February 2022 was found. Using a Poisson regression model, a large decline in the expected number of deals was estimated, and therefore, in the volume of trade occurring in the Ukrainian M&A market.

Overall, estimates indicate that the war has dramatically impacted the scale of M&A activity in Ukraine but has only modestly affected the composition of

M&A activity while having little to no effect on the level of disclosure used in Ukraine's M&A markets.

The research shows that, as a result of policy considerations, it is very important to ensure the political, legal, and financial stability of institutions at times when there are risks related to global politics. The fact that the total number of M&A operations has significantly decreased, and the number of foreign participants in this process has also decreased, indicates that the restoration of trust among investors should be one of the main goals of Ukraine's economic policy. For example, a predictable legislative framework, protection of ownership rights, and transparent procedures for conducting business activities can increase the attractiveness of Ukraine's assets for local and foreign investors.

However, the data on the disclosure of information by companies that participated in the privatization of state-owned enterprises in Ukraine during the war indicated no major changes in comparison to the pre-war period. At the same time, the results showed a strong association between the level of disclosure by these companies and their involvement in the privatization process. These results demonstrate that the implementation of transparency requirements by law and through government oversight mechanisms can provide support for market confidence in Ukraine, even in conditions of high uncertainty. Therefore, maintaining or improving the quality of transparency requirements can be helpful to long-term growth and recovery of the M&A market in Ukraine.

There are many different aspects of this study that have significant limitations. First, the data used in this study is a proprietary transaction-level database with 361 fully executed mergers & acquisitions (M&A) transactions that were publicly disclosed between 2019 and 2025. The database includes a lot of details about each M&A transaction, but due to the limited number of transactions included in the sample, there was no opportunity to investigate certain industries or types of M&As at the same depth. Secondly, while the

study examines obvious characteristics of each transaction, it did not take into account any financial information regarding firms involved in the transaction, any valuation for M&A transactions where terms of the transaction were not publicly disclosed, and/or factors related to investors that can also affect M&A decision-making. Lastly, since the time period analyzed after Russia invaded Ukraine has been relatively short and the time frame still represents a state of great uncertainty, it is possible that longer-term impacts of the war will differ significantly from what was seen in this study's results.

Future studies can expand upon the study's analysis with further post-conflict data that is now becoming available; comparative analyses of M&A activity in other conflict-affected economies will be useful to understand how a country's corporate investment patterns respond differently (or similarly) than those of Ukraine to similar geopolitical shocks.

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